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November 23, 2010

**Via Electronic Filing**

Ms. Renee Jenkins  
Administration/Docketing  
Ohio Power Siting Board  
180 East Broad Street, 11<sup>th</sup> Floor  
Columbus, Ohio 43215-3793

**Re: Heartland Wind Energy LLC,  
Case No. 09-1066-EL-BGN**

Dear Ms. Jenkins:

Throughout the review of Heartland Wind Energy's ("Applicant") application for a certificate to construct a wind farm, Staff of the Ohio Power Siting Board issued data requests of which the Applicant responded. OPSB Staff has requested the Applicant submit for filing in the above-referenced case its responses to Staff data requests in order that the docket reflects the additional information given in the Applicant's responses to the Staff's data requests.

Attached for filing is a copy of the following documents:

- Responses to Staff's formal data requests that were provided to Staff informally and not docketed;
- Shadow Flicker studies;
- Updated Operational Noise Analysis
- Ambient Sound Survey
- Cumulative Sound Contours
- BC Sound Summary

If you have any questions, please call me at the number listed above.

Sincerely,

Sally W. Bloomfield

Attachments

1. Which model turbine is the loudest? Is this true at both proposed hub heights? If not, please delineate.

***Response: Mitsubishi turbines are the loudest being considered. This is true at both hub heights (noise level does not correlate significantly with hub height).***

2. In the 11/05/09 meeting with Staff, 740 homes were said to have been used in the noise modeling. The application, however, shows a sum of 960 receptors within "Table 8-5", page 8-12 of 4906 17-08. Which is accurate – how many homes were modeled?

***Response: The application indicates the correct number of homes modeled. In addition to the modeled home locations, noise contours were developed.***

3. Please clarify the following sentence as it appears on pg. 1 of Appendix T: "Once the final turbine locations have been identified, the noise analysis will be updated."

***Response: Although we extensively analyzed noise implications, we did not know the actual noise constraints of the project when we filed the earlier layout on 12/21/09. Now that we are aware of those restrictions, the layout has been substantially re-designed at great cost and effort by the Applicant. On April 1, we will file an updated layout with the results of our updated noise analysis and turbine locations.***

4. Please clarify the following data: NTIA review findings, regarding the Marine Corps versus the data presented on page 8-91 of the application. Please further clarify the sentence: "...the Marine Corps is (sic) willing to adjust their microwave systems facilities for the Applicant's proposed Facility to avoid future impacts."

***Response: According to reference correspondence in Appendix BB the Marine Corps does not consider the project a significant impact and is willing to adjust their training facilities in accordance with our operating layout.***

5. When does the Applicant plan to:

- A. Perform baseline measurements of the off-air TV stations in the Facility vicinity -

***Response: Prepared in December 2009 and a copy of the report will be submitted to Staff in April 2010.***

B. Observe/record the television channels for video quality?

*Response: See above.*

6. In reference to the aforementioned television studies and observations/recordings; how does the Applicant plan to choose the sites from which to observe/record? If these have already taken place, please provide the data to Staff for review.

*Response: See explanation in forthcoming report.*

7. Page 8-91 of the application lists “minimal to no impact” to the National Weather Service WSR-88D NEXRAD. Please clarify whether it is “no” or “little” impact. If this system is impacted, please describe to what extent.

*Response: “Minimal to no impact” is the lowest rating provided, indicating that no significant impact is expected by the project.*

8. Page 8-93 of the application states: “At the end of its useful life, the Facility would be decommissioned according to lease agreements with landowners.” Please clarify this statement and provide the copies of the leases for staff review. (If confidential, please arrange this viewing with counsel and notify Staff).

*Response: Although we are willing to make available full lease agreements to the Staff under appropriate confidential protection, the relevant language from our standard agreement, which provides specific remediation obligations and timeframes states:*

***12.3 Effect of Termination.*** Upon termination of this Agreement, whether as to the entire Property or only as to part, Lessee shall (i) upon written request by Landowner, execute and record a quitclaim deed to Landowner of all of Lessee’s right, title and interest in and to the Property, or to that part thereof as to which this Agreement has been terminated, and (ii) as soon as practicable thereafter, remove i) all under-ground Windpower Facilities down to 48 inches from the surface and ii) all above-ground Windpower Facilities from the Property or portion as to which this Agreement was terminated, exclusive of any continuing right established pursuant to this Agreement to survive the term of this Agreement, and restore the soil surface to a condition reasonably similar to its original condition. If Lessee fails to remove such Windpower Facilities within eighteen (18) months of termination of this Agreement, Landowner may do so, in which case Lessee shall reimburse Landowner for

*reasonable and actual costs of removal incurred by Landowner, less any salvage value received by Landowner, within thirty (30) days after receipt of an invoice from Landowner. Regardless of the date of termination of this Agreement, Lessee shall have a license to enter the Property during the aforesaid eighteen (18) month period for the purpose of removing above ground Windpower Facilities.*

*Please note that we have made slight modifications to this language in response to specific landowner requests, but each of our lease agreements contain terms which impose at least this level of remediation upon the company in the event of termination or expiration of the lease.*

9. Please provide Staff with the source article(s)/ studies that would support the following statement as it appears on page 8-95 of the application: *“Due to the extremely high value of wind turbines that are less than 10 years old, a form of financial security to guarantee decommissioning is not prior to this point.”*

*Response: This statement comes from logical deduction. Given the fundamental business structure of wind energy – building a high capital cost generating unit that requires no fuel inputs and only minimal operational expenses in the form of maintenance, land lease payments, and taxes – a functional wind turbine has a high intrinsic value. Therefore, a functioning wind turbine in place is invaluable compared to its salvage value. This rationale also serves to demonstrate the low likelihood of decommissioning the facility before the end of its operational life. Details of the Applicant’s investment in the project are confidential but available for Staff review at Counsel’s office*

10. Please provide Staff with the logic (other than possible field tile disturbance) behind leaving the collector lines in place during/after decommissioning.

*Response: The primary logic is to avoid additional disturbance of field drainage tile. The farm ground in the Project area is highly dependent on a network of underground drainage tile to reduce moisture levels in the soil to the point that modern farming practices are economically feasible. The underground electrical collection system is necessary to collect the electricity generated by each wind turbine and convey it ultimately to the interconnection substation. (Underground electrical lines are generally preferred by farmers and residents of the project area because, once installed, they do not interfere with normal farming operations in the fields (i.e., no poles for tractors to navigate around) and because they cannot be seen, lessening*

*visual impact.) If underground collection lines are required to be removed as part of a decommissioning sequence, there could be several years of continued maintenance required to ensure that all tile lines repaired upon removal were done correctly. This will hinder the farmers' attempt to return to normal farming operations. It should also be noted, as shown above, that even though the lines may be left in place, the company has an obligation to restore the surface topsoil to a depth of 48 inches, which exceeds that which is required by most farming practices.*

11. When does the applicant plan on conducting actual ambient noise measurements? If these are already in progress, please provide Staff with a progress report.

*Response: Measurements are anticipated to commence in March 2010.*

12. When does the Applicant expect the eight additional proposed turbines to be studied acoustically and for shadow flicker impacts?

*Response: There will be more than eight turbines added in the designated expansion area, as a result of the Staff's expected noise conditions. These results will be available April 1.*

13. The application lists "heavy construction activities" as occurring during day operations – does this include turbine erection? Further, would the Applicant propose any turbine erection during the night? If so, please explain.

*Response: Yes, the heavy construction activities referenced in the application as occurring during day operations would be turbine erection. Turbine erection may also be required at night depending on construction schedule and wind conditions. During certain seasons, wind conditions are lower at night and thus can allow for safe erection operations. Although we generally avoid night time erection, it may be performed at night if conditions during day time have sufficiently delayed the construction schedule to the point that night time erection is justified.*

14. If a residence is enrolled in the "Good Neighbor Program" and as such receive financial compensation:

A. Does the Applicant therefore consider these residences "participating" landowners?

*Response: Yes.*

- B. Have these residences been delineated as “participating residences” in studies both presented and yet to be presented in/in addendum to the application?

***Response: Yes, but as of December 21, 2009, there were very few signed participants in the Good Neighbor program. The layout to be filed on April 1, 2010 is designed to achieve maximum noise levels of 50 dBA at all residences, regardless of their participating status.***

- C. What, if any, process is there for a “Good Neighbor” residence to un-enroll from the agreement/program?

***Response: There is no such process. The Good Neighbor Agreements, once signed, remain in effect until the cessation of operations of the Facility.***

- D. Would a “Good Neighbor” residence be required to un-enroll from the agreement/program to file complaint (e.g. noise or shadow flicker) and thereby to possibly receive further compensation/mitigation? If this would be the case, please provide the process.

***Response: The Good Neighbor Agreements are voluntary documents, and a Grantor would understand that signing the agreement constitutes acceptance of the effects of the Wind Facility. The Applicant’s OPSB Application has been made available to all potential Grantors, so they have the chance to quantitatively understand what effects they might experience.***

- E. Can the Applicant/resident violate the “Good Neighbor” agreement/program? If so, can/do these violations terminate the agreement and what recourse would the agreeing landowner have? Please provide examples of violations (on each party’s part) that would violate the “Good Neighbor” agreement/program, if applicable.

***Response: As noted, the Good Neighbor program provides compensation to a landowner in return for acceptance of project effects. Although the situation has never arisen, in theory, a landowner could violate the agreement by making a claim against the project for the waived effects. The Applicant would, at that point, be able to cite the landowner’s prior consent in defense of such claim.***

***The sole breach by Applicant would be failure to pay the required amounts. Assuming that the Applicant failed to cure that breach, the landowner would be able to make a claim for either payment of the amount or would be able to reassert their right to assert a claim against the project.***

- F. Once violated (if applicable) by either party (Applicant, or resident) is the agreement rendered void; or are the parties still bound?

***Response: As with any contract, the breach of the agreement by a party would lead to a civil dispute in which, as noted, damages could be sought or the waiver of rights by the landowner could either be asserted (if the breach is by the landowner) or revoked (if the breach is by the Applicant.)***

- G. What type of “walk away” clause(s) does this agreement contain? Can the Applicant or resident just “walk away” without cause? If cause has to be shown, to what degree?

***Response: Although the Applicant has the discretionary right to terminate the agreement on 120 days notice (which would end the restrictions on the landowner’s ability to file a claim against the project), that termination does not terminate the Applicant’s obligation to make previously accrued payments to the landowner. The landowner does not have the discretionary right to terminate the agreement.***

15. When were the physical “line-of-sight” studies (field visits confirming obstructions) for shadow flicker conducted?

***Response: Resident Surveys were conducted on November 4-5, 2009 for the December 20, 2009 filing. Additional line of site surveys for the April 1, 2010 filing will be conducted on March 23, 2010.***

- A. How many residences were studied of the 39 within 2,950 feet of a turbine?

***Response: 1275 residences were studied in the overall project area.***

- B. Of the studied residences, how many received lessened shadow flicker amounts due to physically identified obstructions?

