Rebuttal Testimony
Timothy C. Sexton

Before the Office of Administrative Hearings
600 North Robert Street
Saint Paul, Minnesota 55101

For the Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
Saint Paul, MN 55101

In the Matter of the Petition of Minnesota Energy Resources Corporation for Approval of a Recovery Process for Cost Impacts Due to February Extreme Gas Market Conditions

MPUC Docket No. G011/M-21-611
OAH Docket No. 71-2500-37763
Exhibit __ (TCS-R)

Independent Evaluation

January 21, 2022

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.

A. My name is Timothy C. Sexton. My business address is 19500 State HWY 249, Suite 245, Houston, Texas 77070. I am President of Gas Supply Consulting, Inc., which I will refer to as "GSC."

Q. ARE YOU THE SAME WITNESS WHO SPONSORED DIRECT TESTIMONY IN THIS CASE?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to respond to: (i) the Direct Testimony of witness Matthew J. King on behalf of the Division of Energy Resources of the Minnesota Department of Commerce (the "Department") dated December 22, 2021; and (ii) the Direct Testimony of witness Brian Lebens on behalf of the Office of the Minnesota Attorney General – Residential Utilities Division ("OAG") dated December 22, 2021. In particular, my Rebuttal Testimony addresses the following issues and topics:

1) First, I address statements made by Department Witness Mr. King regarding MERC-NNG's use of its Geographic Diversity of Supply, Baseload Purchases, Ratable Weekend Purchases, and Use of Storage during the February Event. As to each of these issues, I conclude that

MERC-NNG's actions were appropriate during the February Event, and I agree with Mr. King that MERC-NNG should have no disallowances associated with these issues.

2) Next, with respect to Mr. King's request in his Direct Testimony for more information related to the supply reserves utilized by the gas utilities in planning for supply requirements, I address issues related to the appropriate supply reserve utilized by MERC-NNG when purchasing supplies for Gas Day February 17. With respect to this issue, I conclude that growing industry-wide production losses at the time led to MERC-NNG adopting the appropriate decision to increase its reserve margin for February 17 gas flow to insure deliverability on behalf of its customers.

3) Finally, I address statements made by Department Witness Mr. King and OAG Witness Mr. Lebens related to MERC-NNG's use of Financial Hedging Tools to mitigate natural gas costs during the February Event. As to this issue, I agree with Mr. King that available hedging tools are designed to hedge monthly baseload natural gas supply purchases. Further, I conclude that the hedging strategies suggested by Mr. Lebens are not reasonable for use by a utility such as MERC-NNG. Further, I note that Mr. Lebens's proposed hedging strategies: (a) rely on hedging tools that do not exist; (b) utilize hedging tools that do not correlate to MERC's physical purchase locations or purchase timeframes; (c) depend upon highly speculative purchases and sales of hedging

instruments; and (d) appear to be selected to derive a predetermined outcome based upon the benefits of hindsight. For these reasons, I conclude that Mr. Lebens's testimony, and therefore his suggestions regarding proposed disallowances, should be rejected.

II. GEOGRAPHIC DIVERSITY OF SUPPLY

Q. PLEASE SUMMARIZE THE STATEMENTS MADE BY DEPARTMENT WITNESS MR. KING RELATED TO MERC'S GEOGRAPHIC DIVERSITY OF SUPPLY.

A. When discussing the Gas Utilities' failure to purchase supply from lower priced hubs during the February Event, Mr. King states (King Direct Testimony, page 48, lines 13-15) "*The Gas Utilities are limited by their available transportation. CNP, MERC-NNG and GP do not hold the upstream transportation necessary to access pricing at the Chicago hub*. *MERC-NNG does not have transportation related to Emerson*." Based upon these statements, Mr. King accurately concludes MERC-NNG had no available supply alternatives to acquire supply other than those at the Northern Natural Gas ("Northern")-Ventura and Northern-Demarc receipt point locations.

Q. DO YOU AGREE WITH MR. KING'S STATEMENTS REGARDING MERC DIVERSITY OF SUPPLY?

A. Yes. As I explained in my Direct Testimony in this proceeding, the only sources available to MERC-NNG to acquire incremental natural gas supply during the

February Event were at Northern-Ventura and to a much smaller degree at Northern-Demarc. As MERC utilized the only locations available in its portfolio to source incremental supplies during the February Event, MERC appropriately utilized the geographic diversity available to it during the event.

