BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

PROCEEDING NO. 21A − _____G

IN THE MATTER OF THE VERIFIED APPLICATION OF BLACK HILLS COLORADO GAS, INC. FOR APPROVAL TO RECOVER GAS COSTS ASSOCIATED WITH THE FEBRUARY EXTREME COLD WEATHER EVENT

DIRECT TESTIMONY AND ATTACHMENTS OF

JAY D. BAUER

ON BEHALF OF

BLACK HILLS COLORADO GAS, INC.

NOTICE OF CONFIDENTIALITY

THE FOLLOWING ATTACHMENTS HAVE BEEN FILED UNDER SEAL:

Hearing Exhibit 102, Attachment JDB-1C – BHCG GPP Filing2020-2021
Hearing Exhibit 102, Attachment JDB-3HC – DSC Models
Hearing Exhibit 102, Attachment JDB-4HC – February Event Gas Summaries
Hearing Exhibit 102, Attachment JDB-5HC – Detailed Summary of Transactions
Hearing Exhibit 102, Attachment JDB-6HC – Non-Ratable Supply Cost Savings

These documents are filed under seal pursuant to 4 CCR 723-1-1100 and 1101
Redacted Versions have been filed publicly

May 18, 2021

SUMMARY OF THE DIRECT TESTIMONY OF JAY D. BAUER

Mr. Jay D. Bauer is employed by Black Hills Service Company, LLC as a Senior Manager, Gas Supply Services. In this role, Mr. Bauer is responsible for leading the scheduling and forecasting functions, developing gas supply plans, and negotiating all physical gas supply purchases for natural gas customers of Black Hills Colorado Gas ("BHCG" or "Company") in Colorado and most of Wyoming.

The purpose of Mr. Bauer's Direct Testimony is to support BHCG's request to recover the extraordinary natural gas commodity costs incurred as a result of the extreme weather and natural gas event that took place across the country in February 2021, and in particular from February 13-17, 2021 (the "February Event"). Specifically, Mr. Bauer provides information on how the Company plans its natural gas supply purchases and how BHCG implemented this plan, consistent with industry best practices, to purchase sufficient gas supplies and ensure reliable service for the Company's natural gas customers during the February Event.

Mr. Bauer begins his discussion by describing the conditions that led to the February Event. He explains that widespread extreme cold temperatures – including below-zero temperatures affecting every Black Hills Energy customer from western Wyoming to northeastern Arkansas – led to increased demand for natural gas across much of the central United States. On February 14, 2021, BHCG experienced a new system peak demand day of 208,540 dekatherms ("Dth"), as compared to the previous peak of 202,009 Dth. At the same time that demand was increasing, the cold led to well freeze-offs and natural gas processing plant outages in portions of the country that caused supply disruptions. These disruptions led to reduced supply to meet the increased demand, which in turn ultimately caused daily spot market gas prices to rise to unprecedented levels.

Mr. Bauer next describes the Company's Gas Purchase Plan ("GPP") that is developed each year to plan the Company's gas supplies for the upcoming winter. The Company's GPP is developed through sophisticated regression analyses determining the correlation between historical customer demand and historical weather, and provides forecasted customer demand and storage utilization targets.. The Company's current GPP through June 2021 was accepted as complete by the Colorado Public Utilities Commission in the summer of 2020.

Next, Mr. Bauer explains that the Company obtains gas supply through a combination of baseload purchases, storage withdrawals, daily firm peaking contracts, and daily spot market purchases. He describes each type and source of gas supply for BHCG in more detail, noting that the Company must balance the need for flexibility to meet customer demand and limitations on storage withdrawals with the certainty of established baseload purchase and storage options. He notes that BHCG must make daily gas purchases when its forecasted demand is expected to exceed existing gas supplies from baseload and storage, and considering such other factors as upstream pipeline operating conditions, available storage, storage maximum daily withdrawal quantity ("MDWQ"), pipeline imbalances, and the estimated price of gas. Mr. Bauer's team conducts this analysis every weekday to determine the necessary daily gas purchases, and at least twice a day during extreme cold weather or other unusual situations.

Mr. Bauer then applies this information to the February Event. By way of overview, Mr. Bauer explains that the diversity of BHCG's gas supplies, especially BHCG's baseload supply contracts executed in the summer of 2020 and strategic "Firm No-Notice" storage purchases before the February Event, provided considerable protection against the volatile market conditions and saved customers approximately $57.6 million. BHCG achieved additional savings of $8.8 million

by using non-ratable (flexible quantity) supply agreements to avoid purchasing excess gas supplies for Monday and Tuesday and $1.4 million in savings by using firm peaking agreements.

Mr. Bauer describes and provides the Company's weather and demand forecasts leading up to the February Event. He also discusses the relatively typical increase in daily prices the Company began to observe for gas deliveries on Thursday, February 11, 2021, consistent with the beginning of cold weather events and the expected increase in demand for natural gas for heating. Mr. Bauer also explains, however, that the Company implemented contingency plans with suppliers in the event gas sold to BHCG could not flow due to pipeline constraints or other issues, and prepared for the potential likelihood of supply freeze-offs and intra-weekend supply availability issues.

Mr. Bauer then walks through the Company's baseload, storage, firm peaking contracts, and daily spot market gas purchases for the February Event. To ensure adequate gas supply for the Presidents' Day weekend, BHCG made both daily spot market purchases and called on its existing firm peaking contracts on February 12 for February 13-16. These daily spot market purchases and firm peaking contracts were for both ratable (fixed levels) and non-ratable (adjustable levels of) daily gas. Pricing for BHCG's daily spot market purchases was "Daily Index + Premium/Discount" priced gas, which is the first type of daily gas that trades each day. Because BHCG has a limited number of suppliers, it was important for BHCG to complete its trades early in the day to ensure that it can purchase its needed daily supplies. As gas prices subsequently spiked to unprecedented levels and customer demand grew, BHCG was also able to withdraw more gas from storage than planned because it subscribes to Firm No-Notice contracts. Additionally, BHCG made an intraday gas purchase on February 14, to meet increasing customer demand. This combination of strategic advance planning, in advance purchasing, and active management during

the February Event not only provided customers with reliable natural gas service, but also avoided Operational Flow Order ("OFO") penalties and even higher costs. Specifically, the average price that BHCG paid for its baseload, storage, and daily gas purchases used during the February Event was $85.81 per Dth, whereas the five day (February 13-17) average daily index price for gas at the Cheyenne Hub was $168.67 per day.

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LIST OF ACRONYMS AND DEFINED TERMS

BHC	Black Hills Corporation
BHCG	Black Hills Colorado Gas, Inc.
BHSC	Black Hills Service Company, LLC
CIG	Colorado Interstate Gas
Company	Black Hills Colorado Gas, Inc.
DSC	Daily Supply Calculator
Dth	dekatherm
February Event	February 13-17, 2021
FERC	Federal Energy Regulatory Commission
GCA	gas cost adjustment
GPP	Gas Purchase Plan
HDD	Heating Degree Days
ICE	InterContinental Exchange
MAC	maximum available capacity
MDWQ	maximum daily withdrawal quantity
MT	mountain time
NOAA	National Oceanic and Atmospheric Administration
OFO	Operational Flow Order
RFP	Request for Proposal
WACOG	weighted average cost of gas

DIRECT TESTIMONY OF JAY D. BAUER

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jay D. Bauer. My business address is 1515 Arapahoe Street, Tower 1 - Suite 1200, Denver, Colorado 80202.

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

A. I am employed by Black Hills Service Company, LLC ("BHSC"), a wholly owned subsidiary of Black Hills Corporation ("BHC"). I am a Senior Manager, Gas Supply Services.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of Black Hills Colorado Gas, Inc. ("BHCG" or the "Company") d/b/a Black Hills Energy.

II. STATEMENT OF QUALIFICATIONS

Q. WHAT ARE THE DUTIES AND RESPONSIBILITIES IN YOUR CURRENT POSITION?

A. As the Senior Manager, Gas Supply Services for BHCG, my current responsibilities include leading the scheduling and forecasting functions, developing gas supply plans, and negotiating all physical gas supply purchases for BHCG's natural gas customers in Colorado and most of Wyoming.

Q. PLEASE OUTLINE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. My education, employment history, and professional experience is provided in Appendix A.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A. No.

III. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my Direct Testimony is to support BHCG's request to recover the extraordinary natural gas commodity costs incurred as a result of the extreme weather and natural gas event that took place across the country in February 2021, and in particular from February 13-17, 2021 (the "February Event"). As the Senior Manager of Gas Supply, I specifically support BHCG's request by providing information on how the Company plans its natural gas supply purchases and how BHCG implemented this plan, consistent with industry best practices, to purchase sufficient gas supplies to ensure reliable service for our natural gas customers during the extreme market and weather conditions of the February Event.

Q. WHAT ARE THE ATTACHMENTS TO YOUR TESTIMONY?

A. I am sponsoring the following attachments:

- Hearing Exhibit 102, Attachment JDB-1C — BHCG GPP Filing 2020-2021
- Hearing Exhibit 102, Attachment JDB-1 — BHCG GPP Filing 2020-2021
- Hearing Exhibit 102, Attachment JDB-2 — Detailed Timeline of Relevant Events from February 9-17, 2021

- Hearing Exhibit 102, Attachment JDB-3HC DSC Models
- Hearing Exhibit 102, Attachment JDB-3 DSC Models
- Hearing Exhibit 102, Attachment JDB-4HC February Event Gas Summaries
- Hearing Exhibit 102, Attachment JDB-4 February Event Gas Summaries
- Hearing Exhibit 102, Attachment JDB-5HC Detailed Summary of Transactions
- Hearing Exhibit 102, Attachment JDB-5 Detailed Summary of Transactions
- Hearing Exhibit 102, Attachment JDB-6HC Non-Ratable Supply Cost Savings
- Hearing Exhibit 102, Attachment JDB-6 Non-Ratable Supply Cost Savings
- Hearing Exhibit 102, Attachment JDB-7 MDWQ and Imbalance Charges

IV. OVERVIEW OF NATURAL GAS SUPPLY AND FEBRUARY EVENT

Q. PLEASE PROVIDE AN OVERVIEW OF BHCG'S NATURAL GAS SUPPLY STRATEGY.

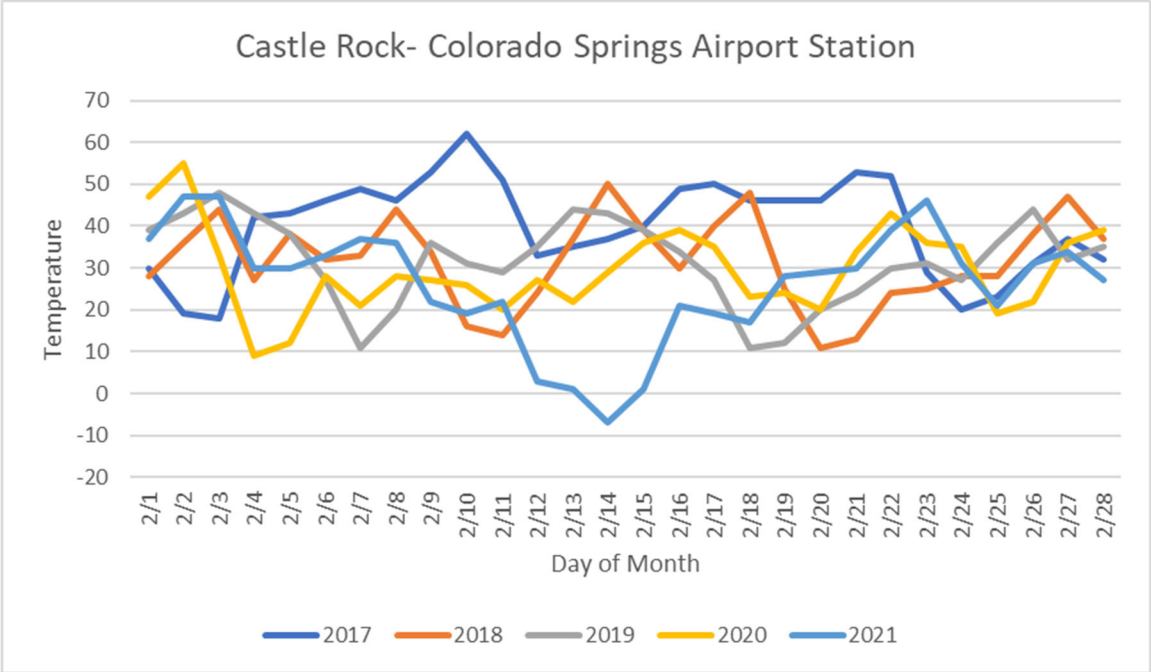
A. BHCG provides natural gas public utility services to approximately 198,000 retail customers in numerous areas throughout Colorado. The Company has approximately 183,000 residential customers and 15,000 commercial or other non-residential customers in its Colorado service area. To procure sufficient natural gas supplies to meet the needs of these customers, BHCG approaches the process of its purchasing gas supply and transportation with three goals in mind. First, BHCG strives to be a reasonably-priced provider of natural gas in its service territory. Second, BHCG is committed to ensuring a high level of reliability. This means that, for those customers who are paying for firm natural gas service, especially residential and commercial customers who depend on the service to heat their homes and businesses, the gas will be there even during the coldest

temperatures. Finally, BHCG employs tools within its portfolio management plan to mitigate price volatility in its supply portfolio to maintain a level of cost stability for its customers.

Q. PLEASE PROVIDE A BRIEF SUMMARY OF THE NATURAL GAS MARKET CONDITIONS LEADING UP TO AND DURING THE FEBRUARY EVENT.

A. Beginning on February 12, 2021, extremely cold temperatures engulfed much of the country including BHCG's service territory. For instance, the weather station correlated to BHCG's Castle Rock service territory recorded a temperature of negative 7 degrees Fahrenheit on February 14, 2021. The abnormal nature of this extreme cold weather during the February Event is shown in the figure below, which provides a five-year look at the recorded February temperatures at this weather station.

Figure JDB-1: Castle Rock – Colorado Springs Airport Station - Temperatures[1]



At one point, every Black Hills Energy customer – from western Wyoming to northeastern Arkansas – simultaneously endured below zero temperatures.

These widespread extreme cold temperatures led to increased demand for natural gas for home heating and electric generation across much of the central U.S. BHCG experienced a new system peak demand day on February 14, 2021, of 208,540 dekatherms ("Dth"), as compared to the previous peak of 202,009 Dth. At the same time that demand was increasing, the cold led to well freeze-offs and natural gas processing plant outages in portions of the country that caused supply disruptions leading to reduced supply to meet the increased demand.

This imbalance between supply and demand caused daily spot market gas prices to rise to unprecedented levels. For the two main indices related to our daily spot market

[1] Colorado Springs Airport Station is one of eight weather stations utilized in the Daily Supply Calculator model for our BHCG customers.

purchases (Cheyenne Hub and Colorado Interstate Gas ("CIG")), daily natural gas prices were in the range of $2.50-$3.50 per Dth for the days leading up to February 10, 2021. For gas delivered on Thursday, February 11, 2021, daily spot market gas prices were in the range of $4.80-$5.65 per Dth. For gas delivered on Friday, February 12, 2021, daily spot market gas prices were in the range of $13.25-$14.85 per Dth. For gas delivered on Saturday, February 13, 2021 through Tuesday, February 16, daily spot market gas prices spiked, resulting in midpoint settlements of $187.69 per Dth at the Cheyenne Hub and $172.95 per Dth at the CIG pricing index and remained at heightened prices through February 18, 2021.

The magnitude of this spike in natural gas prices was unprecedented. During the 2014 Polar Vortex event, daily natural gas prices only rose to $35 per Dth on February 6, 2014 at the Cheyenne Hub. The unusual nature of the February Event price spike is further demonstrated by the below table that provides the historical, maximum daily midpoint prices at the five price indices utilized in February by BHCG: (1) CIG; (2) Cheyenne Hub; (3) Kern River Opal; (4) El Paso-Bondad; and (5) White River Hub.[2] The prices provided in the table are shown over the last 10 years (2011-2020) compared to the daily midpoint natural gas prices for the February Event.

[2] White River Hub did not exist as a trading point in 2011. Therefore, historical daily mid-point pricing is only provided from 2012-2020.

