BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE COMPLAINT OF ENERGY OF UTAH, LLC AND FALL RIVER SOLAR, LLC AGAINST BLACK HILLS POWER INC. DBA BLACK HILLS ENERGY FOR DETERMINATION OF AVOIDED COSTS

EL18-038

REBUTTAL TESTIMONY AND EXHIBIT

OF

KYLE D. WHITE

ON BEHALF OF

BLACK HILLS POWER, INC.
D/B/A BLACK HILLS ENERGY

Date: January 30, 2020

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I. INTRODUCTION

Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

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

Q: PLEASE DESCRIBE YOUR EMPLOYMENT.

A: I am employed by Black Hills Service Company, LLC, 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, Inc.

Q: **DID YOU SUMBIT DIRECT TESTIMONY IN DOCKET EL18-038?**

A: Yes.

Q: **ON WHOSE BEHALF ARE YOU OFFERING THIS REBUTTAL TESTIMONY?**

A: Black Hills Power Inc., d/b/a Black Hills Energy, which is referred to throughout the remainder of my testimony as Black Hills.

Q: IN HIS DIRECT TESTIMONY, STAFF WITNESS DARREN KEARNEY SUGGESTED THAT BLACK HILLS PROVIDE ADDITIONAL SUPPORT AND EXPLANATION ON THREE TOPICS: (1) ITS AVOIDED CAPACITY ANALYSIS; (2) ITS LOAD FORECAST, INCLUDING HOW ENERGY EFFICIENCY PROGRAMS WERE CONSIDERED; AND (3) ITS USE OF A 1.5% INLATION RATE. IS BLACK HILLS ADDRESSING THESE TOPICS WITH ITS REBUTTAL TESTIMONY?

A: Yes, in my rebuttal testimony, the rebuttal testimony of Ms. Amanda Thames, and the rebuttal testimony of Mr. Jim McMahon.

Q: EVEN THOUGH MR. KEARNEY ASKS FOR ADDITIONAL SUPPORT, DID HE FIND IN ANY WAY THAT BLACK HILLS HAD DISCRIMINATED AGAINST FALL RIVER IN PREAPRING ITS AVOIDED COST RATES?

A: No.

II. AVOIDED CAPACITY COSTS

Q: HAVE YOU REVIEWED MR. KEARNEY'S TESTIMONY ON THE TOPIC OF THE APPROPRIATE AVOIDED CAPACITY CREDIT?

A: Yes, I have.

Q: WHAT ARE MR. KEARNEY'S POSITIONS ON THE PAYMENT OF A CAPACITY CREDIT TO FALL RIVER?

A: Mr. Kearney has offered two opinions on the issue of capacity costs. Black Hills agrees with one of those positions and disagrees with the other. First, Mr. Kearney has emphasized language from the Commission decision in Docket F-3365 that indicates capacity credits "should be based on capacity costs actually avoided, and if the purchase does not allow a utility to avoid capacity costs, capacity should not be allowed."[1] Black Hills agrees with this statement and believes that it aligns with PURPA's requirement that a utility pay no more

[1] Direct Testimony of Darren Kearney at page 6.

than its avoided costs. Mr. Kearney's second opinion is that Fall River's avoided capacity credit should be based on the Cost of New Entry or "CONE" for a simple cycle gas plant. Black Hills disagrees with this second opinion, as CONE does not reasonably represent what Black Hills' customers would have paid for identified short-term periodic seasonal capacity deficits in the 20 year Power Purchase Agreement ("PPA") period had there been no QF request for a PPA.

Q: PLEASE COMPARE BLACK HILLS' METHOD FOR PROVIDING AN AVOIDED CAPACITY CREDIT TO THAT PROPOSED BY MR. KEARNEY.

A: Black Hills' method for providing Fall River with an avoided capacity credit matches its historical practice of acquiring seasonal firm energy to address volumetrically small short-term periodic seasonal capacity deficits. This is the same type of capacity that would be avoided if the Fall River project were successfully built. By way of comparison, Mr. Kearney proposes a capacity credit based upon a more generalized and hypothesized industry practice for valuing new capacity. Mr. Kearney's approach is not reflective of Black Hills' reserve or peaking capacity acquisition practices and is not a reasonable comparator to the costs Black Hills' customers can expect to avoid if Black Hills executes a PPA with Fall River.

Q: WHY DO YOU DISAGREE WITH MR. KEARNEY'S CONCLUSION THAT THE AVOIDED CAPACITY COST IN THIS CASE SHOULD BE DETERMINED BASED ON THE CONE?