III. BASELOAD PURCHASES

Q. DID DEPARTMENT WITNESS MR. KING REVIEW MERC'S MONTHLY BASELOAD PURCHASES?

A. Yes. Department witness Mr. King analyzed MERC's monthly baseload purchases, noting (King Direct Testimony, page 35, lines 12-13) that "*MERC indicates that that it generally considers historical load, storage balances, and other factors to maximize a baseload amount that can be operationally balanced*."

Q. DID MR. KING RECOMMEND ANY DISALLOWANCE OF COSTS ASSOCIATED WITH MERC'S BASELOAD PURCHASES?

A. No. In Table 17 on page 109 of his Direct Testimony, Mr. King provided a list of proposed disallowances. As illustrated in this table, Mr. King does not recommend any disallowances of costs associated with MERC's baseload purchases.

Q. DO YOU AGREE WITH MR. KING THAT THERE SHOULD BE NO DISALLOWANCES RELATED TO MERC'S BASELOAD PURCHASES?

A. Yes. As discussed in detail in the Direct Testimony of MERC Witness Sarah Mead (Mead Direct, page 28, line 11 through page 29, line 18), MERC developed and implemented its plan for baseload purchases based upon the information available prior to and leading up to the February event. As stated in Ms. Mead's testimony, MERC develops its baseload plan to "*maximize the amount of baseload purchases while ensuring sufficient operational flexibility to balance load variability through the winter heating season.*"

As indicated in Ms. Mead's Direct Testimony, MERC had clearly developed and implemented a reasonable baseload purchasing plan based upon the information available at the time prior to the February Event. As such, I agree with Mr. King that there should be no disallowance related to MERC's baseload purchases during the February Event.

IV. RATABLE WEEKEND PURCHASES

Q. DID DEPARTMENT WITNESS MR. KING DISCUSS NATURAL GAS MARKETS AND DAILY PURCHASING IN HIS DIRECT TESTIMONY?

A. Yes. On pages 23 through 26 of his Direct Testimony, Mr. King discussed natural gas markets and daily natural gas purchasing. In this section of his testimony, Mr. King points out that natural gas markets primarily operate only on business days with little if any activity during weekends and holidays. Mr. King also points out that natural gas purchases over weekends and/or holidays

are usually made ratably with the same purchase quantity for each day of a weekend or holiday period such as the February Event.

Q. DID MR. KING ADDRESS THE METHODOLOGY THAT UTILITIES UTILIZE TO PURCHASE NATURAL GAS OVER WEEKENDS AND HOLIDAYS?

A. Yes. Mr. King notes on page 25, lines 9-12 of his Direct Testimony:

> "*…when purchasing for multiple days over a weekend, the same amount of gas is bought for each day. In order to meet its requirements, a LDC would base its purchase on the forecasted highest load day and incorporate that amount of spot gas on the lower load days by using storage.*"

Q. DO MR. KING'S STATEMENTS CONFORM TO MERC-NNG'S DAILY NATURAL GAS PURCHASES DURING THE FEBRUARY EVENT?

A. Yes. As I described in my Direct Testimony (Page 27 line 8 through Page 28 line 13), MERC-NNG's natural gas purchases were made ratably over the four-day weekend. Further as I also noted in my Direct Testimony (Page 29 lines 4-7), with no ability to change supply quantities over the four-day weekend, MERC had no choice but to plan its daily supply purchases based upon the highest forecasted demand day over the period.

Q. DID MR. KING RECOMMEND ANY DISALLOWANCE OF COST ASSOCIATED WITH MERC'S RATABLE WEEKEND PURCHASES?

A. No. As illustrated in Table 17 of his Direct Testimony, Mr. King did not recommend any disallowances of costs associated with MERC's ratable purchases.

Q. DO YOU AGREE WITH MR. KING THAT THERE SHOULD BE NO DISALLOWANCES RELATED TO MERC'S RATABLE WEEKEND PURCHASES?

A. Yes. Based upon the market structure and the information available at the time, MERC made the appropriate purchases to ensure that supplies were available to meet its customer requirements over the four-day holiday weekend.

V. USE OF STORAGE

Q. DID DEPARTMENT WITNESS MR. KING ADDRESS THE USE OF STORAGE ACROSS WEEKENDS SUCH AS DURING THE FEBRUARY EVENT?

A. Yes. On page 21, lines 17-19 of his Direct Testimony, Mr. King noted that:

> "*storage provides an operational balancing tool to allow utilities to manage uncertainty and variability of load, including across weekends during which gas trading is limited*."

Further, as mentioned above with respect to intra-weekend purchases, Mr. King also stated that over a weekend, such as the long weekend during the February Event, a utility will typically base its daily gas purchases on the highest forecasted demand day and then utilize storage to balance supply with demand on the lower load days (page 25, lines 10-12).

