

address approval of the revised tariffs; and

(3) granting such waivers, conditions, approvals or other and further relief as the Commission deems necessary or appropriate, consistent with this Application.

INFORMATION PROVIDED PURSUANT TO ADMINISTRATIVE RULES

In support of this Application and in compliance with the Administrative Rules, Black Hills Power states as follows:

A) The name and address of the public utility:

Black Hills Power, Inc.
625 Ninth Street
PO Box 1400
Rapid City SD 57701

B) The following documents are submitted with this filing:

1. Application for Approval of Tariff Revisions (Exhibit 1), Proposed Revised

Tariff (Exhibit 2), and including witness testimony and exhibits of the following witnesses:

Exhibit 3	Ivan Vancas , Vice-President, Operations Services, Black Hills Corporation
Exhibit 3.1	Cost of Service Gas Agreement
Exhibit 3.2	Percentages of Gas Supply Purchases by Type
Exhibit 3.3	Summary of Financial and Operational Terms
Exhibit 3.4	Diagram of Possible Structures for COSG Program

Exhibit 4	John Benton , Vice-President and General Manager, Black Hills Exploration
Exhibit 4.1	Well design diagram
Exhibit 4.2	Sample Production Decline curves
Exhibit 4.3	Sample Joint Operating Agreement

Exhibit 5	Julia M. Ryan , Aether Advisors LLC
Exhibit 5.1	Gas Supply Portfolio Design

Exhibit 6	Richard C. Loomis , Vice-President, Energy Asset Optimization, BHUH
Exhibit 6.1	Chart of Historical Gas Prices
Exhibit 6.2	Price Forecast
Exhibit 7	T. Aaron Carr , Director of Corporate Development, Black Hills Corporation
Exhibit 7.1	Cost of Capital Calculation
Exhibit 7.2	COSG Model
Exhibit 8	Christopher J. Kilpatrick , Director of Regulatory, BHUH
Exhibit 8.1	Condensed Chart of Accounts
Exhibit 8.2	Sample Calculation of Hedge Cost/(Credit) and Annual Hedge Reconciliation
Exhibit 8.3	Redline version of tariff sheet
Exhibit 9	Adrien McKenzie , FINCAP, Inc.
Exhibit 9.1	Qualifications
Exhibit 9.2	Authorized ROEs
Exhibit 9.3	Risk Premium – Combination Group
Exhibit 9.4	Risk Premium – Gas Group
Exhibit 9.5	Expected Earnings Approach – Combination Group
Exhibit 9.6	Expected Earnings Approach – Gas Group
Exhibit 9.7	Capital Structure – Combination Group
Exhibit 9.8	Capital Structure – Gas Group
Exhibit 9.9	Capital Structure – E &P Group

2. Report of Tariff Change:

Proposed revisions to the FPPA tariff in legislative and non-legislative version are attached as Exhibit 2. Specifically, Section No. 3C, the Second Revised Sheet No. 13, cancels First Sheet No. 13.

C) The Company proposes that the tariff revision be effective upon approval by this Commission. Black Hills Power requests that this tariff revision be approved without the requirement of posting a bond or other security.

D) The following is a brief description of the tariff revision:

With the assistance of BHUH, Black Hills Power presently acquires natural gas for fuel for electric generation from producers, marketers and counter-parties under various types of contracts. Black Hills Power passes through its costs to acquire gas supplies under these contracts pursuant to its Fuel and Purchased Power Adjustment tariff. The proposed tariff revision facilitates Black Hills Power's ability to pass through the gas costs incurred to acquire gas under the COSG Agreement as part of its natural gas commodity procurement strategies, similar to the way other fuel costs are passed through the tariff.

E) The reasons for the proposed changes:

After significant research and review, and as discussed in more detail below, Black Hills Power has concluded that the COSG Agreement will provide substantial, long-term benefits to Black Hills Power's customers. Specifically, the COSG Agreement establishes a long-term hedging program that is expected to reduce Black Hills Power's customers' exposure to the volatility of gas market prices, to provide long-term price stability through a physical hedge, and to provide an opportunity for customers to pay less than market prices over the long term.

