EXHIBIT 8
Direct Testimony and Exhibits
CHRISTOPHER J. KILPATRICK

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

In the Matter of the Application of Black Hills Power, Inc.

To Approve Tariff Revisions Related to Its Cost of Service
Gas Agreement With Black Hills Utility Holdings, Inc.

Docket No. EL 15 –__

September 30, 2015

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Exhibits

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Christopher J. Kilpatrick, 625 Ninth Street, P.O. Box 1400, Rapid City, South Dakota 57701.

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

A. I am employed by Black Hills Utility Holdings, Inc. ("BHUH"), a wholly-owned subsidiary of Black Hills Corporation ("BHC"), as Director of Regulatory Services.

Q. FOR WHOM ARE YOU TESTIFYING?

A. I am testifying on behalf of Black Hills Power, Inc. (the "Company").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND BUSINESS BACKGROUND.

A. I am a graduate of Mount Marty College in Yankton, South Dakota, with a Bachelor of Arts Degree in Accounting. I am a Certified Public Accountant, a Chartered Global Management Accountant, a member of the American Institute of Certified Public Accountants, and a member of the South Dakota CPA Society. My work experience includes working for two public accounting firms from 1994 through 1999. The first was Wohlenberg, Ritzman, and Co., located in Yankton, South Dakota, and the second was Ketel Thorstenson, LLP, located in Rapid City, South Dakota. I began my career with BHC in January 2000 in the internal audit department. In August 2003, I became the controller of Black Hills FiberCom until February 2005 when I accepted the position of Director of Accounting – Retail Operations. In August 2008, I became Director of Rates. In 2011, I accepted an expanded role, responsible for both electric rates and resource planning. In 2013, BHC reorganized its Resource Planning department, and I am now the Director of Regulatory.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A. Yes.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. My testimony explains and supports the Company's application by describing and addressing various accounting and regulatory issues associated with the Cost of Service Gas Program (the "COSG Program") including: how "Hedge Credits" and "Hedge Costs" will be calculated under the Cost of Service Gas Agreement; how revenues, expenses, and return on equity will be calculated; how forecast and actual costs, and ultimately Hedge Credits and Hedge Costs, will be trued-up; and how the Company's Fuel and Purchased Power Adjustment ("FPPA") tariff sheets will be modified in light of the COSG Agreement.

III. GENERAL OVERVIEW OF ACCOUNTING AND REGULATORY TREATMENT

Q. CAN YOU PROVIDE AN OVERVIEW OF HOW THE COSG PROGRAM WILL BE MANAGED FROM AN ACCOUNTING AND REGULATORY STANDPOINT?

A. Yes. The accounting for the COSG Program will commence with COSGCO (the entity that would acquire the gas reserve interests) in accordance with the COSG Agreement, and will include the determination of revenues, expenses, assets and liabilities included in the COSG Program. The financial results from COSGCO's operations (including its revenues from the market sale of its gas and other hydrocarbons and its expenses from production activities) will be forecast for six-month periods as described later in my testimony. These forecasts will be used to calculate whether customers will receive a Hedge Credit or pay a Hedge Cost each month. All other existing accounting processes and procedures will remain in place for the FPPA but will also include the projected Hedge Credits or Hedge Costs. After the end of each calendar year, COSGCO's actual financial results will be used to calculate the actual Hedge Credit or Hedge Cost for the calendar year, and any differences from the forecast amounts will be trued-up annually in a reconciliation. When customers receive Hedge Credits, their cost for gas will effectively be discounted from the market prices at the time, because the Hedge Credits will offset part of the Company's gas supply costs. If the Company incurs a Hedge Cost, it will pay an additional amount for the hedge and associated price stability benefits of the COSG Program.

Q. WHAT IS THE SOURCE OF THE ACCOUNTING GUIDANCE THAT WILL BE FOLLOWED FOR THE COSG PROGRAM?

A. ASC 932 - Accounting for Oil and Gas Exploration and ASC 980 (formerly known as FAS 71- Accounting for the Effects of Certain Types of Regulation) will be used to account for the effects of the COSG Agreement. Accounting for oil and gas production is a specialized and unique form of energy accounting. COSGCO will use the oil and gas industry standard chart of accounts to record all revenues, expenses, assets and liabilities. Attached as Exhibit 8.1 is a condensed chart of accounts that will be used for the COSG Program and how these accounts track back and forth from FERC to oil accounts and gas accounts.

