STAFF MEMORANDUM

TO: COMMISSIONERS AND ADVISORS

FROM: BRITTANY MEHLHAFF AND KRISTEN EDWARDS

RE: EL19-022- In the Matter of Black Hills Power, Inc. dba Black Hills Energy's Application for Adjustment to Its Cogeneration and Small Power Production Service Simultaneous Net Billing Generation Credit Rate(s)

DATE: July 18, 2019

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

BACKGROUND

On May 1, 2019, Black Hills Power, Inc. dba Black Hills Energy (BHE or Company) filed with the Commission a request for approval of tariff revisions to update the company's Cogeneration and Small Power Production Service Simultaneous Net Billing Generation Credit Rate(s).

The Commission officially noticed BHE's filing on May 2, 2019, and set an intervention deadline of May 17, 2019. No petitions to intervene were filed.

Under Section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA), electric utilities are required to purchase energy offered by Qualifying Facilities (QFs), which are cogeneration facilities[1] and small power production facilities[2]. Utilities are required to purchase energy, capacity, or both from QFs at rates which are just and reasonable, non-discriminatory, in the public interest, and reflect the incremental cost of energy, capacity, or both, that the utility would have incurred to generate or purchase the energy if it was not supplied by the QF. These incremental costs are termed the utility's avoided costs.

Federal Energy Regulatory Commission (FERC) regulations required states to establish standardized rates for QFs with an installed capacity of 100 kW or less. These standardized rates are included in BHE's tariff. Pursuant to 18 CFR 292.302, at least every two years, each electric utility must provide to its State regulatory authority data from which avoided costs may be derived. The Commission affirmed this requirement for BHE in an Order Approving Tariff Sheets in Docket F-3365[3]. Historically, BHE has not

[1] Cogeneration facilities are generating units that produce electricity and steam simultaneously.
[2] Small power production facilities have a maximum size of 80 MW and have a primary energy source (75 percent or more) of biomass, waste, renewable resources, geothermal resources, or any combination thereof.
[3] In the Matter of the Investigation of the Implementation of Certain Requirements of Title II of the Public Utilities Regulatory Policy Act of 1978 Regarding Cogeneration and Small Power Production.

filed such data every two years, however Staff requested BHE file updated rates in 2016. BHE complied with this request in December of 2016[4], and updated rates were approved by the Commission effective June 1, 2017.

Consistent with the two-year requirement, BHE filed updated rates in this current docket, proposed to be effective June 1, 2019. BHE seeks to revise the Company's Cogeneration and Small Power Production Service Simultaneous Net Billing Generation Credit Rate Tariff Section No. 3B, Sheet No. 9. This filing updates the generation credit rate based on current data and proposes to change the single generation credit rate to rates differentiated between wind and solar projects as well as seasonally differentiated on and off-peak rates. Such proposed revisions will affect approximately 63 customers currently receiving generation credits per this rate schedule. BHE also proposes to cancel Tariff Section No. 3B, Sheets No. 1 through 8 as the Company has never had any customers take service under these schedules. The Company's calculation of the avoided costs underlying the proposed rates is discussed more thoroughly below.

AVOIDED ENERGY COSTS

When calculating its avoided energy costs for this filing, BHE used ABB's Portfolio Optimization software to complete production cost modeling. The Company compares two scenarios to forecast the resource composition, costs and benefits of the utility's future electric system with and without a qualifying facility. The difference between the hourly total system cost of the two scenarios divided by the amount of energy supplied by the qualifying facility represents the avoided cost of energy of the qualifying facility. BHE computed the avoided costs associated with a 100 kW Solar QF and a 100 kW Wind QF.