Table JDB-1: Historical Maximum Daily Midpoint Price

Historical Daily Midpoint Price												
Date	CIG Midpoint (Max)		Cheyenne Hub Midpoint (Max)		Kern River Opal Midpoint (Max)		El Paso - Bondad Midpoint (Max)		White River Hub Midpoint (Max)	
	2011-2020	2021	2011-2020	2021	2011-2020	2021	2011-2020	2021	2012-2020	2021
February-10	$ 6.96	$ 3.46	$ 7.02	$ 3.48	$ 14.30	$ 3.39	$ 6.41	$ 3.31	$ 6.51	$ 3.37
February-11	$ 8.25	$ 4.83	$ 9.93	$ 5.64	$ 14.30	$ 4.53	$ 8.06	$ 4.29	$ 8.14	$ 4.81
February-12	$ 6.07	$ 13.29	$ 6.67	$ 14.84	$ 6.35	$ 10.69	$ 6.20	$ 10.70	$ 6.18	$ 12.14
February-13	$ 5.27	$ 172.95	$ 5.50	$ 187.69	$ 5.47	$ 85.56	$ 5.25	$ 79.36	$ 5.31	$ 139.46
February-14	$ 5.14	$ 172.95	$ 5.24	$ 187.69	$ 8.55	$ 85.56	$ 5.02	$ 79.36	$ 5.13	$ 139.46
February-15	$ 5.27	$ 172.95	$ 5.35	$ 187.69	$ 7.23	$ 85.56	$ 5.25	$ 79.36	$ 5.28	$ 139.46
February-16	$ 5.27	$ 172.95	$ 5.35	$ 187.69	$ 8.22	$ 85.56	$ 5.25	$ 79.36	$ 5.28	$ 139.46
February-17	$ 5.27	$ 78.20	$ 5.35	$ 92.60	$ 8.22	$ 160.84	$ 5.25	$ 186.54	$ 5.28	$ 106.73
February-18	$ 5.27	$ 19.53	$ 5.35	$ 20.44	$ 8.22	$ 20.00	$ 5.25	$ 27.19	$ 5.28	$ 19.82
February-19	$ 5.23	$ 5.79	$ 5.35	$ 5.81	$ 8.22	$ 5.41	$ 5.19	$ 6.26	$ 5.23	$ 5.96
February-20	$ 5.59	$ 3.66	$ 5.66	$ 3.73	$ 9.57	$ 3.65	$ 5.39	$ 3.76	$ 5.58	$ 3.77

As a result of the unforeseen spike in natural gas prices during the February Event, BHCG experienced a significant increase in cost of the daily spot market gas purchased from our gas suppliers.

Q. WAS BHCG ABLE TO MAINTAIN RELIABLE NATURAL GAS SERVICE FOR ITS CUSTOMERS DURING THE FEBRUARY EVENT?

A. Yes. In spite of the volatility of the natural gas market conditions, BHCG was able to procure sufficient natural gas supplies for the February Event such that not a single BHCG natural gas customer lost service. BHCG's procurement of sufficient gas supplies was aided by several factors including: (1) prudent gas supply practices; (2) diversity of gas supply options; (3) positive and effective working relationships with gas suppliers; and (4) effective use of its natural gas storage. I discuss these factors in greater detail later in my testimony.

Q. HOW IS THE REST OF YOUR TESTIMONY ORGANIZED?

A. First, I provide an overview of BHCG's Gas Purchase Plan ("GPP") that outlines the types of natural gas supplies that BHCG plans to use throughout the year to serve our customers. A confidential and public version of BHCG's most recent GPP is provided as Attachment

JDB-1. Then, I discuss the details of the February Event, how BHCG implemented its GPP, and the additional gas supply procurement undertaken during this event to ensure that BHCG had adequate natural gas supplies.

V. GAS PURCHASE PLAN

Q. PLEASE PROVIDE AN OVERVIEW OF BHCG'S GAS COST ADJUSTMENT REGIONS?

A. Company witness Mr. Michael J. Harrington addresses that the Company provides natural gas service to retail customers within the following gas cost adjustment ("GCA") regions: North/Southwest, Central, and Western Slope. My testimony will be structured around the divisions within these GCA Regions.

Q. WHAT GAS SUPPLY SOURCES ARE AVAILABLE TO BHCG TO SERVE ITS CUSTOMERS?

A. The supply sources available are physical gas purchases and storage.

Q. IS STORAGE SERVICE AVAILABLE TO ALL CUSTOMERS?

A. No. Because our customers are geographically spread out throughout the state, we cannot serve our customers by only one upstream pipeline. Therefore, BHCG relies on multiple pipelines to serve our customers. In some areas, storage service is available, and in others, storage is simply not an option.

Q. ON WHICH PIPELINES DOES BHCG CONTRACT FOR TRANSPORTATION CAPACITY TO SERVICE ITS CUSTOMERS?

A. BHCG contracts for transportation capacity on the following pipelines:

- Rocky Mountain Natural Gas LLC;

- Northwest Pipeline;
- TransColorado Gas Transmission Company LLC;
- Colorado Interstate Gas Company, LLC;
- Public Service Company of Colorado;
- Red Cedar Gathering Company; and
- Tallgrass Interstate Gas Transmission.

Q. ON WHICH PIPELINES IS STORAGE SERVICE OFFERED AND CONTRACTED BY BHCG TO SERVICE ITS CUSTOMERS?

A. Storage service is offered and contracted by BHCG on the following pipelines:

- Rocky Mountain Natural Gas LLC;
- Colorado Interstate Gas Company, LLC; and
- Tallgrass Interstate Gas Transmission.

Q. HOW DOES BHCG PLAN ITS GAS SUPPLY PORTFOLIO EACH YEAR?

A. Each year, the Company develops a GPP with the goal of minimizing natural gas supply costs while reliably meeting the forecasted demand on the system. BHCG files its GPP with the Commission on or before June 1. The annual GPP includes the forecasted quantity of gas to be purchased over the ensuing gas purchase year; the utility's forecasted pricing for each receipt point/area; and the utility's portfolio management plan. BHCG filed its most recent GPP on June 1, 2020 in Proceeding No. 20P-232G for gas purchases from July 1, 2020 through June 30, 2021. The Commission deemed BHCG's current GPP complete by minute entry on July 15, 2020.

Q. WHAT ANALYSIS DOES BHCG UNDERTAKE EACH YEAR TO DEVELOP ITS GPP?

A. As explained in the GPP, which is Attachment JDB-1, BHCG conducts a regression analysis to determine the correlation between historical customer demand and historical weather. This correlation produces an equation that can then be used to forecast customer demand based on forecasted weather. To forecast the weather for the GPP, BHCG uses the National Oceanic Atmospheric Administration ("NOAA") 30-year monthly average. The 30-year monthly average forecast establishes the normal weather expected to be observed each month. BHCG can then use the correlation equation described above to forecast normalized monthly customer demand.

BHCG then determines the estimated total monthly gas supply requirements by incorporating the volumetric effect of anticipated storage injections and withdrawals (where applicable) into the monthly normalized customer demand.

Finally, an analysis is done to determine the ratio of minimum daily customer demand to average daily customer demand for each month. From this analysis, the multi-month gas supply purchase plan volumes are defined.

Q. PLEASE FURTHER DESCRIBE THE SOURCES OF GAS SUPPLY THAT ARE AVAILABLE TO BHCG TO SERVE ITS CUSTOMERS.

A. The physical gas supplies that are available to BHCG can be described as baseload purchases, storage withdrawals, daily firm peaking contracts, and daily spot market purchases. I describe each of these types of gas supplies in the next sections of my testimony.

A. BASELOAD PURCHASES

Q. WHAT ARE BASELOAD PURCHASES?

A. Baseload purchases are purchases from counterparties for a term of one month or longer. The volume is the same each day of the month and these volumes are priced at Inside FERC First-of-Month Index prices, which do not fluctuate throughout the month. For a baseload contract longer than a month, the volume is the same each day of the month but may vary from month to month.

Q. HOW DOES BHCG DETERMINE THE AMOUNT OF GAS THAT IT WILL ACQUIRE THROUGH BASELOAD CONTRACTS EACH YEAR?

A. BHCG uses the monthly customer requirements determined in the GPP, and conducts an analysis to determine the ratio of the three-year minimum daily customer demand to the average daily customer demand and storage activity. This ratio determines a volume of baseload supply that can be purchased without needing to sell excess gas.

Based on this analysis, BHCG issues a Request for Proposal ("RFP") to solicit offers for long-term baseload supply contracts and executes these contracts through a competitive bidding process.

In addition, my team holds monthly meetings during which we evaluate the month ahead weather forecasts, current storage inventory and imbalance levels relative to planned targets, market conditions, and potential upstream pipeline maintenance or constraints, to determine if additional monthly baseload purchases would be prudent for that particular month.