***Response: 37 out of the 39 residences with 30 or more hours of potential shadow flicker were determined to have some type of existing obstruction.***

- C. How many were reduced to zero hours per year of exposure? If a residence’s exposure was lessened as a result of this study, please provide the residence’s address and before/after shadow amounts.

***Response: Due to the number of residences within the project area the assessment was limited to those participating and nonparticipating residences with 30 or more hours of potential exposure.***

D. Were any equipment involved in the analysis, or was it strictly a survey via the naked eye?

***Response: A standard digital camera was used to document the existing obstructions.***

16. Please list any coordinates submitted to the FAA or the ODOT Office of Aviation for review that may differ from those provided to OPSB for review in the application.

***Response: The updated turbine coordinates provided to the OPSB on March 9, 2010 were filed with the OPSB on March 11.***

17. For receptors identified to have an exposure of greater than 30 hours per year, please list their forecasted operational noise exposure in dBA (once actual ambient measurements are conducted, please also provide Staff with corrected measurements – if applicable).

***Response: A revised Shadow Flicker study of the revised turbine layout will be provided to the OPSB on April 1. The results of the new study showed only 11 residences that may have an exposure of 30 hours or more.***

ID #	Coordinates UTM NAD83 Z16		Shadow hours per year	Forecasted Noise Levels
	Easting	Northing	[h/year]	dBA
1094	707683.78	4534550.34	56:56:00	50.3
445 (WF 436)	697709.38	4541677.27	44:40:00	50.3
213 (WF 210)	702642.75	4536429.72	41:39:00	49.1
471 (WF 459)	704155.09	4542640.4	39:57:00	50.3
224 (WF 221)	702664.08	4536831.15	39:27:00	49.2
340 (WF 331)	699322.59	4539592.7	38:40:00	48.5
1165	708615.31	4535770.46	33:00:00	49.2
96 (WF 96)	699523.81	4534145.67	31:47:00	48.4
470	697628.66	4542295.44	31:07:00	48.6
88	697993.19	4533816.4	31:00:00	49.3
1096	709294.58	4534771.75	30:43:00	48.3



18. Please define “discrete points” as it appears on page 2-1, Section 2, Appendix K of the application.

***Response: A new report addressing potential effects will be summarized in the April 1 filing. This type of terminology will be defined as it is used.***

19. What are the blade pass frequencies (Hz) for each turbine model at full generation?

***Response: According to Gamesa literature, the RPM range for the G90 is 9 - 19 RPM, varying non-linearly with wind speed. This corresponds to a blade pass frequency of 0.45 – 0.95 Hz.***

20. How many homes were identified to exist within 2,950 feet of a turbine? Of these, how many are “participating” versus “non-participating”?

***Response: Response to follow this week.***

21. What mitigation might be offered to an affected receptor (>30 hours of shadow flicker per year) that did not want to sign a “Good Neighbor” agreement, window coverings, or vegetative plantings as they were mentioned by the applicant on page 4-1, Section 4, Appendix K of the application? Further, what specific type (e.g. species) might the Applicant have in mind for “vegetative screening”?

***Response: If an affected receptor is expected to receive >30 hours of Shadow Flicker, they will first be offered a Good Neighbor Agreement. If they do not wish to sign a Good Neighbor Agreement, they will be offered a one-time payment to sign a letter agreement stating that they accept the effects and they will be encouraged to use the money to buy window blinds or vegetative plantings, such as tall growing evergreen shrubs and trees such as local species of spruce and pine. Fast-growing genotype species may also be available.***

22. As it appears on page 4-1, Section 4, Appendix K of the application, is the Applicant proposing that an affected receptor must sign a “Good Neighbor” agreement to receive compensation other than window coverings and/or vegetative plantings? Please clarify.

***Response: See response above. If we are unable to obtain some agreement, we would reconsider the siting of the relevant turbine.***

23. How might the Applicant micro-site turbines to reduce shadow flicker exposure amounts to less than, or equal to 30 hours per year? Is this possible/feasible?

**Response:** It is possible, but not likely, that slight moves to turbines or removal of turbines can get shadow flicker exposure down below 30 hours per year. A case-by-case analysis can be presented following the updated shadow flicker results to be filed on April 1, 2010.

24. Please graphically model potential shadow flicker, the number of affected receptors, exposure amounts and contributing turbines for 1000 meters. Please further provide the address/owner/coordinates (Lat/Lon) for all receptors expected to receive > 30 hours exposure of shadow flicker at 1,000 meters separation between the nearest contributing turbine(s) and affected receptor. Please provide "Greenhouse Mode" and "Realistic" amounts for each.

**Response:** *Response pending the new report for the revised layout. Results will be presented on April 1.*

25. What source (e.g. website, government agency) and what percentages were used as input for bright sunshine hours and other meteorological parameters necessary to model shadow flicker? Were these values actual, or estimated?

**Response:** *Response pending the new report for the revised layout.*

26. In reference to noise modeling, has the Applicant considered/modeled a scenario where there exist geostrophic winds sufficient for generation, but ground level winds remain calm? If so, what were the results?

**Response:** *The modeling results provided in the application are representative of this scenario. The maximum sound power level of the turbine was used and is therefore independent of ground level winds.*

27. The Applicant mentions on page 6-1 in the Ownership section that “the Applicant owns all leases and other Facility assets. Are there any other assets ( i.e. substations, transmission lines) involved in this project that are owned or operated by any EDU?

***Response: What is an EDU? The Applicant will own all Facility Assets with the exception of the Interconnection Substation, which will be owned by the transmission operator.***

28. On page 5-19 the applicant states, “Figure 5-9 illustrates the 100-year floodplains that occur with the Project area, as mapped by the Federal Emergency Management Agency (FEMA). No turbines or access roads will be constructed within the mapped 100-year floodplain.”

***Response: Yes.***

29. Please clarify the distance (in feet) of turbines #69 and #146 from the FEMA 100-year mapped floodplain?

***Response: Turbines 69 and 146 have shifted with the revised layout. All unrevised and revised locations were confirmed to be outside of 100-year floodplain limits.***

30. Are there any Sole Source Water Protection Area(s) within five miles of the project area?

***Response: Response will be sent by the end of this week.***

31. Will any Sole Source Water Protection Area(s) be impacted by the project?

***Response: Response will be sent by the end of this week.***

32. On page 8-96 the Applicant states, "The Facility would disturb some agricultural land temporarily (782.4 acres) and occupy some agricultural land permanently (230.5 acres)." How many acres of impact (temporary and permanent) of agricultural land would occur in each county? Of the acres of impact (temporary and permanent) to agricultural land, how many acres of impact (temporary and permanent) are within a designated agricultural district?

***Response: The requested information will be provided for the revised layout in the April 1 filing.***

33. It is rather confusing that the Project Summary and the Project Description sections of the application refer to "Phase I and Phase II" of the Blue Creek project, but it wasn't until pp. 5-34 - 5-35 that these references are first described in any detail. Future descriptions of the project should include the Phase I and Phase II details at the beginning, not in the middle.

***Response: Ok.***

34. Pg. 3-8 and pp. 5-38 - 5-39 discuss four substations: a 345 kV interconnection sub, a project collection sub (115 kV to 345 kV), and collector subs #1 and #2 (34.5 kV to 115 kV). The description in both cases goes on to state that the two collector subs will connect to the interconnection sub; however, this appears to be incorrect, since the proposed voltage transformation process would seem to require that the two collector subs connect to the project collection sub, which, in turn, would connect to the interconnection sub. This needs to be clarified.

***Response: Your description is correct the proposed voltage transformation process requires two collector subs that connect to the project collection sub, which, in turn connects to the interconnection sub.***

35. The Applicant notes that the proposed Operations & Maintenance facility will have potable water, using the on-site wells that will be installed for the proposed concrete batch plant as the potable water supply (pg. 8-17). However, the application repeatedly notes that this concrete batch plant is only a construction option, not a certainty. So, if the concrete batch plant option is not pursued, will other wells be drilled to serve the O&M facility? If not, where will the potable water supply come from during operation of the wind farm?

***Response: Yes, a residential well would be required for the O&M Facility.***

36. While there appears to be little likelihood of adverse impacts to high quality streams or wetlands, I did see at least one area of potential concern that could be impacted by installation of buried electrical lines. The Ecological Map (Fig. 08-3), panel B2 - 4 of 4, depicts the proposed 115 kV transmission lines heading south and east from the Taylor Road collector sub to the planned interconnection point. In so doing, it bisects a large wooded area that includes wetlands and the riparian corridor along Hoaglin Creek. What will be the impact on the stream, wetlands, and associated woodland area as a result of installing the proposed 115 kV line through there, and why wasn't an alternative alignment (to the north and east of the area, for example) that could avoid these resources selected instead?

***Response: The 115kV line was sited along the existing cleared railroad bed at a height above normal grade that anticipated a reduction in tree clearing based on the additional height provided by the railroad bed and existing cleared corridor. An alternative route through adjacent ag fields is currently being evaluated and will be considered an option for this portion of the project. A preliminary design for this alternative will be provided in the April 1 filing.***

37. The "Streams" section in Appendix V included photos (aerial and ground level) of at least a dozen stream segments with trees and other woody vegetation in their riparian areas. How does the Applicant plan to avoid or minimize removal of this critical woody vegetation during stream crossing work for proposed access roads and/or electric lines?

***Response: Access road crossings of jurisdictional waters are focused primarily on roadside ditches or minor shallow stream crossings of low quality where vegetative impacts would be limited to previously impacted or routinely maintained areas.***

***Underground collection line crossings would be directionally bored under most stream crossings allowing for existing vegetation to remain intact. In areas of minor low***

*quality stream crossings vegetation maybe temporarily disturbed for open trenching, but allowed to naturally regenerate with no future maintenance.*

38. Does the Applicant expect to have to make roadway improvements (widening, etc.) at intersections, ramps, and other key locations to facilitate oversized-equipment access to the project site? If so, what ecological resources (trees, streams, wetlands, etc.) might be present at these locations, and how might they be impacted by the proposed roadway improvements?

*Response: The majority of the roadway improvements will be intersection widening to accommodate turbine delivery traffic. These are limited to agricultural land with some temporary impacts that may occur if jurisdictional waterbodies or wetlands are determined. The current roadway improvements are based on our experience on past projects. Additional roadway improvements may be necessary, based on Gamesa's trucking company's input during their pre-delivery review typically scheduled prior to component delivery in Spring prior to erection, in this case Spring 2011.*

## Iberdrola, Blue Creek Wind, 09-1066-EL-BGN

Staff found the provided responses to these questions as either unresponsive, or missing:

1. In reference to the aforementioned television studies and observations/recordings; how does the Applicant plan to choose the sites from which to observe/record? If these have already taken place, please provide the data to Staff for review.

*Response: Please see the "TV Broadcast Off-Air Reception Measurement Report" prepared by Comsearch and submitted to the OPSB on April 1, 2010. As stated on page 6 and shown on page 7, the locations were chosen to provide a broad coverage of the study area.*

2. Page 8-91 of the application lists "minimal to no impact" to the National Weather Service WSR-88D NEXRAD. Please clarify whether it is "no" or "little" impact. If this system is impacted, please describe to what extent.

