Exhibit 4
Direct Testimony
KYLE D. WHITE

Before the Public Utilities Commission
of the State of South Dakota

In the Matter of the Application of
Black Hills Power, Inc. d/b/a Black Hills Energy
For Approval to Implement a Renewable Ready Service Tariff

Docket No. EL18-____

December 17, 2018

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ATTACHMENTS

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Kyle White, and my business address is 7001 Mount Rushmore Road, Rapid City, SD 57702.

Q. PLEASE DESCRIBE YOUR EMPLOYMENT.

A. I am employed by Black Hills Utility Holdings, Inc., a wholly-owned subsidiary of Black Hills Corporation, as Vice President of Regulatory Strategy. My areas of responsibility include providing regulatory strategy and support for the regulated utility subsidiaries of Black Hills Corporation, including Black Hills Power.

Q. PLEASE DESCRIBE YOUR EDUCATION AND BUSINESS BACKGROUND.

A. I graduated with honors from the University of South Dakota with a Bachelor of Science degree in Business Administration, majoring in management. Several years later, I graduated with a Master's degree in Business Administration, also from the University of South Dakota. My primary focus at Black Hills Corporation has been rate, resource planning, and marketing related work. I have been in my present position since August of 2016. During my career, I have been actively involved in preparing applications, testifying and receiving regulatory approvals related to numerous rate cases, changes in rules or regulations, and requests for certificates of public convenience and necessity for both power generation and transmission. I have also led successful efforts to achieve regulatory approvals for utility acquisitions in six states. In addition to on-the-job training, I have attended numerous seminars, trade association meetings, and regulatory conferences covering a variety of utility-related subjects.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony discusses the growing customer expectations for renewable energy options both nationally and within the Black Hills Power service territory, the risk behind-the-meter generation poses for customers due to the shift it causes related to fixed cost recovery, principles behind the design of the Renewable Ready Service Tariff and why the Corriedale Project is the best resource for Black Hills Power renewable energy.

III. ATTACHMENTS

Q. ARE YOU SPONSORING ANY ATTACHMENTS TO YOUR TESTIMONY?

A. Yes. I am sponsoring the following attachments:

Attachment KDW-1 Graph of Corporate Renewable Purchases

Attachment KDW-2 NREL Graph

Attachment KDW-3 NREL High Wind Map

IV. CHANGING CUSTOMER EXPECTATIONS AND THE THREAT OF BEHIND-THE-METER GENERATION

Q. HOW DID BLACK HILLS POWER DETERMINE THE NEED TO PROVIDE A RENEWABLE ENERGY SOLUTION IN ITS SERVICE TERRITORY?

A. An increasing number of customers across the country are seeking renewable energy in order to meet sustainability goals, which has created a significant increase in the number of corporate renewable energy transactions across the country in recent years. For example, in 2013, five such transactions were entered into for the delivery of 320 MW. By 2018, 59 new transactions were entered into for the delivery of 4,960 MW, representing a greater than 15-fold increase in delivered renewable MWs through corporate renewable energy transactions over a five year period. Attachment KDW-1 is a

graph prepared by the Rocky Mountain Institute's Business Renewables Center that shows the publicly announced corporate purchases of renewable energy, the participating corporations, and the related generating capacity by year for 2013 through October 17, 2018.[1] The number of purchases, the generating capacity, and number of corporations participating are all clearly increasing, with year-to-date 2018 the highest year in all three categories. I have no doubt that this trend will continue.