Q. WHY DOESN'T BHCG RELY SOLELY ON BASELOAD CONTRACTS FOR ITS GAS SUPPLY?

A. Procuring gas supplies through baseload contracts would not provide BHCG with the flexibility to match its gas supply purchases to each day's forecasted load. Under a baseload contract, BHCG is required to purchase the same volume of gas each day of the month. To procure sufficient gas for each day of the month, BHCG would have to set the monthly baseload contract to cover the maximum daily forecasted load for that month. This means that BHCG would have excess gas supplies each day that actual usage is below the forecasted maximum daily load for the month. To provide the necessary flexibility and to better match gas supplies to load, BHCG relies on storage and daily spot market purchases to supplement its baseload contracts.

B. STORAGE *AND HEDGING*

Q. WHAT TYPES OF GAS STORAGE OPTIONS ARE AVAILABLE TO BHCG?

A. BHCG does not own any storage facilities but rather BHCG contracts for storage service with upstream pipelines where storage services are available. BHCG has firm, no-notice[3] storage contracts as described above.

Generally speaking, BHCG injects gas into storage during the summer months (May – October), and it withdraws gas from storage during the winter months (November – April). The benefit of storage is BHCG can inject gas in the summer months when natural gas prices are typically lower, and it can withdraw gas at the weighted average cost of gas

[3] Within firm service, many pipelines and storage facilities provide "no-notice" service. No-notice service means that BHCG does not have to notify pipelines that that we intend to use storage. It provides automatic balancing between our customers' load requirements and BHCG's physical flowing supply such that any additional supply is drawn from our storage inventory.

("WACOG") during the winter months, when daily spot market prices are generally higher. As a result, the use of storage acts as a hedging tool that can mitigate BHCG's exposure to higher natural gas prices during the winter months.

Q. HOW DOES BHCG DETERMINE THE AMOUNT OF GAS THAT IT WILL ACQUIRE FOR STORAGE EACH YEAR AS PROVIDED IN THE GPP?

A. BHCG targets an inventory increase each month from May – October with the goal of approximately 95% of its maximum available capacity ("MAC") in storage by November 1 of each year.

Q. HOW DOES THE COMPANY DETERMINE THE AMOUNT OF GAS THAT WILL BE TAKEN OUT OF STORAGE EACH DAY?

A. BHCG determines its storage withdrawals based on factors that include: (1) actual current inventory compared to the ending month inventory target as included in the GPP; (2) the daily load forecast as determined by BHCG's load forecast model, the Daily Supply Calculator ("DSC"); (3) the available maximum daily withdrawal quantity ("MDWQ") as defined in the storage service providers' Federal Energy Regulatory Commission ("FERC") or state Public Utilities Commission-approved tariff; (4) current pipeline operating conditions; and (5) current daily spot market prices. The Company also reserves a portion of its storage withdrawal capability each day to manage weather and load forecast uncertainty, unforeseen supply curtailments, or other system contingencies.

Q. ARE THERE LIMITS ON THE AMOUNT OF GAS THAT CAN BE WITHDRAWN FROM STORAGE ON A PARTICULAR DAY?

A. Yes. As I mentioned, each storage provider has a defined MDWQ for each day. In addition, each pipeline has the ability to charge penalties in the event that a shipper

withdraws more gas from storage than the MDWQ for that day. I provide in Attachment JDB-7 the MDWQ for the February Event.

Q. IN ADDITION TO STORAGE, DOES THE COMPANY'S GPP INCLUDE ANY OTHER HEDGING TOOLS?

A. Yes. In addition to storage, the Company also uses call option purchases as a financial hedging tool for its winter gas supply. Mr. Harrington discusses BHCG's hedging plan in his Direct Testimony.

C. DAILY GAS PURCHASES

Q. DESCRIBE THE TYPES OF DAILY GAS PURCHASES MADE BY BHCG.

A. Daily gas purchases are made in two ways: pre-arranged firm peaking contracts and daily spot market purchases.

Firm peaking contracts are contracts with upstream suppliers in which BHCG reserves a volume of gas that BHCG may call upon at its discretion. Firm peaking contracts are typically entered into in the summer months during the RFP process for long-term baseload contracts.

Daily spot market purchases are gas purchases generally contracted the day before, or day of, gas delivery. Daily spot market purchases are typically made when firm baseload and planned storage are not enough to cover the forecasted load.

Q. HOW DOES THE COMPANY DETERMINE WHETHER DAILY GAS PURCHASES ARE NEEDED FOR A PARTICULAR DAY AND WHAT TYPES OF

INFORMATION DOES BHCG RELY ON TO DETERMINE ITS DAILY GAS PURCHASE VOLUMES?

A. BHCG makes daily gas purchases when its forecasted demand (a combination of temperature and weather conditions) is anticipated to exceed its existing gas supplies from baseload and storage. Other factors are also considered such as: upstream pipeline operating conditions, available storage inventory storage MDWQ, pipeline imbalances, and the estimated price of gas.

Typically, my team conducts this analysis every weekday to determine the necessary daily gas purchases. In extreme cold weather or other unusual situations, this activity is completed twice a day to ensure that the most current load information is available to make purchasing decisions.

Q. WHAT IS THE SOURCE OF BHCG'S WEATHER FORECAST DATA THAT IS USED TO DETERMINE ITS DAILY CUSTOMER LOAD?

A. To forecast its customer load for a particular day, BHCG uses a third-party contractor for its weather and temperature forecasts. BHCG relies on weather forecast information from various weather stations within BHCG's service territories. Weather forecast data is provided by the third-party contractor twice a day at around 5 a.m. Mountain Time ("MT")[4] and 2 p.m.

Q. HOW IS THE WEATHER FORECAST INFORMATION USED TO DEVELOP A CUSTOMER LOAD FORECAST?

A. The weather data is processed through BHCG's load forecast model called the DSC. Within the DSC, a regression analysis is used to establish a correlation factor between

[4] All times are in Mountain Time unless otherwise indicated.

historical weather and actual customer consumption based on the most recent three years of data. The DSC uses third-party weather forecast inputs, including average daily temperature and wind speed forecasts, to develop Adjusted Heating Degree Days ("HDD")[5] for the upcoming dates. The DSC then applies the correlation factor, determined by the regression analysis, to the forecasted Adjusted HDD produced by the DSC, which determines the forecasted natural gas load requirements over the upcoming dates.

The DSC load model forecasts load data for the current day and the following six days. Results beyond six days are unreliable due to the nature of weather forecasting and is subject to large margins of error from forecasted to observed weather. The six-day range provides BHCG with sufficient information to make informed longer-term decisions on gas purchases. Additionally, the six-day lead time allows purchases over weekends and holidays when markets are closed.

Q. WHAT IS THE INDUSTRY STANDARD FOR WHEN DAILY GAS PURCHASES ARE TRANSACTED?

A. Daily gas purchases are purchases that are made for delivery the next calendar day. For example, gas purchased on Monday would be delivered on Tuesday. Gas purchased on Fridays are for delivery on Saturday, Sunday, and Monday. In the case of four-day holiday weekends, like the Presidents' Day holiday weekend, gas trading on Friday covers Saturday through Tuesday of the following week.

[5] HDD is defined by the Energy Information Administration as: "A degree day compares the mean (the average of the high and low) outdoor temperatures recorded for a location to a standard temperature, usually 65° Fahrenheit in the United States." The Adjusted HDD also accounts for wind chill and provides a more accurate forecast of the weather customers will experience.

Q. HOW ARE DAILY GAS PURCHASES PRICED?

A. Gas purchased pursuant to firm peaking contracts are priced at daily index price, if and when the firm peak volumes are called upon, plus an agreed upon premium amount. The daily index price is set at the Platts Gas Daily midpoint index price for the delivery hub that settles at the end of the trading day.

Daily spot market purchases are priced either at a "Daily Index + Premium/Discount" price or fixed price. A Daily Index + Premium/Discount price is the daily index price plus an agreed upon premium or discount of that daily index price. Typically, Daily Index + Premium/Discount priced gas is the first type of daily spot market gas that is offered for sale each day.

A fixed price is a set price that is agreed to between the supplier and purchaser when the transaction is made. All fixed priced transactions that are reported to Platts are used to calculate the weighted average midpoint index price for each delivery hub. Fixed priced transactions could be above or below the midpoint index price that settles at the end of the day.

Q. HOW DOES BHCG GATHER DATA ABOUT DAILY MARKET PRICES?

A. BHCG uses the InterContinental Exchange ("ICE") trading platform to gather real-time access to gas trading activity and pricing information.

