BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF BLACK HILLS/ NEBRASKA GAS UTILITY COMPANY, LLC, D/B/A BLACK HILLS ENERGY, FOR APPROVAL OF ITS COST OF SERVICE GAS HEDGE AGREEMENT WITH BLACK HILLS UTILITY HOLDINGS, INC.	))))))))	**DOCKET NO. NG-0086**

DIRECT TESTIMONY OF
JOHN HARMS,
NEBRASKA MUNICIPAL POWER POOL ("NMPP")

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is John Harms. My business address is 8377 Glynoaks Drive, Lincoln, NE 68516.

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

A. I am employed by the Nebraska Municipal Power Pool (NMPP) and assigned as the Director of Risk Management and Compliance.

Q. WHAT ARE YOUR RESPONSIBILITIES AS DIRECTOR OF RISK MANAGEMENT AND COMPLIANCE?

A. As Director of Risk Management and Compliance, I am responsible for identifying, assessing, monitoring, and reporting of risk mitigation and regulatory and legal compliance efforts and their effectiveness. This includes evaluation of the potential financial impacts of both existing and new transactions and their alignment with and support of the objectives and strategies as adopted by the governing boards of NMPP and National Public Gas Agency (NPGA) among other entities.

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE AND QUALIFICATIONS.

A. I became Director of Risk Management and Compliance for NMPP in 2013 and have been employed by NMPP since 1993. My initial duties with NMPP included approximately 10 years as Gas Operations Supervisor where responsibilities included all aspects of procuring, scheduling, and managing all of the gas requirements for the member communities associated with NPGA. This included managing gas and

transportation costs within the goals established by the budget and rates approved by the NPGA governing board, development and recommendations for hedging strategies, and operations management responsibilities for NPGA's interests in gas reserve interests owned by NPGA. I also was promoted to Director of Wholesale Gas for NPGA which in addition to the oversight of gas operations, included the development and recommendation of strategic objectives, business plans, and budgets to the NPGA governing board. Responsibilities included the evaluation and potential risks/rewards associated with future gas supply, delivery, and pricing strategies. During this time, NPGA became a member of Public Gas Partners through which a portion of NPGA's gas supplies are acquired from a gas reserve ownership based program.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of NMPP.

Q. HAVE YOU PREVIOUSLY TESTIFIED OR FILED TESTIMONY BEFORE THE COMMISSION OR COMMISSIONS IN OTHER JURISDICTIONS?

No.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. To discuss risks associated with the long-term hedging Cost of Service Gas Program ("COSG Program") as proposed by Black Hills Utility Holdings, Inc. (BHUH) and to suggest other alternatives that should be considered before approving the COSG Program.

Q. HOW COMMON IS THE USE OF RESERVE BASED ACQUISITION PROGRAMS FOR THE PURPOSE OF HEDGING AGAINST LONG-TERM PRICE INCREASES OF NATURAL GAS?

A. While there are several examples of these types of programs, these types of programs are not common and would not typically be included in a diversified hedging program.

Q. WHY ISN'T THIS TYPE OF HEDGING TOOL MORE COMMONLY USED?

A. These types of programs often have an un-definable end term and are somewhat speculative in nature. Natural gas and oil production is inherently speculative due to the nature of its long-term investment requirement and relatively short-term commitments from end-users. It is a segment of the industry that typically is better suited for stakeholders with the ability to place capital at risk. BHUH suggests that now is a favorable time to acquire reserves due to the current low spot market price outlook created by excess productive capacity in the natural gas industry. While that is a possibility, there is also the possibility that even at today's historically low reserve acquisition cost levels that the cost of producing gas from acquired reserves may exceed future market price levels resulting in the need for a revenue guarantee from Nebraska rate payers in the form of a "Hedge Cost" provision.

Q. HOW PREDICTABLE ARE THE COSTS OF PRODUCING GAS FROM RESERVES?

A. Initial acquisition, operating, and development costs are fairly predictable. However, long-term operating and future development costs are difficult to predict. Long-term labor, material, and equipment costs necessary to maintain production from reserves will be determined by inflationary factors that primarily impact wages and materials.