Q. IS THE RISK THAT CUSTOMERS WILL INSTALL BEHIND-THE-METER GENERATION INCREASING?

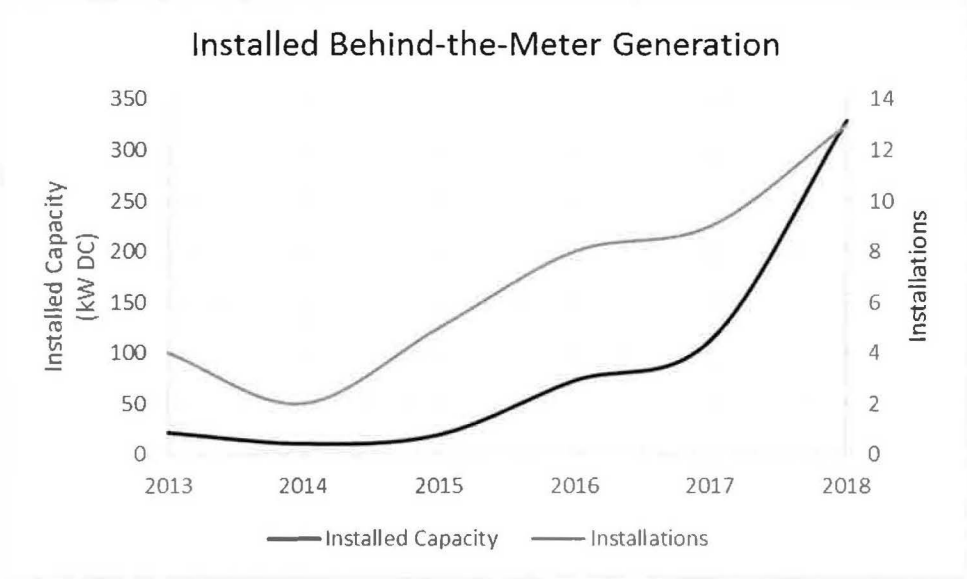
A. Yes. In addition to the increasing level of customer interest discussed above, the costs associated with behind-the-meter generation continue to decline. Attachment KDW-2 is a graph from the National Renewable Energy Lab's ("NREL") U.S. Solar Photovoltaic System Cost Benchmark: Q1 2017, which shows the declining installed solar cost from 2010 to 2017.[2] Specifically, the Commercial PV installed cost has declined significantly from $5.36 per Watt DC to $1.85 per Watt DC. If this trend continues, solar energy costs will become even more competitive with utility rates, including those of Black Hills Power. Without a cost-competitive renewable energy offering from Black Hills Power, many more customers will continue to consider and install behind-the-meter generation to the detriment of all of Black Hills Power's customers. We have witnessed this outcome at other utilities in other parts of the country where governmental actions caused customer-sited solar generation to be more attractive to businesses than the utilities' traditional electric service offerings.

[1] http://businessrenewables.org/corporate-transactions

[2] https://www.nrel.gov/docs/fy17osti/68925.pdf

Q. HAS BLACK HILLS POWER SEEN THIS NATIONAL TREND OF INCREASED BEHIND-THE-METER GENERATION WITHIN ITS SERVICE TERRITORY?

A. Yes. Black Hills Power is experiencing a steadily increasing level of customer installed behind-the-meter generation as illustrated in the graph below:



In short, customers appear willing to make investments in behind-the-meter generation because they value factors like environmental impact, long-term sustainability, and stakeholder perceptions. Adopting sustainable energy practices also creates an opportunity for businesses to positively differentiate themselves from their competitors. Black Hills Power is witnessing this as a primary driving factor for decisions on the part of large customers to install behind-the-meter solar generation on some of their facilities, with a stated interest to expand these installations in the future.

Q. ARE THERE SPECIFIC EXAMPLES OF BLACK HILLS POWER CUSTOMERS MAKING THE MOVE TO BEHIND-THE-METER GENERATION?

A. Yes. Both Regional Health and Xanterra Parks and Resorts are large Black Hills Power customers that have installed some level of behind-the-meter generation, with a stated interest to install more. Fortunately, the solution provided by the Renewable Ready Service Tariff has caused both of these customers to pursue their sustainability goals through the utility-provided program, as opposed to continuing to develop behind-the-meter generation. Other recent customer examples include Black Hills State University and the City of Sturgis. In addition, Walmart has announced a goal to operate with 50 percent renewable energy by 2025, and an ultimate goal of operating with 100 percent renewable energy. Other national brands represented in our region with similar renewable energy targets include Marriott, AT&T, Target, Hilton, Starbucks, and McDonald's.