F) The estimated number of customers whose cost of service will be affected by the proposed tariff revisions and the annual changes in cost of service to such customers is as follows:

All of Black Hills Power's approximately 64,000 South Dakota retail customers would be affected by the proposed tariff revision. The proposed tariff revision is reasonably anticipated to decrease the cost to these customers over the long term. As explained in more detail in the supporting testimony, the precise magnitude of the decrease cannot be quantified at the present time because the gas reserves for the hedging program have not been identified, presented for approval, or acquired. Once those actions have been taken, Black Hills Power can provide an approximate figure for the expected decrease in costs.

G) Notices:

Black Hills Power will provide notice to the public, if any, as directed by the Commission.

H) This Application and attachments includes a statement of the facts, expert opinions, documents and exhibits to support the proposed tariff change.

DESCRIPTION OF BLACK HILLS POWER, BHC AND BHUH

In further support of its Application, Black Hills Power submits the following:

1. Black Hills Power is incorporated under the laws of South Dakota and is a public utility as defined under SDCL § 49-34A-1.

2. Black Hills Power provides electric utility services in certain geographic areas of South Dakota, and is engaged in the generation, transmission and distribution of electricity in accordance with state laws and the rules and regulations of this Commission. Specifically, Black Hills Power provides service to approximately 70,000 electric customers in 20 different communities in a service area of western South Dakota, northern Wyoming and southeastern Montana.

3. Black Hills Power and BHUH are wholly owned subsidiaries of Black Hills Corporation (“BHC”). BHC has been in the utility business for over 100 years and currently owns and operates electric utility businesses in South Dakota, Wyoming and Montana. It also owns natural gas utility businesses in Wyoming, Kansas, Nebraska, Iowa and Colorado.¹ BHC has also been in the oil and gas exploration and production business many years through its subsidiary, Black Hills Exploration and Development, Inc. (“Black Hills Exploration”).

4. Black Hills Power, with the assistance of BHUH’s Gas Supply Services personnel,

¹ In an unrelated proceeding, BHC, through BHUH, has filed an application with the Commission seeking approval to acquire, through an indirect transfer of control, the Wyoming gas utility operations of SourceGas Distribution LLC. That proceeding, Docket No. 30023-1-GA-15 (Record No. 14024), remains open. If BHC completes that acquisition, it will also add gas utility operations in Arkansas.

currently acquires natural gas for fuel for electric generation from producers, marketers and counter-parties.

5. For its electric utility operations, Black Hills Power passes through its costs to acquire gas supplies and have those supplies delivered to its generating units pursuant to its FPPA on file with the Commission (Tariff Section No. 3C, Ninth Revised Sheet No. 1 and Third Revised Sheet Nos. 2, 3, and 4).

THE NEED FOR AND BENEFITS OF THE COSG AGREEMENT

A. Background information

6. To provide protection against short-term price volatility and to provide reliable gas service at reasonably stable prices, BHUH, on behalf of certain utilities of Black Hills Corporation (“Entities”), has acquired natural gas from producers, marketers and counter-parties through a diversified portfolio approach that may incorporate, at any given time: (1) spot market purchases, (2) short-term fixed price contracts and storage agreements, and (3) short-term financial hedges. The current percentages of annual gas supply that the Entities have purchased through these methods is shown in Exhibit 3.2 to the direct testimony of Ivan Vancas. This approach, while a successful hedging plan, is focused on short-term and seasonal hedging. As such, it does not provide protection against long-term increases in natural gas prices or price volatility beyond one or two years.