Additionally, costs for environmental compliance over the life of these types of assets are completely unknown and could be significant for certain types of production. Also, at the end of the production life of a gas well, abandonment and environmental clean-up costs are difficult to project.

Q. HOW EFFECTIVE CAN THIS TYPE OF PROGRAM BE IN REDUCING FUTURE RATE VOLATILITY?

A. This type of program would likely reduce rate volatility because the cost of producing gas from reserves would not be influenced by year-to-year fluctuations in market prices for natural gas; however, reduced volatility doesn't necessarily equate to savings compared to the market.

Q. HOW EFFECTIVE CAN THIS TYPE OF PROGRAM BE IN PROTECTING CUSTOMERS AGAINST LONGER-TERM INCREASES IN NATURAL GAS PRICES?

A. Any potential protection is predicated on the assumption that the reserves consist of a diversified portfolio of production assets that consist of reserve interests in multiple wells and supply basins. It would not be prudent to concentrate the investment in reserves in one specific production region when in fact Nebraska physical supply prices are often influenced by national supply/demand factors affecting both Rocky Mountain and Mid-continent supplies. An effective reserve based hedging program would require that the prices paid to BHUH for the production would closely track the actual prices paid by BHUH for physical supplies delivered to customers.

Moreover, if the guaranteed return on equity proposed by BHUH consumes the majority of the total potential profit margin, the remaining benefit to the consumers might not justify the long-term undefinable term of the program and the potential risks of uncompetitive prices. A comparison of BHUH's requested rate of return on equity should be compared to historical producer profit margins.

Q. ARE THERE OTHER RISKS ASSOCIATED WITH RESERVE BASED HEDGING PROGRAMS?

A. If the reserve based hedging strategy results in gas costs that are higher than other states or if gas rates relative to other energy sources make conversions to other energy sources attractive, there are some significant competitive issues that may arise.

For example, if alternative power generation sources and increases in energy efficiency make electricity an attractive alternative for space heating, significant gas usage reduction within the BHUH distribution areas may result in a COSG gas hedging position that is significantly higher than the targeted 50% level. While shorter term hedging and acquisition plans can be reduced quickly, reserve based hedging levels may not.

Also, if anticipated future market gas price increases do not occur and hedges through the COSG program create above market costs for a sustained period of time, Nebraska could be at a competitive disadvantage from an economic development viewpoint.

As mentioned earlier, the COSG program might also prove to be an inefficient method of hedging against future rate increases if the price volatility where the reserves are sold into the pipeline system does not correlate well with the price volatility in locations where actual physical supplies are purchased for physical delivery into the BHUH distribution systems. As described in the BHUH filing, the actual gas produced by the reserves is not delivered to the distribution systems. It is sold into the market in the area in which it is produced and physical gas for delivery into distribution systems is purchased at locations where BHUH has sufficient pipeline capacity to complete delivery. If there are pipeline constraints that limit prices paid to producers in the production area, while prices beyond the constraint and nearer to market are higher due to demand exceeding supply, the resulting hedge relationship may deteriorate.

Also regarding constraints, the fact that Nebraska is relatively close to both Mid-Continent and Rocky Mountain supply basins tends to give Nebraska a competitive advantage over regions of the country where demand consistently exceeds supply. However, any physical capacity constraints that limit the ability to deliver gas into and throughout Nebraska tend to reduce that competitive advantage. Just as the addition of an additional traffic lane helps all drivers on a congested stretch of road, the addition of extra pipeline capacity in Nebraska helps all consumers. This may be a better use of long-term cost commitments from consumers than COSG.

Q. WHAT SHOULD THE COMMISSION CONSIDER WHEN MAKING A PRUDENCE DETERMINATION ON COSG?

A. As stated by BHUH, the COSG program is designed to be a long-term hedging program with stated goals of reducing customer exposure to price volatility, provide long-term price stability, and to provide an opportunity for customers to pay less than market prices over the long term. The Commission should first determine what the most important objectives are for consumers on the BHUH system. The basis for any hedging program should be a determination of the key objectives of the program.