*Response: The Weather Service was notified in writing in February 10, 2009 of the plans to construct the Blue Creek Wind Energy Project. All of the technical and geographic parameters for the wind energy facility were described in the Notification Letter. No issues were raised by the Weather Service to the Notification with regard to their operations and specifically to the operation of the Weather Service Surveillance RADAR-1988 Doppler weather RADAR. The Weather Service has been very diligent in identifying problems with wind energy facilities to their RADAR operations over the past five years. So if there had been any problems it would have been received in response to the Notification Letter. Further support of this result can be obtained by going to the DoD Screening Tool (<https://oeaaa.faa.gov/oeaaa/>) set up on-line by the FAA to check for the impact of wind energy installations versus RADAR operations. It shows that the Weather Service Surveillance RADAR-1988 Doppler weather RADAR is not affected by the Blue Creek Wind Energy. The Applicant is able to arrange a telephone conference or other communication between Staff and Applicant's consultant at the request of Staff if there are questions still remaining or further discussion required.*

3. Please provide Staff with the source article(s)/ studies that would support the following statement as it appears on page 8-95 of the application: "Due to the extremely high value of wind turbines that are less than 10 years old, a form of financial security to guarantee decommissioning is not prior to this point."

*Response: Attached are some articles documenting the sale of some of Babcock & Brown's operating wind farms after that company became financially insolvent. These show that even in the case of severe financial difficulties on the part of a wind farm's owner, the project remains a valuable asset. Here is a summary:*

Buyer	Seller	Size (MW)	Sale Price	Sale price per kW
Pattern Energy	Babcock & Brown	283	\$540,000,000	\$1,908
FPL	Babcock & Brown	184.5	\$352,000,000	\$1,908

*Please note how the sale price compares to the cost of constructing a wind facility as stated in section 6 of the Applicant's application.*

4. If a residence's exposure was lessened as a result of the line-of-sight study, please provide the residence's address and before/after shadow amounts.

*Response: Please refer to Shadow Flicker Analysis prepared by Epsilon Associates, dated April 7, 2010, as it is the most current and most relevant analysis. Pages 5-1 through 5-3 address this subject. Of the 11 residences that initial modeling showed greater than 30 hours of shadow flicker, six had some obstacles. Redoing the modeling to include the presence of the obstacles did not reduce the expected shadow flicker exposure but it is also clear that the WindPro Model is limited in this function and additional real-time reductions may occur in operation.*

5. Please list any coordinates submitted to the FAA or the ODOT Office of Aviation for review that may differ from those provided to OPSB for review in the application.

*Response: The coordinates submitted to the OPSB in the April 1, 2010 supplement are the same as the coordinates submitted to the FAA and ODOT Office of Aviation. Both the FAA and ODOT have determined the proposed project would have no obstruction to aviation. See attached documentation.*

6. Please define "discrete points" as it appears on page 2-1, Section 2, Appendix K of the application.

*Response: Please refer to the Shadow Flicker Analysis prepared by Epsilon Associates, dated April 7, 2010, as it is the most current and most relevant analysis. "Discrete points" means specific locations on a map. In other words, instead of modeling a house as a 30 ft by 50 ft rectangle and predicted the shadow flicker on each face of the house, the house was modeled as one location, with that location being the geometric center of the house.*

7. How many homes were identified to exist within 2,950 feet of a turbine? Of these, how many are "participating" versus "non-participating"?

*Response: As stated on page 1-1 of the Flicker Analysis prepared by Epsilon Associates, dated April 7, 2010, there were 605 residences within 900m (2950 feet) of turbines. All houses were modeled regardless of whether the owner has a land agreement with the Applicant or not. Of those, 29 are leased to Blue Creek, 33 have signed GNA's, 3 are leased to the Applicant for other projects, and seven more are in discussions on agreements with the Applicant.*



8. How might the Applicant micro-site turbines to reduce shadow flicker exposure amounts to less than, or equal to 30 hours per year? Is this possible/feasible?

*Response: At the present point, the Applicant no longer is able to micro-site turbines to reduce shadow flicker exposure. Reducing exposure to 30 hours or less per year or getting landowners to accept exposure above 30 hours per year will be accomplished by obtaining Good Neighbor Agreements, offering window treatments or landscape buffers to affected residences outside of a Good Neighbor Agreement, and, if those two methods fail, turbine positions will be eliminated or turbines will be programmed to limit their operation during conditions conducive to creating shadow flicker to less than 30 hours annually.*

9. Please graphically model potential shadow flicker, the number of affected receptors, exposure amounts and contributing turbines for 1000 meters. Please further provide the address/owner/coordinates (Lat/Lon) for all receptors expected to receive > 30 hours exposure of shadow flicker at 1,000 meters separation between the nearest contributing turbine(s) and affected receptor. Please provide "Greenhouse Mode" and "Realistic" amounts for each.

*Response: The Applicant has performed modeling for shadow flicker at a distance of 900m, or ten times the proposed rotor diameter, from every turbine. An explanation for this standard is provided on page 3-1 of the Shadow Flicker Analysis prepared by Epsilon Associates, dated April 7, 2010 and is excerpted here: "The effects of shadow flicker diminish, thus reducing the amount of annoyance, as the distance from the wind turbine increases (Osten and Pahlke, 1998). To-date, the U.S. has no regulations or guidelines regarding the maximum radial distance from a wind turbine to which shadow flicker should be analyzed. Other areas of the world, particularly Europe, have established such guidelines. The Irish Wind Energy Association (IWEA) suggests that a radial distance equivalent to ten times the rotor diameter be used to predict the potential effects of shadow flicker (IWEA, 2008). This analysis was conducted using ten rotor diameters (900 m) as the maximum distance between receptor and wind turbine. Impacts at receptors at greater distances were not calculated in this analysis." Appendix C of the Epsilon analysis includes the graphical models of shadow flicker exposure. See response to new question #4 below for the lat/long.*

10. What source (e.g. website, government agency) and what percentages were used as input for bright sunshine hours and other meteorological parameters necessary to model shadow flicker? Were these values actual, or estimated?

*Response: Daily weather summaries were collected for the time period 1998-2009 for Fort Wayne Airport from the National Climatic Data Center. Average daily cloud cover information was used to compute the average monthly percentage of cloud fraction (cloud cover) and in turn, percentage of clear sky. Additionally, hourly weather observations for Fort Wayne Airport were collected for the year 2009 from the National Climatic Data Center. Average month daytime cloud cover percentage was calculated by looking at cloud cover measurements for the hours 0600-1800. The diurnal signal of cloud cover from the hourly measurements for the year 2009*

was then averaged with the long-term average monthly percentage of clear sky derived from the 1998-2009 daily observation dataset. This calculation is presented as the long-term daytime % clear sky (% sunshine) for Fort Wayne, IN.

Accompanying calculations:

	1998- 2009	1998- 2009	2009	2009	2009 (0600- 1800)	2009 (0600- 1800)	Long-term Daytime % Clear Sky (Sunshine) Average(1998- 2009,2009) % Clear Sky
	% Cloud Cover	% Clear Sky	% Cloud Cover	% Clear Sky	% Cloud Cover	% Clear Sky	
January	57.6	42.4	59.5	40.5	61.4	38.6	40
February	50.5	49.5	62.8	37.2	65.3	34.7	42
March	49.3	50.7	52.2	47.8	52.1	47.9	49
April	42.3	57.7	37.3	62.7	39	61	59
May	41.6	58.4	38.2	61.8	39.8	60.2	59
June	37.5	62.5	34	66	37.6	62.4	62
July	34.3	65.7	45.1	54.9	48.4	51.6	59
August	35.2	64.8	51.6	48.4	55.2	44.8	55
September	31.7	68.3	52	48	56.9	43.1	56
October	42.5	57.5	65.9	34.1	65.3	34.7	46
November	48.3	51.7	53	47	58.8	41.2	46
December	55.8	44.2	66	34	65.2	34.8	40

#### New Questions:

1. Page 4-2 and 5-18 of the application supplement lists the “Aeronautical Study” section as having “no changes”. How is this possible/could this be accurate, if new coordinates were submitted to the FAA and ODOT for review?

*Response: The “Aeronautical Study” was a key part of the Applicant’s early due diligence on the project area, and was done for the entire project area not to study the discrete turbine coordinates. The result of the aeronautical study allowed the Applicant to determine project boundaries. By performing this study at a relatively early time in the development process, the Applicant was able to set a project boundary that would avoid future conflicts with aviation uses. Both the FAA and ODOT have determined the proposed project would have no obstruction to aviation. See attached documentation of FAA approvals as well as Aeronautical study performed by ASI and resulting map.*

2. Please clarify the logic behind and how it fits to have adjusted the yearly shadow flicker amounts presented in Table 8-6 on page 8-10 with mean monthly sky cover from Fort Wayne, Indiana.

Separately, please provide these residences predicted yearly shadow flicker exposure amounts as presented in table 8-6, but without any type of adjustment.

*Response: In order to accurately portray onsite sunshine, in lieu of onsite measurements, it is necessary to have a nearby source of reliable cloud cover data at a roughly equal latitude. In this case, Fort Wayne Airport was the best candidate location. As a major regional airport, the meteorological period of record is more than a decade in length, which is necessary to most accurately calculate a long-term average. The daily observations of cloud cover fraction were used to calculate the long-term cloud cover for the site, and hourly observations were used to remove any existing diurnal bias in the cloud cover estimate. Due to daytime heating, cloud cover is often higher during the daytime hours, and therefore the nighttime low bias of cloud cover for the nighttime hours was removed by utilizing the hourly measurements to adjust the daily measurements.*

3. In reference to the Shadow Flicker – “April 1, 2010 Supplemental Report”: When can Staff expect to receive this data?

*Response: This report was sent electronically to select OPSB staff on April 9, 2010.*

4. Please provide the corresponding addresses and latitudinal / longitudinal coordinates for the residence ID numbers presented in the table within the response to interrogatory number 17.

HOME_ID	LONGITUDE	LATITUDE
88	-84.64831149	40.93150516
96	-84.63004015	40.93409663
213	-84.59227711	40.95388675
224	-84.59189253	40.95749443
340	-84.63067489	40.98317221
445	-84.6491687	41.00232718
470	-84.64992994	41.00791061
471	-84.57227343	41.00940745
1094	-84.5330638	40.93570644
1096	-84.51387258	40.93728832
1165	-84.52159797	40.94645024



## Babcock & Brown Commences Construction of Majestic Wind Farm in Texas Panhandle

HOUSTON, Sept. 15 /PRNewswire/ -- Babcock & Brown, a leader in wind energy development, operation and maintenance, today announced the closing of financing and commencement of construction of its 79.5 megawatt (MW) Majestic Wind Farm near Panhandle, Texas, northeast of Amarillo. The project is expected to finish construction and reach full commercial operation before the end of 2008.

Babcock & Brown was a leading supporter of designation of the Texas Panhandle Region as a Competitive Renewable Energy Zone (CREZ) by the Texas Public Utility Commission, and plans to construct at least 1,000 megawatts of wind generation to connect to the new CREZ lines into the ERCOT region of Texas.