Q. ARE MR. KING'S STATEMENTS REGARDING THE USE OF STORAGE CONSISTENT WITH MERC'S USE OF STORAGE DURING THE FEBRUARY EVENT?

A. Yes. As I explained in detail in my Direct Testimony (pages 30 through 32), based upon the information available at the time gas purchases were made, MERC-NNG initially made storage withdrawal nominations consistent with its maximum storage contract rights. Subsequently, MERC utilized its contracted storage flexibility to reduce its storage nominations during the day such that MERC's total flowing supplies were within allowable pipeline balancing tolerances versus total demand requirements on the system.

Q. DID DEPARTMENT WITNESS MR. KING RECOMMEND ANY DISALLOWANCE OF COST ASSOCIATED WITH MERC'S USE OF STORAGE?

A. No. As illustrated in Table 17 on page 109 of his Direct Testimony, Mr. King did not recommend any disallowances of costs associated with MERC's use of storage.

Q. DO YOU AGREE WITH MR. KING THAT THERE SHOULD BE NO DISALLOWANCES RELATED TO MERC'S USE OF STORAGE?

A. Yes. As I mentioned in my Direct Testimony (page 32, lines 11-14), based upon the information that MERC-NNG had available at the time it made gas

supply purchases, storage nominations were at maximum levels and as a result, MERC maximized the use of its storage capacity during the February Event.

VI. SUPPLY RESERVE FOR GAS DAY FEBRUARY 17

Q. DID DEPARTMENT MR. KING ADDRESS THE QUANTITY OF SUPPLY RESERVES UTILIZED BY THE UTILITIES DURING THE FEBRUARY EVENT?

A. Yes. On page 61, line 18 through page 62, line 2 of his Direct Testimony, Mr. King discussed supply reserves and requested additional information supporting the quantity of supply reserves during the February Event.

Q. WHICH SUPPLY RESERVE ARE YOU ADDRESSING?

A. In her Rebuttal Testimony, Ms. Mead provides a thorough review of the load forecast utilized, natural gas supply purchases made, and supply reserves included that underpin MERC-NNG's supply acquisition for both the long weekend across Gas Days February 13 through February 16 and for Gas Day February 17. While I will not restate Ms. Mead's testimony regarding these issues, I will address in some detail, the unique conditions related to planning and supply purchases for Gas Day February 17 that led to a need for a more robust supply reserve on this day.

Q. WHAT IS THE PURPOSE OF A SUPPLY RESERVE?

A. As stated in Mr. King's Direct Testimony and Ms. Mead's Rebuttal Testimony, planning for some level of supply in excess of forecasted load is important to address the risk of imbalance penalties, potential supply cuts, and forecast uncertainty.

Q. WHAT LEVEL OF SUPPLY RESERVES DID MERC-NNG PLAN FOR ON GAS DAY FEBRUARY 17?

A. As Ms. Mead states in her Rebuttal Testimony, MERC-NNG planned for a Supply Reserve of approximately 10% for Gas Day February 17.

Q. DOES THIS REPRESENT AN INCREASE COMPARED TO THE LEVEL MERC GENERALLY UTILIZES DURING COLD WEATHER EVENTS?

A. Yes. As discussed on page 28 of Ms. Mead's Rebuttal Testimony, during cold weather events, MERC-NNG typically targets a supply reserve of roughly 7% to 9%.

Q. WERE THERE ANY UNIQUE CONDITIONS THAT SUPPORTED THE NEED FOR AN INCREASED SUPPLY RESERVE FOR GAS DAY FEBRUARY 17?

A. Yes. As described in detail in Joint Gas Utilities Witness Richard G. Smead's Direct Testimony, natural gas production losses were significant and growing at the time that supply purchases needed to be made for February 17. In fact, as illustrated in Schedule 5 of Mr. Smead's Direct Testimony, Permian Basin production (which feeds Northern-Demarc) had suffered production losses of

approximately 65% by the start of February 16 and the losses were still growing. Ultimately, Permian Basin production losses would increase another 10% through February 16 reaching the unprecedented level of about 75% of Permian Basin natural gas production lost for February 17.

The impact of production losses in the Permian Basin and surrounding areas had a significant impact on overall production throughout the United States. In fact, as reported in the joint Federal Energy Regulatory Commission ("FERC") and North American Electric Reliability Corporation ("NERC") report issued on September 23, 2021,[1] total U.S. dry gas production ultimately fell to 65.4 Bcf/d on February 17, a 28% decline from the 90.8 Bcf/d production level seen on February 4.