Q. ARE THERE FINANCIAL IMPACTS TO BLACK HILLS POWER'S CUSTOMERS WHEN EXISTING CUSTOMERS INSTALL BEHIND-THE-METER GENERATION?

A. Yes. In order to meet its obligation to serve, Black Hills Power has invested in and operates a vertically integrated electric system, which is sized and operated to meet the maximum demand of all of its customers. Current pricing practices recover the majority of the cost of owning and operating the system through a per kWh energy charge. This charge recovers both fixed and variable generation, transmission, distribution, and administrative and general costs. Much of the utility's costs incurred to meet its obligation to serve are fixed and do not change when customers reduce their electricity purchases, as happens through the installation of behind-the-meter generation.

Each customer electing to self-generate passes on much of the true cost associated with their continuing electric service requirements to the utility's other customers. If the economics of self-generating with intermittent renewable energy continue to improve or the desire of customers to utilize sustainable energy resources becomes greater, then those customers that don't participate in the move to behind-the-meter generation will subsidize the customers that do. With changing customer expectations regarding sustainability and the improving economics of behind-the-meter generation, these are significant risks to Black Hills Power and its customers.

Q. EVEN THOUGH CUSTOMERS WHO INSTALL BEHIND-THE-METER GENERATION CONTRIBUTE LESS TO FIXED COST RECOVERY, DO THEY CONTINUE TO BENEFIT FROM THE UTILITY SYSTEM?

A. Yes. For reliability reasons, nearly all customers who elect to self-generate some or all of their electricity requirements continue to interconnect with the utility's electric system. The result is that these self-generating customers get the benefit of using the integrated electric system whenever they need it at a fraction of the true cost of providing it.

Q. WHAT IS THE FINANCIAL RISK TO CUSTOMERS IF THE COMMISSION DOES NOT APPROVE THE RENEWABLE READY SERVICE TARIFF?

A. As discussed in the testimony of Nick Gardner (Exhibit 3), if the proposed Renewable Ready Service Tariff is not approved by the Commission and renewable generation providers continue to convert customers to serving their loads from behind-the-meter installations, remaining customers will be forced to absorb between $0.04302/kWh and $0.07364/kWh for every kWh provided by behind-the-meter generation systems. As a specific example, I mentioned earlier in my testimony that Regional Health has installed

a limited amount of behind-the-meter generation on their facilities, with a stated plan to install nearly 1.5 MW more. The Renewable Ready Service Tariff has allowed Regional Health to postpone its plan to install additional behind-the-meter generation, while still meeting its sustainability goals. Had Regional Health continued with its planned installation, Black Hills Power estimates that a $122,000 reduction in annual utility fixed cost recovery would have occurred, resulting in a reallocation of these fixed costs to Black Hills Power's remaining customers as part of its next rate review.

Q. DOES BLACK HILLS POWER'S PROPOSED RENEWABLE READY SERVICE TARIFF APPROPRIATELY ADDRESS THESE RISKS?

A. Yes. By requiring subscribers to pay all of their current electricity charges, the Renewable Ready Service Tariff ensures non-subscribers are protected from a reduction in fixed cost recovery.

V. PRINCIPLES BEHIND THE DESIGN OF THE PROPOSED TARIFF

Q. HAS THE RENEWABLE READY SERVICE TARIFF BEEN DESIGNED TO ADDRESS MULTIPLE CONSIDERATIONS?

A. Yes. Specifically, the proposed tariff is intended to accomplish the following:

- Meet changing customer expectations by providing a solution for customers with sustainability goals or desires.
- Protect existing customers by maintaining the fixed cost contribution of customers seeking sustainable electricity options.
- Offer a program that is acceptable for all customers.
- Improve compliance with the South Dakota Renewable Portfolio Objective.