Q. PLEASE DESCRIBE THE INTERNAL CONTROLS THAT WILL BE PUT IN PLACE TO ENSURE ACCURATE FINANCIAL REPORTING AND CALCULATIONS UNDER THE COSG AGREEMENT.

A. COSGCO will rely on a third party or BHEP to operate the wells to produce gas, either as a contract operator or as the operator under a joint operating agreement ("JOA"). Standard industry practice includes measures that substantially protect a non-operator. For example, under the standard industry form of JOA, COSGCO will (i) receive detailed monthly invoices for all costs (called "JIBs" by the industry, which is short for joint interest billings) calculated using the standard form accounting procedures (called the "COPAS" by the industry because it was developed by the Council of Petroleum Accountants Societies), and (ii) have audit rights. A sample JOA, including the COPAS, is attached as Exhibit 4.3 to the Direct Testimony of John Benton. Furthermore, COSGCO will utilize the expertise and experience of Black Hills Exploration and Production, Inc. ("BHEP") in oil and gas accounting. In addition to the protection provided by these standard industry procedures, there are also internal controls that will further ensure accurate financial accounting and calculations. COSGCO will be a company within Black Hills Corporation and will be subject to the same internal control standards as all other companies. These standards will be in compliance with Sarbanes Oxley and part of the annual audit currently performed by Deloitte and Touche.

Q. WILL A THIRD PARTY VERIFY THE FINANCIAL REPORTING AND HEDGE CALCULATIONS UNDER THE COSG AGREEMENT?

A. Yes. As required by Section 5.5 of the COSG Agreement, BHUH will provide the Company with an annual report containing COSGCO's financial statements, plus other information related to the calculation of Hedge Credits and Hedge Costs and the performance of the COSG Program. The independent Accounting Monitor will also provide an assurance report, which will assess whether BHUH's report is materially correct and consistent with the COSG Agreement. The

Company will file the report and the Accounting Monitor's conclusions with the Commission as part of its next FPPA filing.

IV. HEDGE CREDITS AND HEDGE COSTS

Q. WILL THERE BE A REVENUE REQUIREMENT CALCULATED UNDER THE COSG PROGRAM TO DETERMINE HEDGE CREDITS AND HEDGE COSTS?

A. In a matter of speaking, yes, although it is somewhat different than in a traditional regulatory setting. Hedge Credits and Hedge Costs will be calculated in accordance with the provisions and formulas set forth in the COSG Agreement, which effectively equate to a revenue requirement in a traditional regulatory setting. Consequently, there is a revenue requirement, including an allowed return on equity, imbedded in the calculation of Hedge Credits and Hedge Costs, which are based on COSGCO's financial performance.

Q. CAN YOU GENERALLY DESCRIBE HOW HEDGE CREDITS AND HEDGE COSTS WILL BE CALCULATED UNDER THE COSG PROGRAM?

A. Yes. In simple terms and as provided in the COSG Agreement, Hedge Credits and Hedge Costs will be calculated by first dividing "Net Income" (which will be calculated using the total revenues COSGCO receives from the market sales of its natural gas and other hydrocarbons to third parties, less operating expenses, interest expense, and income taxes) by "Invested Equity" (which will be 60% of

"Investment Base," namely 60% of the net capital COSGCO has invested in the acquisition and development of the gas reserves). The quotient is the "Actual ROE" under the COSG Agreement, which is used to calculate a Hedge Credit or Hedge Cost. To the extent the Actual ROE is more than 100 basis points greater than the "Allowed ROE" under the COSG Agreement, then the Company would receive a Hedge Credit from BHUH, which amount would flow through to the benefit of customers. On the other hand, to the extent the Actual ROE is less than the Allowed ROE by more than 100 basis points, then BHUH will assess a Hedge Cost to the Company. An illustration of this calculation is shown in Exhibit 8.2, pages 1 and 2.

Q. HOW WILL CUSTOMERS RECEIVE THE HEDGE CREDIT OR COST?

A. Customers will receive the Hedge Credit or Cost based on a six-month forecast. This forecast will be completed in November and May, respectively, for each six-month forecast period (i.e., January through June, and July through December). An example forecast for each period is shown in Exhibit 8.2, pages 3 and 4.