A: Stated simply, it is not representative of the true costs which are expected to be avoided if Black Hills enters into a PPA with Fall River for its intermittent solar generation. The Load and Resource Balance in this case does not support the construction of generation or acquisition of a long-term PPA during the planning period. To ensure that PURPA's customer indifference standard is satisfied, it is imperative that the avoided capacity rate actually matches the costs which would be avoided by the QF purchase. Absent construction of the Fall River solar project, consistent with its historical practice, Black Hills would fill short-term periodic seasonal capacity gaps with seasonal firm purchases or, given the very small nature of some of the capacity deficits in this matter, in the day ahead market. By pricing avoided capacity in the manner proposed by Black Hills, its customers are truly indifferent to the capacity source (i.e., seasonal firm market energy or solar energy generated by Fall River). Customers will not be indifferent if the Commission allows a capacity credit using either the recommendations of Mr. Klein or Mr. Kearney.

Q: HAS BLACK HILLS UTILIZED THIS APPROACH IN OTHER AREAS OF PLANNING AND OPERATING ITS ELECTRIC UTILITY BUSINESS?

A: Yes, Black Hills' approach in this docket is consistent with its planning and operating practice. It has utilized short-term capacity (currently seasonal firm energy purchases) for decades to meet the lowest load factor capacity requirements for meeting its obligation to serve. From a historical operating practice perspective, as a small utility (in terms of both customers and load served), Black Hills has the ability to rely on the power supply resources

of its neighboring utilities for short-term periodic seasonal peaking and reserve capacity requirements. Through this practice, Black Hills' customers avoid paying for peaking and reserve capacity on a year-round basis either through long-term power purchases or utility ownership of peaking generation. The flexibility and savings of this approach has resulted in substantial customer benefits. Similarly, from a planning perspective, the concept of addressing short-term periodic seasonal capacity deficits (a couple to a few weeks each year) with seasonal firm purchases is utilized for budgeting, resource planning and seasonal power supply acquisition purposes.

Q: WHAT LEVEL OF CAPACITY DEFICIT HAS BLACK HILLS ALLOWED TO BE FILLED WITH THIS TYPE OF FIRM ENERGY PURCHASE AS PART OF ITS RESOURCE PLANNING?

A: In its more recent budgeting and resource planning, Black Hills has allowed up to 50 MW of seasonal deficits to be filled with firm energy purchases.

Q: WHY DOES BLACK HILLS BELIEVE IT IS REASONABLE TO USE AZ-PV AS A REFERENCE HUB FOR PRICING SEASONAL FIRM ENERGY PURCHASES AND IN DETERMINING THE RESULTING AVOIDED CAPACITY CREDIT FOR FALL RIVER?

A: The acronym "AZ-PV" describes the Arizona / Palo Verde hub, which is a trading point in the Western Interconnection with sufficient transaction volumes to support a reliable price forecast for firm energy purchases. In addition, AZ-PV has enough transmission

interconnections and transfer capability into the Rockies market (Black Hills' closest market) to influence purchased power prices in the Rockies region. The Rockies region is the region in which Black Hills engages in the majority of its bilateral energy purchases and sales.

Q: SINCE BLACK HILLS USES AZ-PV ENERGY PRICES AS THE BASIS FOR ITS SEASONAL FIRM ENERGY PRICING FORECASTS, DOES THAT MEAN THAT BLACK HILLS' SEASONAL FIRM ENERGY PURCHASES ARE ALL SOURCED AT THE AZ-PV HUB?

A: No, it does not. Black Hills' purchases could be sourced from AZ-PV, however, it frequently trades with neighboring utilities in the Rockies region due to availability, favorable transmission interconnections, and transfer capability. As described below, Rockies firm purchases have been favorable to customers and to the AZ-PV energy pricing.

Q: DOES BLACK HILLS BELIEVE THAT USE OF THE ABB AZ-PV FORECASTED ENERGY PRICING PLUS A 20% PREMIUM CONSTITUTES A REASONABLE ASSUMPTION FOR THE COSTS ASSCOCIATED WITH THE SEASONAL FIRM ENERGY PURCHASES THAT BLACK HILLS MAY AVOID IF THE FALL RIVER SOLAR PROJECT IS SUCCESSFULLY CONSTRUCTED?

A: Yes.

Q: PLEASE EXPLAIN WHY.

