BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

PROCEEDING NO. 16A-______E

IN THE MATTER OF THE APPLICATION OF BLACK HILLS/COLORADO ELECTRIC UTILITY COMPANY, LP FOR (1) APPROVAL OF ITS 2016 ELECTRIC RESOURCE PLAN AND (2) APPROVAL OF ITS 2016-2019 RES COMPLIANCE PLAN.

DIRECT TESTIMONY AND ATTACHMENTS OF

FREDRIC C. STOFFEL

ON BEHALF OF

BLACK HILLS/COLORADO ELECTRIC UTILITY COMPANY, LP

June 3, 2016

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DIRECT TESTIMONY OF FREDRIC C. STOFFEL

I. INTRODUCTION AND BACKGROUND

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Fredric C. Stoffel. My business address is 1515 Wynkoop Street, Suite 500, Denver, Colorado 80202.

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"). I am Director – Regulatory Affairs.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of Black Hills/Colorado Electric Utility Company, LP d/b/a/ Black Hills Energy (the "Company" or "Black Hills").

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

A. I am responsible for directing the administration of rate and regulatory filings, proceedings, and related matters in Colorado for all electric and gas utilities of BHC. I also direct BHC's energy efficiency programs.

Q. WOULD YOU PLEASE OUTLINE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?

A. I have a Bachelor's degree in Economics from the University of Colorado. I have held positions in various professional and management capacities during the past 37 years with BHUH, Tri-State Generation and Transmission Association, Inc., Public Service Company of Colorado and Xcel Energy Inc. My employment history and experience is provided in Appendix A.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A. Yes, I have testified before the Commission and submitted pre-filed written testimony in numerous proceedings.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present an overview of, as well as regulatory and policy support for, the Company's 2016 Electric Resource Plan ("2016 ERP") and 2018-2021 Renewable Energy Standard Plan ("RES Plan"). Black Hills' 2016 ERP and RES Plan, which are being sponsored by Ms. Lisa Seaman, are attached to Ms. Seaman's direct testimony as Attachment LS-1 and Attachment LS-2, respectively. I also introduce the Company's other witnesses regarding the 2016 ERP and the RES Plan.

Q. UNDER RULES 3603(A) AND 3657(A)(IV), THE 2016 ERP AND RES PLAN WERE REQUIRED TO BE FILED ON OR BEFORE OCTOBER 31, 2015. WHY IS THE COMPANY FILING ITS 2016 ERP AND RES PLAN NOW?

A. The 2016 ERP was not filed on October 31, 2015 because at that time important issues were pending resolution in Proceeding No. 13A-0445E (the 2013 ERP). In addition, a final order had not been issued on the Company's 2015-2017 RES Plan in Proceeding No. 14A-0535E. As a result, Black Hills petitioned for a 6-

month delay in making its ERP and RES plan filings in Proceeding No. 15V-0622E.

The Commission approved the requested variance in Decision No. C15-1071 and ordered the Company to file its next ERP and RES plan no later than six months beyond the later of the date upon which the Commission issued a final decision in Proceeding No. 14A-0535E (2015-2017 RES Plan) or Proceeding No. 15A-0502E (Peak View Wind Project CPCN). The final decision in Proceeding No. 15A-0502E was mailed on November 6, 2015 (Decision No. C15-1182) and the final decision in .Proceeding No. 14A-0535E was mailed on December 3, 2015 (Decision No. C15-1279).

Q. ARE YOU SPONSORING ANY ATTACHMENTS?

A. Yes, I am sponsoring the following appendices to Attachments LS-1 and LS-2 to Ms. - Seaman's testimony:

- Appendix M to Attachment LS-1 is the request for proposal ("RFP") for intermittent resources proposed as part of the 2016 ERP;

- Appendix N to Attachment LS-1 is the form contract for intermittent resources proposed as part of the 2016 ERP;

- Appendix O to Attachment LS-1 is the RFP for stand-alone renewable energy credits ("RECs");

- Appendix B to Attachment LS-2 contains the redlined On-Site Solar Contracts proposed as part of the RES Plan;

- Appendix C to Attachment LS-2 contains the redlined Standard Offer Community Solar Garden ("CSG") Program Process Document and Contracts proposed as part of the RES Plan;

- Appendix D to Attachment LS-2 contains the redlined CSG RFP proposed as part of the RES Plan; and

- Appendix E to Attachment LS-2 contains the redlined Solar Tariffs proposed in connection with the RES Plan.

III. <u>SUMMARY OF TESTIMONY</u>

Q. WHAT ARE THE KEY ASPECTS OF THE 2016 ERP?

A. The key aspects of the 2016 ERP are:

<u>Preferred Plan</u>. Based upon the 2016 ERP (Attachment LS-1), which uses a 25-year Planning Period (2016-2040) ("Planning Period") and a seven-year RAP (2016-2022) ("RAP"), the Company determined that it does not need any additional capacity resources over the RAP to serve its customers' forecasted electricity needs. Importantly, however, the Company's model selects a 60 MW wind resource as an economic energy resource regardless of compliance with the Renewable Energy Standard ("RES"). The 60 MW wind resource has the added benefit of enabling compliance with the RES. The Company's Preferred Plan identifies a 60 MW wind resource installed in 2019.

<u>Acquisition of Eligible Energy Resources Needed to Comply with the RES</u>. Separately, under the RES established by C.R.S. § 40-2-124. *et seq.* (the "RES Statute") and implemented by Rules 3650 through 3668 (the "RES Rules"), Black Hills is required to generate a minimum of 20 percent of its retail electricity sales from Eligible energy resources through 2019. Black Hills will meet this requirement. However, when this requirement increases to 30 percent of retail sales in 2020, Black Hills' then-existing Eligible energy resources will not be sufficient to generate enough renewable energy credits ("REC") to meet this standard absent acquisition of additional Eligible energy resources or RECs.

