

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

In the Matter of the Request for a
Declaratory Ruling Approving a QF Power
Purchase Agreement

EL13-_____

Affidavit of Bleau J. LaFave

STATE OF SOUTH DAKOTA)

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COUNTY OF LINCOLN)

I, Bleau J. LaFave, being first duly sworn upon oath, state and allege as follows:

1. I am NorthWestern Energy’s Director of Long-Term Growth. I am responsible for overseeing the long-term supply growth strategies for NorthWestern Energy’s Montana, South Dakota, and Nebraska territories, including large project development and acquisitions. I am an active participant in selecting and implementing NorthWestern’s resource portfolio options.

2. I have personal knowledge of the facts stated herein. Any opinions expressed herein are based upon my experience, as well my direct involvement in NorthWestern’s negotiations with B & H Wind, LLC (“B & H”).

3. NorthWestern serves approximately 61,600 customers in 110 communities in South Dakota. In 2012, NorthWestern’s hourly load ranged from a minimum of 109 megawatts (“MW”) to a peak of 324 MW and averaged 171 MW. For 2014, NorthWestern projects its load will average 184 MW with a total load of 1,708,974 MWh. NorthWestern projects its average hourly load will grow at 1.91% per year to 2,458,797 MWh over the next 20 years.

4. Currently, NorthWestern provides the energy its customers require from its ownership share of three coal plants – Big Stone, Coyote, and Neil #4; a power purchase agreement

from an existing wind generation facility – Titan 1; and market purchases. Based on five years of historic hourly generation by the coal plants and three years of historic hourly generation by Titan 1, NorthWestern generates an average of 191 MW per hour. Additionally, NorthWestern plans to purchase the output of the Oak Tree Wind Project (“Oak Tree”), a QF wind-powered qualifying facility (“QF”) not yet constructed.

NorthWestern forecasts that the output of its coal generation, Titan 1, and Oak Tree will exceed its load during 6,127 hours in 2014, or 70% of the time. In my business judgment, NorthWestern’s portfolio requirements do not support the acquisition of additional intermittent energy resources in South Dakota at this time.

5. In conjunction with providing energy, NorthWestern must have capacity to meet reliability standards. NorthWestern provides capacity through its resources and purchases additional capacity in the market. The market-purchased capacity does not include energy unless NorthWestern calls on it. NorthWestern plans to purchase some amount of capacity throughout the next 20-year period.

6. It is my understanding B & H was formed in 2009 by a local group of residents to create a new source of income for area landowners and economic growth for the local communities through wind energy. B & H commenced development activities for a 41 MW wind facility located approximately 35 miles south of Mitchell, South Dakota (“Project”) in July of 2009 by submitting an interconnection request to NorthWestern Energy/WAPA (WAPA Queue #GI-0920a). B & H also leased land and installed two 60-meter and one 80-meter meteorological towers. In 2013, B & H completed the interconnection application process and self-certified the Project as a QF. After the Commission issued

the Final Order in the *Oak Tree* docket¹, B & H requested NorthWestern enter into negotiations for a power purchase agreement (“PPA”).

7. PURPA requires NorthWestern purchase the output from QFs at the utility’s avoided cost. NorthWestern prepared for negotiations by estimating the costs it could avoid by purchasing the output from the Project.

8. NorthWestern used a model to estimate its avoided cost for energy. The model uses historical information to predict the future performance. By subtracting the historical average generation from the historical load profile that has been increased by forecasted load growth, the forecasted cost for offsetting generation and purchases can be calculated hourly to derive the estimated future energy avoided cost.

The model inputs include:

- a. *Energy forecast*: The electric energy forecast comprises three parts that include an electric market forecast, gas market forecast, and escalation. Each section represents a different time frame in the 20-year forecast.
 - i. *Electric Market Forecast*: This forecast represents the first four years of the energy forecast due to the lack of a liquid market beyond this time frame. The forecast is based on the historic correlation between the Indiana Hub price and the average of four regional points that include Big Stone, Coyote, Neil, and WAUE. These four regional points represent the largest energy throughput points connected to or near NorthWestern’s system that are tracked by pricing on MISO. The comparisons of historical pricing between these points indicate a strong correlation in pricing movements and NorthWestern’s historical purchase costs. The historical

¹ SDPUC Docket No. EL11-006.

correlation is used to forecast the regional prices based on the forecasted prices of the Indiana Hub.

