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## STAFF MEMORANDUM

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**TO:** COMMISSIONERS AND ADVISORS  
**FROM:** BRITTANY MEHLHAFF, LORENA REICHERT, AND KRISTEN EDWARDS  
**RE:** Docket EL16-006 - In the Matter of the Application of Black Hills Power, Inc. dba Black Hills Energy for Approval of its 2016 Environmental Improvement Adjustment  
**DATE:** May 3, 2016

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Commission Staff (Staff) submits this Memorandum regarding its recommendations for the above captioned matter.

### **BACKGROUND**

On February 16, 2016, the Commission received an application from Black Hills Power, Inc. dba Black Hills Energy (Black Hills) for Approval of its 2016 Environmental Improvement Adjustment (EIA). Black Hills requests the annual rate adjustment allowed under SDCL 49-34A-99 for the costs of the Wyodak Mercury Control System and Wygen III CO and O<sub>2</sub> Grid Install environmental improvements approved in Docket EL15-008. The Company also proposes to include costs related to the Neil Simpson II Electrostatic Precipitator (ESP) Upgrade Project, the Gillette Energy Complex Compressed Air System Upgrade Project, and the Amended Silicates Silo Projects.

The EIA rider was implemented on June 1, 2011, as a result of Docket EL11-001. In Docket EL12-029, the Commission approved the Company's projected second year EIA revenue requirements associated with the previously approved Wyodak environmental improvements, including the true-up of the first year actual costs and revenues. In Docket EL13-009, the Commission approved the Company's projected third year EIA revenue requirements associated with the Wyodak environmental improvements, including the true-up of the second year actual costs and revenues. The revenue requirement in Docket EL13-009 was based on only two and a half months of cost recovery since the Company shifted cost recovery of the Wyodak environmental improvements from the EIA rider to base rates in Docket EL12-061. In Docket EL14-037, the Commission approved the true-up of the third year revenue requirements, an EIA rate of \$0.0000 for all customer classes, and the Company's request to credit/charge the remaining EIA balancing account amounts through Transmission Facility Adjustment (TFA).

In Docket EL15-008, the Commission approved the Company's request for cost recovery of its share of the environmental improvements made to Wyodak and Wygen III to meet the requirements of the Environmental Protection Agency (EPA) Utility Maximum Achievable Control Technology (MACT) rule and the associated first year revenue requirements and rates.

In this current docket, the Company seeks approval of its annual true-up of EIA revenue requirement from April 15, 2015, through May 31, 2016, as approved in Docket EL15-008, and the forecasted recovery of EIA revenue requirements associated with eligible environmental improvements from June 1, 2016, through May 31, 2017. Black Hills' true-up also includes the remaining balance from the Phase In Plan Rate (PIPR) rider, as approved in Docket EL15-008.

The Company proposed to implement the following changes to rates (per kWh) to the respective customer classes effective June 1, 2016:

	<u>Current Rates</u>	<u>Proposed Rates</u>
Residential	\$ 0.00012	\$ 0.00019
Small General Service	\$ 0.00011	\$ 0.00023
Large General Service and Industrial	\$ 0.00009	\$ 0.00017
Lighting	\$ 0.00006	\$ 0.00012

Staff's recommendation is based on its analysis of Black Hills' application, discovery information, relevant statutes, and previous Commission orders. Staff reviewed the June 1, 2015 – May 31, 2016 revenue requirement and balancing account true-up as well as the forecasted June 1, 2016 – May 31, 2017 revenue requirement and rate calculation. Following Staff's review of the application, the Company and Staff agreed to minor changes to the revenue requirement calculations. Black Hills filed a revised Exhibit 4 and tariff sheet on April 29, 2016, reflecting the agreed upon changes. These changes are discussed in more detail below.

#### **JUNE 1, 2015 – MAY 31, 2016 REVENUE REQUIREMENT**

The rates approved in Docket EL15-008 were based on the estimated revenue requirements associated with the Wyodak Mercury Control Project and the Wygen III CO and O<sub>2</sub> Grid Install Project from the projected in-service dates through May 31, 2016. In this docket, Staff reviewed the June 1, 2015 through May 31, 2016 revenue requirement calculation and compared actual recoveries to actual costs to determine the under/over collection of costs to incorporate in the new EIA rates.