Q. HOW DOES BHCG MAKE ITS DAILY MARKET GAS PURCHASES?

A. BHCG uses a communication tool on ICE to communicate and complete transactions with counter parties. This tool is widely used in the natural gas trading industry. BHCG uses the North American Energy Standards Board's contracts and transaction confirmation for all gas purchases.

Q. WHAT TIME OF DAY DOES THE COMPANY DECIDE WHETHER DAILY GAS PURCHASES ARE REQUIRED?

A. The data gathering process as described above, generally begins at 5 a.m. each weekday. If necessary, the Company will begin to execute daily gas purchases starting as early as 6 a.m. These daily gas purchases are typically completed before 7 a.m. BHCG executes these purchases early in the day to ensure that BHCG is able to procure sufficient gas supplies to meet forecasted customer loads.

Q. **HOW DOES THE COMPANY DECIDE WHETHER TO USE ITS FIRM PEAKING CONTRACTS OR TO BUY GAS IN THE DAILY SPOT MARKET?**

A. To determine whether to call on a firm peaking arrangement or buy gas on the daily spot market, the Company analyzes supply liquidity and the current estimated purchase premium in the daily spot market. As stated, firm peaking arrangement counterparties must stand ready to supply gas volumes up to a pre-determined level. If gas is unavailable in the daily spot market, firm peaking arrangements provide a reliable source of supply with a predetermined premium.

If the daily spot market purchase premium is higher than the predetermined premium agreed to on the firm peaking arrangement, the firm peaking contract is a lower cost alternative for our customers.

VI. THE FEBRUARY EVENT

Q. HOW DOES BHCG'S GAS PURCHASING PROCESS AND GPP THAT YOU DISCUSSED ABOVE RELATE TO THE FEBRUARY EVENT?

A. During the February Event, BHCG relied on its established gas purchase process and its GPP to ensure that BHCG had sufficient natural gas supplies to serve its customers during these extreme cold temperatures and volatile market conditions. The diversity of BHCG's gas supplies, in particular the baseload and storage purchases made by BHCG prior to this event, also provided BHCG considerable protection against the volatile market conditions that were experienced and saved customers approximately $57.6 million. The table below provides a calculation of these cost savings from baseload and storage. I also discuss further below the additional savings of $8.8 million that BHCG achieved by using non-ratable (flexible quantity) supply agreements to avoid purchasing excess gas supplies for Monday and Tuesday and $1.4 million in savings by using firm peaking agreements.

Table JDB-2: Gas Baseload and Storage Savings

Gas Baseload and Storage Savings					
	Sat, Feb 13, 2021	**Sun, Feb 14, 2021**	**Mon, Feb 15, 2021**	**Tue, Feb 16, 2021**	**Wed, Feb 17, 2021**
Total State					
Baseload Gas Volumes	60,350	60,350	60,350	60,350	60,350
Baseload Gas Costs @ Contract	$ 153,743	$ 153,743	$ 153,743	$ 153,743	$ 153,743
Baseload Gas Costs @ Market Rate	$ 8,713,264	$ 8,713,264	$ 8,713,264	$ 8,713,264	$ 5,137,897
Savings from Baseload Gas	**$ 39,222,241**				
Storage Gas Volumes	22,679	42,736	14,712	16,517	23,374
Storage Gas Costs @ WACOG	$ 41,627	$ 76,327	$ 25,139	$ 28,606	$ 41,510
Storage Gas Costs @ Market Rate	$ 4,218,305	$ 7,207,657	$ 2,243,338	$ 2,612,620	$ 2,355,860
Savings from Storage Gas	**$ 18,424,570**				
Total Savings	**$ 57,646,811**				

Q. PLEASE PROVIDE AN OVERVIEW OF THE WEATHER FORECAST LEADING UP TO FEBRUARY EVENT.

A. Prior to the February Event, the weather forecast projected colder than normal temperatures for much of the central portion of the United States, including Colorado, for the Presidents'

Day weekend. On February 9, 2021, upstream pipeline operators started issuing cold weather alerts for the Presidents' Day weekend. Cold Weather alerts from upstream pipeline operators are a typical practice in advance of cold weather events. Operators want to ensure that their shippers have sufficient gas to meet the increased demand due to cold weather. A detailed timeline of the relevant events from February 9-17, 2021 is provided as Attachment JDB-2.

Q. CAN YOU PROVIDE AN EXAMPLE OF THE COMPANY'S WEATHER FORECASTS IN ADVANCE OF THE FEBRUARY EVENT?

A. Yes. Figure JDB-2 below shows weather forecasting for Castle Rock, Colorado provided as the 6-day ahead HDD forecast, day ahead HDD forecast, and observed adjusted HDD for the month of February 2021.

Figure JDB-2: Castle Rock Weather Forecasts Comparison – Adjusted HDD

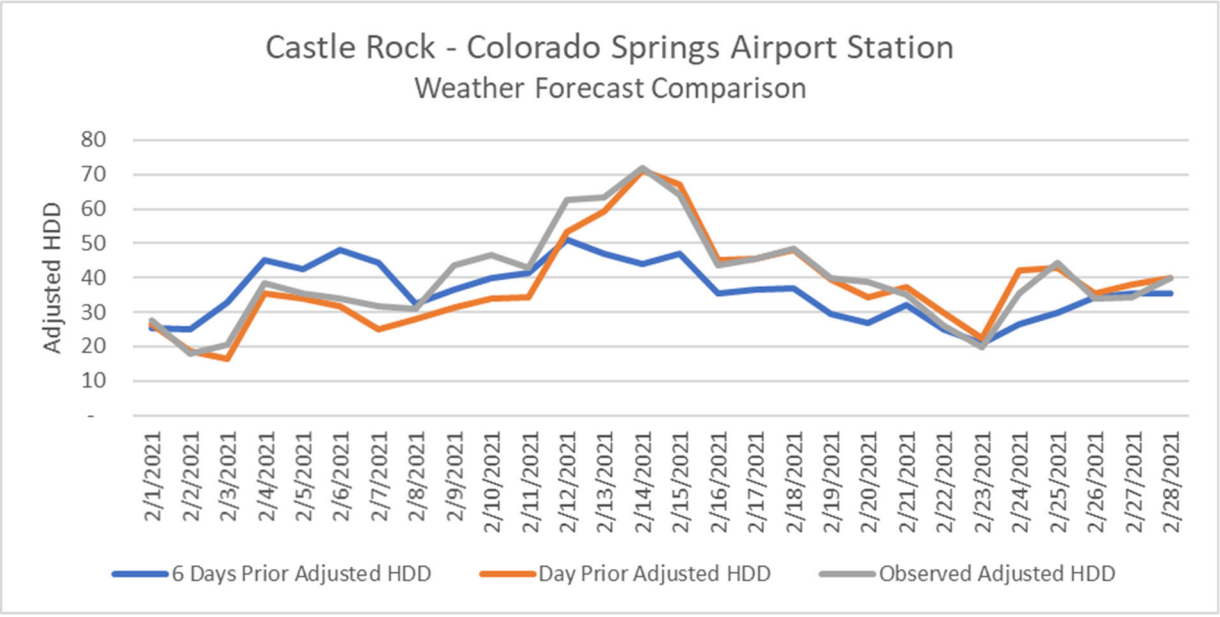


Figure JDB-2 demonstrates that the closer the weather forecast is to the observed weather day, the more accurate it is. Attachment JDB-3 provides the weather forecasts that were used in the DSC model for the February Event.

Q. CAN YOU PROVIDE AN EXAMPLE OF BHCG'S LOAD FORECASTS IN ADVANCE OF THE FEBRUARY EVENT?

A. Figure JDB-3 below shows for Castle Rock, Colorado the 6-day ahead load forecast, day ahead load forecast, and observed load for the month of February 2021. Attachment JDB-3HC includes BHCG's DSC model for the February Event.