A: The decision to include a 20% premium on the forecasted AZ-PV energy price was based on Black Hills power trading desks' experience in making daily bi-lateral sales within this

portion of the Western Interconnection. The 20% premium is intended to account for the short-term nature of the purchases and potential volatility in the energy and capacity market. Black Hills believes this same approach is appropriate for the avoided cost rate. Black Hills' general trading experience within this portion of the Western Interconnection is validated by empirical data it gathered in 2017 and 2018, which includes routine purchases of Rockies firm energy on behalf of its affiliate Cheyenne Light, Fuel and Power Company ("Cheyenne Light"). Beginning in 2017, under its Generation Dispatch and Energy Management agreement with Cheyenne Light, Black Hills has made daily Rockies firm energy purchases on behalf of Cheyenne Light. Analysis of the prices paid for firm energy in the Rockies region in 2017 and 2018 supports the conclusion that forecasting avoided capacity cost at the AZ-PV rate plus 20% is not only reasonable, but also conservative when compared to Black Hills' recent experience with firm energy purchases. Confidential Exhibit KDW-6 compares the average on-peak AZ-PV energy pricing to the price of firm energy purchases in the Rockies region. Additionally, Confidential Exhibit KDW-6 compares the Rockies energy and capacity price to the Rockies energy only price. As shown in Confidential Exhibit KDW-6, the AZ-PV economy energy traded at a 23% premium as compared to Rockies firm energy over the identified time frame. Black Hills believes this comparison demonstrates and supports the conclusion that the AZ-PV energy forecast with a 20% capacity premium is conservative and is appropriate for use in resource planning, as well as appropriate for use in determining an avoided capacity credit.

Q: WHAT IS THE DIFERENCE IN ECONOMIC IMPACT OF PRICING CAPACITY AS PROPOSED BY MR. KEARNEY AS COMPARED TO THE METHOD PROPOSED BY BLACK HILLS?

A: Mr. Kearney's substitution of costs associated with new natural gas peaking generation for Black Hills' actual practice will cause Black Hills' customers to pay about $20,000,000 more over the life of the PPA. Mr. Kearney's discomfort with the derivation of the price forecast for the seasonal firm energy purchases is not sufficient justification for the Commission to ignore Black Hills' longstanding reserve and peaking capacity acquisition practices. Purchasing seasonal firm purchases has been the planning and operating practice of Black Hills and the Commission should endorse it as the appropriate method for valuing avoided capacity.

Q: WHAT TYPE OF PREMIUM WOULD NEED TO BE APPLIED TO AZ-PV FIRM ENERGY PRICING FOR A PEAKING UNIT, SUCH AS THAT DESCRIBED BY MR. KEARNEY, TO BE THE MORE REASONABLE APPROACH FOR DETERMINING AVOIDED CAPACITY?

A: Under the resource planning modeling parameters, seasonal firm energy (purchased in 25 MW blocks) is purchased only for a single month (July) in 10 of the 20 years of the PPA term. Consequently, the inflation adjusted ABB forecasted Purchased Energy price for energy purchased at AZ-PV would need be increased by over 400% for Black Hills' customers to be indifferent to his recommendation when compared to Black Hills' actual and

expected practice for acquiring peaking and reserve capacity. Utilizing Mr. Kearney's capacity credit recommendation simply does not result in an avoided cost rate (or avoided capacity credit) that would leave Black Hills' customers indifferent to the capacity source or that would be fair, just and reasonable. On this basis, the Commission should reject Mr. Kearney's approach.

Q: MR. KEARNEY HAS PROPOSED THAT A MORE APPROPRIATE ACCREDITED CAPACITY FOR THE FALL RIVER PROJECT WOULD BE 50%, DOES BLACK HILLS DISPUTE MR. KEARNEY'S SUGGESTION?

A: No, it does not.

Q: DID YOU RESPOND TO MARK KLEIN'S PROPOSED AVOIDED CAPACITY METHODOLOGY AND RATE IN YOUR DIRECT TESTIMONY?

A: Yes, I did.

Q: SINCE OFFERING THAT TESTIMONY, HAVE YOU BECOME AWARE OF ANY ADDITIONAL INFORMATION THAT THE COMMISSION SHOULD CONSIDER IN RESOLVING THIS MATTER?

A: Yes, I have.

Q: WHAT ADDITIONAL INFORMATION HAS BECOME AVAILABLE?

A: First, I have reviewed Mr. Vrba's deposition and at page 116 and 118 and he indicates that he no longer believes that SD Sun is an appropriate proxy for avoided capacity. Second, Mr. Kearney has filed testimony indicating that he disagreed with the proposed solar proxy.

Q: HAS THIS INFORMATION CAUSED YOU TO CHANGE YOUR OPINION ON THE APPROPRIATE METHOD FOR DETERMINING THE AVOIDED CAPACITY COST IN THIS CASE?

A: No, I remain of the opinion that the only way to ensure that Black Hills' customers pay no more than the "avoided costs" is to price that capacity contribution based upon avoided seasonal firm purchases as described elsewhere in this testimony and in my direct testimony.

Q: WHY IS IT IMPORTANT TO ESTABLISH A RATE FOR PURCHASES THAT DOES NOT EXCEED BLACK HILLS' AVOIDED COST?

A: As is well stated in the testimony of Mr. Kearney, Black Hills' customers will ultimately be responsible for paying the avoided cost rate for purchases ordered by the Commission during the 20 year duration of the QF PPA. Thus, the avoided capacity cost should not exceed what Black Hills' customers would have expected to pay absent the QF PPA; this is the true meaning of customer indifference.