Q. WHAT IMPLICATIONS DID THE PRODUCTION LOSSES HAVE ON MERC-NNG WHEN PLANNING FOR GAS DAY FEBRUARY 17?

A. When planning supply purchases for Gas Day February 17, MERC-NNG faced an unprecedented natural gas supply situation with significant production losses that were still growing in magnitude.

As noted above, a supply reserve margin is important to maintain reliability in the face of forecast uncertainty, imbalance penalties, and potential supply cuts.

[1] Copy of FERC-NERC Report available at: https://www.ferc.gov/february-2021-cold-weather-grid-operations-preliminary-findings-and-recommendations.

When planning for February 17, forecast uncertainty and imbalance penalty risk remained as issues. Further, growing production losses put MERC-NNG at significant risk for supply cuts within its natural gas supply agreements.

In hindsight, MERC-NNG did not suffer significant cuts to its supply arrangements. However, at the time that the supply purchasing plan for February 17 was developed on the morning of February 16, risk of supply cuts in MERC's supply agreements was very high and as such, a higher supply reserve was appropriate and reasonable.

Q. SHOULD MERC-NNG HAVE ANY DISALLOWANCES OF COSTS RELATED TO SUPPLY RESERVE FOR GAS DAY FEBRUARY 17?

A. No. As stated in detail above, growing natural gas production losses indicated a need for an elevated supply reserve when planning for Gas Day February 17. I conclude that the 10% supply reserve that MERC-NNG incorporated into its planning for Gas Day February 17 was reasonable and there should be no disallowance of costs associated with this supply reserve.

VII. FINANCIAL HEDGING TOOLS

Q. DID DEPARTMENT WITNESS MR. KING, ADDRESS THE USE OF HEDGING TOOLS TO MITIGATE DAILY PRICE SPIKES?

A. Yes. On page 23, lines 4-13 of his Direct Testimony, Mr. King discussed financial hedging tools and clarified that available hedging tools are monthly-

oriented similar to baseload purchases. As a result, these tools are ineffective with respect to gas purchased using daily price indices and as a result are not useful to mitigate daily price spikes.

Q. ARE YOU AWARE OF ANY FINANCIAL HEDGING TOOLS THAT COULD HAVE BEEN UTILIZED BY MERC-NNG TO MITIGATE INTRA-MONTH DAILY PRICE SPIKES DURING THE FEBRUARY EVENT?

A. No. First, as noted previously in this Rebuttal Testimony, the only locations that MERC-NNG has available to purchase incremental daily supplies are at Northern – Ventura and to a much lesser extent Northern - Demarc. As a result, MERC-NNG made its daily purchases based on market pricing at these locations. In other words, MERC-NNG purchased daily supplies at prices based upon the Northern– Ventura daily index price and the Northern – Demarc daily index price.

I am not aware of any actively traded hedging instrument designed to provide a hedge against daily price indices at either of these two pricing locations.

Q. DID OAG WITNESS MR. LEBENS ADDRESS THE USE OF HEDGING TOOLS TO MITIGATE DAILY PRICE SPIKES?

A. Yes. Mr. Lebens's testimony focused exclusively on potential hedging instruments that he claims the gas utilities, including MERC, could have pursued to offset part, and even potentially all of the cost of the price spike

during the February Event. This said, and as I will explain, Mr. Lebens's proposed hedging strategies either involve hedging instruments that do not exist or are entirely speculative and inappropriate for use by a utility, such as MERC-NNG, as price risk management tools. I do not believe that any of the hedging strategies described by Mr. Lebens in his Direct Testimony would have been appropriate tools to offset daily price risk at any time, including during the February Event, and therefore, Mr. Lebens's recommendations for disallowance should be rejected.

Q. ARE ANY OF THE HEDGING INSTRUMENTS DESCRIBED BY MR. LEBENS DESIGNED TO MITIGATE DAILY PRICE RISK AT MERC-NNG'S NATURAL GAS SUPPLY PURCHASE LOCATIONS?

A. No. During the February Event, the only locations that MERC-NNG had available to purchase incremental daily supplies were at Northern – Ventura and to a much lesser extent Northern – Demarc. In order to offset daily price risk without incurring speculative locational price risk, any hedging instrument utilized by MERC-NNG to offset daily price risk would need to be priced based upon these physical locations. Contrary to this basic requirement, Mr. Lebens did not identify any hedging instruments designed to offset price risk at either Northern-Ventura or Northern-Demarc.

Q. PLEASE DESCRIBE THE HEDGES THAT MR. LEBENS SUGGESTED THE UTILITIES MAY HAVE BEEN ABLE TO PURSUE TO MITIGATE SOME OF THE EXTRAORDINARY COSTS.