Q. WHAT PRINCIPLES DID BLACK HILLS POWER UTILIZE IN THE DESIGN OF THE RENEWABLE READY SERVICE TARIFF?

A. A set of sustainable energy principles, frequently referred to as the Corporate Renewable Energy Buyers' Principles ("Buyers' Principles") have been developed by large energy buyers - in collaboration with the World Resource Institute and the World Wildlife Fund - to guide the purchases of renewable energy through the regulated utility or directly from a renewable energy project. To date, 78 major U.S. companies have signed on to the Buyers' Principles. Several of these companies have a presence in Black Hills Power's service territory, including Marriott, McDonald's, AT&T, Target, Walmart, Starbucks, and Hilton. Although Black Hills Power's customers may each value different considerations when considering whether or not to subscribe to the Renewable Ready Service Tariff, feedback from our customers has been generally consistent with these principles. Therefore, Black Hills Power utilized the Buyers' Principles when designing its Renewable Ready Service Tariff.

Q. WHAT ARE THE CORPORATE RENEWABLE ENERGY BUYERS' PRINCIPLES?

A. The Buyers' Principles are:

- Greater Choice
- Cost Competitiveness
- Long-term Contracts
- Additionality
- Access to Effective and Affordable Financing Tools
- Cooperation with Utilities and Regulators

Q. WHAT IS THE DEFINITION OF "ADDITIONALITY" AND WHY DO YOU BELIEVE CORPORATE RENEWABLE ENERGY BUYERS FOCUS ON ADDITIONALITY?

A. For purposes of the Buyers' Principles, I consider "additionality" to mean that the purchase of renewable energy will cause new renewable energy to be generated, which then will further reduce the carbon emissions associated with meeting customer electricity requirements. Purchasing renewable energy from new projects, as opposed to purchasing from existing renewable energy projects, allows buyers to claim an incremental reduction in future carbon emissions.

Black Hills Power's Renewable Ready Service Tariff aligns with this principle very well, which makes it an attractive option for corporate energy buyers. The renewable energy will be generated from a new wind energy project specifically constructed and dedicated to supply Renewable Ready Service Tariff customers. The electricity generated by the Corriedale Project has the added benefit of being delivered to the customers' point of consumption.

Q. WHY ARE THE BUYERS' PRINCIPLES IMPORTANT TO THE DESIGN OF THE RENEWABLE READY SERVICE TARIFF?

A. Black Hills Power used the Buyers' Principles as a guide when designing the Renewable Ready Service Tariff because we believe that addressing a set of accepted principles increases the likelihood of program success, which reduces risk for all parties, including subscribers, non-subscribers, and Black Hills Power. Following the Buyers' Principles increases the probability that the program will address customer needs, and be seen as a viable option for acquiring renewable energy. This reduces the risk that customers will

choose behind-the-meter generation instead of Black Hills Power's renewable option. Designing the Renewable Ready Service Tariff to align with the established Buyers' Principles increases the likelihood of the program becoming the preferred method for addressing customers' sustainability goals.

VI THE PROPOSED TARIFF

Q. PLEASE PROVIDE A HIGH LEVEL OVERVIEW OF THE PROPOSED TARIFF AND ITS KEY PROVISIONS.

A. The proposed Renewable Ready Service Tariff is designed purposefully to achieve the following outcomes:

- Provide a renewable energy option for large commercial and governmental customers.
- Retain fixed cost contributions of customers electing to subscribe to Black Hills Power's Renewable Ready Service Tariff.

To achieve these outcomes the proposed tariff provides that:

- Customers can subscribe up to 100% of their current annual electricity requirements as renewable energy from the new Corriedale Project. *See* Testimony of Bret Jones (Exhibit 5) for a description of the subscription process.
- The subscription terms are 5 - 25 years, with better pricing for the longer subscription periods. *See* Testimony of Bret Jones (Exhibit 5) and Jason Keil (Exhibit 6) for a discussion of pricing under the proposed tariff.

- Subscribers will continue to pay all charges specified under their current standard service rate schedules. Subscribers will pay a Renewable Ready Charge and

receive a Renewable Ready Credit to account for the renewable energy received from the Corriedale Project. *See* Testimony of Jason Keil (Exhibit 6) for a detailed discussion of the charge and credit.