Q: MR. KLEIN URGES THAT WHILE THERE MAY BE SITUATIONS WHERE EXCESS ENERGY MUST BE SOLD INTO THE MARKET AT A RATE LOWER THAN THE FIXED AVOIDED COSTS PAYMENTS TO THE QF, THERE WILL ALSO BE TIMES WHEN EXCESS ENERGY CAN BE SOLD AT A PRICE ABOVE THE FIXED AVOIDED COST PAYMENTS; THUS IN THE END ANY "RISK" WILL NET OUT. WHY CAN'T THE COMMISSION JUST TRUST THAT PAYMENTS

MADE FOR ENERGY IN LONG 2 SCENARIO WILL JUST NET TO ZERO AT THE END OF THE DAY?

A: First, this ignores one of the key PURPA principals; namely that a utility should not be required to pay more than its avoided costs for energy or capacity. Second, as noted in the testimony of Mr. Kearney, it is likely that the greatest amount of excess or "dump" energy will be generated and delivered during low load hours when market prices would likely be lower. Finally, Mr. Klein's statement in this regard is squarely contradicted by observations in a recent Notice of Potential Rule Making ("NOPR") under consideration at the Federal Energy Regulatory Commission ("FERC"). There, FERC indicates its concern that the idea that the risks associated with the fixed price QF contract pricing being high (above market) or low (below market) "balance out over time may no longer be valid."[2]

III. AVOIDED COST MODELING

Q: HAVE YOU REVIEWED MR. VRBA'S DEPOSITION TESTIMONY IN THIS MATTER, AND PARTICULARLY HIS TESTIMONY REGARDING BLACK HILLS' AVOIDED COST MODELING EFFORTS?

A: Yes.

[2] *See* 168 FERC ¶61, 184, at Para. 30, Docket Nos. RM19-15-000 and AD16-16-000 (September 19, 2019)

Q: ARE YOU AWARE THAT MR. VRBA TESTIFIED AT PAGE 115 OF HIS DEPOSITION THAT THE AVOIDED COSTS BLACK HILLS PRODUCED ARE "ARBITRARY" AND SHOULD BE REJECTED IN THEIR ENTIRETY.

A: Yes, I am.

Q: DO YOU AGREE WITH HIS TESTIMONY?

A: No, I do not.

Q: PLEASE EXPLAIN YOUR BASIS FOR DISAGREEMENT.

A: Mr. Vrba's testimony is unsupported by the record before the Commission. First and foremost, a change in facts resulting in a change in avoided costs does not cause the resulting avoided cost rate to be arbitrary. In addition, at least with regard to the avoided cost of energy, Mr. Kearney's direct testimony, in essence, endorses Black Hills' modeling methodology and resulting avoided energy cost. Indeed with regard to the avoided energy cost, the only input for which Mr. Kearney sought "additional information" was the 1.5% inflation rate used on ABB's commodity forecasts and which 1.5% inflation factor is further supported in Black Hills' rebuttal testimony. Finally, with regard to avoided capacity, when acting on behalf of SD Sun I and II, Mr. Vrba accepted an avoided capacity rate valued on the avoidance of seasonal firm purchases with pricing at AZ-PV plus 20%, which is the same method used by Black Hills in this case. This last factor demonstrates Fall River's argument is not so much as to the appropriate methodology for determining avoided capacity cost, but instead about its preferred or desired PPA price outcome.

Q: AT PAGE 117 OF HIS DEPOSITION TESTIMONY, MR. VRBA TESTIFIED THAT MR. KEARNEY'S PROPOSED AVOIDED COST ESTIMATE INCLUDED AN ASSUMPTION THAT THE SD SUN PROJECT WAS TO BE CONSTRUCTED AND INCLUDED AS PART OF THE POWER SUPPLY PORTFOLIO, DO YOU AGREE WITH THAT TESTIMONY?

A: No, I do not. Mr. Kearney's proposed avoided cost estimate did not include an assumption that SD Sun was constructed and included as part of Black Hills' power supply portfolio, as Mr. Kearney's proposed avoided cost estimate was premised upon avoided cost modeling outputs provided by Black Hills in discovery in response to Staff's Data Request 2-7 on July 16, 2019. A review of the assumptions document provided with that response shows that SD Sun is not included as an available resource.

Q: IN HIS DEPOSITION, MR. VRBA TESTIFIED THAT THERE WAS NO EXPLANATION FOR THE CHANGE IN AVOIDED COST PRICING IN BLACK HILLS' VARIOUS AVOIDED COST SUBMISSIONS, CAN YOU EXPLAIN THE CHANGE IN CALCULATED AVOIDED COST RATES PROVIDED BY BLACK HILLS IN APRIL 2018, AUGUST 2018, MARCH 2019 AND JULY 2019?

