

## AFFIDAVIT OF RICHARD LAUCKHART

I, Richard Lauckhart, having been duly sworn, do hereby depose and say as follows:

1. I am a Managing Director in the Energy Management Solutions Division of Black & Veatch. Black & Veatch Corporation is a leading global engineering, consulting and construction company. Founded in 1915, Black & Veatch specializes in infrastructure development in energy, water, telecommunications, federal, management consulting and environmental markets. Black & Veatch is an employee-owned company that has more than 100 offices worldwide. Black & Veatch is ranked on the Forbes "500 Largest Private Companies in the United States" listing.

2. I have been involved in the electric utility industry since receiving an undergraduate degree in Electrical Engineering from Washington State University in Feb 1971. From 1975-1996 I was employed by Puget Sound Power & Light (now Puget Sound Energy). That work experience covered the period when PURPA (and Avoided Cost) legislation was passed and implemented. While at Puget I developed our avoided cost filings with the Washington Utilities and Transportation Commission (WUTC). As a part of the work, I reviewed avoided cost methodologies developed in other states. In my career I have been involved extensively in resource planning work. Recently I have testified about avoided cost matters in California, Texas, and Montana.

3. I have been asked by Oak Tree Energy LLC to provide a calculation of avoided cost that would be used by the South Dakota PUC to establish a contract rate for the 19.5 MW Oak Tree Wind Project.

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4. In performing this calculation, I have been attentive to procedures used in the industry for calculation of avoided cost. The Public Utility Regulatory Policy Act of 1978 ( PURPA) was the original legislation that required utilities to purchase power from Qualifying Facilities at the utility's avoided cost. That legislation, and the implementing rules established by the Federal Energy Regulatory Commission gives the Qualifying Facility (in this case, Oak Tree Energy) the following choices:

- a. Whether to provide the electric energy at avoided cost rates, or at some lesser level acceptable to the QF.
- b. Whether to sell the energy (a) at the QF's discretion from time to time or (b) whether to sell under a long term contract.
- c. Assuming the choice is to sell under a long term contract, whether the avoided cost rate will be calculated (a) at the time of delivery during the contract period or (b) based on a forecast for the term of the contract at the time the contract is put in place.

5. As I considered the appropriate methodology for determining the avoided cost for the Oak Tree Wind Project, I considered the fact Oak Tree Energy has chosen to sell to NorthWestern Energy in South Dakota under a 20 year contract and Oak Tree Energy has chosen to have the avoided cost rate based on a forecast of avoided cost over that 20 year term, which forecast is to be made now.

6. Many public utility commissions tie the calculation of the forecast of avoided cost to the long term Integrated Resource Plan filed by the utility with the commission. However, the South Dakota PUC does not require NorthWestern Energy to file a long term Integrated Resource Plan in the state of South Dakota. Therefore it is necessary to develop the long term forecast of avoided cost without the benefit of the Integrated Resource Plan.

7. I have chosen two different approaches to developing a long term forecast of avoided cost.
- a. The first method assumes that the cost that NorthWestern Energy will avoid by taking the output of the Oak Tree Wind Project into its system will be an avoidance of spot market purchases as well as some avoidance of capacity purchases starting in the year 2013 when NorthWestern data indicates it will need new capacity. The avoided capacity value is quite small in comparison to the avoided energy value because only 20% of the 19.5 MW of Oak Tree Wind nameplate capacity is assumed to count toward peak needs and because the value of capacity is assumed to be small. The value of energy came directly from the Black & Veatch Fall 2010 Energy Market Forecast for the Midwest United States. This energy forecast is a standard off the shelf product that Black & Veatch prepares and uses in a large number of consulting engagements. It was not prepared specifically for this proceeding. That forecast, which provides hourly estimates of energy value over the next 25 years, was used to value the expected hourly output of the Oak Tree wind project. The result of this calculation is a 20 year levelized avoided cost of \$78.92/MWh. This method assumes that the costs being avoided are not from resources that qualify as “renewable:” resources, this avoided cost would have Oak Tree Energy retain the Renewable Energy Credit (REC) value.
  - b. The second method assumes that NorthWestern Energy will avoid building its own 19.5 MW wind plant if it purchases the Oak Tree Wind project output for a 20 year period. To perform this calculation, I have used data on the cost of wind from NorthWestern Energy filings in Montana. I have used the wind capacity factor for a wind project located in South Dakota. The result of this

calculation is a 20 year levelized avoided cost of \$70.81/MWh. This method assumes that the costs being avoided would be from a "renewable" resource. Therefore, under this calculation of avoided cost, the Renewable Energy Credit (REC) value would go to NorthWestern Energy.

8. Oak Tree Energy has indicated they need a 20 year PPA price of \$54.4/MWh in the first year of operation, escalating at 2.5% per year over the 20 year term. That price is equivalent to a 20 year levelized price of \$65/MWh. This price is below the avoided cost I calculated from my two different approaches. Because a QF can choose to accept a price that is below avoided cost, and because Oak Tree Energy feels they can build their plant at the rate they have proposed, it would be fair and consistent with PURPA for the South Dakota PUC to confirm that the Oak Tree Energy proposed contract is a valid contract (i.e. a Legally Enforceable Obligation). Further, this will result in the desirable action of having a wind plant built in South Dakota. Further, the affiant sayeth not.

  
Richard Lauckhart

SUBSCRIBED AND SWORN to before me, this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

State of California  
County of Sacramento

Subscribed and sworn to (or affirmed) before me  
on this 22 day of April, 2011,  
by Richard Lauckhart  
proved to me on the basis of satisfactory  
evidence to be the person who appeared before me.

Signature M J Pond

Printed Name: M J Pond

Notary Public for the State of CA

Residing at \_\_\_\_\_

My commission expires Feb. 26, 2014