Q. PLEASE DESCRIBE EXHIBIT 8.2 PAGES 3 AND 4.

A. As described above, the starting point in determining a Hedge Credit or Cost is the financial performance of COSGCO. Pages 3 and 4 of Exhibit 8.2 show how the financial performance of COSGCO is reflected and how the resulting Hedge Credit or Cost is calculated. The forecast completed for each six-month period will also incorporate the 100 basis-point band as risk for BHUH. This is illustrated on pages 3 and 4 of Exhibit 8.2 on line 17 as a deadband in the calculation.

V. INVESTMENT BASE

Q. PLEASE EXPLAIN HOW INVESTMENT BASE WILL BE CALCULATED.

A. As provided in the COSG Agreement, Investment Base will consist of the average of the forecast capitalized costs at the end of each calendar month during each six-month forecast period to identify, acquire and develop reserve interests, less any accumulated depletion, depreciation, amortization, and net accumulated deferred taxes. Investment Base will include such components as: lease acquisition costs; capital investments; drilling, completion and tangible equipment costs; and compression, gathering and processing capital costs.

Q. IS THIS APPROACH SIMILAR TO THE APPROACH USED IN TYPICAL RATEMAKING CONTEXTS?

A. Yes it is. Under the COSG Program, the COSG Agreement allows the recovery of prudently-incurred expenses and a return on and a return of investment base in the same way that the Company typically recovers for prudently-incurred expenses and a return on and a return of rate base in other contexts.

Q. WOULD THE FORECASTS START WHEN THE COSG AGREEMENT IS SIGNED OR WHEN COSGCO ACTUALLY ACQUIRES ITS FIRST RESERVE INTEREST?

A. Forecasts would begin as close as practical to when COSGCO acquires its first reserve interest and gas is produced.

Q. WILL CONSTRUCTION WORK IN PROGRESS ("CWIP") BE INCLUDED IN THE INVESTMENT BASE?

A. No, CWIP will not be included in Investment Base. As an example, if a well is drilled, the capital costs to drill the well will be included in Investment Base when the well begins producing natural gas.

Q. WHEN WILL THE CAPITAL COSTS TO ACQUIRE INTERESTS IN GAS RESERVES BE INCLUDED IN INVESTMENT BASE?

A. The capital costs to acquire interests in gas reserves will be included in Investment Base as those interests are acquired. For example, when COSGCO acquires reserves, those reserves will be included as an asset on COSGCO's books and the acquisition cost would be included in the Investment Base used to calculate Hedge Credits and Hedge Costs from that point forward.

Q. IF COSGCO EARNS INTERESTS IN GAS RESERVES THROUGH DRILLING RATHER THAN PURCHASING INTERESTS, HOW WOULD THE INVESTMENT BASE BE DETERMINED?

A. If COSGCO earns interests in gas reserves through drilling under a joint development agreement, COSGCO's capital costs to drill the wells will be included in Investment Base as the wells are drilled and gas is produced, rather than when the joint development agreement is signed.

Q. WHAT ELSE WOULD BE INCLUDED IN INVESTMENT BASE?

A. Consistent with traditional ratemaking policies for both natural gas and electric utilities, payments for consultants, attorneys, and other costs to assess and complete a reserve transaction will be recorded to a Preliminary Natural Gas Survey and Investigation Charges Account. If the transaction is made, these costs will become part of Investment Base as described above. However, if the transaction is not made, these costs will not become part of Investment Base, but instead will be recovered through depletion accounting consistent with generally accepted accounting principles, FERC rules, and the COSG Agreement.

VI. NET INCOME UNDER THE COSG PROGRAM

Q. PLEASE EXPLAIN HOW NET INCOME WILL BE CALCULATED UNDER THE COSG PROGRAM.

A. As provided in the COSG Agreement, Net Income will be derived by calculating revenues minus expenses in accordance with generally accepted accounting principles and the COSG Agreement. Specifically, Net Income will be calculated based on the proceeds that COSGCO receives from the market sale of its share of production and hydrocarbons from the wells. That amount will be netted against the following: (i) COSGCO's operating expenses (e.g., lease operating expenses, processing, transportation and marketing costs, and accruals for future plugging, abandonment, and other anticipated asset retirement expenses), (ii) BHUH's implied interest expense reflecting the COSG Agreement's capital structure and cost of debt, and (iii) BHUH's income tax expense (both current and deferred). This calculation is shown in Exhibit 8.2 pages 1 and 2 based on a hypothetical example for illustrative purposes only.