"Babcock & Brown has a long-term commitment to development of the Texas Panhandle's world-class wind resources and we are excited to commence construction of the Majestic Wind Project, which has been under development since 2003," said Hunter Armistead, head of Babcock & Brown's North American renewable energy group. "The Majestic Project will be followed by Majestic II next year, and then by our 1,000 MW Panhandle Wind Project once the ERCOT CREZ transmission facilities are in place."

"As one of the world's largest owners and operators of wind energy projects, we long ago recognized the superior wind resource in the Panhandle, and we applaud the efforts of Rep. Swinford, as well as other State leaders and the PUC, for creating and implementing the CREZ process to allow this vital renewable energy resource to be harnessed for consumers throughout Texas," added Armistead.

The Majestic Wind Farm will interconnect into the existing SPP transmission grid to supply power to the Panhandle region, as will a second phase at Majestic, planned for construction next year. Development of the 1,000 MW Panhandle Wind project is ongoing, and construction will be timed to coincide with completion of the ERCOT CREZ transmission lines.

Babcock & Brown currently has a total of five wind energy projects under construction in Texas and other states, including Majestic and the following four projects:

-- Gulf Winds Project in Kenedy County, Texas (283 MW) -- South Trent Project in Nolan and Taylor counties, Texas (101 MW) -- Wessington Spring

Combined, these five wind projects have a 567.5 MW nameplate capacity and represent an investment of more than \$1 billion. Upon completion of these five projects, Babcock & Brown will own, or manage on behalf of Babcock & Brown Wind Partners, 25 operational wind farms in the U.S., representing more than 2,000 MW of clean, renewable energy -- or enough to power more than half a million American homes. Included among these is the 585 MW Sweetwater Wind Farm, one of the largest wind farms in the country, located in Sweetwater, Texas. In addition, Babcock & Brown has more than 25 wind energy projects in various stages of development around the country.

Babcock & Brown has offices throughout North America, including in Houston, Austin and Dallas, where the Company's 24/7 wind farm monitoring headquarters is located.

Babcock & Brown has also invested in infrastructure projects in Texas outside the wind energy sector including the development of conventional power plants and its recent participation in the acquisition of the Natural Gas Pipeline Company of America, one of the largest natural gas transmission pipeline and storage systems in the country, which extends from Odessa, Texas and the Texas Gulf Coast and traverses ten states in the Central US. In 2007, Babcock & Brown acquired the Celanese Plant in Pampa, which it is converting into the Pampa Energy Center, a conventional base load power plant.

Tejas Transmission LLC, a Babcock & Brown affiliate, is participating in the PUCT process to select transmission service providers to build, own and operate new ERCOT transmission lines to serve wind power in the recently designated CREZ areas. Babcock & Brown, has extensive experience in the development of transmission infrastructure and has proposed to plan, finance and construct approximately \$1 billion in CREZ transmission lines in Texas. Babcock & Brown is currently constructing the Trans Bay Cable Project in California, a 53-mile long 400 MW HVDC transmission line that will supply up to 40% of the electric needs of San Francisco upon completion. Babcock & Brown Infrastructure also currently owns and manages the Cross-Sound Cable Project, a 330 MW DC transmission project connecting the electricity grids in New York and New England.

### About Babcock & Brown

Babcock & Brown is an international investment and specialized fund and asset management group with longstanding capabilities in the creation, syndication and management of asset and cash flow-based investments.

Babcock & Brown is one of the top five wind energy developers and operators in the world with more than 20 years of experience in wind energy. Babcock & Brown currently operates 20 wind farms across nine states, totaling nearly 1600 MW of installed capacity, which is enough clean and renewable energy to power more than 400,000 American homes.

Babcock & Brown was founded in San Francisco in 1977. For further information about Babcock & Brown please see our website: <http://www.babcockbrown.com/>.

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Babcock & Brown

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#### Wessington Springs Wind Energy Center

- Laramie River Station
- Whelan Energy Center Unit 2
- Cooper Nuclear Station
- **Wessington Springs Wind Energy Center**

#### Heartland News

03.10.2010  
[Heartland launches blog](#)

03.10.2010  
[Heartland Awarded \\$1 Million on Behalf of Rural Learning Center](#)

02.10.2010  
[Nominate your community for GOED Community of Year](#)

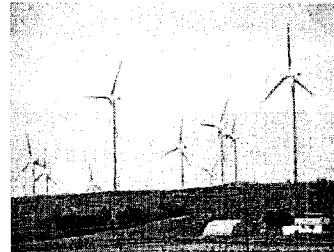
01.20.2010  
[Heartland moves into its new headquarters](#)

### The Power of Forward Thinking

## Wessington Springs Wind Energy Center

With the addition of the Wessington Springs Wind Energy Center (WSW Energy Center) to our power supply portfolio, Heartland has shown a commitment to clean energy resources. Built by Babcock & Brown (now known as NextEra Energy Resources, LLC) the 34 turbine, 51 MW wind project has performed extremely well with few operational issues since its launch in February, 2009.

Located in the bluffs of Jerauld County, just south of Wessington Springs, SD, WSW Energy Center has the capability to generate enough renewable energy to power over 17,000 residential homes. The project also supplies clean power to South Dakota State University and the University of South Dakota, per a contract with the state of South Dakota, making the two universities the first in the Midwest to be powered with 100% renewable energy. WSW Energy Center also fulfills our commitment to the Renewable Energy Objective for the state of South Dakota and the Renewable Energy Standard for the state of Minnesota.



#### Project Background

- Project Size: 51 megawatts
- Expected Annual Production: 213 MWh
- Estimated Electricity Production: Equivalent to 17,498 residential homes
- Location: Wessington Springs, SD
- Landowners: 8
- Project Owner, Operator and Manager: NextEra Energy Resources, LLC
- Total Project Acreage: 3,500 (approximate)

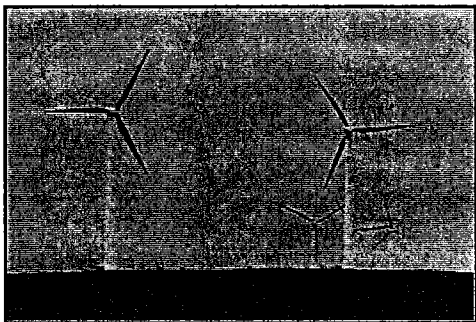
#### Wind Turbine Data

- Number of Turbines: 34
- Turbine Size: 1.5 megawatts
- Turbine Manufacturer: GE
- Tower Height: 80 meters (262 feet)
- Rotor Diameter: 77 meters (253 feet)

- Meteorology News - <http://www.meteorologynews.com> -

## New Wind Farm Causing Problems for Doppler Radar

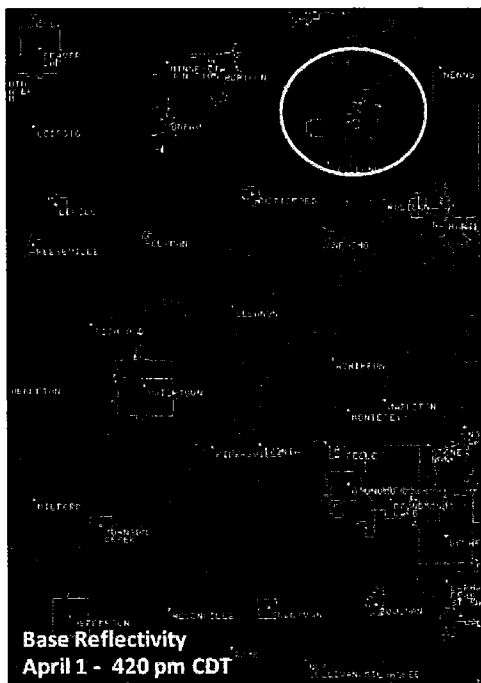
Posted By [Jay Michaels](#) On April 13, 2009 @ 2:20 pm In [Meteorology](#), [Offbeat](#), [Weather Technology](#) | [7 Comments](#)



Wind turbines along the Buffalo Ridge in rural southwest Minnesota (2004)

A relatively new wind energy farm in central Wisconsin has created a newly-discovered, puzzling side effect: interference with the local National Weather Service doppler radar.

The Butler Ridge wind farm was constructed in February of this year and contains a total of 36 wind turbines, each standing about 300 feet above ground level. These windmills were built on a ridge line that is about 1100 feet above sea level, placing the turbines in an optimal location to benefit from the highest wind speeds in the region. Coincidentally, the location is in the sight of the local doppler radar tower in Sullivan, WI that is approximately 30 miles south of the wind farm.

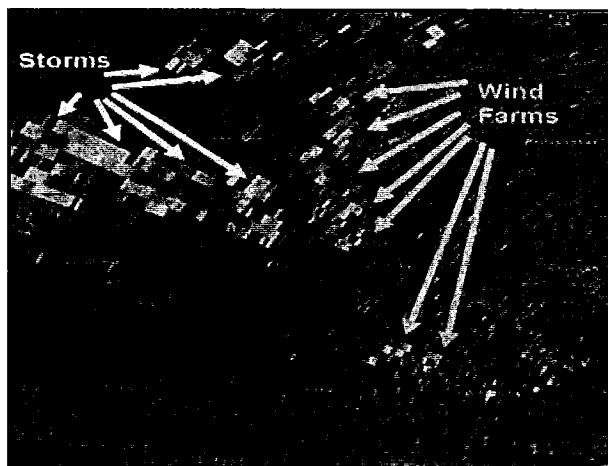


This image from April 1, 2009 displays the location and reflectivity of the wind

farm 30 miles north of the radar site.  
Credit: NOAA

Doppler radar functions to detect atmospheric phenomena by sending out an electromagnetic signal and simultaneously "listening" for the signal to return if it is bounced off of an object. Many objects will reflect the radar beam, most notably rain droplets, ice crystals, and snowflakes. But as we reported earlier this year, doppler radar can also detect bats, birds, aircraft, surface traffic, and even tragedies like 9/11 and the Columbia disaster. They are even believed to have the potential to alter the weather.