<u>2016 ERP - Phase II</u>. Because of its need for additional Eligible energy resources or RECs, Black Hills is requesting a separate competitive solicitation process, or Phase II, for up to 60 MW of Eligible energy resources following the completion of this proceeding. The Company is proposing to update certain general planning assumptions including its natural gas and electric price forecast in the Phase II for the purpose of evaluating bids received in a Phase II and locking-down the net incremental costs of a new Eligible energy resource.

Q. WHAT ARE THE KEY ASPECTS OF THE PROPOSED RES PLAN?

A. The key aspects of the proposed RES Plan are:

<u>Eligible energy resources - Wholesale and Retail Distributed Generation (“DG”)</u>. Black Hills has the DG Eligible energy resources needed to meet the separate wholesale and retail DG requirements of the RES through 2027. Nevertheless, Black Hills believes there is merit in continuing to support retail DG resources in Black Hills’ service territory. Therefore, the Company is proposing, for the RES Plan, to continue both the on-site solar and CSG programs, with the modifications proposed herein. The Company is proposing to offer 1,500 kW of annual on-site solar capacity in each of the RES Plan years. For the CSG program, Black Hills is proposing both a standard offer program and a Request for Proposal (“RFP”) program with a maximum of 1,000 kW and 1,500 kW, respectively, made available in each of the RES Plan years.

<u>Changes to Contracts and Tariffs</u>. In order to implement the proposed changes to the On-Site Solar and CSG programs, and to implement other needed contractual changes, corrections, and clarifications, Black Hills is requesting changes to its on-site solar and CSG materials and contracts, as well as to its solar tariffs. All changes are redlined in Appendices B, C, D, and E to Attachment LS-2.

Eligible Energy Resources - Minimum Required Percent of Retail Electricity Sales. As mentioned above, under the RES Statute and RES Rules, Black Hills is required to generate a minimum of 20 percent of its retail electricity sales from Eligible energy resources through 2019. Black Hills will meet this requirement. However, when this requirement increases to 30 percent of retail sales in 2020, Black Hills' then existing Eligible energy resources will not be able to generate enough renewable energy credits ("RECs") to meet this standard absent acquisition of additional Eligible energy resources or RECs.

Retail Rate Impact and Locked Down Eligible Energy Resources. Rule 3661 establishes the parameters for determining the retail rate impact of implementing the RES. Consistent with Rule 3661(a), Black Hills currently collects a 2 percent RESA surcharge from its retail customers and credits the revenues into the RESA account to track both RESA collections and the incremental costs of Eligible energy resources that are charged against the RESA. In this proceeding, Black Hills is proposing to lock-down the net incremental costs of the following Eligible energy resources for the time period 2018 through 2024: (1) proposed 2018-2021 on-site solar program; and (2) proposed 2018-2021 CSG program. The Company is also proposing to lock-down the net incremental cost of the Vestas 1.8 MW Wind facility for the period 2016-2024.

<u>Status of the Renewable Energy Standard Account (“RESA”)</u>. As of the end of 2015, the RESA balance was negative $4,043,450 which means that Black Hills has advanced shareholder funds to cover the excess REC costs over the revenues collected. The Company forecasts that the RESA will have a positive balance by 2020 if the Company meets all of its existing and authorized REC obligations and the Commission approves the Company’s proposed 2018-2021 solar programs and the acquisition of up to 60 MW of Eligible energy resources in 2019 as a result of a Phase II solicitation process.

<u>Reduction of the RESA Surcharge</u>. Since the Company will be in compliance with the RES from an Electric resource standard perspective, the Company believes it is advisable to reduce the RESA surcharge to prevent the accrual of a large positive RESA balance. Consequently, beginning in 2021, the Company has modeled a reduction of the surcharge to zero. This reduction would stay in place until funds are necessary to support future compliance with the Electric resource standard.

<u>Continuation of Rule 3660(e) Waiver</u>. For modeling purposes, the Company applied the current Commission-approved customer deposit interest rate of 0.34 percent to the positive RESA balance that is projected to accrue prior to reduction of the RESA surcharge. Applying the Commission-approved customer deposit interest rate to a positive RESA balance was agreed to by the settling parties, and approved by the Commission, with respect to the 2015-2017 RES

Plan.[1] This included the grant of a partial waiver of the Rule 3660(e) requirement that the Company pay interest on any positive RESA balance at its most recently authorized weighted average cost of capital. For the legal and policy reasons expressed by the settling parties in the settlement of the 2015-2017 RES Plan, as accepted by the Commission, Black Hills requests continuation of this Rule 3660(e) waiver for this RES Plan, so that it will continue to be authorized to apply the Commission-approved customer deposit rate to any positive RESA balance. A separate motion will be filed further supporting this request.

Q. WHO ARE THE COMPANY'S OTHER WITNESSES IN THIS PROCEEDING AND WHAT ARE THEIR AREAS OF TESTIMONY?

A. In support of both the 2016 ERP and the RES Plan, Black Hills is submitting the direct testimony of **Ms. Lisa Seaman**, Manager of Resource Planning for BHUH. For the 2016 ERP, Ms. Seaman describes how the load forecast was developed, the assumptions used in the modeling, and the 2016 ERP modeling process and results. For the RES Plan, she provides an overview of the RES Plan and the Tables in the RES Plan. She also discusses the analysis of the retail rate impact of the Company's solar resources, Busch Ranch Wind Project, Peak View Wind Project, and the additional Eligible energy resources selected in modeling conducted in the Company's 2016 ERP.