7. Historically, gas prices have been subject to substantial changes from month to month and year to year, based on supply and demand and other market factors. Exhibit 6.1 and Figure 1 to the direct testimony of Richard C. Loomis demonstrates this volatility. Furthermore, while gas prices are currently at an historic low point relative to recent history, gas prices are anticipated to increase over the next two decades and experience periods of significant fluctuation.

Specifically, as part of assessing its long-term gas strategy and to understand the potential benefits of a long-term hedging program like the COSG Agreement, Black Hills Power, through BHUH, reviewed gas price forecasts from well-accepted entities in the gas industry covering the years 2016 to 2035 and created an average forecast based on the prices reflected in those forecasts. The resulting data shows that gas prices are estimated to rise from a low of \$3.54/MMBtu in 2016 to a high of approximately \$10.43/MMBtu in 2035. Table 1 in the direct testimony of Richard C. Loomis shows the annual average for each year in the price forecast.

8. In addition, BHUH retained Julia Ryan of Aether Advisors LLC (“Aether”) to review that forecast, the market trends, and the diversified portfolio BHUH has implemented to this point, and to assess whether changes should be made to that portfolio and whether hedging should be implemented for Black Hills Power to protect customers against long-term price risks and market volatility. As set forth in more detail in her direct testimony, Ms. Ryan concurs that gas prices are likely to rise over the period covered by the forecast. She also concludes that, while the BHUH’s current diversified portfolio approach has been effective in hedging against short-term price increases and volatility, Black Hills Power, along with the Entities, should incorporate a long-term hedging program. Specifically, she recommends that Black Hills Power should look to physically hedge a portion of its firm gas demand, through a long-term hedging program that acquires reserves at a minimum of 35% of its forecast firm demand with an objective of acquiring up to 50% of its forecast firm demand.

9. Based on Ms. Ryan’s analysis and for other reasons set forth in the supporting testimony, Black Hills Power has concluded that, to minimize customers’ exposure to the volatility of gas market prices, to provide long-term price stability, and to provide a reasonably anticipated opportunity for customers to pay less than market prices over the long term, it is prudent for Black

Hills Power to pursue a long-term hedging program for a portion of its gas portfolio. Specifically, Black Hills Power has determined that it was advisable to enter into the COSG Agreement with BHUH and to hedge a portion of its forecast annual firm demand for natural gas under the Cost of Service Gas Program (the “COSG Program”). In addition to South Dakota, tariff revisions related to the COSG Agreement or the COSG Program are being submitted for commission approval in the following states: Colorado, Iowa, Kansas, Nebraska, and Wyoming.

B. The COSG Program and the COSG Agreement

10. In general terms, under the COSG Agreement (which is attached as Exhibit 3.1 to the direct testimony of Ivan Vancas), Black Hills Power commits to have BHUH acquire up to 50% of its forecast annual firm demand (the “Hedge Quantity”), for the term of the COSG Agreement. Based on that commitment, BHUH will, through a wholly owned subsidiary that will be established (“COSGCO”), bring to the Commission for approval gas reserves that would be purchased (if the tariff revisions proposed herein are approved). The reserves would not be purchased with any funds or credit of Black Hills Power. COSGCO would acquire the reserves either through a cash acquisition or the funding of drilling costs for new gas wells.

11. Under the acquisition criteria set forth in the COSG Agreement, the target reserves would consist of fields with proven gas reserves and an operating history, demonstrating drilling and operating costs. The reserves would also be located in fields with established gathering and processing capabilities and connections to interstate pipelines, or in fields for which production and transportation costs can be reliably estimated to minimize risk. To protect customers, for an acquisition to be submitted to the Commission under the COSG Program, the estimated cost of acquiring, developing, and producing the acquired reserves would have to be, on a net present value basis, at a cost anticipated to be less than the long-term market price gas forecast, such that the

acquisition and development would be reasonably anticipated to save Black Hills Power's customers money over the term of the COSG Program.