A. On page 6, lines 4-6, of his Direct Testimony, Mr. Lebens suggests that the utilities could have utilized “daily options, weekly options, and short-term options” as traded on the CME Group platform to mitigate extraordinary costs. Next, on page 6, lines 6-8 of his Direct Testimony, Mr. Lebens suggests the utilities could have pursued “customizable over-the-counter (“OTC”) contracts that cap the maximum price that they would have paid”. Finally, Mr. Lebens suggests (page 6, lines 8-10 of his Direct Testimony) that the utilities could have used Weather Futures and Options to hedge price risk during the February Event.

Q. AS TO MR. LEBENS’S SUGGESTION THAT "CUSTOMIZABLE OVER-THE-COUNTER (OTC) CONTRACTS THAT CAP THE MAXIMUM PRICE THAT THEY WOULD HAVE PAID” COULD HAVE BEEN UTILIZED BY THE UTILITIES AS A HEDGING TOOL DURING THE FEBRUARY EVENT, ARE YOU AWARE OF ANY SUCH PRODUCTS THAT WERE AVAILABLE TO MERC-NNG TO HEDGE AGAINST DAILY PRICE RISK PRIOR TO THE FEBRUARY EVENT?

A. No. I am not aware of any such products that were available to MERC (or any other market participant for that matter) prior to the February Event.

Q. DOES OAG WITNESS MR. LEBENS IDENTIFY ANY SPECIFIC OVER THE COUNTER PRODUCTS THAT COULD HAVE BEEN UTILIZED TO HEDGE AGAINST GAS PRICE SPIKES AT NNG-DEMARC OR NNG-VENTURA?

A. No. He does not (Lebens Direct Testimony page 10, lines 18-20). Rather, he requests that the Utilities identify these products that he cannot price or quantify. As these products were unavailable and not priced prior to the February Event, this portion of Mr. Lebens's testimony does not provide any useful analysis or conclusions.

Q. AS TO MR. LEBENS'S SUGGESTION THAT WEATHER DERIVATIVES COULD HAVE BEEN UTILIZED TO MITIGATE FEBRUARY PRICE SPIKES, WOULD THE PURCHASE OF WEATHER DERIVATIVES HAVE BEEN AN EFFECTIVE STRATEGY FOR MERC-NNG TO MITIGATE PRICE SPIKES?

A. No. There are numerous flaws and holes in the logic related to the potential use of weather derivatives to mitigate price spikes during the February Event. First, weather derivatives are not designed to hedge gas prices, because they are not correlated to the price of gas. Rather, these are tools by which a utility might hedge against the risk that distribution service revenues are below associated forecasts due to warmer than average temperatures during the winter season. As such, these tools are not suited to hedge against a specific daily gas price spike.

Next, even if a weather derivative were utilized by a utility such as MERC-NNG to hedge overall costs and revenues, a weather derivative based upon weather in a location far removed and with minimal correlation to Minnesota weather, such as the Dallas weather derivative cited by Mr. Lebens, would not represent a reasonable choice to hedge weather risk in Minnesota.

Just because the February Event and resulting price spikes happened to coincide with cold weather in Texas, this is not always the case when price spikes are experienced at the hubs relied on to serve Minnesota customers. For example, as illustrated in Table 4 of my Direct Testimony, the next two highest price events on the Northern system that have occurred over the past twenty years occurred on December 28, 2017, and January 27, 2014. As reported by the National Oceanic and Atmospheric Administration, the average temperature in Dallas on these two dates was 38°F and 44°F respectively. While admittedly brisk by Dallas standards, the temperature on each of these days was above freezing and nowhere close to the average temperature of 10°F reported in Dallas on February 15 and 16 of 2021. As history would suggest, although the February Event coincided with cold weather in Dallas, the fact that other price spikes have occurred on Northern did not coincide with historically cold weather in Dallas reveals that the use of a Dallas weather derivative would have been a poor (non-correlated) choice as a hedging tool to mitigate price risks for customers in Minnesota.

Finally, even if this type of derivative were relevant, Mr. Lebens's claims that the Dallas Weather Derivative value increased by 66 percent during the month of February 2021 (page 14, lines 3 and 4 of his Direct Testimony).[2] This would have provided little protection with respect to the Northern-Demarc and Northern-Ventura daily index price which increased by over 8,500 percent and over 6,900 percent respectively[3] during the same time period.

Q. ARE THE "DAILY OPTIONS, WEEKLY OPTIONS AND SHORT-TERM OPTIONS" SUGGESTED BY MR. LEBENS DESIGNED TO HEDGE PRICE RISK ASSOCIATED WITH NATURAL GAS PURCHASES AT NNG-VENTURA AND/OR NNG-DEMARC?