- Subscribers failing to complete their subscription term are subject to an Early Termination Fee.

Q. WHY ARE ONLY LONG-TERM SUBSCRIPTIONS OFFERED?

A. Without the Renewable Ready Service Tariff the only alternative for Black Hills Power customers seeking renewable energy is to install behind-the-meter generation, which would require either a full upfront payment with a multi-year payback or an ongoing financial commitment of 20 years or more. Requiring long-term commitments is an effective way to target subscriptions toward customers who would be most likely to install behind-the-meter generation. Additionally, the Corriedale Project will have a 25 year book life which is the time period over which Black Hills Power will recover its investment. Longer subscription terms decrease the risk that investment recovery will be shifted from subscribers to non-subscribers. Finally, the existence of long-term contracts will minimize Renewable Ready Service Tariff administrative costs through lower subscription turnover.

Q. WHY WILL SUBSCRIBERS BE REQUIRED TO PAY AN EARLY TERMINATION FEE?

A. The Renewable Ready Service Tariff provides renewable energy without the costs and complications of installing behind-the-meter generation. Since Black Hills Power will have the ownership responsibilities for the desired renewable generation instead of the subscriber, it is appropriate that the subscriber pay for the renewable energy that has been

acquired for its benefit. Requiring an Early Termination Fee discourages subscribers from terminating the Subscriber Agreement, which could result in unsubscribed energy and increased costs to non-subscribers. The Early Termination Fee also discourages subscribers from signing up for longer term subscriptions to obtain a lower Renewable Ready Charge, even if they have no intention of participating for the full term.

VII. TIMING OF THE PROPOSED RENEWABLE READY SERVICE TARIFF

Q. WHY IS BLACK HILLS POWER OFFERING ITS SOUTH DAKOTA CUSTOMERS A RENEWABLE ENERGY SOLUTION AT THIS TIME?

A. There are several reasons why Black Hills Power believes now is the right time to offer a subscription based renewable energy solution for its customers. Key among these reasons is the reduction of the risk and associated impacts of customers installing behind-the-meter renewable generation. Other reasons include:

- Black Hills Power's intent to provide energy solutions based on customer input;
- Black Hills Power's desire to align the interests of all customers when power supply decisions are made; and
- Black Hills Power's desire for increased compliance with the South Dakota Renewable Energy Objective.

Q. ARE THERE OTHER FINANCIAL FACTORS THAT SHOULD BE CONSIDERED?

A. Yes. The Federal Renewable Electricity Production Tax Credits ("PTCs") for wind generation are in the process of phasing out. The Corriedale Project must be placed in service prior to January 1, 2021 in order to preserve the full PTC benefits. As discussed

in Jason Keil's testimony (Exhibit 6), the current PTC is $24/MWh and will result in a reduction of the revenue requirement for the Corriedale Project. If commercial operation is delayed beyond 2020, the PTC value of approximately $43 million will be lost for the entirety of the Corriedale Project.

Q. DO NON-SUBSCRIBERS BENEFIT FINANCIALLY FROM THE TIMING OF THE INTRODUCTION OF THE RENEWABLE ENERGY OPTION?

A. Yes. Due to the PTC benefit, the Corriedale Project revenue requirement at the time of Black Hills Power's next rate review is expected to be less than the subscription revenue, potentially providing a benefit for non-subscribers.

VIII. THE CORRIEDALE PROJECT

Q. WHY IS THE CORRIEDALE PROJECT THE RIGHT RENEWABLE GENERATION PROJECT FOR THE RENEWABLE READY SERVICE TARIFF?

A. Corriedale offers many benefits as the renewable energy supply for the Renewable Ready Service Tariff. First, the Cheyenne, Wyoming area is one of the best wind resources in the nation. Please see Attachment KDW-3, which is a map from the National Renewable Energy Lab showing high winds in the Cheyenne area relative to the rest of the United States.[3] Black Hills Power is able to offer an attractive subscription rate because of the strong wind resource coupled with its unique ability to deliver energy economically from Cheyenne Light's system.