A: Yes, I can.

April 2018 to August 2018: There are two factors which explain the difference in avoided cost pricing that was provided by Black Hills in April 2018 and August 2018: (1) the amount of SD Sun assumed available within the power supply portfolio and (2) use of an

updated ABB reference case (April 2018 modeling used Fall 2017 and August 2018 modeling used Spring 2018). When the initial avoided cost rate was provided in April of 2018, Black Hills had just recently acquired development rights for the SD Sun project from 174 Power Global and SD Sun was being evaluated for construction by Black Hills. By August of 2018, Black Hills believed that a 20 MW project was more likely, so it changed the amount of expected solar generation to reflect that progression in its resource planning. Since, all Parties now agree that there was no LEO in place until August 14, 2018 *at the absolute earliest,* updating the assumptions to reflect release of the Spring 2018 reference case was appropriate. These two factors produced a $21.77 per MWh avoided cost rate.

August 2018 and March 2019: Between August of 2018 and March 8, 2019, a single factor explains the increase in avoided cost rate: namely, the decision to not construct the SD Sun solar project at that time. As described in the deposition of Justin Briggs and consistent with documents produced in response to Fall River's Second Set of Discovery, Black Hills initiated request for proposals ("RFP") for construction costs for which it received a response in October of 2018 and an additional response in November of 2018. After review and analysis of the RFP responses, Black Hills determined it was not feasible to proceed with development at that time. On March 1, 2019, Black Hills notified Fall River and Commission Staff that it did not intend to construct SD Sun. In light of this decision, Black Hills determined that SD Sun, as a future generation assumption, should be revisited. It decided to remove any SD Sun generation from the production cost modeling and, as such,

the determination of the avoided cost rate for Fall River. Because it believed the LEO date would likely be deemed to have pre-dated issuance of the 2018 Fall Reference Case, Black Hills chose not to use it for March 2019 avoided cost calculation. The elimination of the SD Sun generation (which was favorable to Fall River and what Ros Vrba has testified via deposition is the correct assumption)[3] explains the change in price from August 2018 to March 2019. The price produced in March of 2019 was $24.95 per MWh.

July 2019: The preparation of an updated avoided cost rate in the Summer of 2019 has been previously explained, but for sake of completeness it resulted from the inclusion of an escalation for inflation of the natural gas and purchased power pricing forecasts from ABB and updating of the weighted average cost of capital used to levelize that avoided cost rate. The inflation adjustment resulted in an avoided cost rate of $28.30 per MWh.

Q: WHY DID BLACK HILLS MODEL ITS AVOIDED COSTS ON A 20 YEAR PLANNING PERIOD?

A: Black Hills modeled the avoided cost rate on a 20 year planning period as it believed that time period to be consistent with prior Commission decisions and it was the time period requested by the QF.

Q: DOES THE UTILITY HAVE ANY CONCERNS WITH REGARD TO A 20 YEAR QF PPA?

[3] Deposition of Ros Vrba at page 144.

A: Yes, it does.

Q: CAN YOU DESCRIBE THE BASIS FOR THOSE CONCERNS?

A: The longer the term of the fixed price PPA, the greater the potential that a change in the economy, environmental policy, or regulation would result in a PPA being out of market in the latter years of that contract. As mentioned above, when PURPA was first enacted, it was presumed that "any overestimations and underestimations in avoided costs during the term of the contract would 'balance out' over time," however, in an ongoing FERC NOPR that assumption is being squarely criticized.[4] Indeed FERC has specifically indicated that it has received evidence that "overestimations of avoided cost have not been balanced by underestimations."[5] A final concern is that, given the passage time in this docket, the modeling period is unlikely to match the actual PPA period.

IV. THE LONG 2 SUPPLY SCENARIO

Q: THOUGH FALL RIVER REMAINS CRITICAL OF BLACK HILLS' ASSIGNMENT OF A ZERO DOLLAR AVOIDED COST IN THE LONG 2 SCENARIO, AT PAGE 118 OF HIS DEPOSITION, MR. VRBA CHARACTERIZED THE LONG 2 SCENARIO AS IRRELEVANT DURING HIS DEPOSITION TESTIMONY, BEFORE

[4] *See* 168 FERC ¶61, 184, at Para. 30, Docket Nos. RM19-15-000 and AD16-16-000 (September 19, 2019)

[5] *Id.*

DISCUSSING ISSUES SURROUNDING "THE LONG 2 SCENARIO," CAN YOU DESCRIBE WHAT THAT IS?