A. No. As illustrated in Schedules BPL-D-1, BPL-D-2, and BPL-D-3 to Mr. Lebens's Direct Testimony, each of these three Options are settled based upon the price of natural gas at Henry Hub, Louisiana.

Q. WOULD IT HAVE BEEN REASONABLE FOR MERC-NNG TO UTILIZE THESE OPTIONS SUGGESTED BY MR. LEBENS, PRICED AT HENRY HUB LOUISIANA, TO HEDGE ITS DAILY GAS SUPPLY PURCHASES?

[2] A review of Lebens's Exhibit BPL-D-8 reveals that only about 37% of this 66% increase in value occurred prior to February 17.

[3] NNG-Demarc increased from a February FOM price of $2.690/MMBtu to a February 13-16 daily index price of $231.670/MMBtu (8,512% increase) and NNG-Ventura increased from a February FOM price of $2.680/MMBtu to a daily index on February 17 of $188.320/MMBtu (6,927% increase).

A. No. It is not reasonable to utilize an option priced at Henry Hub, Louisiana to hedge against natural gas price risk at NNG-Ventura or NNG-Demarc. As illustrated in the following Table 1, the market price of natural gas at Henry Hub was very different than the market price of natural gas at Ventura or Demarc during the February Event.

Table 1 – Daily Natural Gas Pricing During February Event

Date	Gas Daily Midpoint Index Price for day of Delivery ($/MMBtu)		
	Henry Hub	Northern – Demarc	Northern - Ventura
02/13/2021	$6.000	$231.670	$154.905
02/14/2021	$6.000	$231.670	$154.905
02/15/2021	$6.000	$231.670	$154.905
02/16/2021	$6.000	$231.670	$154.905
02/17/2021	$16.995	$133.635	$188.320

Using the data in the table above, if MERC-NNG had purchased a call option with a strike price of $4.00 per MMBtu with delivery at Henry Hub, this would have provided MERC-NNG with the right to resell the call option at a market value of about $2.00 per MMBtu immediately prior to gas flow ($6.00 per MMBtu Henry Hub Index price less $4.00 per MMBtu Call Option strike price). Netting this $2.00 option value gain against MERC-NNG's daily gas purchase price would have provided very little offset versus the historically high Ventura and Demarc daily gas prices incurred during the February Event.

Q. IN SECTION VI OF HIS TESTIMONY, MR. LEBENS CLAIMS TO USE ACTUAL HEDGE RESULTS TO QUANTIFY CLAIMS THAT THE UTILITIES, SUCH AS MERC-NNG, SHOULD HAVE BETTER MITIGATED PRICE EXPOSURE. DO YOU AGREE WITH HIS ANALYSIS?

A. No. Mr. Lebens's analysis runs contrary to reasonable utility planning as the hedging mechanisms that he suggests either don't exist or, in the case of those that do exist, would have been highly speculative, illiquid, and would have imprudently and unreasonably exposed MERC-NNG's customers to additional price risk. Further, rather than representing a plan that would have managed price risk in all situations, his plan simply relies on hindsight to identify transactions that provide a pre-ordained outcome.

Q. WHY IS MR. LEBENS'S PLAN SPECULATIVE?

Mr. Lebens's calculations in Section VI of his Direct Testimony rely upon the values of monthly call options for gas delivered at Henry Hub during the month of March 2021.[4] In his calculations, Mr. Lebens claims that if the utilities had purchased these options at some time during the period of February 8 through February 10 and then resold these options on the evening of February 17, the resulting extraordinary gas costs could have been mitigated. Mr. Lebens's analysis relies on speculative transactions timed perfectly for maximum effect based upon perfect hindsight, and which are completely inappropriate for utility planning for numerous reasons.

First, as I previously indicated, the use of options settled based upon the price of natural gas at Henry Hub, Louisiana is not an appropriate hedging

[4] See Exhibit BPL-D-8 which illustrates cost of March 2021 $4.000 Call option with delivery at Henry Hub.

mechanism to offset risk for gas purchases at Northern-Demarc or Northern Ventura. As these markets are disconnected, pricing trends do not always track between these two locations and in fact as illustrated in the following Table 2, did not track during the February Event:

Table 2 – Index Price Changes During February Event

Gas Price Indices – Flow Date	Northern Demarc	Northern Ventura	Henry Hub
Feb Inside FERC First of Month ("FOM")	$2.690	$2.680	$2.770
Gas Daily Midpoint			
February 11, 2021	$6.605	$6.905	$3.675
February 12, 2021	$15.680	$15.415	$5.880
February 13, 2021	$231.670	$154.905	$6.000
February 14, 2021	$231.670	$154.905	$6.000
February 15, 2021	$231.670	$154.905	$6.000
February 16, 2021	$231.670	$154.905	$6.000
February 17, 2021	$133.635	$188.320	$16.955
February 18, 2021	$26.945	$19.460	$23.605

As illustrated in Table 2 above, Northern Demarc and Northern Ventura daily index prices increased by multiples of about 85 and 58 respectively versus the February First of Month index price whereas Henry Hub prices only increased by a factor of about 2 during the same period. Obviously, there was little correlation between these price points during the February Event and the use of these instruments would have introduced speculative locational price risk to the portfolio.

Next, the use of options associated with March natural gas deliveries to hedge against February natural gas requirements would introduce significant time related price risk into the equation. While looking back in hindsight may show an increase in option value during the selected timeframe, from a planning perspective ahead of the February event, it would have been completely speculative and inappropriate to obtain call options for gas delivered in March as a hedge against physical prices of natural gas to be delivered in February.

Finally, purchasing hedges when a utility thinks prices are low (Lebens suggested purchase date of Feb 8 to Feb 10) and selling when the utility thinks prices are high (February 17) would have been highly speculative at the time. A reasonable utility price risk management plan would never rely upon quick purchase and sales transactions in an attempt to time the market. This is akin to speculative day trading and is not reasonable utility planning.

The hedging mechanisms upon which Mr. Lebens bases his analysis are clearly selected based upon a hindsight review of results, are highly speculative, and are not related to the utilities', including MERC-NNG's, physical gas requirements during the February Event.

Q. IN SECTION VII OF HIS TESTIMONY, MR. LEBENS CLAIMS THAT THE UTILITIES SHOULD HAVE NEGOTIATED COLLARS INTO THEIR SWING

CONTRACTS WITH SUPPLIERS TO OFFSET GAS COSTS. IS THIS CLAIM REASONABLE FOR MERC-NNG?

A. No it is not. I am not aware of any such collars being available or offered to MERC-NNG for the 2021 winter. As such, the claim is entirely hypothetical and not a strategy that MERC could have acted on prior to the 2021 winter.

Q. IN SECTION VIII OF HIS TESTIMONY, MR. LEBENS DISCUSSES THE POTENTIAL USE OF "COSTLESS COLLARS" AS A HEDGING MECHANISM. ARE COSTLESS COLLARS A REASONABLE TOOL TO HEDGE MERC-NNG'S SWING SUPPLIES PURCHASED AT DAILY PRICE INDICES?

A. No. Costless collars are appropriate to hedge baseload gas supply that a utility is certain it will purchase during the winter, but they are not suited as a hedging mechanism for swing supplies purchased at daily index prices.

Q. WHY ARE COSTLESS COLLARS NOT SUITABLE AS A HEDGING MECHANISM FOR SWING SUPPLIES?

A. A costless collar is a structured product that requires three components to operate effectively. These three components include the purchase of a call option, the sale of a put option and the purchase of baseload supply.

As swing supplies represent weather dependent supplies only required under certain conditions, a utility, such as MERC-NNG, has no certainty if these supplies will be required and purchased. Absent certainty that physical supply

will be needed; one of the three components required to utilize a costless collar, the baseload supply purchase, is absent and as such, a costless collar cannot be acquired to support hedging of swing supply purchases.

Q. IN INDUSTRY TERMINOLOGY, WHY IS THIS MECHANISM TERMED A "COSTLESS COLLAR"?

A. As noted, one required component of a costless collar is the sale of a put option. A put option is sold to generate revenues sufficient to offset the cost associated with the purchase of the call option. As the revenue from the sale of the put option offsets the cost of the purchase of the call option, the transaction is then referred to as "costless." As an example, if the price of a call option with a strike price of $6.00 per MMBtu is $0.30 per MMBtu and the price of a put option with a strike price of $3.50 per MMBtu is also $0.30 per MMBtu, a costless collar would include the purchase of a $6.00 call option and the sale of a $3.50 put option. In this example, the proceeds of $0.30 per MMBtu received from the sale of the put option offsets the cost of $0.30 per MMBtu associated with the call option, thus creating a "costless" transaction that establishes a price cap of $6.00 per MMBtu and a price floor of $3.50 per MMBtu for the underlying baseload supply contract.