Q. WHAT ARE THE OPERATING EXPENSES THAT WOULD BE INCLUDED IN THE CALCULATION OF NET INCOME (AND THE CALCULATION OF HEDGE CREDITS AND HEDGE COSTS)?

A. Generally, the same types of expenses recovered in the ratemaking process in the traditional natural gas and electric utility context will be used in calculating Net Income under the COSG Program. For example, COSGCO will incur direct costs for running the business, such as labor costs, associated benefits, and operation and maintenance costs. In addition, there may also be direct costs from Black Hills Service Company ("BHSC"), BHUH, and BHEP to the extent they render services to COSGCO.

Q. PLEASE EXPLAIN THE TYPE OF COSTS THAT COULD COME FROM THOSE OTHER COMPANIES.

A. Costs COSGCO incurs for the direct support and operation of the COSG Program will be directly charged by the respective supporting companies and will be added to the costs otherwise incurred by COSGCO to acquire, develop, and operate its reserves. For example, when BHEP provides direct consulting or other assistance to COSGCO, the costs for that support will be directly charged to COSGCO and included in the calculation of Net Income under the COSG Agreement. In addition, BHSC could provide such things as accounting services, legal support, and environmental services. The COSG Program will benefit from COSGCO's ability to leverage the existing expertise and systems of BHC.

Q. WILL COSGCO BE INCLUDED IN THE ALLOCATION OF COSTS UNDER BHUH'S OR BHSC'S COST ALLOCATION MANUALS?

A. No. As provided in Section 5.6 of the COSG Agreement, no indirect charges shall be allocated to BHUH's performance of the COSG Agreement under BHUH's or BHSC's cost allocation manuals. Because the COSG Program is a hedging program that flows through the Company's FPPA filings, it would be inconsistent with practice and inappropriate to allocate overhead charges to the COSG Program. Currently indirect costs are not allocated to the FPPA as indirect costs are included in base rates and should remain in base rates to be reviewed through normal rate case procedures.

Q. WILL THE COST ALLOCATED MANUALS BE UPDATED TO REFLECT THIS APPROACH?

A. Yes. The cost allocated manuals will be updated when the COSG Program is approved.

Q. WHAT IS DEPLETION ACCOUNTING AND HOW IS IT APPLICABLE TO THE COSG PROGRAM?

A. Depletion accounting is used to account for the recovery of the capital costs associated with oil and gas reserves over time. Depletion is to hydrocarbon reserves as depreciation is to tangible equipment; both are means by which capital is expensed (i.e., recovered) over time. Generally Accepted Accounting Principles provide for two acceptable methods of accounting for depletion. The two methods are either Full Cost or Successful Efforts. The COSG Program will use the Full Cost Method, which is consistent with FERC guidance. Aaron Carr's Direct Testimony explains the benefits to customers of using the Full Cost Method. Standard depreciation principles would continue to dictate when other capital costs, such as the costs for equipment, are expensed.

Q. HOW DOES DEPLETION ACCOUNTING DIFFER FROM DEPRECIATION ACCOUNTING PRINCIPLES?

A. Each method is based on a systematic and rational manner to allocate the service value on an annual basis over the service life of the asset. However, depletion is based on the useful life of each well and the amount of production that will come from those wells. For a simple illustrative example, suppose a natural gas well costs $12,000,000 to drill and has an estimated asset retirement cost of $500,000. The well is expected to produce approximately 10 Bcf of natural gas over its life, which would result in a depletion expense of $1.20 per produced Mcf (i.e., [$12,000,000 + $500,000] ÷ 10 Bcf). Therefore for every Mcf produced from this hypothetical well, a corresponding expense of $1.20 would be recorded in the financial statements to reduce Investment Base. Depletion accounting becomes more complex as all the wells are analyzed collectively under the concept of depletion "pooling" to determine the depletion rate to use for all wells. Pursuant to ASC 932, for depletion purposes, COSGCO's capital investments in gas reserves will be aggregated at a reservoir or field level when they share common geological structural features. The reserve estimates used in calculating depletion will be updated annually and verified by the independent Hydrocarbon Monitor.