A: As I described in my direct testimony, the Long 2 Scenario involves a supply situation where the utility's load is less than its available power supply resources, operating at minimum levels, and its power supply cannot be reduced due to operational or contractual constraints. In this situation, the utility avoids no costs and consistent with the Commission's discussion in *In the Matter of Consolidated Edison Development Inc., against Northwestern Corporation, DBA Northwestern Energy For Establishing a Purchase Power Agreement* (December 20, 2017) energy supplied during the Long 2 Scenario is assigned zero dollars when determining the avoided cost rate for the QF.

Q: DO YOU BELIEVE THAT CONTINUED RECOGNITION OF THE LONG 2 SCENARIO BY THE COMMISSION IS AS URGED BY MR. VRBA?

A: No, Black Hills disagrees with any statement or insinuation that the Long 2 Scenario is irrelevant to calculating an avoided cost rate. On the contrary, recognition of the Long 2 Scenario is necessary to ensure that PURPA's customer indifference standard is satisfied. In *Consolidated Edison*, the Commission correctly determined that, in the Long 2 Scenario, the utility avoids no costs; thus the energy has zero value. Changing this practice of the Commission could have serious financial implications for electric utility customers in South Dakota.

Q: WHAT ARE THE FINANCIAL IMPLICATIONS THAT YOU ARE CONCERNED ABOUT?

A: With each new intermittent renewable must-run generation source, Black Hills has less ability to back down other power supply resources to accommodate the must-run intermittent renewable resource. At some point all of the new QF energy will be excess and **only** has value if the Commission requires the utility to market the energy and requires the utility's customers to pay the forecasted market price. If this happens, Black Hills' customers will be guaranteeing both a market and a price for the excess energy generated by the QF and all risks related to the future value of this excess energy will borne by customers.

Q: CAN YOU PROVIDE MORE DETAIL AROUND THE MARKET RISK REFERENCED IN YOUR LAST ANSWER?

A: Under normal power supply acquisition practices customers have confidence that power acquired will be used to serve them and that it will have a predictable price (cost to construct or PPA pricing terms). If the Commission were to require that a QF be paid the forecasted market price in the Long 2 Scenario, the QF will enjoy rate certainty (the avoided cost rate customers will pay), but customers will have none. Instead, customers will only experience market uncertainty. The market price over twenty years will at times be lower than the QF's avoided cost rate, at times higher, and at times may even be negative.

Q: IF THE COMMISSION WERE TO REACH A DIFFERENT CONCLUSION ON THE LONG 2 SCENARIO THAN IT DID IN *CONSOLIDATED EDISON,* IS IT POSSIBLE

THAT, AT SOME POINT, A QF PROJECT COULD BE WHOLLY FINANCED ONLY ON EXCESS ENERGY?

A: Yes, I believe that is possible.

Q: WHAT WOULD BE THE PRACTICAL RESULT OF SUCH A SITUATION?

A: Reversal of the Long 2 Scenario could result in South Dakota customers being the market price guarantors and the utility being the involuntary marketer for all of the QF's production, as in that situation none of the QF energy could actually be used to serve the utility's load or the customer's needs.

V. NATURAL GAS AND PURCHASED POWER ASSUMPTIONS / INPUTS

Q: IN YOUR DIRECT TESTIMONY, YOU DISCUSSED THE DOWNWARD TREND OF NATURAL GAS AND PURCHASED POWER PRICES SINCE 2015. HAS ANY WITNESS DISPUTED THAT TREND?

A: No, in fact Mr. Kearney has filed similar testimony also recognizing this trend.

VI. ESCALATION OF ABB FORECASTS

Q: IN YOUR DIRECT TESTIMONY YOU WERE ASKED WHETHER YOU HAD DISCOVERED ANYTHING THAT YOU BELIEVE SHOULD BE CHANGED IN BLACK HILLS' AVOIDED COST RATE CALCULATIONS AND YOU INDICATED THAT YOU ANTICIPATED SUPPLEMENTING YOUR TESTIMONY AND/OR EXHIBITS TO ACCOUNT FOR APPLICATION OF AN INFLATION FACTOR ON COMMODITY FORECASTS PROVIDED BY ABB AND ALSO THAT BLACK HLLS

INTENDED TO UPDATE THE DISCOUNT FACTOR UTILIZED, IS THAT CORRECT?

A: Yes.

Q: HAS THAT WORK BEEN ACCOMPLISHED?

A: Yes, the modeling work was accomplished and an updated price ($28.30 per MWh) as well as supporting workpapers were provided to Fall River and Staff in July of 2019. Output files representative of that work are also included as Confidential Attachments SDPUC 2-7(a) - SDPUC 2-7(d) in response to Staff's DR 2-7.

Q: WHAT INFLATION FACTOR WAS USED IN THE WORK THAT YOU HAVE DESCRIBED?

A: A 1.5% annual compound escalation factor was applied to the ABB Spring 2018 Reference Case.