- ii. *Gas Market Forecast*: This part of the energy forecast represents years five through nine. Using an implied heat rate that is calculated by comparing pricing of the electric and natural gas markets over the initial four years of the forecast period, the forecasted price is estimated using the implied heat rate and the regional forecasted Ventura natural gas price. The forecasted Ventura price is derived from the forward NYMEX Henry Hub price adjusted by the historical difference between the Ventura and Henry Hub spot prices.
 - iii. *Escalation*: This component represents year 10 through year 20 of the energy forecast. The escalation rate of 4.21% is derived from the EIA 2013 early release. This rate is applied to the previous forecast to complete the 20-year estimate.
- b. *Historical average generation*: This is the average generation per hour generated by NorthWestern's coal power plants or purchased from Titan 1 as described above. The model assumes similar future generation from all four sources based on the average historic hourly production.
 - c. *Historical load growth*: The historic load growth trends a growth of 1.91%, as described above. The model includes a seven-year history of load to establish the load growth. A seven-year time frame was chosen due to a change in Western Area Power Administration ("WAPA") changes in tracking and reporting for NorthWestern's load. This time frame represents the most consistent sources of information.

- d. *Historical incremental coal generation costs:* The 10-year historical incremental cost of each plant was used to forecast the future incremental costs for coal production facilities. In the model, the plants were dispatched according to highest cost first limited by the maximum amount the plants can be backed down in accordance with the operating contract.
- e. *Projected wind generation from Oak Tree:* Although Oak Tree is not yet in operation, this facility would be in front of B & H in the resources stack because of timing associated with the Commission order. The avoided cost calculation for B & H reflects the anticipated generation from Oak Tree. The output for Oak Tree was estimated using the average between the hourly production of three Basin Electric Power Cooperative (“Basin”) wind farms and Titan 1.
- f. *Projected wind generation from the Project:* B & H provided an hourly production by month. This profile was used to estimate the hourly production for an entire year during the life of the Project.

For each hour, the model calculates the amount of projected load served by current resources plus Oak Tree and the amount, if any, that will be served by market purchases. Then the model calculates the cost avoided by purchasing the projected output from the Project by multiplying the appropriate value related to the projected output. Finally, the model calculates the annual estimated avoided costs.

The levelized estimated avoided energy costs are below \$34.00/MWh. The actual values, both annual and levelized, are presented in NorthWestern’s Petition for Declaratory Ruling as confidential Exhibit 2.

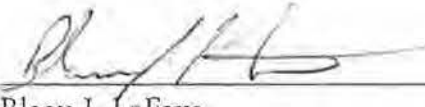
9. The avoidable capacity cost is based on the cost of offsetting the current capacity contract with Basin escalated by a rate of 5.84% after the expiration of the contract. The avoidable capacity cost ranges from \$30.00 to \$88.20 per kW-year and is \$42.75 per kW-year on a levelized basis.

10. After calculating the avoided cost, NorthWestern communicated the energy price and proposed contract terms to B & H. NorthWestern and B & H negotiated the commercial terms and conditions. Eventually, NorthWestern and B & H agreed to the PPA executed on June 28, 2013. B & H has the option to choose an escalating rate or a levelized rate for energy and capacity and will need to make the selection within a specified period after the execution date of the PPA. The PPA rates are consistent with NorthWestern's calculation of its avoided cost. The Project's capacity credit is initially 14% of net capacity, as allowed by the MRO.

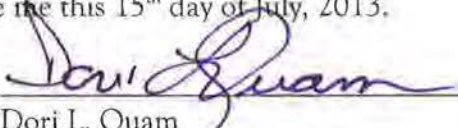
11. The PPA includes several terms and conditions that protect NorthWestern's customers while allowing B & H to proceed with the Project, including but not limited to a guaranteed commercial operation date, curtailment rights, required Public Utilities Commission approval, annual net energy delivery requirements, a mechanical availability guaranty, allocation of future ancillary services costs directly attributable to the generator, B & H provided forecasting, and adequate security provisions.

Further affiant sayeth naught.

Dated at Sioux Falls, South Dakota, this 15th day of July, 2013


Bleau J. LaFave
Director of Long-Term Growth

SUBSCRIBED AND SWORN TO before me this 15th day of July, 2013.


Dori L. Quam
Notary Public, South Dakota
My Commission expires: 2/4/2016