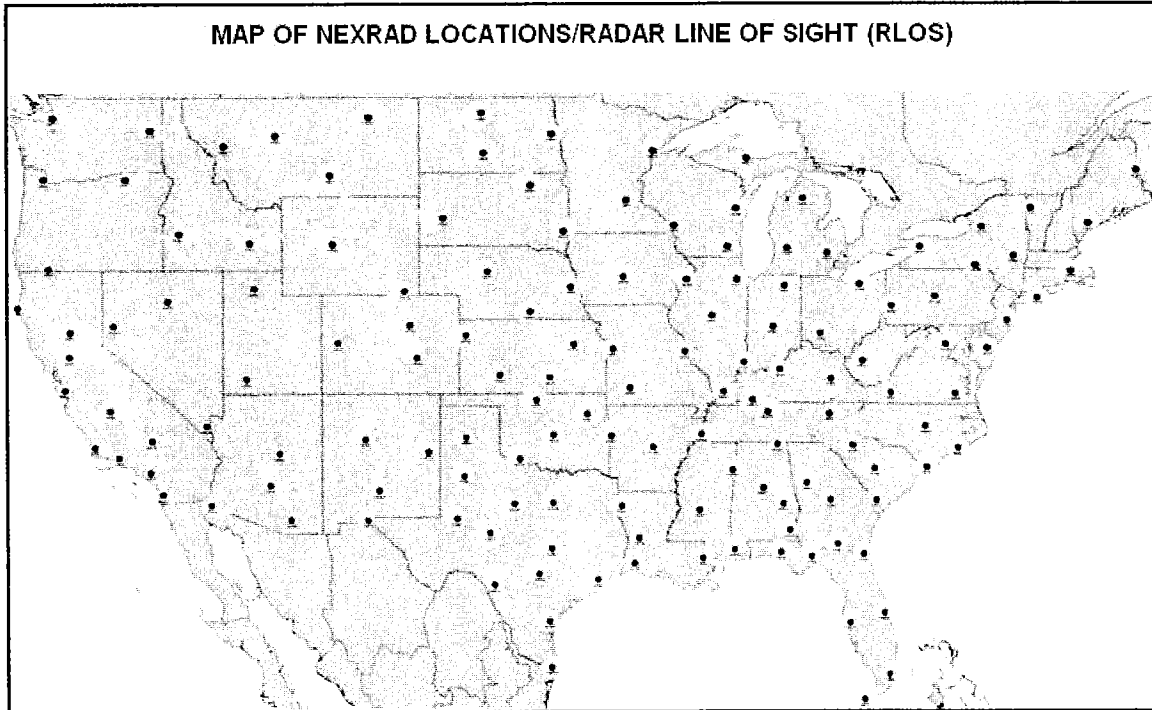
In the case of the Butler Ridge wind farm, the radar beam is being reflected by the large blades on the spinning turbines. This electromagnetic energy is then reflected back to the radar dome and the radar detects the object. The turbine blades then appear on the radar image. This seemingly innocuous interference could have significant ramifications in the upcoming severe weather season though.



This image from the National Weather Service demonstrates how wind turbines can be mistaken for storms on doppler radar. Credit: NOAA

Doppler radar is arguably one of the most critical tools at the disposal of the National Weather Service when they look to provide timely watches and warnings of severe thunderstorms and tornadoes. By examining the output of doppler radars, meteorologists are able to detect and forecast thunderstorms that may become severe and where they may track. But if the radar image is masked by interference such as the wind turbines, it is feared that severe weather watches and warnings may be less robust.

The National Weather Service Radar Operations Center has enlisted the help of the wind energy industry to try to alleviate these problems in the future by locating the wind farms in places that would not interfere with such radar signals. They have published an extensive analysis of the problem. The map below displays the locations (in red) of the doppler radar sites that may be impacted. The yellow regions are those in which the radar beam travels close enough to the ground that it could be impacted by windmills constructed in those regions.



This map displays the locations of all National Weather Service radar locations (red) and the regions in which the radar beam is low enough to the ground that it may be impacted by windmills (yellow).  
Credit: NOAA

Meteorologists may be able to write software code that is able to filter out this interference, but such work can be costly and time-consuming. The primary concern is that filtering the data to remove such interference may also increase the risk of filtering out true radar echoes – those of actual storms that must be detected for public safety.

With the mushrooming popularity of wind energy around the country, this problem is one that is sure to warrant further study and creative mitigation attempts.

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December 16, 2009

## NextEra Energy Resources completes purchase of wind projects from Babcock & Brown

JUNO BEACH, Fla. – NextEra Energy Resources, LLC, a subsidiary of FPL Group, Inc. (NYSE:FPL) and North America's leading generator of wind power, today announced it has completed its previously announced acquisition of three operating wind projects with a combined capacity of 184.5 megawatts (MW) from Babcock & Brown.

The projects included in the transaction are:

- 79.5-MW Majestic Wind Energy Center located in Carson County, Texas, northeast of Amarillo. The Majestic project is comprised of 54 GE 1.5-MW turbines. All of the output from this project is sold to Southwestern Electric Power Company, a subsidiary of AEP, under a long-term contract.
- 54-MW Butler Ridge Wind Energy Center located in Dodge County, Wisconsin, northwest of Milwaukee. The Butler Ridge project is comprised of 36 GE 1.5-MW wind turbines. A portion of the output from the project is sold to Wisconsin Public Power under a long-term contract. The remaining output is expected to be sold to Midwest utilities to serve their growing renewable portfolio standard requirements.
- 51-MW Wessington Springs Wind Energy Center located in Jerauld County, South Dakota, south of Wessington Springs. The Wessington Springs project is comprised of 34 GE 1.5-MW wind turbines. All of the output from this project is sold to Heartland Consumer Power District under a long-term contract.

Mitch Davidson, president and CEO of NextEra Energy Resources, said, "This acquisition furthers our clean energy leadership in North America and is consistent with our strategy to profitably grow our wind portfolio. All of these projects are located in markets with very strong wind regimes and utilize proven wind turbine technology. In addition, we are pleased that more than 80 percent of the total output from these three facilities is being sold under long-term contracts to creditworthy counterparties."

NextEra Energy Resources is the largest generator of wind power in North America. Today the company operates over 8,600 wind turbines at more than 70 wind projects located in 16 states and two Canadian provinces. In addition to its wind portfolio, NextEra Energy Resources is also the largest operator of solar power in the U.S., with 310 MW located in California's Mojave Desert.

### About NextEra Energy Resources

NextEra Energy Resources is a clean energy leader and one of the largest competitive energy suppliers in North America. A subsidiary of Juno Beach, Fla.-based FPL Group (NYSE: FPL), NextEra Energy Resources is the largest generator in North America of renewable energy from the wind and sun. It operates clean, emissions-free nuclear power generation facilities in New Hampshire, Iowa and Wisconsin as part of the FPL Group

nuclear fleet, which is the third largest in the U.S. FPL Group had 2008 revenues of more than \$16 billion, approximately 39,000 megawatts of generating capacity, and more than 15,000 employees in 27 states and Canada. For more information, visit these Web sites: [www.NextEraEnergyResources.com](http://www.NextEraEnergyResources.com), [www.FPLGroup.com](http://www.FPLGroup.com).

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## UPDATE 1-FPL buys wind projects from Babcock & Brown

10.01.09, 11:53 AM EDT



**REUTERS**

NEW YORK, Oct 1 (Reuters) - FPL Group Inc's green-energy unit on Thursday said it agreed to buy

three wind projects from Babcock & Brown Power for about \$352 million.

FPL's NextEra Energy Resources — the largest U.S. generator of wind power — said the three projects have a combined capacity of 184.5 megawatts. They are located in Carson County, Texas; Dodge County, Wisconsin; and Jerauld County, South Dakota.

The company said more than 80 percent of the output from the facilities has been sold under long-term contracts.

Approvals for the deal are needed from federal agencies, including the U.S. Federal Energy Regulatory Commission and Department of Justice, FPL said.

Australian infrastructure investor Babcock & Brown, once one of that country's largest firms, has been under administration since March, after its market value plunged as the global credit-crunch hurt its debt-funded expansion model.

(Reporting by Michael Eрман, editing by Gerald E. McCormick)  
Keywords: BABCOCK FPL

(Reuters Messaging: michael.erman.reuters.com@reuters.net; +1 646 223 6021)

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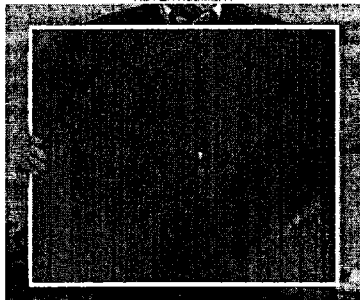
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JANUARY 11, 2010

VOL. XIII, NO. 1

## TCW Shops For Manager

**Trust Company of the West** is in talks with several parties manage its stake in the La Paloma plant that is in foreclosure.

*See story, page 2*

## At Press Time

enXco Nears Canadian  
Solar Financing

2

## In The News

Enel Eyes Renewable IPO

3

Fla. Solar Company Seeks Funding

3

First Wind Wraps Financing

3

/ancouver Dev. Hunts

Hydro Investor

3

BNP Snags Fortis Bankers

3

Tokyo Gas, Mitsui Tap

Financing Trio

3

Geo. Co. Scouts Lenders

4

SteelRiver Restructures For Purchase

4

Invenergy Expects Jan. Financing

4

NordLB Preps Mexican Roundtable

4

Suzlon, Marathon Plot Lending

5

Canadian Wind Financing Planned

5

LS Plots Transmission

5

## Corporate Strategies

Asset Sale Slashes Dynegy Debt

5

## Departments

Project Finance Deal Chart

6

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## Tough Pitch?

### TENASKA SCOUTS CLEAN COAL FINANCING

Tenaska is talking to banks about how to finance a portion of a \$3.5 billion integrated gasification combined cycle project in Taylorville, Ill. But even with a possible U.S.

Department of Energy loan guarantee, some bankers think the IPP has its work cut out given the expense of the technology.

As an IPP, Tenaska cannot pass off some of the costs onto ratepayers, but on the flip side, the project is in the running for a loan guarantee from the U.S. Department of Energy that would cover up to 60% of the costs.

Christian County Generation, a joint venture between Tenaska and MDL Holdings Co., is building the 730 MW Taylorville Energy Center. Tenaska is planning to inject equity and

*(continued on page 7)*

### RENEWABLES PLAYERS SCOPE LEVERAGED LEASES

Developers, project financiers and tax equity investors are considering using leveraged lease structures, instead of the traditional partnership flip, to finance wind and solar projects. "We think leveraged leasing is really going to be the preferred route for financing wind and solar projects," says Ted Brandt, CEO of Marathon Capital in Bannockburn, Ill., adding that leveraged lease transactions are simpler, cheaper and quicker to implement than partnership flips.

They are only being considered now as bankers and developers have started to fully grasp the plethora of financing options available under the American Recovery and Reinvestment Act, says Keith Martin, partner at Chadbourne & Parke.

Prior to ARRA, tax equity investors have relied on the partnership flip, where they owned

*(continued on page 7)*

## '09 Generation Sales Data

### GENERATION SALES COLLAPSE 70%

The number of generation plants sold in North America dropped a whopping 70% last year against 2008 numbers. According to exclusive numbers from PFR's Generation Sale Database, 82 generation facilities were sold in 2008 and just 25 last year.

"The plummet from 82 deals to 25 is dramatic," says Jeff Bodington, president of boutique investment bank Bodington & Co. in San Francisco.

Gas-fired generation has been particularly hard hit, as would be expected given the negative buzz through the year. A 94% drop in deals could herald the bottom though. The gradual economic recovery could spur growth in these larger assets as buyers gain more confidence in larger, strategic acquisitions, says an M&A banker in Chicago.

*(continued on page 8)*

Check [www.iipower.com](http://www.iipower.com) during the week for breaking news and updates.



## At Press Time

### TCW Seeks Manager For La Paloma Stake

Trust Company of the West is talking to small independent power producers and other energy companies to manage its stake in the La Paloma power plant that it is in the process of foreclosing on.

Complete Energy had a 60% stake in the plant and defaulted on a \$130 million TCW loan used to fund it (PFR, 11/20). The other 40% of the plant is owned by various institutional investors, including hedge funds.