[1] Proceeding No. 14A-0535E, Decision No. C15-1279 at ¶ 19. The settling parties (and the Commission through its order) agreed that Black Hills would pay interest on a positive RESA balance at the Commission-approved customer deposit rate, which is currently 0.34 percent, until the approval of the Company's 2018-2021 RES Compliance Plan.

The other witnesses providing direct testimony regarding the 2016 ERP Mr. Timothy Mordhorst, Mr. Eric M. Egge, Mr. Daniel Hansen, and Mr. Wes Wingen.

Mr. Daniel G. Hansen, Vice President at Christensen Associates Energy Consulting, LLC, describes the forecasts he helped prepare for Black Hills' econometric load forecasts.

Mr. Timothy Mordhorst, Environmental Services Manager for Black Hills Corporation, discusses Black Hills' compliance with existing and proposed environmental regulations.

Mr. Eric M. Egge, Director of Generation Dispatch and Power Marketing for Black Hills Power, provides testimony in support of the planning reserve margin and the assumptions regarding the availability of seasonal firm market power to the Company's system used in the Company's ERP.

Mr. Wes Wingen, Manager of Electric Engineering – Transmission Planning, BHUH, provides an overview of the Company's transmission system and interconnections.

The other witness providing direct testimony regarding the RES Plan is **Mr. Kevin Pratt,** Renewable Energy Program Manager for the Company. Mr. Pratt provides information about the Company's on-site solar and Community Solar Gardens ("CSG") programs as they currently exist and as proposed for the RES Plan.

IV. BACKGROUND

Q. PLEASE DESCRIBE BLACK HILLS.

A. Black Hills is one of two investor-owned electric utilities subject to the jurisdiction of the Commission. Black Hills' service territory is in southern Colorado along the Arkansas River Valley and neighboring regions encompassing all or part of Crowley, Custer, El Paso, Fremont, Otero, Pueblo, and Teller counties. The Company provides electric service to 95,000 customers in 21 southeastern Colorado communities. The largest communities served are City of Pueblo, portions of Pueblo West, Cañon City, and Rocky Ford. The Company achieved its system peak load of 400 MW in June of 2012.

Q. WHAT TYPES OF RESOURCES ARE USED BY BLACK HILLS TO SUPPLY ITS LOAD?

A. All of Black Hills' load is served by: (1) natural gas-fired generation; (2) diesel generating units; (3) two long-term firm power PPAs; (4) two non-facility specific agreements; (5) non-customer-sited wind resources (Busch Ranch - 50% utility-owned and 50% long-term Purchased Power Agreement ("PPA")); (6) economy energy purchases; and (7) customer-sited wind and solar resources. In addition, by the end of 2016 the Company will own the Peak View Wind Project, a new 60 MW wind generating facility located in Huerfano and Las Animas Counties, Colorado.

Q. PLEASE DESCRIBE THE COMPANY'S CURRENT DEMAND SIDE MANAGEMENT ("DSM") PLAN.

A. The Company filed for approval of its Electric DSM Plan for 2016-2018 in Proceeding No. 15A-0424E. A settlement agreement resolving that application was filed with the Commission on September 18, 2015. The ALJ's recommended decision approving the settlement agreement, with modifications, was mailed on December 8, 2015 (Decision No. R15-1292). The Company's approved 2016-2018 DSM Plan is divided into three broad program categories based on customer sector – residential, commercial and industrial, and special programs. The residential, commercial and industrial programs provide a variety of energy efficiency opportunities for residential customers, small and large commercial customers, and industrial customers. Special programs target low income residents, and education in schools. Table FCS-1 below reflects the savings goals under the Company's 2016-2018 DSM plan.

Table FCS-1
2016-2018 DSM Plan Savings Goals

Sector	2016	
	kW Goal @ Generator	kWh Goal @ Generator
Residential	1,536	6,407,449
C&I	2,675	9,462,706
Special	1,020	2,143,384
General Administration		
General Marketing/Education		
Evaluation		
Total	**5,232**	**18,013,538**
	2017	
Residential	1,751	7,574,675
C&I	2,828	10,050,811
Special	1,020	2,143,384
General Administration		
General Marketing/Education		
Evaluation		
Total	**5,599**	**19,768,870**
	2018	
Residential	1,814	7,865,243
C&I	2,983	10,624,193
Special	1,020	2,143,384
General Administration		
General Marketing/Education		
Evaluation		
Total	**5,818**	**20,632,820**

V. <u>THE RESOURCE PLANNING PROCESS AND THE 2016 ERP</u>

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE RESOURCE PLANNING PROCESS.

A. Every four years Black Hills is required to file its long-term ERP. The ERP includes a forecast of the utility's customer demand (load) as well as an assessment of the utility's existing portfolio of resources that is available to serve that load, including any reserve requirements. As the load grows over time, and as available resources age or supply contracts expire, the planning process identifies the need for additional resources.

The Commission's Rules establish very specific processes. Black Hills is using a 25-year Planning Period (2016-2040) and a 7-year RAP (2016-2022). The Company uses accepted methods for resource planning and creates alternative plans and scenarios based on varying load growth rates, fuel prices, electricity prices, levels of renewable resources, and Section 123 resources.

In addition to establishing a process for identifying future resource needs, the Commission's Rules establish various processes for acquiring resources to meet the identified needs. The Rules establish a preference for competitive bidding.