12. To provide oversight of the COSG Program, BHUH would retain, subject to Commission approval, an independent hydrocarbon monitor (the "Hydrocarbon Monitor"). The Hydrocarbon Monitor would assess any proposed acquisition and initial drilling plan and provide a written recommendation regarding whether the acquisition or drilling plan satisfies the criteria of the COSG Agreement. In addition, the Hydrocarbon Monitor would assess every five years future drilling plans and provide a written recommendation regarding whether the those plans satisfy the criteria in the COSG Agreement. In addition, BHUH would retain, subject to Commission approval, an independent accounting monitor (the "Accounting Monitor"). The Accounting Monitor would conduct annual assessments of the COSG Program as provided by the COSG Agreement and provide an annual assurance report of its findings to the Commission.

13. Under the terms of the COSG Agreement, BHUH would determine a revenue requirement under the COSG Program based on the actual cost per MMBtu for production operating expenses (including overhead paid to the field operator, O&M, gathering, processing costs, taxes and royalty payments), plus a return on equity ("ROE") for capital used to acquire the reserves, drill the wells and construct any required infrastructure. The acquisition would be accounted for and the revenue requirement would be calculated using a capital structure based on 40% debt, 60% equity. The "Allowed Return on Equity" ("Allowed ROE") under the COSG Program would be the average annual ROE on all gas and electric utility rate cases for the calendar year as reported by Regulatory Research Associates, *provided* that if there are fewer than 20 gas and electric utility rate cases reported for a calendar year, then the Allowed ROE for that calendar year will be the average of (i) the annual ROE on equity in all gas and electric utility rate cases for that calendar year, and (ii) the

annual ROE in all gas and electric utility rate cases for the prior calendar year, as reported by Regulatory Research Associates.

14. After acquiring the reserves, COSGCO would produce natural gas and any associated liquids. For tax and other reasons explained in more detail in the supporting testimony, unless agreed to by all of the parties to the COSG Agreement, Black Hills Power would not receive the gas produced from the reserves. Rather, that gas would be sold to third parties, and BHUH would purchase the Hedge Quantity for the Company from the spot market just as it currently does. However, if the actual ROE under the COSG Program is more than 100 basis points over the Allowed ROE during that month, then Black Hills Power's customers would receive a "Hedge Credit" for that month through the FPPA clauses in the Company's tariffs, effectively reducing the cost of gas for customers in that month. By contrast, if the Allowed ROE under the COSG Program exceeds the actual ROE by more than 100 basis points, Black Hills Power would be charged a "Hedge Cost" to make up for the difference, which amount would be passed on to Black Hills Power's customers that month through the FPPA clauses in the Company's tariffs.

15. Explained in simpler terms, under the COSG Program, a portion of the Black Hills Powers' customers' gas costs, instead of being dependent upon uncertain spot market prices, would be roughly pegged to the production cost of gas, which is more stable. The current environment, where prices are below reserve replacement costs in many cases, provides a prime opportunity to acquire reserves that would serve as the long-term physical hedge under the COSG Program. Once reserves are acquired at today's low prices, the cost of production is unlikely to be as variable as the market price of gas. As such, by acquiring a percentage of its gas supply at the physical hedge price as calculated under the COSG Agreement, Black Hills Power anticipates that the COSG Program will stabilize the gas prices paid by the Black Hills Power' customers over the long term, reduce

customers' exposure to market volatility, and provide reasonably anticipated savings to customers over the life of the COSG Agreement.

16. SDCL § 49-34A-25 allows a “public utility to file rate schedules containing provisions for the automatic adjustment of rates for public utility service in direct relation to changes in wholesale rates for energy delivered, the delivered costs of fuel used in generation of electricity, [and] the delivered cost of gas. . . .” Accordingly, the total fuel costs of the Company to generate electricity are included in the FPPA, which costs are then passed through to BHP’s customers. (See BHP’s FPPA tariff Section No. 3C, Third Revised Sheet No. 2.) Black Hills Power’s COSG Agreement is consistent with the policy objectives underlying these provisions.