The U.S. Federal Energy Regulatory Commission approved the La Paloma Generating Co.'s request to divest its stake in the plant last Monday, but the two parties are working towards a consensual foreclosure which is expected to be complete by month-end, says a person familiar with the matter. TCW is also close to choosing a manager for the plant.

Morgan Stanley owns part of the Complete loan, and has an offtake agreement for 75% of the power through 2012 via a subsidiary. A banker at TCW declined comment. Bankers at Morgan Stanley were unavailable for comment, and a call Hugh Tarpley, co-founder of Complete in Houston was not returned.

## enXco To Wrap Canadian Solar

enXco is set to wrap financing of its \$85-100 million photovoltaic solar plant in Annprior, Ontario. Whether the financing consists of a construction or term loan or another type of facility could not be learned.

The North American affiliate of EDF Energies Nouvelles had been looking for a 15-year facility with pricing below 300 basis points over LIBOR when the company was shopping it around to lenders last year, a project financier notes. Dexia Crédit Local, Unicredit HVB and NordLB had been looking at the deal, but the identity of the lenders or whether the pricing was attained could not be learned.

Bank officials declined to comment. Jim Peters, director of project finance in Burlington, Vt., did not return a call by press time.

The project is split into two phases in order to qualify for the province's Renewable Energy Standard Offer Program, which pays a \$C0.43 (\$0.62) per kWh of electricity, the project financier adds. Projects under the program must be smaller than roughly 10 MW.

### Tell Us What You Think!

Do you have questions, comments or criticisms about a story that appeared in PFR? Should we be covering more or less of a given area? The staff of PFR is committed as ever to evolving with the markets and we welcome your feedback. Feel free to contact Jeanine Prezioso, managing editor, at 212-224-3226 or [jprezioso@iineews.com](mailto:jprezioso@iineews.com).

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**Institutional  
Investor NEWS**  
INTELLIGENCE FIRST

## Enel Mulls IPO For U.S. Renewable Co.

Enel is likely to file an initial public offering for subsidiary **Enel Green Power** this year, says an official at **Enel North America** in Andover, Mass. The company has told employees at subsidiaries there will be an IPO in the future though it did not give a timeline.

The Italian utility wants to maintain control over its renewable unit, the official says. He referred additional questions to headquarters in Rome which did not return phone calls or e-mails. It could not be learned if the company was using any advisors.

The move to list Enel Green Power would be similar to **Iberdrola's** 2007 decision to list subsidiary **Iberdrola Renewables** separately on the Madrid stock exchange to increase access to public financing, says a banker.

## Renewable Developer To Seek Solar Financing

Renewable energy developer **Energy 5.0** will begin considering financing options including raising equity, tax equity and debt in about six months for its 25 MW Florida solar project. "We're working through that now," says **Bernard Cherry**, ceo, in West Palm Beach, Fla.

The company received approval for its power purchase agreement with **Tampa Electric Company** from the **Florida Public Service Commission** last month. The project will move forward pending PPA contract approval from the **Tampa Electric Board** at the end of this month.

The so-called Florida Solar I Project will be built and operated by **Energy 5.0**. **Tampa Electric** will purchase all of the power produced from the facility for 25 years beginning in 2011.

**Energy 5.0** is working on a 100 MW solar development pipeline but **Cherry** declined to delve into specifics on future projects.

## First Wind Refis, Funds Construction

**First Wind** will refinance debt associated with its 57 MW **Stetson I** wind farm and help fund construction on the second phase of the project with a \$116 million loan. **BNP Paribas** and **HSH Nordbank** were joint bookrunners on the deal that closed Dec. 22.

Proceeds from the seven-year loan will be used for construction costs for a 25.5 MW **Stetson II** expansion. The financing is for a \$76 million loan taken out in July, and underwritten by **Alberta Investment Management** and **HSH** (PFR, 7/09). Pricing on both loans could not be learned.

Construction began in October on **Stetson II** near Danforth,

Maine, and is expected to begin operation in the first half of the year. **Stetson I** and **II** have a total capacity of 82.5 MW and have a long-term PPA with **Harvard University**. Officials at **BNP Paribas**, **HSH Nordbank** and **First Wind** declined to comment.

## BC Developer Scouts Hydro Investor

**Advanced Energy Systems** is hunting for an investor for a 10 MW hydro project in British Columbia.

The run-of-the-river project near **Revelstoke, B.C.**, about 350 miles northeast of **Vancouver**, has a long-term PPA with **BC Hydro** that was awarded from a 2002-2003 **Green Power Generation** call. The two-generator project that cost roughly \$20 million is scheduled to come online this year.

**Daniel Robinson**, president of **Advanced Energy** in **Vancouver**, declined to comment.

## Fortis Bankers Flip To BNP

**Karsten Schmitz**, former v.p. of syndications at **Fortis Capital**, and colleague **David Holmes**, have moved over to **BNP Paribas**, which bought **Fortis** last year. Being more focused on renewables than **BNP** has allowed **Fortis** project financiers to stay on despite the merger, a banker notes. The details of how or if the banks are incorporating the energy teams or whether other **Fortis** bankers have moved to **BNP**, could not be learned.

**Schmitz**, v.p. of corporate and investment banking structured finance loan syndicate, reports to **Dan Whalen**, head of syndication in New York. The pair began at **BNP** last month. Calls to **Schmitz** and **Whalen** were not returned and **Holmes** declined to comment. Details of **Holmes** former and current positions could not be learned. A **Fortis** spokesman did not return a call by press time.

## Tokyo Gas, Mitsui Tap Banks For Mexico Financing

**Tokyo Gas** and **Mitsui** have lined up three banks to lead financing for the purchase of **Gas Natural's** power assets in Mexico.

**Sumitomo Mitsui**, **Bank of Tokyo Mitsubishi** and **Mizuho** were hired to raise debt financing for the \$1.23 billion acquisition. **Gas Natural** reportedly bought the assets for \$1.5 billion but was forced to sell them at a loss due to Mexican anti-trust regulations, as a portion of their gas-business had become vertically integrated with the original acquisition. Bank officials did not return calls or declined comment and details of the financing such as pricing and the amount of debt to be raised could not be learned.

The assets include five natural gas power plants with a total



capacity of 2.2 GW, an associated pipeline and the *Compañía Mexicana de Gerencia y Operación* service company.

Gas Natural had been interviewing banks for an advisor mandate to sell 4 GW of combined assets in Mexico (PFR, 9/25).

## Geo Co. Sounds Out Banks

Geothermal developer **Ram Power** is having preliminary discussions with lenders to finance its \$250 million, 49.9 MW Orita project in Imperial Valley, Calif. The company is aiming for a 15-year tenor on the \$80-100 million of debt and will look to secure funding this year, says **Hezy Ram**, ceo in Reno, Nev.

The project has a 20-year PPA with **Southern California Edison** and Ram notes the investment-grade rating of the offtaker should keep pricing low. The structure of the deal has yet to be determined and he declined to identify potential lenders. The company will fund the remaining project costs with equity from its initial public offering (PFR, 7/24) and from the U.S. Department of Treasury's cash grant program.

The company has also closed \$77 million in financing backing a 36 MW expansion to its existing 10 MW San Jacinto-Tizate plant near Leon, Nicaragua (PFR, 8/14). The **Central American Bank for Economic Integration**, **Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden**, **Export Development Canada** and **Cordiant Capital** are participating in the deal, which has a nine-year tenor and a 10-12% interest rate.

## SteelRiver Restructures Financing For Peoples Gas

**SteelRiver Infrastructure Fund North America** is in the process of restructuring the financing it was seeking for the purchase and operation of two natural gas distribution units. The move is after regulators dismissed one of the purchases as too costly for ratepayers.

The fund intended to purchase **Peoples Gas** in Pennsylvania and **Hope Gas Inc.** in West Virginia from **Dominion**, but the **Public Service Commission** of West Virginia shot down the proposal on the grounds that the fund was seeking an immediate \$8 million rate increase.

"The financing is being modified to mirror the new transaction which now includes the acquisition of **Peoples Gas** only by **SteelRiver**," says **Vittorio Lacagnina**, director at **SteelRiver** in New York.

**Dominion** intends to sell **Peoples** to the **SteelRiver** subsidiary **PH Gas** for \$780 million with a planned close by the end of the quarter. The fund intended to pay \$910 million for the two assets and sought one of the largest financings since **Astoria Energy's** \$1.2 billion financing, bankers say, (PFR, 11/6). The fund is likely to seek the same 60-40% debt-to-equity ratio to fund the

purchase as it did in the last transaction, one banker says.

**BNP Paribas** was left lead on the first deal with **Scotia Capital**, **Bayern LB** and **Union Bank** as joint lead arrangers and **Lacagnina** says it is working with the same banks for this financing. Officials at banks either declined comment or did not return calls for comment.

The fund is managed by **SteelRiver Infrastructure Partners**, which was spun off from **Babcock & Brown's Infrastructure Fund North America**.

## Invenergy Targets January Close For Wind

**Invenergy** is looking to wrap financing backing its \$220 million, 103 MW wind project in Vantage, Wash., by month-end, say project financiers. **Dexia** and **UniCredit HVB** are working on the deal. Bank officials declined to comment and **Jim Murphy**, cfo in Chicago, did not return a call.

The company plans to apply for the U.S. Department of Treasury's cash grant program to partially fund the project. Details of the deal, such as debt amount, tenor and pricing, could not be immediately learned. The project is slated for operation sometime this year.

In other news, financing has stalled on the company's \$300 million, 186 MW **Beech Ridge** project in Greenbrier County, West Va., say deal watchers (PFR, 10/16). U.S. District Judge **Roger Titus** has ordered the developer to halt work on the project citing potential harm to the endangered Indiana bat. The company's plans for the project could not be learned.

## NordLB Positions For More Mexican Wind Flow

**NordLB** is planning a roundtable with a group of wind turbine suppliers, sponsors, development banks and local officials in Mexico City Jan. 19 to discuss financing 300 MW worth of projects.

State-owned utility **Comisión Federal de Electricidad** plans to issue requests for proposals for 300 MW worth of wind projects this year, totaling some \$600 million. **Bruno Mejean**, senior v.p. and head of structured finance for the Americas in New York, estimates those projects will be financed with about 70% debt. "Certain areas of Mexico have some of the best wind regimes in the world," he says. "We see a good chance of quite a few transactions in the coming year."

Last year the bank advised the **Export-Import Bank of the United States** on project financing wind farms including **EDF Energies Nouvelles'** 67.5 MW **La Ventosa** project in Oaxaca, Mexico (PFR, 7/10). The **La Ventosa** project has a 15-20 year

PA with Wal-Mart de Mexico stores and Mejean says private industries such as Wal-Mart could be offtakers in these future wind projects.

## Suzlon Taps Marathon For Customer Finance Slot

Turbine manufacturer Suzlon has tapped Marathon Capital to advise customers on financing for their products and projects. "We have a whole new tranche of developers who need capital and can't get these projects up and running. So we got together to provide some innovative solutions for financing," says Andris Cukurs, ceo in of Suzlon in New York.