Q. CAN YOU EXPLAIN WHY MERC-NNG CANNOT UTILIZE A FINANCIAL COSTLESS COLLAR TO HEDGE SWING SUPPLY REQUIREMENTS?

A. Yes. The sale of the put option in the costless collar would place MERC-NNG in a position where the counterparty (the buyer of the put option) has the right to sell gas to MERC-NNG at the predefined price. As a costless collar is intended to operate, the put sets a price floor for a baseload gas purchase. Assuming the costless collar described above with a $6.00 call option and a $3.50 put option, in a falling market assuming the First of Month index falls to $2.00 per MMBtu (i.e., below the $3.50 put option strike price), the counterparty would exercise the put and sell MERC-NNG the put quantity at the strike price of $3.50 per MMBtu. Since the natural gas that MERC purchases under the terms of the put option is not needed for system requirements, MERC would then be required to sell this gas back into the market at the market price, effectively locking in a net cost of $1.50 per MMBtu (purchase at strike price of $3.50 per MMBtu / sale at market price of $2.00 per MMBtu). As the mechanism is intended to operate with an associated baseload transaction, this $1.50 per MMBtu put cost added to the baseload gas cost results in an all-in cost of $3.50 per MMBtu for gas delivered (i.e., baseload purchased at $2.00 per MMBtu plus put cost of $1.50 per MMBtu equals total cost of $3.50 per MMBtu for flowing supply). As illustrated, it might be “costless” by the put and call, but can add significant dollars to the cost of gas when required to purchase the floor price in a low market for gas the utilities might not need.

The structure does not work if there is no underlying baseload purchase. In the above example, if there is no baseload purchase to absorb the cost of the put, the cost would simply be a financial cost and the utility would be over-hedged. As swing supplies are only purchased if the weather conditions result in a need for the supplies, these supplies may or not be purchased on a given day. As a costless collar only works with the three components (purchase of physical supply, purchase of a call option, and sale of a put option), a costless collar cannot be acquired to hedge against swing supplies where there is no certainty that the supplies will be purchased each day.

Q. DOES OAG WITNESS MR. LEBENS DISCUSS LIMITS ON SELLING PUTS?

A. Yes. On page 32, lines 4-8 of his testimony, Mr. Lebens states:

> *"Utilities should avoid selling a greater number of puts than their demand would justify. That is, utilities should avoid selling more put contracts (generally at 10,000 MMBtus each) than the amount of gas that will pass through to their customers during a given time frame (excluding transportation customers since they manage their own cost of gas)."*

As I noted above, when planning for a winter season, MERC-NNG plans to make swing purchases at daily prices for supply requirements that may or may not be needed depending upon weather conditions. As a result, sales of put contracts (such as those in costless collars) is not a reasonable strategy to hedge against swing natural gas purchases.

Q. SHOULD THERE BE ANY DISALLOWANCE OF MERC-NNG'S GAS COSTS BASED UPON THE COMPANY'S HEDGING ACTIVITIES?

A. No. As Department Witness Mr. King concluded in his direct testimony, available hedging tools are monthly-oriented and are useful to hedge monthly baseload purchases. Conversely, these tools are not effective hedging tools with respect to gas purchased using daily price indices or to mitigate daily price spikes.

OAG witness Mr. Lebens advances arguments for various OTC hedging instruments that he is unsure even exist and for various exchange traded hedging instruments that if used as he suggests would be highly speculative and which would have exposed MERC-NNG's customers to substantial price risk. Further, to the extent his strategies would have been possible, Mr. Lebens's arguments rely completely upon hindsight and do not support the conclusion that the costs MERC-NNG incurred to serve customers were unreasonable or imprudent.

VIII. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. Based upon my review of the testimony of Department Witness Mr. King, I confirm my opinion that MERC-NNG acted reasonably and prudently in procuring geographically diverse supply, consistent with available

transportation capacity. I also conclude that MERC-NNG's baseload purchases were reasonable and consistent with the Company's gas supply plan and that MERC-NNG was obligated to procure daily gas on a ratable basis over the four-day period of Presidents' Day weekend, which impacted the ability to shape daily purchases to match differences in customer load requirements. MERC also appropriately utilized its available storage contracts to mitigate daily purchases, balance customer load, and avoid the risk of punitive pipeline penalties and MERC's hedging plan and implementation for winter 2020-2021 was reasonable and prudent.

Further, based upon my review of OAG Witness Mr. Lebens's Direct Testimony, I conclude that Mr. Lebens suggestions refer to hedging mechanisms that either do not exist or are highly speculative tools inappropriate for use by a utility in development of a risk management plan. As such, there was no reasonable or viable scenario under which the Company could have mitigated its daily price exposure through the use of financial hedging instruments, and Mr. Lebens's recommendations for disallowance are not reasonable and should be rejected.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.