Figure JDB-3: Load Forecast Comparison

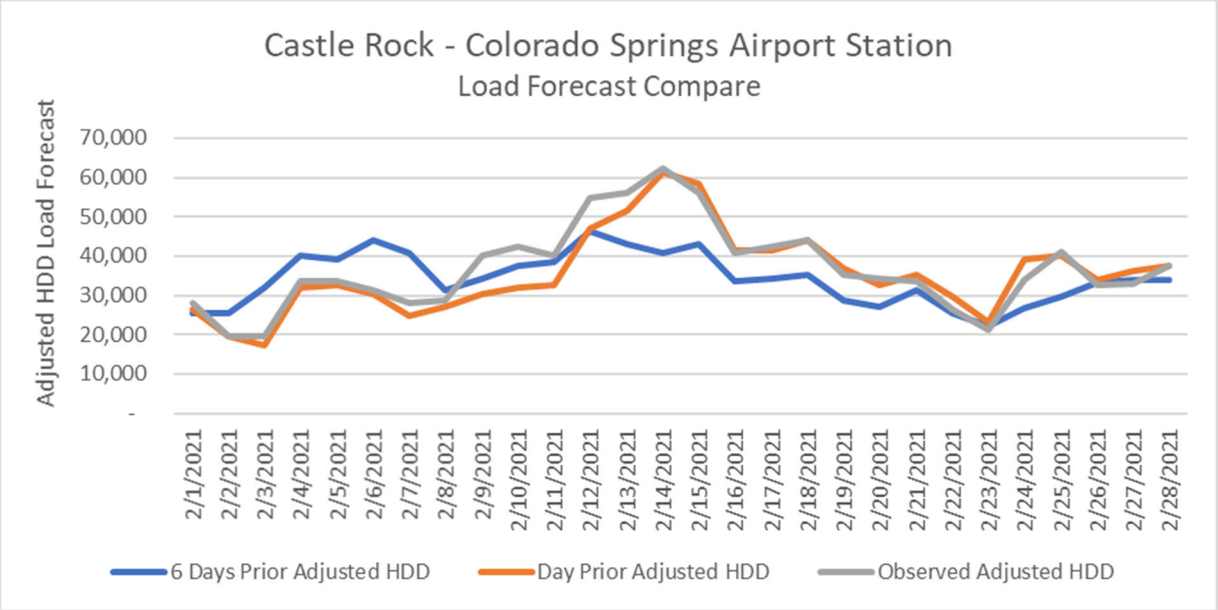


Figure JDB-3 demonstrates that the closer the load forecast is conducted to the observed day, the more accurate it is. This is why during the February Event, BHCG was updating the DSC model twice a day. Also represented here is the volumetric risk associated with attempting to buy gas too far into the future from the delivery day.

Q. WHEN DID DAILY GAS PRICES BEGIN TO INCREASE PRIOR TO THE FEBRUARY EVENT?

A. As shown in Table JDB-1 above, daily prices increased on Thursday, February 11, 2021, but this type of increase in daily prices is not atypical at the beginning of cold weather events due to the expected increase in demand for natural gas for heating.

Q. WHAT ACTIONS DID BHCG TAKE IN ADVANCE OF THE FEBRUARY EVENT TO ENSURE THAT ITS CUSTOMERS HAD AN ADEQUATE SUPPLY OF GAS DURING THE FORECASTED COLD TEMPERATURES?

A. Prior to the February Event, BHCG discussed contingency plans with its suppliers in the event that gas sold to BHCG could not flow due to pipeline constraints or other issues that can occur more frequently during cold weather. I also discussed the potential likelihood of supply freeze-offs and any potential intra-weekend supply availability.

Q. TURNING TO THE FEBRUARY EVENT, WHAT TYPES OF NATURAL GAS SUPPLIES WERE USED BY BHCG TO SERVE ITS CUSTOMERS?

A. BHCG procured natural gas supplies consistent with its GPP and relied on a combination of baseload purchases, storage withdrawals, and daily gas purchases (including firm peaking contracts) to serve its natural gas customers. Examining the February Event, 34.2 percent of BHCG's gas supplies were baseload purchases at an Inside FERC First-of-Month Index. In addition to the baseload, storage represented 13.6 percent priced at WACOG. The remaining 52.2 percent were daily purchases (including 22 percent from peaking purchases). The details of the natural gas purchases made by BHCG during the February Event are provided in Attachment JBD-4 and Attachment JBD-5. A summary of

the total volume of gas purchased by type during the February Event is summarized in the table below.

Table JDB-3: BHCG's Gas Purchases for February Event (Dth)

	Sat, Feb 13, 2021	Sun, Feb 14, 2021	Mon, Feb 15, 2021	Tue, Feb 16, 2021	Wed, Feb 17, 2021
Total State					
Baseload Supplies	60,350	60,350	60,350	60,350	60,350
Daily Purchases	63,048	65,239	53,050	44,050	40,950
Peaking Purchases	45,000	45,000	45,000	30,000	29,000
Storage Gas	22,679	42,736	14,712	16,517	23,374

Q. WHEN DID BHCG PROCURE ITS BASELOAD SUPPLY OF NATURAL GAS THAT WAS USED TO SERVE CUSTOMERS DURING THE FEBRUARY EVENT?

A. BHCG executed baseload contracts and firm peaking contracts that were relied upon during the February Event following a competitive bidding process that occurred in the summer of 2020. BHCG purchased 60,350 Dth of daily baseload and contracted for a volume up to 45,000 Dth of daily firm peaking purchases for February 2021.

Q. DOES BHCG HAVE AN ESTIMATE OF THE COST SAVINGS THAT WERE ACHIEVED BY RELYING ON ITS BASELOAD SUPPLIES DURING THE FEBRUARY EVENT?

A. Yes. During the February Event, the Company's reliance on baseload gas supplies provided considerable protection against the extreme market conditions. The Company estimates that its baseload supply purchases avoided the need to purchase 301,750 Dth at the daily index prices during the February Event, which saved customers approximately $39.2 million.

Q. WHAT WERE BHCG'S PLANNED GAS STORAGE WITHDRAWALS DURING THE FEBRUARY EVENT?

A. BHCG'S planned gas storage withdrawals during the February Event by GCA region are provided in Attachment JDB-4 and are provided in total in Table JDB-4 below. Prior to the February Event, BHCG forecasted 76,553 Dth in planned storage gas withdrawals for February 13-17, 2021.

Q. WHAT WERE BHCG'S ACTUAL GAS STORAGE WITHDRAWALS DURING THE FEBRUARY EVENT?

A. BHCG planned our storage withdrawal to the maximum reasonable extent possible while also ensuring that there were sufficient storage reserves in case of unforeseen supply or pipeline issues due to the cold weather. The table below provides the volumes of storage gas planned and actual withdrawals each day during the February Event.

Table JDB-4: Planned and Actual Storage Withdrawals (Dth)

Total State	Sat, Feb. 13, 2021	Sun, Feb. 14, 2021	Mon, Feb. 15, 2021	Tues, Feb. 16, 2021	Wed, Feb. 17, 2021
Planned Storage Withdrawals	1,227	30,259	21,190	8,976	14,901
Actual Storage Withdrawals	22,679	42,736	14,712	16,517	23,374

Q. WHY DID BHCG WITHDRAW MORE GAS FROM STORAGE THAN INITIALLY PLANNED DURING THE FEBRUARY EVENT?

A. BHCG withdrew more gas from storage than planned because actual observed customer loads were higher than forecasted due to actual observed weather being colder than forecasted. As stated earlier, BHCG's contracted storage capacity is Firm No-Notice. This level of service provided an important balancing tool and to help prevent potential pipeline penalty charges. BHCG's use of its storage supplies also reduced the Company's exposure to the daily index gas prices during the February Event. The flexibility of our gas storage

and prudent management of our inventory allowed BHCG to mitigate the impact of the high prices for daily spot market gas during the February Event. BHCG's use of its gas storage supplies saved our customers $18.4 million in daily spot market purchases.

Q. WHY DID BHCG ALSO MAKE DAILY GAS PURCHASES DURING THE FEBRUARY EVENT?

A. As stated earlier, daily gas purchases are required when the DSC model forecasts customer usage greater than baseload and planned storage supply as was the case during the February Event.

Q. WHEN DID BHCG MAKE ITS DAILY GAS PURCHASES TO SERVE CUSTOMERS DURING THE FEBRUARY EVENT?

A. On Friday February 12, BHCG began contacting counterparties at around 5:40 a.m. for gas supply for the four-day holiday period (February 13-16, 2021). BHCG executed its first transaction at 6:04 a.m. and completed the final transaction at 6:50 a.m. This means that by 6:50 a.m. on February 12, BHCG had locked in its volume of daily gas purchases and the pricing terms with its gas suppliers for gas supplies for February 13-16. For a complete listing of all daily market transactions with time stamps, please refer to Attachment JBD-5.