Second, Corriedale will interconnect directly to the Cheyenne Light transmission system, eliminating off-system transmission costs. Interconnection will be at the West Cheyenne substation, which will be constructed on the same King Ranch property as the

[3] https://www.nrel.gov/gis/images/80m_wind/USwind300dpe4-11.jpg

Corriedale Project. This proximity reduces the infrastructure costs while also eliminating risks and costs related to the acquisition of easements across multiple landowner properties.

Third, Corriedale is pre-qualified for 100% of the PTCs as long as it is placed in service prior to 2021. As described in Jason Hartman's testimony (Exhibit 7), commercial operation prior to 2021 is possible due to the project's development status. Corriedale is well positioned to achieve its required placed in-service date with land rights, preliminary engineering, and completed transmission studies.

Fourth, Corriedale provides additionality. As discussed earlier in my testimony, Black Hills Power believes adding new renewable resources will be a key component in its success of attracting subscribers to the Renewable Ready Service Tariff.

Finally, the site is large enough to accommodate a combined Black Hills Power and Cheyenne Light project, which leads to efficiencies and provides benefits from economies of scale.

Q. WHY IS BLACK HILLS POWER OWNERSHIP OF CORRIEDALE IMPORTANT?

A. When a utility proposes to develop and own a generation project, the costs and risks of the project are limited to actual costs with a regulated return and are more transparent to customers and the Commission than if acquired through a purchased power agreement ("PPA"). As efficiencies are gained through updated technology, such as increased availability or cut-out speed, utility ownership allows the associated benefits to be passed on to customers, rather than the owners of a PPA project. Additionally, it is possible the turbines will be able to operate beyond the 25 year depreciable life. To the extent this

occurs, Black Hills Power's customers will benefit from having a fully depreciated asset continue to provide very low cost generation.

Q. DOES OWNERSHIP OF RENEWABLE GENERATION PROVIDE ANY OTHER BENEFITS TO BLACK HILLS POWER'S CUSTOMERS?

A. Yes. There is an expectation of continued changes in public policy and customer interest, driving toward lower carbon emitting generation resources. Corriedale would be Black Hills Power's first utility-owned zero emission generation resource. To the extent the presence of Corriedale reduces the burden of future regulations, customers will benefit.

Q. DOES BLACK HILLS POWER INTEND TO INCLUDE CORRIEDALE IN ITS UTILITY RATE BASE?

A. Yes, Black Hills Power is constructing Corriedale and offering Renewable Ready Service in order to meet its service obligations. Therefore, Corriedale will become part of its rate base.

IX. CONCLUSION

Q. WHY IS BLACK HILLS POWER PROPOSING A RENEWABLE ENERGY SOLUTION FOR CUSTOMERS AT THIS TIME?

A. By being proactive, Black Hills Power is providing a sustainable energy solution before the demand for sustainable energy has a significant financial impact for Black Hills Power's customers. Acting now helps ensure that the utilization of sustainable energy options is economic and acceptable to all customers.

Additional advantages of acting now include: the ability to utilize the Production Tax Credits prior to their expiration; achieving project economies of scale by partnering with Cheyenne Light to construct the Corriedale Project; meeting our customers'

sustainability requirements for electricity in a timely way; and significantly lowering the risk of larger customers installing behind-the-meter generation.

For these reasons, Black Hills Power respectfully requests that the Commission issue an order approving the proposed Renewable Ready Service Tariff with an effective date of July 1, 2019.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF PENNINGTON)

I, Kyle White, being first duly sworn on oath, depose and state that I am the witness identified in the foregoing prepared testimony and I am familiar with its contents, and that the facts set forth are true to the best of my knowledge, information and belief.

Kyle D. White

Kyle D. White

Subscribed and sworn to before me this 17th day of December, 2018.

BECKY PURINGTON NOTARY PUBLIC (SEAL) STATE OF SOUTH DAKOTA

Notary Public

My Commission Expires: My Commission Expires June 22, 2023