The estimated June 1, 2015 through May 31, 2016 revenue requirement from Docket EL15-008 was \$157,384. Black Hills' updated revenue requirement filed in this current docket was \$139,829. Changes from EL15-008 to the current application include: 1) Updated project costs and in-service date for the Wygen III Co & O<sub>2</sub> Grid Install Project; 2) Reflection of the utilization of bonus depreciation; and 3) Reflection of the actual filing fee assessed in Docket EL15-008 instead of an estimate.

Staff and the Company agreed to two minor changes to the June 1, 2015 through May 31, 2016 revenue requirement. The first change was to update the costs for the Wygen III CO and O<sub>2</sub> Grid Install project to the most recent actual costs. Additionally, the formula for the allocation based on in-service date<sup>1</sup> for the Wygen III CO and O<sub>2</sub> Grid Install project was revised to accurately reflect the number of days the project was in-service during the pro forma period in the numerator and the total number of days during the pro forma period in the denominator. The net effect of these changes results in a June 1, 2015 through May 31, 2016 revenue requirement of \$140,156.

#### **BALANCING ACCOUNT TRUE-UP**

The Company calculated the true-up of the amounts collected for each customer class, comparing actual costs to actual recoveries. The true-up also includes the remaining balance from the PIPR rider, as approved in Docket EL15-008. Black Hills' calculations resulted in a forecasted net under-collection of costs to be collected from customers of \$21,504. The only change to Black Hills' filed balancing account

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<sup>1</sup> See Exhibit 4, Page 9, Schedule 4-8, column (e)

true-up is to reflect the changes associated with the June 1, 2015 through May 31, 2016 revenue requirement discussed above. This results in a forecasted net under-collection of costs to be collected from customers of \$21,844. The amounts to be charged to each customer class are:

	(Over)/Under Recovery Amount
Residential	\$ 112
Small General Service	\$ 13,080
Large General Service and Industrial	\$ 8,570
Lighting	\$ 82
Net Amount	\$ 21,844

### **JUNE 1, 2016 – MAY 31, 2017 REVENUE REQUIREMENT**

Black Hills' estimated the June 1, 2016 – May 31, 2017 revenue requirement at \$273,911. This revenue requirement is based on the estimated costs associated with the two previously approved projects, Wyodak Mercury Control System and Wygen III Co & O<sub>2</sub> Grid Install, and four new projects, the Neil Simpson II ESP Upgrade Project, the Gillette Energy Complex Compressed Air System Upgrade Project, the Neil Simpson II Amended Silicates Silo Project, and the Wygen III Amended Silicates Silo Project. Each of these four new projects is briefly discussed below and is discussed in more detail in the Company's application.

The Neil Simpson II ESP Upgrade Project is required to improve particulate collection efficiencies during startup events in order to remain in compliance with the Title V Permit issued by the Wyoming Department of Environmental Quality. Black Hills owns 100% of the Neil Simpson II Power Plant. The estimated cost of this project is \$1,314,100. Black Hills' competitively bid the ESP Upgrade Project to three different ESP suppliers and then contracted with Black and Veatch to evaluate the bids received. Following this evaluation, Black Hills selected the lowest cost technically acceptable option.

The Gillette Energy Complex Compressed Air System Upgrade Project is required since demand for compressed air capacity is increasing due to environmental improvements required by the EPA Utility MACT rule and the Wyoming Department of Environmental Quality air quality permit. Black Hills owns 147.2 MW of the coal plants that share the compressed air system, or 38.23%<sup>2</sup>. The total estimated cost of the Compressed Air System Upgrade Project is \$1,834,600 and Black Hills' share is approximately \$701,460. During discovery, the Company stated it will complete the air compressor upgrade project through three competitive bidding processes. An evaluation team was organized to perform evaluation of the responsive bids. In each of these processes the bids were evaluated and the lowest cost technically acceptable option was selected. Currently, a large rental compressor is utilized to meet the increasing compressed air requirements and will be removed when the project is complete. During discovery, the Company stated that no costs associated with the rental compressor are currently being recovered from ratepayers in base rates. The Company also noted that by upgrading the compressed air system and removing the rental compressor the project payback is about four years.