Q. WHAT MODELING SOFTWARE DOES BLACK HILLS USE FOR ITS RESOURCE PLANNING?

A. Black Hills performed its analysis using ABB's System Optimizer, Planning and Risk and Strategic Planning software, described in Appendix I of the 2016 ERP.

Q. WHAT ARE THE FINANCIAL ASSUMPTIONS IN THE 2016 ERP?

A. The financial assumptions in the 2016 ERP are based on the approved cost of capital from Black Hills' last rate case, in Proceeding No. 14AL-0393E. The weighted average cost of capital is 7.55 percent. For the 2016 ERP, the Company used 49.83 percent equity at 9.83 percent and 50.17 percent debt at 5.29 percent.

Q. HOW IS THE COST OF CAPITAL USED IN THE 2016 ERP?

A. The cost of capital is used in the 2016 ERP to determine the total revenue requirement for each alternative portfolio. Optimal capacity expansion portfolios are determined for the Planning Period using the cost of capital assumptions along with standard federal and state income tax percentages and a Colorado property tax rate. The production cost modeling provides the deterministic Present Value of Revenue Requirement ("PVRR") over the Planning Period for each model run. PVRR is the typical metric used to evaluate resource portfolios.

VI. THE COMPANY'S RESOURCE NEED

Q. WHAT IS THE COMPANY'S RESOURCE NEED FOR ADDITIONAL CAPACITY FOR THE RAP?

A. As addressed by Ms. Seaman in her direct testimony, and as shown in Table 8-1 of the 2016 ERP (replicated below as Table FCS-2), beginning in 2016 Black Hills has sufficient capacity available to meet its customers' load throughout the RAP.

Table FCS-2
Summary Table 8-1
Black Hills Colorado Electric
Load and Resource Balance (2016-2022)

	2016	2017	2018	2019	2020	2021	2022
Peak plus 15% planning reserve (MW):	**454.6**	**454.0**	**452.9**	**456.0**	**461.0**	**460.7**	**456.6**
Total Resources and Purchases (MW):	**481.2**	**485.0**	**480.5**	**480.5**	**480.5**	**480.5**	**480.5**
Resource Need (MW):	**26.5**	**31.0**	**27.6**	**24.5**	**19.5**	**19.8**	**23.9**
Resource Need (%):	**6.7**	**7.9**	**7.0**	**6.2**	**4.9**	**4.9**	**6.0**

Q. EVEN THOUGH THE COMPANY HAS DETERMINED THAT IT DOES NOT HAVE A CAPACITY NEED DURING THE RAP, DOES IT HAVE A NEED TO ACQUIRE ELIGIBLE ENERGY RESOURCES IN ORDER TO COMPLY WITH THE RES?

A. Yes. After the addition of the Peak View Wind Project and the Company's purchase of stand-alone RECs in 2015, Black Hills will be in compliance with the RES through 2019. However, in 2020, when the RES requirement increases to 30 percent of retail sales under the RES Statute and the RES Rules, Black Hills' then-existing Eligible energy resources will not be sufficient to generate enough RECs to meet this standard.

VII. <u>BASE PLAN ANALYSIS AND ALTERNATIVE PLANS</u>

Q. IN LIGHT OF THE NEED TO ACQUIRE ADDITIONAL ELIGIBLE ENERGY RESOURCES IN ORDER TO COMPLY WITH THE RES, WHAT FURTHER MODELING DID THE COMPANY CONDUCT?

A. As discussed by Ms. Seaman in her direct testimony, Black Hills developed three alternative portfolios, as required by Rule 3604(k), which represent the costs from increasing amounts of Eligible energy resources and Section 123 resources. These plans are identified as the Base-with-RES Plan, Alternative Plan 1 and Alternative Plan 2. The table below summarizes the names and key elements of the plans.

Table FCS-3
Key Elements of Base-with RES and Alternative Plans

Plan Name	Key Elements
Base-with-RES Plan	Renewables to comply with RES, Comply with DSM Statute
Alternative Plan 1	Base-with-RES Plan plus increasing amounts of Renewables Resources by adding a single facility
Alternative Plan 2	Base-with-RES Plan plus further increase in amounts of Renewables Resources by adding multiple facilities

Q. PRODUCTION TAX CREDIT ("PTC") AND INVESTMENT TAX CREDIT ("ITC") ASSUMPTIONS WERE USED IN THE 2016 ERP MODELING. PLEASE PROVIDE BACKGROUND ON PTC AND ITC LEGISLATION.

A. The Energy Policy Act of 1992 originally enacted the PTC which has been the primary production based incentive for wind energy and has been essential to the industry's research and development. The original PTC legislation expired in July 1999 but has been expanded and extended several times through many different laws. In late 2015, Congress provided a 5-year PTC with provisions to phase out the PTC by 2020 at a rate of 20% per year. The Consolidated Appropriations Act, 2016 extended the expiration date for this tax credit to December 31, 2019. The value of the PTC is based on the year that construction begins rather than when the facility begins production. The phase-down begins for wind projects commencing construction after December 31, 2016. The Act extended the tax credit for other eligible renewable energy technologies commencing construction through December 31, 2016. The Act applies retroactively to January 1, 2015.

Legislation also extended the ITC. This legislation, which was signed into law on December 18, 2015, extends the 30 percent ITC for both residential and commercial projects through the end of 2019. Previous to the 2015 extension, the 30 percent ITC was available to such facilities placed in service on or before December 31, 2016. Changing from a deadline based solely on placed in-service to one focused on commencement of construction was intended to provide facility developers with greater certainty. Like the PTC legislation, provisions to lower the credits over time were included in the bill.