VII. RETURN ON EQUITY

Q. HOW WILL ACTUAL ROE BE CALCULATED UNDER THE COSG PROGRAM?

A. The COSG Agreement provides that Actual ROE will be calculated in much the same way it is under traditional rate making procedures. Net Income will be compared to Investment Base, and the quotient will be the Actual ROE.

Q. WHAT RETURN ON EQUITY WILL BE USED IN THE CALCULATION OF HEDGE COSTS AND HEDGE CREDITS?

A. The actual ROE earned under the COSG Program will be either the Allowed ROE or a risk-adjusted ROE within a range of minus 100 basis points to plus 100 basis points of the Allowed ROE, as discussed above.

Q. HOW IS THE ALLOWED ROE CALCULATED?

A. Under the COSG Agreement, Allowed ROE will constitute "the average of the annual return on equity in all gas and electric utility rate cases for the calendar year, as subsequently reported by Regulatory Research Associates, *provided* that if less than twenty (20) gas and electric utility rate cases are reported for a calendar year, then Allowed ROE for that calendar year shall equal the average of (i) the average of the annual return on equity in all gas and electric utility rate cases for that calendar year, and (ii) the average of the annual return on equity in all gas and electric utility rate cases for the prior calendar year, all as reported by Regulatory Research Associates." COSG Agreement, Article 1, at 2. Witness Adrian McKenzie discusses in detail how Allowed ROE is determined and explains why this approach is reasonable.

VIII. ANNUAL TRUE-UP OF HEDGE CREDITS AND COSTS

Q. WILL FORECAST HEDGE CREDITS AND HEDGE COSTS BE TRUED-UP BASED ON COSGCO'S ACTUAL PERFORMANCE?

A. Yes. Hedge Credits and Hedge Costs will be forecast before January 1 and July 1 for the following six-month period. Section 5.3 of the COSG Agreement provides for an annual reconciliation of those forecasts. No later than ninety days after the end of each calendar year, BHUH will reconcile the forecast Hedge Credits and Hedge Costs for the completed calendar year against the actual Hedge Credits and Hedge Costs for the completed calendar year, which will be calculated using COSGCO's actual performance during that calendar year and the actual Allowed ROE for that calendar year. (The report from Regulatory Research Associates used to determine the actual Allowed ROE for the completed year will not be available until mid- to late January.) See Exhibit 8.2, pages 5 and 6. Once this calculation is completed for the entire COSG Program, the Company's proportionate share of any necessary adjustment will be reflected in the next six-month period, which would be in approximately May of each year. This reconciliation process will ensure that the Company and its customers are receiving the actual benefits or paying the actual costs of the COSG Program and will be reflected in customer rates for six months beginning in July. See Exhibit 8.2, page 7 for an illustration of how this would work.

Q. ARE THERE MECHANISMS TO MITIGATE THE POSSIBILITY OF LARGE ANNUAL ADJUSTMENTS?

A. Yes. Utilizing six-month forecasts rather than annual forecasts is one mechanism to mitigate the possibility of large annual adjustments. The forecasts, particularly in the early years of the COSG Program, may also include an adjustment to reflect anticipated differences between the prior forecasts and actuals to date.

IX. <u>TARIFF SHEETS</u>

Q. WILL TARIFF SHEETS NEED TO BE MODIFIED TO IMPLEMENT THE COSG PROGRAM?

A. Yes. The Company's FPPA adjustment clause tariff sheet will need to include a new variable as part of the formula for costs to be recovered from customers. The reason to make these changes in the Company's tariff sheet is to make sure all stakeholders are aware of how the COSG Program benefits and costs will flow into the adjustment clauses. This provides transparency and helps provide guidance on future audits of those adjustment clauses.

Q. WHAT SPECIFIC CHANGES WOULD BE MADE TO THE COMPANY'S TARIFF SHEET?

A. Attached as Exhibit 8.3 is a redline version of the Company's tariff sheet showing the modifications that would be necessary to incorporate the COSG Program.

X. <u>CONCLUSION</u>

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.