The Neil Simpson Amended Silicates Silo and Wygen III Amended Silicates Silo projects are required to meet all requirements of the current EPA Mercury Air Toxicity Standards (MATS) rule and the Wyoming

<sup>2</sup> Black Hills owns 90 MW of NSII and 57.2 MW of Wygen III. In total, the NSII, Wygen I, Wygen II, and Wygen III plants amount to 385 MW.

Department of Environmental Quality air quality permit. In order to meet the required mercury reduction, larger silo storage space and additional equipment are necessary to inject Amended Silicates and/or Powder Activated Carbon at higher feed rates. Two additional silos will be constructed at the Gillette Energy Complex. One silo will support the north units (Wygen II and Wygen III) and the other will support the south units (Wygen I and Neil Simpson II). Black Hills owns 57.2 MW or 27.90% of the north coal units<sup>3</sup> and 90 MW or 50.0% of the south coal units<sup>4</sup>. The total estimated cost of the Amended Silicates Silo Project North Units is \$1,816,280. Black Hills' share of this project for its ownership in Wygen III is approximately \$506,786. The total estimated cost of the Amended Silicates Silo Project South Units is \$1,944,035. Black Hills' share of this project for its ownership in Neil Simpson II is approximately \$972,017. The Company is completing the Amended Silicates Silo Projects through three competitive bidding processes and an evaluation team is organized to perform evaluations of the responsive bids. Contracts are (or will be) either "not to exceed" or fixed price contracts and the bids selected are (or will be) the lowest cost technically acceptable options.

Staff believes these new environmental projects qualify as eligible environmental improvements under SDCL 49-34A-97. Staff also believes the Company has demonstrated its efforts to ensure the lowest reasonable costs to ratepayers as required by SDCL 49-34A-99(4).

Staff and the Company agreed to two minor changes to the June 1, 2016 through May 31, 2017 revenue requirement. The first change was to update the costs for the Wygen III CO and O<sub>2</sub> Grid Install project to the most recent actual costs. Additionally, the formulas for the allocation based on in-service date<sup>5</sup> for the NSII ESP Project, the NSII Amended Silicates Silo Project, and the Wygen III Amended Silicates Silo Project were revised to accurately reflect the number of days the project is projected to be in-service during the pro forma period in the numerator and the total number of days during the pro forma period in the denominator. The revised allocation based on in-service date formula will result in an accurate percentage for any project regardless of whether the pro forma period includes a leap year or not.

The net effect of these changes results in an estimated June 1, 2016 – May 31, 2017 revenue requirement of \$275,407.

## **REVISED EIA RATES**

The forecasted June 1, 2016 – May 31, 2017 revenue requirement of \$275,407 is allocated to the customer classes based on production capacity allocators used in Black Hills' most recent rate case, Docket EL14-026, resulting in the following revenue requirements per customer class:

	6/1/16 – 5/31/17 Revenue Requirement
Residential	\$ 104,853
Small General Service	\$ 85,156
Large General Service and Industrial	\$ 83,795
Lighting	\$ 1,603
Net Amount	\$ 275,407

<sup>3</sup> Black Hills owns 57.2 MW of Wygen III. Total North Coal Units is 205 MW.

<sup>4</sup> Black Hills owns 90 MW of Neil Simpson II. Total South Coal Units is 180 MW.

<sup>5</sup> See Exhibit 4, Page 5, Schedule 4-4, column (e)

The customer class revenue requirements are combined with the balancing account amounts:

	(Over)/Under Recovery Amount
Residential	\$ 112
Small General Service	\$ 13,080
Large General Service and Industrial	\$ 8,570
Lighting	\$ 82
Net Amount	\$ 21,844

To arrive at the total revenue requirements per customer class:

	Net Revenue Requirement
Residential	\$ 104,965
Small General Service	\$ 98,236
Large General Service and Industrial	\$ 92,365
Lighting	\$ 1,685
Net Amount	\$ 297,251

Finally, the net revenue requirements per customer class are divided by the forecasted kWh sales for the period June 2016 through May 2017 to determine the rates per customer class. The revised EIA rates per kWh for the respective customer classes to be effective June 1, 2016 are:

Residential	\$0.00020
Small General Service	\$0.00023
Large General Service and Industrial	\$0.00017
Lighting Service	\$0.00012

### **RECOMMENDATION**

Staff recommends the Commission approve the revised revenue requirement and rates, as filed on April 29, 2016, and the associated tariff sheet effective June 1, 2016.