Q: PLEASE EXPLAIN WHY BLACK HILLS BELIEVES THAT A 1.5% INFLATION FACTOR IS APPROPRIATE IN THIS SITUATION?

A: As Mr. Kearney has confirmed, 1.5% was the inflation rate used by Black Hills for its business forecasting purposes. As additional support for the 1.5% future inflation estimate, I reviewed the Producers Price Index for Utilities and observed that from 2010 through 2019, the average annual inflation rate was 1.23%. Inflation has trended downward and has remained low for a number of years. Even with a strong economy and a Federal Reserve which desires to raise the rate of inflation here in the United States, the inflation rate has

remained low. With continuing advances in technology, and the related productivity increases, there are no signs that suggest that inflation will rise materially. Long-term interest rates also support on-going expectations for low U.S. inflation rates.

VII. LEO DATE

Q: HAVE YOU REVIEWED MR. KEARNEY'S TESTIMONY AS IT RELATES TO THE LEO DATE IN THIS MATTER?

A: Yes.

Q: DO YOU AGREE WITH HIS TESTIMONY?

A: I agree that before a LEO can attach the QF has to have made a realistic and true commitment, and have the ability to deliver energy, capacity or energy and capacity. I also agree with Mr. Kearney's opinion that there must be some significant steps towards solar project completion. While Mr. Kearney references the attainment of permits necessary for construction as an indicator of "significant steps toward completion," the factor appears to have no value in this case, as Mr. Vrba has testified that there are no permits necessary for construction. Finally, I agree with Mr. Kearney that the Commission should not find a LEO has been created until, at a minimum, the feasibility study has been completed. The feasibility study in this matter is dated August 16, 2018.

Q: DO YOU AGREE THAT FALL RIVER ESTABLISHED A LEO WHEN IT SENT CORRESPONDENCE TO BLACK HILLS ON AUGUST 14, 2018?

A: No, I do not.

Q: WHY NOT?

A: First, the feasibility study was not completed by August 14, 2018. Second, while Fall River did send a letter to Black Hills on August 14, 2018, it also indicated that it was giving Black Hills seven days to accept its proposed price, or it would file a complaint. Based on these facts it appears any determination that a LEO was created before August 21, 2018 is incorrect. Moreover, Black Hills responded to the August 14, 2018 letter, indicating that there were updates that it believed were appropriate (removal of a portion of generation contribution of SD Sun and use of the 2018 Spring Reference case) and sought a short extension of time to provide an updated avoided cost rate. Fall River agreed to that extension. Black Hills provided an updated rate and modeling outputs to Fall River on August 29, 2018. The avoided cost rate provided represented an increase of the prior avoided cost rate provided to Fall River. As of August 29, 2018, the parties continued to negotiate as anticipated in the Commission's Order in F-3365. On September 6, 2018, Fall River rejected the price. September 6, 2018 was the date that Black Hills previously agreed to stipulate as a LEO, but which was never finalized by Fall River. Fall River filed its Petition on September 14, 2018. Based on the facts set forth, Mr. Kearney's testimony, and a review of the Commission's prior decision in Consolidated *Edison,* it appears appropriate for the Commission to conclude the LEO arose on September 14, 2018 when the complaint was filed with the Commission.

Q: BASED UPON THE AVOIDED COST CALCULATION MODELING TO DATE, IS THERE ANY MATERIAL DIFFERENCE IN THE AVOIDED COST RATE FOR ANY OF THESE POSSIBLE LEO DATES?

A: No, there is not. Regardless of the date ultimately selected, Black Hills appropriately used ABB's Spring Reference case and its recent calculations do not include any contribution of SD Sun or the 12 MW Wind PPA (executed on August 16, 2018), as available generation resources.

VIII. CONCLUSION

Q: DID MR. KEARNEY IDENTIFY ANY CONCERN FOR DISCRIMINATION IN BLACK HILLS' WORK IN PREPARING ITS AVOIDED COST RATES IN HIS DIRECT TESTIMONY?

A: No.

Q: BASED UPON THE TESTIONY SUBMITTED THUS FAR, WHAT MATTERS DO BLACK HILLS AND COMMISSION STAFF AGREE UPON?

A: Commission Staff and Black Hills agree upon the methodology to be used in determining Black Hills' avoided energy cost, including the handling of the Long 2 Scenario. Black Hills and Commission Staff also agree on the inputs utilized by Black Hills in its avoided energy cost modeling, however, Mr. Kearney did raise one concern about the 1.5% inflation factor for ABB Commodity prices, which inflation factor has been further supported by Black Hills in its discovery and its rebuttal testimony. Black Hills and Commission Staff further agree

that a 50% capacity factor can be used when determining an avoided capacity cost, use of the 50% accredited capacity would result in some adjustment to the $28.30 MWh price previously provided. Though there might be a technical dispute between Black Hills and Commission Staff as to the LEO date, as explained herein, that technical dispute does not necessarily impact the avoided cost rate.