SUPPORTING TESTIMONY

17. In support of its Application, Black Hills Power is concurrently submitting direct testimony of the following seven witnesses, which is incorporated herein by reference:

a. **Mr. Ivan Vancas:** Mr. Vancas introduces each of the witnesses who are providing testimony in support of this Application and identifies the topics on which they will testify. He also explains what the Company is seeking through its Application, the manner in which the Company currently procures natural gas for its customers, and describes the purpose and reasons for a long-term hedge program like the COSG Program. He also addresses how the COSG Program is designed to provide long-term price stability to customers with reasonably anticipated savings for customers over the life of the program. In addition, he describes how the program will operate and explains the terms of the COSG Agreement.

b. **Mr. John Benton:** Mr. Benton describes the gas exploration and production industry, including the common structures used for acquiring gas reserves and

the types of production costs incurred in gas exploration and production. His testimony also discusses Black Hills Exploration, its history and expertise in acquiring and developing shale and tight gas reserves, and its advisory and other potential roles in the COSG Program.

c. **Ms. Julia Ryan:** Ms. Ryan is associated with Aether Advisors LLC. Ms. Ryan's testimony discusses Aether's review of the Company's current gas procurement approach. She also explains her recommendations regarding actions the Company should consider taking to include long-term hedging mechanisms into its gas procurement approach. Finally, she explains how the COSG Agreement is consistent with that objective.

d. **Mr. Richard C. Loomis:** Mr. Loomis explains BHUH's current hedging practices, how the COSG Agreement meshes with those hedging practices and the reasons for Black Hills Power's decision to hedge up to 50% of its natural gas demand under the COSG Agreement. Mr. Loomis also explains the long-term natural gas price forecast used by Black Hills Power and Aether Advisors, LLC (an expert retained by BHUH) in its assessment of the COSG Program.

e. **Mr. T. Aaron Carr:** Mr. Carr describes the Commission's oversight of the COSG Program as well as the customer protections incorporated into the COSG Agreement and the COSG Program design. Specifically, he discusses (i) the guidelines for future acquisitions and drilling plans, (ii) reviews of those acquisitions and plans, (iii) the retention of independent Accounting and Hydrocarbon Monitors, and (iv) the other COSG Program protections for customers. Finally, he explains a hypothetical model used by the Company as a tool to evaluate the costs and benefits of the COSG Program as compared with those that would result from the continued purchase of gas at the prices in the long-term spot market forecast.

f. **Mr. Christopher J. Kilpatrick:** Mr. Kilpatrick’s testimony discusses accounting and regulatory issues related to the COSG Program, including, how “Hedge Credits” and “Hedge Costs” are forecast and calculated; how investment base, expenses, revenues, and return on equity are calculated; how forecast and actual costs will be accounted for, trued-up and adjusted as necessary; and how tariff sheets will be modified in light of the COSG Program and how costs incurred by the Company under its COSG Agreement would be recovered through the Company’s proposed clauses in its tariffs.

g. **Mr. Adrien McKenzie:** Mr. McKenzie is associated with FINCAP, Inc. Mr. McKenzie discusses the capital structure of the COSG Program and the basis for and reasonableness of the requested return on equity.

COMMUNICATIONS

18. Communications regarding this filing should be addressed to:

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WHEREFORE, Black Hills Power requests that the Commission:

- A. Grant this Application in its entirety and approve the revised tariff sheets regarding the FPPA, and direct Black Hills Power to file revised tariff sheets for electric utility operations in substantially the same form as reflected in Exhibit 2 hereto, to include the costs incurred by Black Hills Power under the COSG Agreement as described herein;
- B. Approve the COSG Agreement; and
- C. Grant such waivers, conditions, approvals or such other and further relief as the Commission deems necessary or appropriate, consistent with this Application.

Respectfully submitted this 30th day of September, 2015,

BLACK HILLS POWER, INC.

By 

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