Suzlon and Marathon are targeting small to mid-size developers that don't have access to large balance sheets like Suzlon's larger clients such as Edison Mission Energy, John Deere, Iberdrola, Horizon and Duke Energy. "We're trying to help Suzlon compete in a world where manufacturers are providing financing," says Ted Brandt, ceo of Marathon in Chicago. Siemens and GE Energy also have their own financial arms, Siemens Financial and GE Capital, to facilitate funding with customers.

The pair is looking at a range of financing structures including turbine supply loans, project financing, tax equity investment and federal subsidies, Brandt adds. Brandt and Cukurs declined to identify potential small to mid-size clients or specify a targeted deal size.

## Invenergy Mulls Canadian Financing

Invenergy is planning to nail down project financing for its 138 MW Le Plateau wind farm in southeastern Quebec in the first half of this year. "Our projects are financed in a variety of ways and usually include a consortium of international banks," says Frits de Kiewit, director of business development in Montreal, Quebec. He declined to identify potential lenders, the amount of debt and equity the company is looking to put on the project or the source of potential equity.

Dexia Crédit Local and Unicredit HVB wrapped \$118 million in financing backing the company's 100.5 MW Grand Ridge expansion in La Salle County, Ill. (PFR, 7/10). Credit Suisse plans to take a 100% tax equity stake in that project. CS affiliate Credit Suisse Leasing will own all of the Class A stock giving the bank veto rights "to protect its economic" interests, according to documents filed with the U.S. Federal Energy Regulatory Commission on Dec. 23. The Grand Ridge expansion, which came online Dec. 29, has a 20-year PPA with American Electric Power subsidiary Appalachian Power.

The company is also in talks with lenders for financing its \$300 million Beech Ridge project in Greenbrier County, W. Va., and its \$220 million, 103 MW wind project in Vantage, Wash.

(PFR, 10/16). A Dexia official declined to comment and a Unicredit official did not return calls.

The C\$330 million (\$309 million) farm is slated for operation in 2011. Hydro-Quebec has a long-term PPA with the facility.

## LS Plans Transmission Funding

LS Power will seek external financing for its 160-mile renewable energy transmission line that will traverse Illinois and Indiana through subsidiary Central Transmission, says Sharon Segner, director in Washington, D.C. She declined to comment on how the company will finance the project. The start and end points are plotted but route details need to be finalized in addition to completing permitting and licensing before the company starts the financing process, adds Segner.

The company filed with PJM to connect to the grid and is in early stages of working to secure land rights. She declined to comment on how the preliminary costs are being financed or how construction costs might be financed. The project could cost roughly \$320 million, based on an estimated \$2 million a mile, according to bankers.

The line will run from Pontiac, Ill., to North Liberty, Ind., making an L-like bend in Reynolds, Ind. The LaSalle line is slated for 2014 operation and has a 3 GW capacity.

## Corporate Strategies

### Dynegy Cuts Debt With Asset Sale Proceeds

Dynegy has used proceeds from its sale of nine gas-fired plants to repay \$830 million of bonds maturing in the next two years. "It bought them some time. This will take away some of the uncertainty of the markets for the company," says A.J. Sabatelle, analyst at Moody's Investors Service in New York. The Houston-based company began the repurchase efforts on Dec. 14 and wrapped it Dec. 31.

LS Power purchased the assets for roughly \$850 million, closing \$775 million in bank facilities to back the deal (PFR, 12/7). Dynegy repurchased \$420 million in outstanding 6.875% senior unsecured notes due in 2011 and \$410 million in 8.75% notes senior unsecured notes due in 2012. The company has \$150 million in outstanding maturities for those years. The use of the proceeds and the tenors of the 2011 and 2012 bonds could not be learned. Holli Nichols, cfo, and a spokeswoman did not return calls by press time.

Bank of America is the exclusive repurchasing agent on the deal. A bank spokesman did not return a call. Moody's assigns the company a corporate family rating of B2.

## Project Finance Deal Book

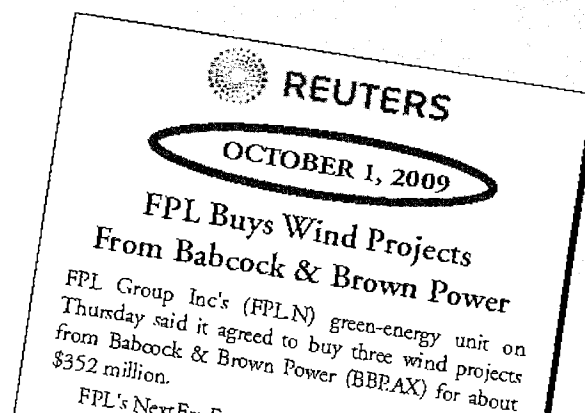
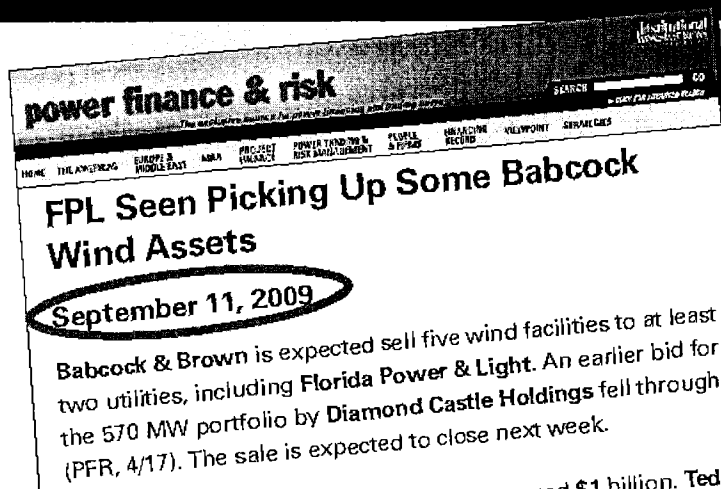
*Deal Book is a matrix of energy project finance deals that PFR is tracking in the energy sector. The entries below are of new deals or deals where there has been change in their parameters or status. To report updates or provide additional information on the status of financings, please call Jeanine Prezioso at (212) 224-3226 or e-mail [jprezioso@iineews.com](mailto:jprezioso@iineews.com).*

### Live Deals: North America

Sponsor	Project	Location	Lead(s)	Loan	Loan Amount	Tenor	Notes
Abengoa Mexico	Unknown (300 MW Co Gen)	Tabasco, Mexico	TBA	TBA	\$450M	TBA	Financing on track for Dec. payments (PFR, 12/21).
Alpine Energy	Unknown (33 MW Waste)	St. Thomas, U.S. Virgin Islands	TBA	TBA	TBA	TBA	Financing planned for 2010 (PFR, 12/21).
	Unknown (16 MW Waste)	St. Croix, U.S. Virgin Islands	TBA	TBA	TBA	TBA	
Auright Capital	Various (Gas and Transmission)	Various	Barclays, BofA	TBA	TBA	TBA	Looking to launch financing in January (PFR, 12/21).
Edison Mission	Cedro Hills (150 MW Wind)	Webb County, Texas	Union Bank, WestLB, Dexia, Banco Santander, BBVA	Term	\$220M	15-yr	Looking to round up club (SPFR, 12/21).
Energy 5.0	Florida Solar 1 Project (Solar 25 MW)	Florida	TBA	TBA	TBA	TBA	Considering financing options (see story, page 3).
Exergy Development Group	Various (Wind)	Idaho	TBA	TBA	TBA	TBA	Talking to banks for p.f. (PFR, 12/21).
Falcon Gas Storage	MoBay (50Bcf Gas Storage)	Mobile County, Ala.	Calyon, WestLB	Construction/ Term Loan	\$400M	7-yr	Plotting deal relaunch (PFR, 12/21).
Invenery	Beech Ridge (186 MW Wind)	Greenbrier County, W. Va.	TBA	TBA	TBA	TBA	Project on hold for permitting issues (see story, page 4).
	Vantage (103 MW Wind)	Vantage, Wash.	Dexia, Unicredit HVB	TBA	TBA	TBA	Looking to wrap this month (see story, page 4).
	Le Plateau (138 MW Wind)	Quebec, Canada	TBA	TBA	TBA	TBA	Planning for p.f. (see story, page 5).
Mitsui, Tokyo Gas	Various (Gas-fired)	Mexico	Sumitomo, BoTM, Mizuho	TBA	TBA	TBA	Lead banks lined up (see page, 3).
Ram Power	San Jacinto Tizate (24 MW Geo)	Lyon, Nicaragua	Central American Bank of Economic Integration, Export Development Canada, FMO, Cordiant Capital	Term Loan	\$17M	9-yr	Deal wrapped (see story, page 4).
	Drita (49.9 MW Geo)	Imperial Valley, Calif.	TBA	TBA	TBA	TBA	Talking to banks for p.f. (see story, page 4).
Terra-Gen Power	Alta (700 MW Phase I Wind)	Tehachapi, Calif.	TBA	Term Loan	TBA	TBA	Talking to lenders (PFR, 12/21).

For a complete listing of the Project Finance Deal Book, please go to [iipower.com](http://iipower.com).

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## RENEWABLES PLAYERS

(continued from page 1)

99% of a project until it has procured all of the tax credits and then all but 5% of the ownership interests revert back to the developer.

Under the ARRA, owners no longer have to be operators to receive tax credits. So tax equity investors can now buy projects and lease them back to the developers or create an inverted lease transaction, where the developer can own the project and lease to the investor.

Marathon has hired Dan Morash, former senior managing director CIT Energy, and Matt Shanahan, v.p. of structured finance at CIT, to focus the firm's efforts on leveraged leasing and project finance. Shanahan is based in New York and Morash in Chicago. Both report to Brandt.

Invenergy is shopping a sale lease-back for a wind farm for a short-term construction loan (see page 4). Calls to Jim Murphy, ceo at Invenergy in Chicago, were directed to Joe Condo, general counsel, who did not return calls.

The leveraged lease structures have advantages and negatives, Martin notes. The sale lease-back transaction allows developers to get the project fully financed because there is a guaranteed buyout from the tax equity investor, however, the developer is obligated to buy back the project at full market

value at the end of the lease. This creates a buy-back risk for the developer as it will likely have to seek funding to purchase the project.

Inverted leases eliminate the buy-back risk for the developer-owner but also prevent the tax equity investor from getting the tax benefits of depreciation, which can equal up to 50% of the tax credit value and is legally available only to the owner.

—Sara Rosner

## TENASKA SCOUTS

(continued from page 1)

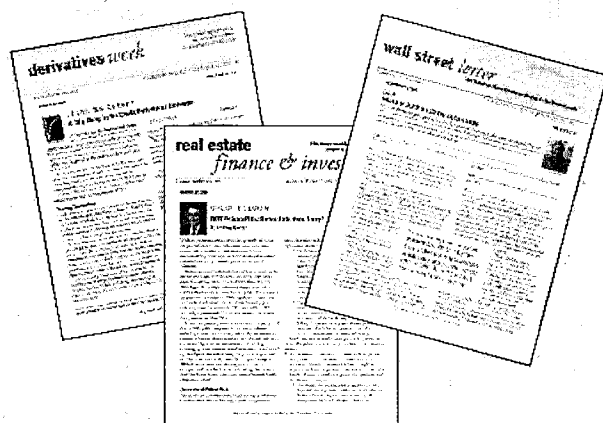
maintain a 55%-45% debt-to-equity ratio with an 11.5% return on equity, according to a filing with the U.S. Federal Energy Regulatory Commission on Dec. 23. The company needs FERC approval on the capital structure and the 11.5% ROE to proceed. Calls to Gregory Van Dyke, treasurer of Tenaska in Omaha, Neb., were not returned.