Q. HOW WAS DSM REFLECTED IN THE 2016 ERP MODELING?

A. The Base-with-RES Plan, Alternative Plan 1 and Alternative Plan 2 assume that the load forecast was reduced by the levels approved in the 2016-2018 DSM Plan.

Q. HAS THE COMPANY IDENTIFIED A PREFERRED PLAN?

A. Yes. Black Hills considers the Base-with-RES Plan its Preferred Plan. The Base-with-RES Plan model incorporates into the future resource portfolio all of the additional Eligible energy resources that would be required to achieve the RES requirements during the RAP and the Planning Period. The Base-with-RES Plan contemplates the addition of a new 60 MW renewable resource in 2019.

Q. DID THE COMPANY MODEL TWO ALTERNATIVE SCENARIOS AS REQUIRED BY THE COMMISSION'S RULES?

A. Yes. In compliance with the Commission's rules, Black Hills modeled two alternative scenarios to reflect the addition of more renewable resources and/or Section 123 resources during the RAP. The outcome of these alternative scenarios is shown in Table FCS-4 below. These two alternative expansion scenarios show compliance with the Commission's rules, however, they are only theoretical and do not reflect real options for future resource acquisitions.

Alternative Plan 1 shows the addition of two 10 MW solar projects in 2035. Alternative Plan 2 shows the addition of two 10 MW solar projects and one 10 MW sodium sulfur battery in 2039 and two 10 MW sodium sulfur batteries in 2040. The Company's 2016 ERP shows that each of these alternatives is more expensive than the Base-with-RES Plan.

Table FCS-4
Modeled Expansion Plans

Year	Base-with-RES Plan	Alternative Plan 1	Alternative Plan 2
2019	60 MW Wind	60 MW Wind	60 MW Wind
2026	30 MW Wind	30 MW Wind	30 MW Wind
2032	(2) LMS100	(2) LMS100	(2) LMS100
2035		(2) 10 MW Solar	(2) 10 MW Solar
2038	60 MW Wind	60 MW Wind	60 MW Wind
2039			Sodium Sulfur Battery 10 MW
2040			(2) Sodium Sulfur Battery 10 MW

Q. IS BLACK HILLS PROPOSING THAT IT BE ALLOWED TO ACQUIRE 60 MW OF RENEWABLE ENERGY TO COMPLY WITH THE RES IN 2020 THROUGH A PHASE II SOLICITATION?

A. Yes. Black Hills' Action Plan to implement the Company's Preferred Plan recommends that the Company engage in a Phase II competitive solicitation to acquire up to 60 MW of Eligible energy resources by 2019. This solicitation will allow the Company to determine if Eligible energy resources can be acquired at a cost that will provide savings for customers and generate sufficient RECs such that Black Hills will comply with the 30 percent RES requirement from 2020 through 2025.

Black Hills' 2016 ERP and, as discussed below, the RES Plan, contemplate that the Company will issue an RFP for 60 MW of renewable energy after completion of the current proceeding. An analysis of the retail rate impact of the additional wind energy showed that the 60 MW of additional wind energy needed to comply with the RES requirements beyond 2019 can be added without exceeding the 2 percent retail rate impact cap codified at C.R.S. § 40-2-124.

Q. HAS THE COMPANY SELECTED AN INDEPENDENT EVALUATOR TO CONDUCT THE PHASE II ACQUISITION PROCESS?

A. No. Black Hills has not determined whether an Independent Evaluator ("IE") will be required for a Phase II acquisition process and is filing a separate motion seeking a waiver from the Rule 3612 requirement that it identify an IE acceptable to Black Hills, Trial Staff of the Commission, and the Office of Consumer Counsel. If required, the Company will propose an IE prior to commencing a Phase II proceeding.

VIII. <u>THE 2018-2021 RES PLAN</u>

Q. HOW DOES THE 2018-2021 RES PLAN RELATE TO THE 2016 ERP?

A. As discussed in the RES Plan attached to Ms. Seaman's direct testimony as Attachment LS-2, Black Hills' RES compliance and, therefore, the RES Plan, is driven by the outcome of the intermittent resource solicitation proposed for Phase II of the 2016 ERP. In the 2016 ERP, Black Hills showed the modeled results of acquiring 60 MW of wind resources in 2019. Based on the modeling assumptions used in the 2016 ERP, the 60 MW wind resource was selected as economic and a preferred energy resource without a constraint with regard to RES compliance. A corollary benefit of the 60 MW wind resource is that it enables the Company to comply with the 30 percent RES requirement in 2020.

Q. HOW LONG WILL ACQUISITION OF A 60 MW WIND RESOURCE ALLOW THE COMPANY TO BE IN COMPLIANCE WITH THE 30 PERCENT RES REQUIREMENT?

A. With the acquisition of 60 MW of wind resources in 2019, Black Hills will be able to acquire all of the renewable RECs required by the RES Statute and RES Rules through 2025. By 2026, the Company will likely need to acquire additional Eligible energy resources or RECs in order to stay in compliance with the RES. However, based on the Commission's current electric resource planning and RES rules, these additions will be considered in future resource plans and RES compliance plans.

Q. WHAT IS THE STATUS OF THE RESA BALANCE?

A. Black Hills strives to manage the RESA balance consistent with the requirements of the RES to charge customers no more than 2 percent annually and to use the fund to acquire RECs to meet the Electric resource standards. At the end of 2013, the RESA balance was approximately negative $10.1 million. As of the end of 2015, the RESA Balance was negative $4,043,450, a significant reduction from 2013. The Company forecasts that the RESA will have a positive balance by 2020 if the Company meets all of its existing and authorized REC obligations and the Commission approves the Company's proposed 2018-2021 solar programs and the acquisition of up to 60 MW of Eligible energy resources in 2019 through a Phase II solicitation process.