Q. ARE THERE OTHER HEDGING OPTIONS THAT SHOULD BE CONSIDERED?

A. As part of the prudency requirement of the Commission, there likely are other hedging options that should be evaluated. BHUH has submitted testimony that indicates the limitations of their current 1-2 year hedging practices, 10-20 year purchase gas agreements, and the potential value of long-term hedging via a reserve acquisition program. However, there are other 1-7 year hedging strategies that could be considered that could be supported using a revenue guarantee similar to the "Hedge credit/cost" mechanism proposed by BHUH.

In the wake of the unbundling of the natural gas industry in the early 1990's, a wide variety of financial tools became available to both producers and consumers of natural gas for the primary purpose of managing price risks. Various uses of futures, options, and other financial derivatives are the tools that the majority of industrial, commercial, and residential hedging programs use today. These tools, combined with other storage and transportation management practices usually allow consumers to satisfy their objectives of reduced price volatility and increased cost stability over time.

Whether these tools are employed by individual consumers or as part of an approved rate based program for a customer class, the use of such hedging practices helps consumers meet their objectives while avoiding all the regulatory and production risks associated with the producer side of the natural gas industry.

Q. WHAT IS YOUR RECOMMENDATION?

A. There are other strategies that the Commission should evaluate and understand in conjunction with the COSG review. The Commission is in a position to ask BHUH to submit, in confidence, potential hedging strategies based on the following premise:

"If given a 7 year rolling program commitment, what types of hedging strategies could you offer to end-use consumers if given the ability to pass-through actual hedge results?"

BHUH is familiar with Nebraska consumers and their needs and should be able to submit potential strategies which target individual customer objectives on a relatively short time schedule. They obviously would not want to share their proprietary strategies publicly, but submitted strategies that can be customized to meet consumer objectives such as reduced volatility, increased rate stability, or rate competiveness could easily be "back-tested" on historical actual market price relationships to illustrate effectiveness.

Alternatively, there are many energy management consulting firms who could provide alternative hedging strategies that are market based and appropriate for the various

natural gas customer classes in Nebraska. A review of hedging programs that have been adopted by rate regulating authorities in other states should also be considered.

Additionally, the Commission should consider that there may be some customers who prefer to receive market prices and have based their previous decisions to install natural gas consuming systems on their own evaluation of natural gas costs relative to other alternatives. These consumers likely should not be forced into acceptance of a price managed program.

While COSG will likely help reduce price volatility and increase rate stability, it is not certain that in the long-run that COSG will yield significant average cost savings. These programs are in limited use nationally due to the aforementioned risks and a more prudent exposure to COSG might be more in the 10-20% range of hedging and not the 50% suggested by BHUH. However, final approval of any level should not occur until other hedging strategies have been solicited and evaluated.

Q. DOES THAT CONCLUDE YOUR PREPARED DIRECT TESTIMONY?

A. Yes, thank you.

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STATE OF NEBRASKA	)	
COUNTY OF LANCASTER	)	**Affidavit Adopting Direct Testimony**

John Harms being first duly sworn on oath, states that he is the John Harms whose Direct Testimony in the above-captioned proceeding accompanies this Affidavit.

John Harms further states that such Direct Testimony is a true and accurate statement of his answers to the questions contained therein, and that he does adopt those answers as his sworn Testimony in this proceeding.

John Harms

On this 10th day of February, 2016, before me, the undersigned, a Notary Public commissioned and qualified for in said County, personally came John Harms, to me known to be the identical person whose names are affixed to the foregoing Testimony and acknowledged the execution thereof to be his voluntary act and deed.

WITNESS my hand and Notary Seal the day and year last above written.

Notary Public
My Commission Expires: 2/5/17

GENERAL NOTARY - State of Nebraska
BRITTANY H MILLARD
My Comm. Exp. February 5, 2017

CERTIFICATE OF SERVICE

On this 12th day of February, 2016, a true and correct copy of the foregoing Testimony was mailed by electronic mail and United States Mail, First Class, postage prepaid to:

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