Q: BASED UPON THE TESTIMONY SUBMITTED THUS FAR, WHAT MATTERS DO STAFF AND BLACK HILLS DISAGREE ABOUT?

A: There might be a disagreement as to the method for pricing any theoretical avoided capacity, however, from Mr. Kearney's testimony he appeared willing to consider Black Hills' approach to valuing avoided capacity, if additional justification were provided. Black Hills believes that it has provided that additional justification through its rebuttal testimony. Similarly, Mr. Kearney sought additional information about Black Hills weather normalized econometric load forecast which has been provided through rebuttal testimony of Amanda Thames and Jim McMahon.

Q: ARE THESE THE SAME BASIC ISSUES DISPUTED BY FALL RIVER?

A: Yes, at least in part. There is a fundamental difference among all three parties with regard to the methodology proposed for determining avoided capacity costs. However, Black Hills' approach is the best approach for customers, is the only proposed approach that reflects the costs its customers could avoid if the Fall River solar project were constructed, and is the only approach that leaves customers indifferent to the source of generation, as required by

PURPA. While Commission Staff and Black Hills have supported continued recognition of the Long 2 Scenario, it appears that Fall River continues to challenge that modeling assumption. As described in my direct testimony and in this rebuttal testimony, continued acceptance of the Long 2 Scenario is key to ensuring that customers only pay their avoided costs. Despite being asked in data requests and in depositions to identify the inputs and assumptions it challenges, Fall River has not identified anything other than the avoided capacity cost and use of the Long 2 Scenario. Thus, determination of the avoided capacity costs and the Long 2 Scenario appear to be the primary areas of dispute by Fall River.

Q: WHAT DECISION DOES BLACK HILLS ASK THAT THE COMMISSION REACH IN THIS MATTER?

A: Black Hills requests a Commission decision that accepts its modeling approach and inputs described within its pre-filed testimony and that resulted in an avoided cost rate of $28.30 per MWh, but allow for an adjustment to account for a 50% accredited capacity, as proposed by Mr. Kearney in his pre-filed testimony.

Q: DO YOU HAVE ANY FURTHER TESTIMONY AT THIS TIME?

A: I do not.

Q: DO YOU ANTICIPATE HAVING ANY FURTHER OPINIONS?

A: The answer to this question largely depends on the nature of Fall River's rebuttal testimony. In their pre-filed testimony both Mr. Vrba and Mr. Klein reserved the right to change their

positions, testimony, and even avoided cost methodology. If that occurs, I might well have additional testimony and opinions and reserve the right to supplement on that basis.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE COMPLAINT OF ENERGY OF UTAH, LLC AND FALL RIVER SOLAR, LLC AGAINST BLACK HILLS POWER INC. DBA BLACK HILLS ENERGY FOR DETERMINATION OF AVOIDED COSTS

EL18-038

STATE OF SOUTH DAKOTA)
)SS
COUNTY OF PENNINGTON)

I, Kyle D. White, being first duly sworn, on oath state that I am Vice President - Regulatory Strategy for Black Hills Service Company, LLC, which is a wholly-owned subsidiary of Black Hills Corporation and an affiliate of the Respondent, Black Hills Power, Inc. d/b/a Black Hills Energy, in this proceeding, whose Rebuttal Testimony and Exhibit were prepared by me or under my supervision. I am providing this testimony on behalf of Black Hills Power, Inc., and certify that the contents of the enclosed Rebuttal Testimony and Exhibit are true and correct to the best of my knowledge, information, and belief.

Kyle D. White

Subscribed and sworn to before me this 30th day of January, 2020.

Notary Public
My Commission Expires December 19, 2025

KYLIE GRIFFITH NOTARY SEAL PUBLIC STATE OF SOUTH DAKOTA

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE COMPLAINT OF ENERGY OF UTAH, LLC AND FALL RIVER SOLAR, LLC AGAINST BLACK HILLS POWER INC. DBA BLACK HILLS ENERGY FOR DETERMINATION OF AVOIDED COSTS	* * * * * * *	**CERTIFICATE OF SERVICE** **EL18-038**

I hereby certify that on the 30th day of January, 2020, I served the foregoing, Rebuttal Testimony and Exhibit of Kyle D. White on Behalf of Black Hills Power, Inc. d/b/a Black Hills Energy, via electronic mail to the following:

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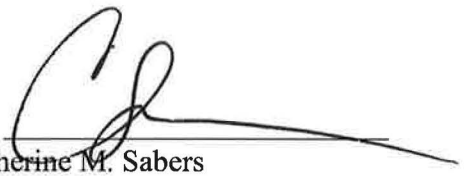
By: 
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