Q. WILL THE COMPANY BE REQUIRED TO ADVANCE FUNDS TO THE RESA UNDER THE 2018-2021 RES PLAN?

A. No. However, Table 5 of the RES Plan shows that the Company will have to advance approximately $650,000 to the RESA in 2017 based on current estimates of RESA revenues, costs and avoided costs of Eligible energy resources. In its 2015-2017 RES Compliance Plan, the Company indicated that in no years going forward would it have to advance funds to the RESA, however, based on the Company's revised RESA revenue forecast and the increased integration cost of variable energy resources due to Public Service Company of Colorado's recently implemented VER tariff, the Company projects that it may need to advance funds in 2017. Thereafter, the RESA revenues exceed the costs recoverable from the RESA and the Company's RESA account begins to accumulate funds in 2020.

The forecasts included in this RES Plan are based on projections and assumptions. Black Hills anticipates that energy sales, the level of renewable generation and other projections and assumptions will likely be different than what were used to complete the RES Plan. Though the modeling indicates that the Company will have to advance approximately $650,000 in 2017 the Company will closely monitor the RESA balance and will make the appropriate filings with the Commission as soon as the Company becomes aware that it will be necessary to advance funds to the RESA.

Q. WHAT OPTIONS DID THE COMPANY CONSIDER FOR MEETING THE 2020 RES REQUIREMENT?

A. As discussed above, the 60 MW wind resource in 2019 was selected by the model as an economic resource to meet the customers' energy needs without consideration of RES compliance. The Company only considered the acquisition of this 60 MW of wind resources in 2019 to meet the 30 percent RES requirement as it was the economic resource. The Company did not consider stand-alone RECs as a method of compliance given these circumstances. Acquiring actual Eligible energy resources allows long-term compliance as compared to the purchase of stand-alone RECS, which might be beneficial in the short term.

Q. CAN BLACK HILLS ACQUIRE THE 60 MW OF WIND RESOURCES WITHOUT EXCEEDING THE TWO PERCENT RETAIL RATE IMPACT CAP?

A. Yes.

Q. IF THE RES PLAN IS APPROVED, WILL THE COMPANY RETAIN THE TWO PERCENT RESA SURCHARGE?

A. No. If this RES Plan is approved, the Company's modeling indicates that the RESA balance will turn positive in 2020 and continues to grow year-to-year. Since the Company will be in compliance with the RES from an Electric resource standard perspective, the Company believes it is advisable to reduce the RESA surcharge to prevent the accrual of a large positive RESA balance. Consequently, beginning in 2021, the Company has modeled a reduction of the surcharge until funds are necessary to support future compliance with the Electric resource standard.

Q. WHAT IS THE ESTIMATED AVERAGE BILL IMPACT ON THE COMPANY'S TYPICAL RESIDENTIAL CUSTOMER IF THE SURCHARGE IS REDUCED FROM TWO PERCENT TO ZERO PERCENT IN 2020 AS PROPOSED BY THE RES PLAN?

A. Based upon the Company's existing residential customer's average bill, a RESA surcharge reduction to zero percent would reduce a typical residential customer's monthly cost by approximately $2.04 based on currently effective tariff rates. This is illustrative only, as rates will change before the RES Plan becomes effective.

Q. IN CONNECTION WITH THE 2015-2017 RES PLAN, THE COMPANY WAS GRANTED A PARTIAL WAIVER OF THE RULE 3660(E), ALLOWING IT TO PAY INTEREST ON ANY POSITIVE RESA BALANCE AT THE COMMISSION-APPROVED CUSTOMER DEPOSIT INTEREST RATE. IS THE COMPANY REQUESTING A CONTINUED WAIVER OF RULE 3660(E) FOR THE RES PLAN?

A. Yes. Applying the Commission-approved customer deposit interest rate to a positive RESA balance was agreed to by the settling parties, and approved by the Commission, with respect to the 2015-2017 RES Plan.[2] This included the grant of a partial waiver of the Rule 3660(e) requirement that the Company pay interest

[2] Proceeding No. 14A-0535E, Decision No. C15-1279 at ¶ 19. The settling parties (and the Commission through its order) agreed that Black Hills would pay interest on a positive RESA balance at the Commission-approved customer deposit rate, which is currently 0.34 percent, until the approval of the Company's 2018-2021 RES Compliance Plan.

on any positive RESA balance at its most recently authorized weighted average cost of capital. For the legal and policy reasons expressed by the settling parties in the settlement of the 2015-2017 RES Plan, as accepted by the Commission, Black Hills requests continuation of this Rule 3660(e) waiver for this RES Plan, so that it will continue to be authorized to apply the Commission-approved customer deposit rate to any positive RESA balance. A separate motion will be filed further supporting this request.

Consistent with this request, for modeling purposes, the Company has applied the current customer deposit rate to the projected positive RESA balance. As depicted on Table 5 of Appendix A to the RES Plan, even if the RESA surcharge is reduced to zero, the RESA balance remains positive and grows from year-to-year primarily due to the modeled avoided costs.

Q. WHAT IS THE COMPANY'S PLAN REGARDING THE ACQUISITION OF ADDITIONAL ON-SITE SOLAR IN THE RES PLAN?

A. Black Hills proposes to annually acquire up to 1,500 kW of additional on-site solar. Black Hills also, as discussed in detail by Mr. Pratt in his direct testimony, proposes to make several changes to the on-site solar program, including changes to the customer categories.

