

Appendix C-2 BOT Option

Bid Summary

Project Name _____

Unique Bid Name (i.e, ACME-1, etc) _____

Resource Type (Wind, Solar, Geothermal, Hydro, etc.) _____

Control Area:

PacifiCorp West _____

PacifiCorp East _____

Other (describe): _____

Estimated Commercial Operation Date (dd/mm/yy) _____

Net Capacity (at 95°F, 20% Relative Humidity, and at Site Conditions) _____ MW

Expected Gross Annual Energy Production (net of station load) _____ MWh/yr

Expected Net¹ Annual Energy Production () _____ MWh/yr

Minimum Guaranteed Annual Energy Production _____ MWh/yr

Number of Years of on-site data relied on for above MWh projections _____

Name of firm who prepared the energy analysis² _____

Expected On Peak Monthly Energy Production:

“On Peak” means all hours ending 07:00:00 through 22:00:00 Pacific Prevailing Time, Monday through Saturday, excluding NERC designated holidays.

January MWh/month _____

Maximum MW/hour _____

February MWh/month _____

Maximum MW/hour _____

March MWh/month _____

Maximum MW/hour _____

April MWh/month _____

Maximum MW/hour _____

May MWh/month _____

Maximum MW/hour _____

June MWh/month _____

Maximum MW/hour _____

July MWh/month _____

Maximum MW/hour _____

August MWh/month _____

Maximum MW/hour _____

September MWh/month _____

Maximum MW/hour _____

October MWh/month _____

Maximum MW/hour _____

November MWh/month _____

Maximum MW/hour _____

¹ Net means as delivered to the point of interconnection with the transmission provider and, if a wind plant, using an assumption at the 50 percent probability level and a wind turbine availability of 95%.

² PacifiCorp requires that the analysis be made available to PacifiCorp for review.

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December MWh/month _____ Maximum MW/hour _____

Expected Off Peak Monthly Energy Production:

“Off Peak” means all hours that are not On Peak.

January MWh/month _____	Maximum MW/hour _____
February MWh/month _____	Maximum MW/hour _____
March MWh/month _____	Maximum MW/hour _____
April MWh/month _____	Maximum MW/hour _____
May MWh/month _____	Maximum MW/hour _____
June MWh/month _____	Maximum MW/hour _____
July MWh/month _____	Maximum MW/hour _____
August MWh/month _____	Maximum MW/hour _____
September MWh/month _____	Maximum MW/hour _____
October MWh/month _____	Maximum MW/hour _____
November MWh/month _____	Maximum MW/hour _____
December MWh/month _____	Maximum MW/hour _____

Expected Annual availability (% of hours able to produce max/hour): _____

Guaranteed Annual availability (% of hours able to produce max/hour): _____

Project Location (State, County, Range and Township of transmission interconnection)

Point of Interconnection with, or Delivery to PacifiCorp’s Transmission System

Quality of Delivery (Check All that Apply):

_____ As Generated, Unit Contingent, Interconnected to PacifiCorp System
_____ As Generated, Unit Contingent, Telemetered into PacifiCorp System
_____ WSPP Schedule C Firm Scheduled Deliveries (ISAS Scheduling
Protocols) to PacifiCorp Transmission System
_____ Other (describe): _____

Does delivery include operating reserves? (yes or no) _____

Will PacifiCorp incur third-party transmission expenses? (yes or no) _____

If yes, check all that apply:

Third party transmission wheeling _____
Third party transmission losses _____

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Third party imbalance charges _____
Third party operating reserves _____
Third party scheduling/dispatch _____
Third party voltage support _____

Permits to be Transferred: _____

Land Rights to be Transferred: _____

Purchase Price: _____

Wind Turbine Technical Description: _____

Wind Information:

1. How was the wind data collected, certified, and correlated to the reference points?
2. Who provided the wind data analysis service?
3. What is reference height, or heights, of the meteorological data?
4. What is the assumed turbine type, hub height, and rotor diameter?
5. How was the wind data adjusted for the turbine hub height?
6. What is the estimated wind shear and how was the wind shear calculated?
7. What is the accuracy of your wind and energy forecast?
8. What is the basis year of the underlying data? Are the references years high, low, or average years?
9. How was generation output calculated from the meteorological data?
10. What specific de-ratings are included in your energy forecast (wind array losses, line losses, blade degradation, site elevation, etc.)?

In anticipation of a potential need to perform comparison among bids, PacifiCorp also requests the following more detailed information:

A. Site Wind Data

1. Raw hourly or ten-minute wind speed and direction data
2. Description of equipment used to record data
3. Available calibration certificates for equipment
4. Conversion factors (e.g. m/s per Hz) applied in recording wind speeds
5. Maintenance records for the monitoring work
6. Location, height and orientation relative to mast of all sensors

B. Reference Wind Data

1. Hourly or ten-minute wind speed and direction data
2. Description of equipment used to record data
3. Available calibration certificates for equipment
4. Maintenance records for the monitoring work

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5. Location, height and orientation relative to mast of all sensors

C. Wind Turbine Information

1. Turbine make and model
2. Turbine rotor diameter
3. Turbine hub height
4. Turbine power curve

D. Wind Project Information

1. Layout of wind project turbine array using latitude and longitude co-ordinates
2. Detailed topographic maps of project area with all mast and turbine locations

E. Verification and Analysis

1. Details of instrument configurations and measurement periods for each site mast and reference station
2. Summary of mast maintenance records and explanations for significant periods of missing data
3. Data recovery rates and measured monthly means for masts employed in the assessment

F. Prediction of Wind Regime

1. Description of methodology employed to adjust measured wind speeds on site to the long-term
2. Correlation plots and coefficients for relevant correlations in the assessments
3. Predicted long-term mean wind speeds at measurement heights and hub height at all masts employed in the assessment
4. Annual wind speed and direction frequency distribution for long-term site masts
5. Plot of annual wind rose for long-term site masts
6. Description of methodology employed to extrapolate mean wind speeds at measurement heights to hub height

G. Prediction of Wind Speed Variations

1. Description of methodology employed to predict wind speed variations across the site
2. Details of wind flow modeling employed and any inputs to the model (where applicable)

H. Energy Production Estimate

1. Predicted hub height mean wind speed and gross and net energy production for the full project

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2. Predicted long-term site air density
3. Turbine power curve employed and description of any adjustments made to the power curve
4. Description of methodology employed to calculate energy losses due to array effects
5. Clear breakdown of applied energy loss factors
6. Monthly and diurnal pattern of predicted energy production with an explanation of the variation
7. Analysis of the uncertainty associated with the predictions provided in the assessment

Operating Expenses: Please provide complete information on the following, including any assumptions you make on a forward basis (e.g., escalation rates)

Operating Expense Assumptions

Turbine Warranty Period and Characteristics

Turbine O&M – by year \$ per WTG

O&M Sales Tax Rate

Annual O&M – Facilities \$000

O&M - Substation/Interconnection \$000

Electric Usage \$000

Land Lease costs (describe)

Property Tax

Expected Rate %

Rate Escalation %

Initial Cost Assessed Value \$000

Replacement Cost Escalation %

Depreciation

Year 2007 - Partial Year % %

Method

Insurance

Property (per \$100 assessed value)

General & Excess Liability \$000

General & Admin. Expenses \$000

Other (wind forecasting service) \$000

Additional Information

Please provide any other information you believe germane to PacifiCorp's analysis of your submittal.