Q. WHEN DID BHCG HAVE INDICATIONS THAT DAILY GAS PRICES WERE GOING TO BE HIGH OVER THE PRESIDENTS' DAY HOLIDAY?

A. Not until after these daily gas purchases were made. Around 7:30 a.m. on Friday, February 12, BHCG observed elevated gas prices on ICE for gas purchased for delivery on Saturday, February 13. At this early time of the day, it was not known if these prices would continue rising, stabilize, or decrease by the end of the trading day.

Q. WHY DID BHCG PURCHASE ITS DAILY GAS EARLY IN THE MORNING ON FEBRUARY 12?

A. Given the forecasted cold weather and expected high demand for natural gas, BHCG knew there would be increased competition for gas supply. In some areas, BHCG has a limited number of suppliers. If BHCG had waited until later in the day on February 12 to make its needed daily purchases, BHCG would have risked that it would not have been able to purchase a sufficient supply of daily gas to serve customers during the February Event.

Q. CAN YOU PROVIDE MORE DETAILS ABOUT THE TYPES OF DAILY GAS PURCHASES MADE BY BHCG ON THE MORNING OF FEBRUARY 12?

A. BHCG made both daily spot market purchases and called on its existing firm peaking contracts on February 12. These daily spot market purchases and firm peaking contracts were for both ratable and non-ratable daily gas.

Ratable purchases require BHCG to purchase the same amount of gas each day from February 13-16.

Non-ratable purchases allow BHCG the flexibility to change the volume for each day from February 13-16.[6] These types of transactions are not industry norm and are not easy to find as most suppliers cannot offer this type of flexibility.

BHCG used a RFP process to secure a non-ratable firm peaking contract, which was called on during the February 13-16 weekend. In addition, BHCG used our long-standing relationships with suppliers to transact two additional non-ratable daily spot market purchases for the February 13-16 weekend on February 12. The non-ratable supply

[6] Non-ratable purchases are only available on weekends and holidays.

volumes for each day of the four-day period were set when these purchases were executed on the morning of February 12.

BHCG purchased the non-ratable gas because the DSC model predicted higher customer usage for Saturday, February 13 and Sunday, February 14 but lower customer usage for Monday, February 15 and Tuesday, February 16. As shown in the table below, by purchasing non-ratable gas, BHCG was able to adjust its supply volumes to match usage rather than purchasing the same volume of daily gas for each of the four days of the Presidents' Day holiday.

Because we were able to better match supply and demand, BHCG estimates that we saved customers approximately $8.8 million by not purchasing excess gas supplies for Monday and Tuesday. The table below provides a summary of the how these non-ratable purchases provided cost savings to customers. Additional details on the cost savings from the non-ratable purchases are provided in my Attachment JDB-6.

Table JDB-5: February Event Non-Ratable Cost Savings

	2/13	2/14	2/15	2/16	2/17		
	Supply Cost	Supply Cost	Supply Cost	Supply Cost	Supply Cost	Total Cost	Total Savings
Non-ratable Deal 63006	$ 2,965,848	$ 2,965,848	$ 2,965,848	$ 2,200,468	-	$ 11,098,010	$ 647,270
Ratable Deal at Market Price	$ 2,936,320	$ 2,936,320	$ 2,936,320	$ 2,936,320	-	$ 11,745,280	
Non-ratable Deal 60261	$ 2,597,175	$ 2,597,175	$ 2,597,175	$ -	-	$ 7,791,525	$ 3,574,875
Ratable Deal at Market Price	$ 2,841,600	$ 2,841,600	$ 2,841,600	$ 2,841,600	-	$ 11,366,400	
Non-ratable Deal 63008	$ 4,791,867	$ 4,792,250	$ 2,875,350	$ 1,916,900	-	$ 14,376,367	$ 4,567,633
Ratable Deal at Market Price	$ 4,736,000	$ 4,736,000	$ 4,736,000	$ 4,736,000	-	$ 18,944,000	
							$ 8,789,778

Q. YOU MENTIONED THAT SOME OF THESE NON-RATABLE PURCHASES WERE FIRM PEAKING CONTRACTS, PLEASE DESCRIBE THE BENEFITS OF THESE FIRM PEAKING CONTRACTS.

A. As I discussed above, these firm peaking contracts are executed in the summer months and allowed BHCG the ability to call on these suppliers during February Event to purchase certain volumes of gas at Daily Index prices plus a set premium. These firm peaking contracts provided a valuable gas supply source to BHCG during the February Event when there was increased competition for gas. As the pricing for these firm peaking contracts was negotiated prior to the February Event, they also provided customers with protection from the high daily spot market prices. By utilizing these firm peaking contracts to meet BHCG's gas supply needs during February Event, BHCG saved customers approximately $1.4 million as summarized in the table below. Additional details about the cost savings from the firm peaking contracts is provided in Attachment JDB-4.

Table JDB-6: February Event Firm Peaking Contract Savings

		Sat, Feb 13, 2021	Sun, Feb 14, 2021	Mon, Feb 15, 2021	Tue, Feb 16, 2021	Wed, Feb 17, 2021
Total State						
Peaking Purchases	Volume	45,000	45,000	45,000	30,000	29,000
	Total Cost	$ 7,115,450	$ 7,115,450	$ 7,115,450	$ 4,518,275	$ 3,073,725
Peaking Gas Costs @ Contract	Average Price	$ 158.12	$ 158.12	$ 158.12	$ 150.61	$ 105.99
Peaking Gas Costs @ Market Rate		$ 7,555,200	$ 7,555,200	$ 7,555,200	$ 4,713,600	$ 2,999,725
Savings from Peaking Gas		**$ 439,750**	**$ 439,750**	**$ 439,750**	**$ 195,325**	**$ (74,000)**
Total Savings		**$ 1,440,575**				

Q. WHAT WERE THE PRICING TERMS FOR THE DAILY SPOT MARKET GAS PURCHASED BY BHCG ON THE MORNING OF FEBRUARY 12?

A. These daily spot market purchases were made at "Daily Index + Premium/Discount" prices. More detailed pricing information for these daily spot market purchases is available in Attachment JBD-5.

Q. WHY DID BHCG PURCHASE DAILY SPOT MARKET GAS AT "DAILY INDEX + PREMIUM/DISCOUNT" PRICING AS OPPOSED TO A FIXED PRICE DURING THE FEBRUARY EVENT?

A. First, as I mentioned earlier, "Daily Index + Premium/Discount" priced gas is the first type of daily gas that trades each day. Because BHCG has a limited number of suppliers, it is important for BHCG to complete its trades early in the day to ensure that it can purchase its needed daily supplies. BHCG's primary obligation in purchasing gas supplies is to ensure reliable service. BHCG competes with other, and also larger, purchasers of gas supplies. Trading early in the day assists BHCG in ensuring it has an opportunity to obtain necessary gas supplies.

Second, the price for "Daily Index + Premium/Discount" is an effective purchasing practice for risk mitigation. With "Daily Index + Premium/Discount" prices, BHCG avoids the risk of purchasing fixed price gas at a price that is higher than the prevailing market price.

Q. WHEN BHCG MADE ITS DAILY GAS PURCHASES ON THE MORNING OF FEBRUARY 12, DID BHCG ANTICIPATE THAT THE INDEX PRICES FOR DAILY GAS WOULD SETTLE WHERE THEY DID?

A. No, no one did. While prices were slowly increasing prior to the February Event, no one predicted that prices would reach historic levels. The table below shows the sudden, surprising nature of this price spike.