Although the Company is in compliance, from a REC perspective, with the retail DG requirements, Black Hills believes there is merit in continuing to support additional distributed resources in Black Hills' service territory. The cost of the proposed annual level of on-site solar resource additions, if fully subscribed at the proposed level of incentive payments, is approximately $157,950. Thus, if fully subscribed, the cumulative cost of the small solar program after 4 years is approximately $631,800 annually.

Q. ARE ANY CHANGES REQUIRED TO ON-SITE SOLAR CONTRACTS?

A. Yes. Black Hills has made redlined revisions to certain on-site solar contracts, which are found in Appendix B to the RES Plan (Attachment LS-2 to Ms. Seaman's direct testimony). These redlines reflect proposed changes to the following approved on-site solar agreements filed with the Commission in Proceeding No. 14A-0535E on December 10, 2015: (1) Customer-Owned Small Category PV Systems Agreements; (2) Third-Party Operator (TPO) Small Category PV Systems Agreements; (3) Customer-Owned Medium Category PV Systems Agreements; and (4) TPO Medium Category PV Systems Agreements. In addition to the changes made to conform the agreements with the proposals contained in the RES Plan, the Company included redlined changes to:

- make the agreements more consistent with each other;
- clarify and change definitional terms;
- fix typographical errors;
- clarify the contract term and the PBI payment term;
- update the "Certificate of Completion;"
- include the requirement that the System cannot supply more than 120 percent of the customer's the average annual consumption of electricity; and
- update language to be consistent with preferred process (i.e., invoices, email, etc.).

Other changes were made as redlined therein. Black Hills will file clean, compliance on-site solar agreements upon issuance of a final order in connection with this RES Plan.

Q. WHAT IS THE COMPANY'S PLAN REGARDING THE ACQUISITION OF ADDITIONAL CSG RESOURCES IN THIS RES COMPLIANCE PLAN?

A. With regard to the CSG program, Rule 3665(d)(I) provides that "[f]or compliance years 2014 and thereafter, the Commission shall determine the minimum and maximum purchases of renewable energy and RECs from new CSGs …." The Company proposes to maintain a two-component CSG program structure that includes both a (1) Standard Offer and (2) RFP component. The Company proposes to make a total of 1 MW available for <u>CSG Standard Offers</u> during each year under the RES Plan. Each CSG Standard Offer, however, will have a minimum of 10 kW and a maximum of 500 kW. In addition, the Company proposes to offer a minimum of 10 kW and a maximum of 1,500 kW each year <u>for a CSG RFP offering</u>. Black Hills projects that the cost of the proposed CSG program resource additions, if fully subscribed at 2,500 kW, will be approximately $615,250 annually. Thus, if fully subscribed, the cumulative cost of the CSG Program after four years is approximately $2,461,000 annually.

Q. WHAT IS THE COMPANY PROPOSING WITH RESPECT TO LOW INCOME PARTICIPATION IN THE CSG OFFERINGS?

A. Under the standard offer program, CSG capacity is available on a first-come basis, as further detailed in the standard offer program materials which are part of Appendix C to the RES Plan. Under the competitive solicitation component of the Company's CSG offering, the Company gives weight in the evaluation process to bids that propose to exceed the low-income set aside in Rule

3665(d)(V). Low-income subscription levels of bid proposals are to be considered along with other relevant factors, including the subscribed REC price. In addition, the Company allows bidders to structure proposals so that CSG owners may propose higher subscribed REC prices for low-income subscribers and lower subscribed REC prices for other subscribers, so long as the average aggregate of all subscribed REC prices for the project meets the avoided cost cap for the subscribed REC prices as indicated in the CSG RFP solicitation.

Q. ARE ANY CHANGES REQUIRED TO CSG CONTRACTS OR PROCESS DOCUMENTS?

A. Yes. To reflect the proposed changes to the CSG Standard Offer program, Black Hills has made redlined revisions to the contracts for CSG resources and materials implementing the standard offer for CSG resources, which are found in Appendix C to the RES Plan. These redlines reflect proposed changes to the following approved CSG Standard Offer materials filed with the Commission in Proceeding No. 14A-0535E on February 1, 2016: (1) CSG Standard Offer Application Process; (2) CSG Standard Offer Application; (3) CSG Standard Offer Deposit Agreement; (4) CSG Standard Offer Escrow Agreement; (5) CSG Standard Offer Level 2 Renewable Energy System Review; (6) CSG Standard Offer Community Solar Garden Agreement; (7) CSG Standard Offer Interconnection Application/Agreement for Parallel Generation Service; (8) CSG Standard Offer Subscriber Agency Agreement; and (9) CSG Standard Offer Low Income Verification Form. In addition to the changes made to conform these documents with the proposals contained in the RES Plan, the Company included redlined changes to:

- make the CSG agreements more consistent with each other;
- clarify and change definitional terms;
- fix typographical errors;
- add clarifying language to the requirement that the System cannot supply more than 120 percent of the customer's the average annual consumption of electricity; and
- update the Low Income verification form.

Other changes were made as redlined therein. Black Hills will file clean, compliance CSG Standard Offer materials upon issuance of a final order in connection with this RES Plan.

To reflect the proposed changes to the CSG RFP program, Black Hills has made redlined revisions to the "Black Hills/Colorado Electric Utility Company, LP Request for Proposals for Energy and Renewable Energy Credits (RECs) from Qualified Community Solar Gardens, along with its Appendices" ("CSG RFP"), which is found in Appendix D to the RES Plan. These redlines reflect proposed changes to the CSG RFP filed with the Commission in Proceeding No. 14A-0535E on February 1, 2016. In addition to the changes made to conform this document with the proposals contained in the RES Plan, the Company made redlined changes to:

- make the CSG agreements more consistent with each other;
- clarify and change definitional terms;
- fix typographical errors;
- add clarifying language to the requirement that the System cannot supply more than 120 percent of the customer's the average annual consumption of electricity; and
- update the Low Income verification form;
- clarify that environmental benefits are included with the CSG RECs; and

- updated other provisions of the CSG RFP as indicated therein, including, but not limited to, interconnect requirements, bid timeline deadlines, and energy production profile requirements.