Pursuant to Commission direction in Docket EL16-042, the Company provided on-peak and off-peak seasonal avoided cost rates in this filing. The Company proposed changing the existing generation credit rate of $0.0275/kWh to the following generation credit rates per kWh:

	Winter On-Peak	***Summer On-Peak***	***Winter Off-Peak***	***Summer Off-Peak***
100 kW or less Wind Project	$0.0259	$0.0259	$0.0209	$0.0192
100 kW or less Solar Project	$0.0260	$0.0263	$0.0225	$0.0213

After filing its application, BHE encountered issues with its proposed on/off-peak seasonal rates while conducting billing and metering testing. The Company discovered problems with implementing the proposed rates for customers who take service on the Residential Demand Rate. The Company's meters are only able to utilize one on/off-peak period. Given the on/off-peak periods proposed for the generation credit rates differ from the Residential Demand Rate Schedule on/off-peak periods, the

[4] See Docket EL16-042

Company is currently unable to implement the rates as proposed. Therefore, BHE filed revised exhibits supporting a single generation credit rate of $0.0248 per kWh. Given the complications associated with the proposed rates, Staff supports the Company's request to continue with a single generation credit rate at this time. BHE does note it plans to continue working on a solution to allow separate seasonal on/off-peak rates in the future.

The new single generation credit rate calculation is based upon the yearly seasonal average price of a theoretical 100 kW solar qualifying facility. Approximately 94% of the existing qualifying facility small power production capacity interconnected to the Company's system is solar. Staff agrees utilizing this credit rate for all small qualifying facilities is appropriate given the amount of solar currently on the system compared to wind, as well as the small disparity between the solar rate and the rate calculated for a 100 kW wind qualifying facility. The proposed generation credit rate of $0.0248 per kWh is a slight reduction from the present credit rate of $0.0275 per kWh.

AVOIDED CAPACITY COSTS

BHE indicates its peak demand and energy forecasts as well as load and resource balance[5], which are completed on an annual basis, show it will have sufficient capacity resources to serve customer electricity demand, including a fifteen percent reserve margin, over the three-year planning period of 2019 through 2021[6]. Therefore, BHE does not expect to add any planned capacity resources, which eliminates the need for a capacity credit in its calculation of avoided cost for qualified facilities of 100 kW or less. The Company does, however, estimate that seasonal firm energy purchases will be needed during that time period. Avoided costs associated with the reduction of seasonal firm energy purchases would be reflected in the production cost model and reflected in the total avoided energy costs. However, since these seasonal firm energy purchases are transacted in 25 MW blocks, the addition of a 100 kW qualifying facility does not eliminate or reduce a seasonal firm energy purchase.

OTHER ISSUES

The Commission is currently processing Docket EL18-038 – 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 Cost. Staff notes that this docket is unrelated to Docket EL18-038, and no positions taken by either party in this docket are applicable or should be assumed to apply to Docket EL18-038, nor should

[5] In response to Staff's data request, BHE indicated that when the load and resource balance indicates there is a capacity deficit, seasonal firm market purchases will be procured to fill the gap in resources and maintain reliability. When the forecasted deficit becomes large enough that seasonal firm market purchases are no longer able to satisfy the gap between forecasted load and available resources, BHE starts an integrated resource planning process to identify the next resource need.

[6] BHE utilized a 3-year planning period for purposes of this docket because the tariff rate is updated every two years. However, in response to Staff's data request, the full load and resource balance was provided as 18 CFR § 292.302 (b) (2) requires the Company to provide a plan for a 10-year planning period. According to BHE's analysis, no capacity or firm energy purchases are avoided by the addition of a 100 kW solar or wind qualifying facility.

a decision in one docket be regarded as precedent for the other. The scope and depth of EL18-038 and the effect of the decision in that docket are vastly greater, making the two incongruent.

However, in the event any decisions made by the Commission in Docket EL18-038 are also applicable to the modeling the Company conducts for purposes of its 100 kW or less qualifying facility tariff, Staff recommends the Company address these items in its next biannual filing.

RECOMMENDATION

Staff recommends the Commission approve the revised generation credit rate of $0.0248 per kWh and associated tariff revisions with an effective date of August 1, 2019.