Table JDB-7: February Daily Natural Gas Prices

Feb. 2021	Cheyenne Hub	CIG Rockies	El Paso - Bondad	Kern River Opal	White River Hub
Feb-01	$ 2.565	$ 2.565	$ 2.580	$ 2.650	$ 2.580
Feb-02	$ 2.655	$ 2.660	$ 2.680	$ 2.685	$ 2.660
Feb-03	$ 2.830	$ 2.805	$ 2.810	$ 2.845	$ 2.815
Feb-04	$ 2.805	$ 2.760	$ 2.780	$ 2.815	$ 2.795
Feb-05	$ 2.875	$ 2.835	$ 2.785	$ 2.830	$ 2.830
Feb-06	$ 3.490	$ 3.490	$ 3.410	$ 3.540	$ 3.475
Feb-07	$ 3.490	$ 3.490	$ 3.410	$ 3.540	$ 3.475
Feb-08	$ 3.490	$ 3.490	$ 3.410	$ 3.540	$ 3.475
Feb-09	$ 3.415	$ 3.395	$ 3.295	$ 3.390	$ 3.355
Feb-10	$ 3.475	$ 3.460	$ 3.305	$ 3.390	$ 3.365
Feb-11	$ 5.635	$ 4.825	$ 4.285	$ 4.530	$ 4.805
Feb-12	$ 14.840	$ 13.285	$ 10.695	$ 10.685	$ 12.140
Feb-13	$ 187.690	$ 172.945	$ 79.355	$ 85.560	$ 139.455
Feb-14	$ 187.690	$ 172.945	$ 79.355	$ 85.560	$ 139.455
Feb-15	$ 187.690	$ 172.945	$ 79.355	$ 85.560	$ 139.455
Feb-16	$ 187.690	$ 172.945	$ 79.355	$ 85.560	$ 139.455
Feb-17	$ 92.595	$ 78.200	$ 186.540	$ 160.840	$ 106.725
Feb-18	$ 20.440	$ 19.525	$ 27.190	$ 20.000	$ 19.815
Feb-19	$ 5.810	$ 5.785	$ 6.255	$ 5.405	$ 5.955
Feb-20	$ 3.730	$ 3.655	$ 3.755	$ 3.650	$ 3.770
Feb-21	$ 3.730	$ 3.655	$ 3.755	$ 3.650	$ 3.770
Feb-22	$ 3.730	$ 3.655	$ 3.755	$ 3.650	$ 3.770
Feb-23	$ 2.650	$ 2.665	$ 2.660	$ 2.810	$ 2.705
Feb-24	$ 2.700	$ 2.700	$ 2.715	$ 2.785	$ 2.685
Feb-25	$ 2.630	$ 2.630	$ 2.680	$ 2.750	$ 2.650
Feb-26	$ 2.485	$ 2.480	$ 2.425	$ 2.580	$ 2.440
Feb-27	$ 2.485	$ 2.480	$ 2.425	$ 2.580	$ 2.440
Feb-28	$ 2.485	$ 2.480	$ 2.425	$ 2.580	$ 2.440

Q. PLEASE PROVIDE ADDITIONAL DETAILS AS TO WHAT BHCG WAS DOING DURING THE PRESIDENTS' WEEKEND TO MONITOR THE GAS MARKET AND BHCG'S SUPPLY OF NATURAL GAS?

A. BHCG worked diligently throughout the weekend to ensure customer's reliability needs were met with the necessary gas supplies during the extreme event. In addition to updating our load forecasts twice a day, BHCG personnel worked throughout the holiday weekend

to ensure that all purchased gas was flowing as expected. My team monitored upstream pipeline conditions and notifications and communicated with gas suppliers and scheduling teams to ensure that the gas supplies we purchased were showing up as expected to avoid potential pipeline penalties.

Q. DID BHCG MAKE ANY ADDITIONAL PURCHASES DURING THE PRESIDENTS' DAY WEEKEND?

A. Yes. Based on updated DSC forecast, BHCG purchased additional fixed price daily gas supplies on Sunday, February 14, 2021, for our customers. While there is very limited liquidity in the intra-day market, BHCG was able to find additional gas supply to meet this increase in demand.

This intra-day purchase was also needed so that BHCG could avoid a potential Operational Flow Order ("OFO") penalty for consuming more gas than was purchased. The OFO penalty being assessed by the pipeline at the time was the daily midpoint index price plus $25 per Dth.

Q. DID BHCG INCUR ANY OFO PENALTIES DURING THE FEBRUARY EVENT?

A. No.

Q. DID BHCG'S DAILY SPOT MARKET PURCHASES DURING THE FEBRUARY EVENT RESULT IN GAS SUPPLIES IN EXCESS OF CUSTOMER LOAD?

A. As shown in the table below, on Monday, February 15 and Wednesday, February 17, BHCG's overall gas supply was slightly higher than its actual customer load. While Gas Supply aims to procure only enough gas to meet the forecasted load, there is no way to forecast load with 100 percent accuracy. BHCG seeks to procure sufficient gas supplies to not only meet its customers' needs but to also avoid Under Delivery OFO penalties. As

shown, BHCG procured gas supplies in amounts that were within approximately one percent of actual load.

Table JDB-8: Total Gas Supplies and Actual Load (Dth)

Total State	Sat., Feb. 13	Sun., Feb. 14	Mon., Feb. 15	Tues., Feb. 16	Wed., Feb. 17
Baseload Supplies	60,350	60,350	60,350	60,350	60,350
Daily Purchases	63,048	65,2390	53,050	44,050	40,950
Peaking Purchases	45,000	45,000	45,000	30,000	29,000
Actual Storage Withdrawals	22,679	42,736	14,712	16,517	23,374
Total Supply	191,077	213,325	173,112	150,917	153,674
Actual Load	192,560	210,458	174,170	153,045	153,333
Percentage Supply/Load Difference	-0.78	1.34	-0.61	-1.41	0.22

Q. WHAT HAPPENS WHEN THERE IS MORE GAS SUPPLY THAN CUSTOMER LOAD?

A. If storage service is available; the excess gas will be injected into inventory. Where storage service is unavailable, a pipeline imbalance is created. In Attachment JDB-7, I have provided the total costs of imbalance charges incurred during the February Event, which were minor.

Q. DID THE COMPANY SELL ANY NATURAL GAS DURING THE FEBRUARY EVENT TO OTHER PARTIES?

A. No.

Q. HOW DOES THE AVERAGE PRICE FOR ALL OF BHCG'S GAS SUPPLIES USED DURING THE FEBRUARY EVENT COMPARE TO THE AVERAGE DAILY MARKET PRICE FOR GAS?

A. The average price that BHCG paid for its baseload, storage, and daily gas purchases that was used during the February Event was $85.81 per Dth whereas the five day (February 13-17) average daily index price for gas at the Cheyenne Hub was $168.67 per day.

Q. PLEASE SUMMARIZE WHY BHCG'S GAS PURCHASES FOR THE FEBRUARY EVENT, WERE REASONABLE AND PRUDENT.

A. BHCG's primary obligation is to supply safe and reliable natural gas service to its customers. During the extreme weather and market conditions of the February Event, BHCG was able to provide this service because the accuracy of its load forecasting allowed BHCG to procure sufficient natural gas supplies comprised of baseload, storage, firm peaking, and daily spot market purchases. As daily gas prices spiked, the Company's strategic and proactive purchases of baseload, non-ratable, and firm peaking contracts provided considerable price protection to BHCG customers to the high daily gas prices during the February Event. These contracts provided customers with the following savings: $39.2 million from baseload, $8.8 million from non-ratable, and $1.4 from firm peaking contracts. BHCG was also able to withdraw more gas from storage than planned during the February Event because it subscribes to Firm No-Notice storage contracts saving customers an additional $18.4 million. The Company thus saved customers $67.8 million. The combination of strategic advance planning, advance purchasing, and active management of gas supplies during the February Event allowed the price paid by BHCG

for gas supplies used during time period to come in below the average daily index price for gas on the Cheyenne Hub.

VII. CONCLUSION

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.

Appendix A

Statement of Qualifications

Jay D. Bauer

I received my Bachelor of Science degree in Business Administration with an emphasis in Marketing from Bemidji State University in 1997. After receiving my degree, I began working as a Transportation Sales Representative for C.H. Robinson Worldwide, Inc. in Eden Prairie, Minnesota where my responsibilities included over-the-road freight logistics and transportation contract negotiations. In 1998, I moved to Bismarck, North Dakota and started my career in the natural gas industry at Williston Basin Interstate Pipeline Company as a Customer Service Specialist. As part of the Customer Service team, I balanced customer nominations and allocations as well as confirmed multiple interconnecting pipeline agreements. In 2001, I was offered the role of Gas Control Analyst for Millennium Gas Marketing where my responsibilities included transportation contract optimization and scheduling natural gas deliveries on twenty different pipelines and gathering systems. In 2003, I accepted an offer for Director of Gas Marketing for a start-up company, Liberty Gas Marketing, LLC where I was tasked with investor relations and establishing a market presence to trade natural gas. In 2007 I founded Viking Energy, Inc. and performed all activities relevant to owning and operating a natural gas marketing company. In 2008, I was approached by SourceGas LLC regarding their open Manager, Gas Supply position and I accepted the offer to relocate to Denver, Colorado. I maintained the same role with the title of Sr. Manager, Gas Supply Services following the acquisition of SourceGas by Black Hills Energy in 2016. My current responsibilities include leading the Scheduling and Forecasting functions, developing gas supply plans, and negotiating all physical gas supply purchases for Black Hills natural gas customers in Colorado and most of Wyoming.