Other changes were made as redlined therein. Black Hills will file a clean, compliance CSG RFP materials upon issuance of a final order in connection with this RES Plan.

Q. ARE ANY CHANGES REQUIRED TO THE COMPANY'S SOLAR TARIFFS?

A. Yes. Several changes are required to the Company's on-site solar and CSG tariffs as a result of the proposed RES Plan. Black Hills has made redlined revisions to the applicable solar tariffs, which are found in Appendix E to the RES Plan. These redlines reflect proposed changes to the currently effective solar tariffs. In addition to the changes made to conform the solar tariffs with the proposals contained in this RES Plan, the Company made redlined changes to generally update, correct and clarify the certain terms of the Photovoltaic Service tariff, Community Solar Garden Service tariff, and the Net Metering Service tariff. All changes are reflected in redline in Appendix E to the RES Plan. Black Hills will file clean, compliance solar tariffs upon issuance of a final order in connection with this RES Plan.

Q. HOW WILL ELIGIBLE ENERGY RESOURCE COSTS, REC COSTS, AND PROGRAM COSTS INCURRED TO COMPLY WITH THE RES REQUIREMENTS BE RECOVERED?

A. Black Hills proposes to recover the costs of its Eligible energy resources through its Energy Cost Adjustment ("ECA") up to the amount of the costs the Company avoids as a result of these renewable resources. All excess costs, including interest on the RESA balance and program costs, will be recovered through the RESA. This is consistent with prior Commission decisions. The one exception is with respect to the costs associated via Black Hills' fifty percent ownership of the Busch Ranch Wind Project. Black Hills recovers its investment in Busch Ranch through its base electric rates and makes additional necessary adjustments to the RESA and ECA.

Q. WHAT "LOCK-DOWN" REQUESTS IS THE COMPANY MAKING IN THIS PROCEEDING?

A. As detailed in the RES Plan, Black Hills is proposing to lock-down the net incremental costs of the following Eligible energy resources for the time period 2018 through 2024: (1) the proposed 2018-2021 on-site solar program; (2) the proposed 2018-2021 CSG program; and (3) the Vestas 1.8 MW Wind facility.[3]

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

[3] "Black Hills further acknowledges and agrees to calculate and propose an avoided cost amount for the Vestas demonstration wind turbine in its next RES Compliance Plan based on actual data obtained from the Vestas production meter. The Company's next RES Compliance Plan will be filed with the Company's next ERP on or before October 31, 2015 pursuant to Rule 3657(a)(IV) and covers the resource acquisition period related to that ERP" (Paragraph 19 of the Settlement Agreement attached to Decision No. C15-0317 issued in Proceeding No. 14A-0534E).

Appendix A

Statement of Qualifications

Fredric C. Stoffel

Mr. Stoffel graduated from the University of Colorado with a degree in Economics. He began his employment with Public Service Company of Colorado ("Public Service Company") in February 1979. From May 1980 through January 1989, he held various positions in Rates and Regulations.

In February 1989, he was appointed Manager of the Gas Supply and Transportation Division, becoming General Manager in August 1992.

In 1998, with the merger of Public Service Company and Southwestern Public Service Company, Mr. Stoffel was appointed Managing Director, Regulatory Administration, for New Century Energies, Inc. ("NCE"). In that capacity, he had overall responsibility for the company's rate and regulatory affairs including determination of revenue requirements and electric and gas rate design.

With the merger of NCE and Northern States Power Company in August 2000 to form Xcel Energy Inc., he was promoted to the position of Vice President, Policy Development. In this position he was responsible for coordinating the development of the Company's policies related to electric and natural gas restructuring, including environmental and market structure issues. He also had primary responsibility for managing the Company's rate and regulatory affairs before the Colorado Public Utilities Commission.

In October 2006, he was named Vice President, Marketing. In this position, he oversaw Xcel Energy's market research, product development, product management, advertising, customer advocacy and renewable and energy efficiency programs.

Beginning in March 2009, Mr. Stoffel began working as an independent energy consultant. In that capacity he managed the performance of an energy efficiency potential study for Tri-State Generation and Transmission Association, Inc. ("Tri-State").

In December 2009, Mr. Stoffel was employed by Tri-State as Energy Resources Strategy Coordinator. In that capacity he was Project Manager for Tri-State's Integrated Resource Plan and oversaw the implementation of its long-term business strategy analysis tools.

In June 2010, Mr. Stoffel was promoted to Senior Manager, Budget and Financial/Business Analytics and was responsible for the development of Tri-State's annual operating and capital budgets as well as the long term financial forecast.

Mr. Stoffel began his employment with Black Hills Utility Holdings, Inc., a subsidiary of Black Hills Corporation, in October 2012, as Director of Regulatory Services in Colorado. Currently, he serves as Director of Regulatory Affairs for all the electric and gas utilities of Black Hills Corporation.

Mr. Stoffel has testified before the FERC, the Colorado Public Utilities Commission, the Wyoming Public Service Commission, the New Mexico Public Regulation Commission, the Texas Public Utility Commission and the Colorado legislature on numerous regulatory, rate, certificate, resource planning and tariff issues.