Historically, Tenaska has tapped construction financing from banks for generation then paid down that debt with bonds once the plant is in operation. Tenaska has worked with Credit Suisse, BNP Paribas and Calyon in the past (PFR, 2/22/08) but bankers at CS and BNP say they are not involved with this financing. Bankers at Calyon did not return calls.

—Holly Fletcher

## Institutional Investor NEWS

INTELLIGENCE FIRST



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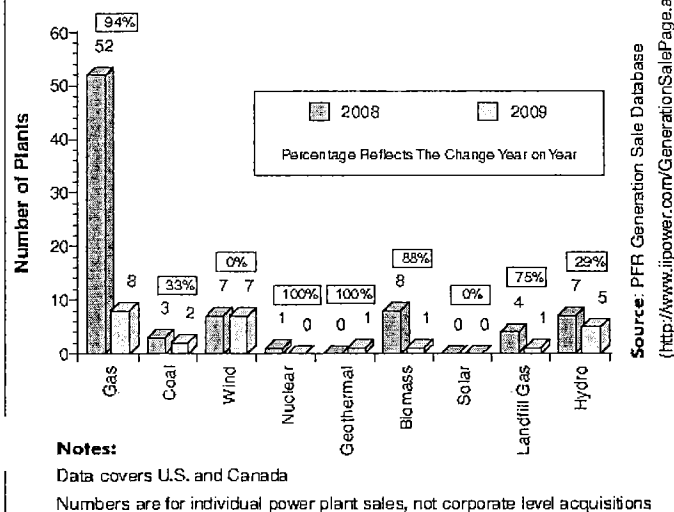
# REPRINTS MEAN BUSINESS!

## GENERATION SALES

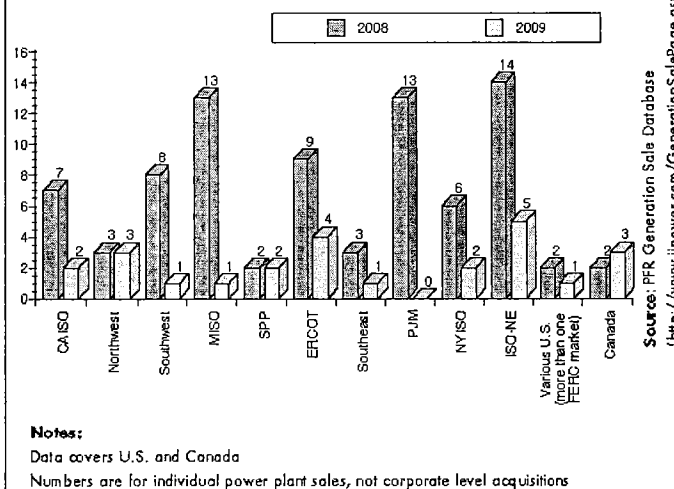
(continued from page 1)

Jim Schaefer, co-head of the power & utilities group at UBS in New York, thinks there are signs of a rebound already. One work week into the year, buyer appetite is increasing and certainly looks better than "the first three to four months of 2009 [which was] a broken year," he says.

Sales By Generation Type



Sales By Power Pool



This is the first in a series of reports PFR will be publishing based on the Generation Sale Database each quarter. Subscribers can access the data any time at <http://www.ipower.com/GenerationSalePage.aspx>

## Alternating Current



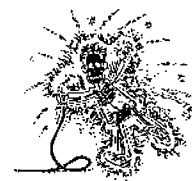
### The Most Expensive Solar Project... Ever?

Spanish company Acciona Energia has closed on EUR893 million (\$1.278 billion) in financing backing (insert drum roll here) a measly 150 MW of solar thermal plants in Majadas and Palma del Rio, Spain. "It's pretty ridiculous," notes a project financier, pointing out that at \$8 million per MW, it's the most expensive project in recent memory.

Developing solar generally costs between \$4-5 million per MW, the project financier notes. A spokesman at Acciona in Madrid did not return calls by press time and the breakdown in costs for developing the project could not be immediately learned.

It's not clear why it's so expensive. So we put our collective brains together and came up with these unlikely reasons:

- Contractors to be fed jamón ibérico de bellota hourly during construction.
- Penelope Cruz and Antonio Banderas signed up to provide lunchtime entertainment.
- Solar thermal pipes lined in platinum.



## Calendar

- The Geothermal Energy Association will host the Geothermal Energy Finance Forum 2010 Thursday at the Ritz-Carlton Battery Park in New York. To register, visit [www.geo-energy.org](http://www.geo-energy.org) or call 202.454.5263.
- SNL Exnet will host Power & Utilities M&A Symposium Jan. 25-26 at the Ritz-Carlton Battery Park in New York. To register, visit [www.snlcenter.com](http://www.snlcenter.com) or call 703.373.0164.

## Quote Of The Week

"We think leveraged leasing is really going to be the preferred route for financing wind and solar projects." —**Ted Brandt**, CEO of **Marathon Capital**, on renewables players' interest in using leveraged leases to finance projects (see story, page 1).

## One Year Ago In Power Finance & Risk

Babcock & Brown retained Marathon Capital to sell a 500-600 MW portfolio of U.S. wind projects. [NextEra Energy Resources, a unit of FPL Group, scooped three of the projects for \$352 million (PFR, 9/11).]

# power finance & risk

The exclusive source for power financing and M&A news

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## NextEra Snags Tax Equity

A **JPMorgan** unit is among the investors in two **NextEra** wind farms in North Dakota.

*See story, page 2*

## At Press Time

Entegra Plans Presentations  
For Gila Bidders 2

## In The News

Good Energies Bankrolls Solar 3  
Geo Project Lands Funding 3  
enXco Scouts Wind PPA 3  
Fla. Biomass Seeks Financing 3  
attern Acquires Own Wind Farm 3  
WestLB Loses Director 4  
Southern, Turner Scout Solar 4  
Minn. Wind Nabs Investors 4  
Terra-Gen Alta Loan Closes 4  
Energy Lawyers Head West 5  
Infigen Takes Final Bids 5

## Corporate Strategies

NSTAR Refis For Capex Costs 5  
Entergy Cuts Coupon With Refi 5

## Departments

Project Finance Deal Chart 6  
News In Brief 6  
Conference Calendar 7

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## ECP SHOPS SOLAR ARM

Energy Capital Partners is looking to sell its solar development arm **NextLight Renewable Power**. **NextLight** has a 1.3 GW portfolio that could cost around \$5.2 billion (at \$4 million per MW) to build. **Credit Suisse** is running the sale.

The private equity shop is looking for a buyer that won't require any seller financing. Tapping the debt markets for projects approaching \$1 billion is challenging for companies because banks are hesitant to get behind mega-projects. Utility scale solar projects are still seen as risky to finance, bankers in New York say. **NextLight** is planning to project finance about 1 GW of photovoltaic projects this year (PFR, 10/9). *(continued on page 7)*

## New Structure

## APS CONSIDERS TAX EQUITY STAKE IN SOLAR PROJECT

**Arizona Public Services** is in discussions to invest a tax equity stake in a solar project developed by **Abengoa Solar**, from which it is purchasing power. The deal is a new twist in solar development as utilities seek to own their generation and developers seek to solidify their ability to garner financing. It would be the first time such a structure is used.

The idea is that if the utility which is buying the power has skin in the project, then banks might be more willing to lend. *(continued on page 8)*

## LS SALE DRAWS KEEN LENDERS

**LS Power's** planned sale of its **Arlington Valley** plant has at least a dozen firms vying to finance or advise bidders. Why the sale is creating such a scrum may be simple: "It's the only thing in the market," says one project financier.

The final bids were due last week and a buyer is expected to emerge by month end. **ArcLight Capital Partners**, **Energy Capital Partners** and **Energy Investors Funds** are among the bidders, bankers say. **EQT Infrastructure Funds** and **Southwest Generation** are also thought to be in the mix. *(continued on page 8)*

## ORMAT SCOPES REFI ROLLOUT

**Ormat Technologies** will be in the market to refinance some of its 260 MW of geothermal generation projects worth roughly \$1 billion once they are up and running. The company will be looking at all financing alternatives, says **Dita Bronicki**, ceo, in Reno, Nev.

"We will pay for construction on balance sheet and refinance in the capital markets," **Bronicki** told **PFR**. "A substantial part [of the projects] are already developed and some have PPAs." Of the 260 MW, 160 MW will be financed with U.S. Department of Energy loan guarantees, she adds. Projects will be refinanced as they come online. *(continued on page 2)*

Check [www.iipower.com](http://www.iipower.com) during the week for breaking news and updates.



## At Press Time

### NextEra Lands JPM Tax Equity

NextEra Energy Resources has landed tax equity from a unit of JPMorgan and other unidentified investors for two wind farms in North Dakota. The transaction is expected to wrap this week, according to documents filed with the U.S. Federal Energy Regulatory Commission. Neither the names of the additional investors nor the cash amount could be immediately learned.

The JPM Capital-led investors will take a 100% stake in a joint venture, Peace Garden Wind, that encompasses Ashtabula II and Milton II. NextEra will be the managing member and the investors will have a 25% vote in financial decisions.

Minnkota Power Co-op buys about half of 120 MW from Ashtabula II in Griggs and Steele Counties. The FPL Group sub is in discussions for a second offtaker. Basin Power Electric Co-op purchases the power from the other project, the 49.5 MW Wilton II, which was built in 2005 (PFR, 6/23/06). Calls to officials at NextEra in Juno Beach, Fla., and JPMorgan were not returned by press time.

### Entegra To Host Shortlisted Bidders

Entegra Power Group will be hosting presentations for the shortlisted Gila River bidders later this month. Final bids will be due to auctioneer Barclays Capital shortly after bidder management visits to the facility near Phoenix, Ariz., a banker says. Calls to Michael Schuyler, ceo at Entegra, and Barclays officials were not returned.

LS Power is one of the companies interested in owning one of the four gas-fired units at its 2.2 GW facility, the banker says. An LS Power official in New York declined to comment. Other companies that plan to attend the presentations couldn't be learned.

The Tampa, Fla.-based company plans to wrap the sale in the second quarter (PFR, 2/25).

## ORMAT SCOPES

(continued from page 1)

Ormat has worked with Barclays Capital, Citigroup and JPMorgan on deals in the past.

The company is also developing an energy conversion project utilizing temperature differentials to create energy from a liquefied natural gas project in Spain. That project will cost \$16-\$20 million and will be developed on balance sheet. Ormat may also look to the U.S. to develop such projects.

Bronicki would not disclose the price Ormat paid for the recent acquisition of Energy Investors Funds Hot Sulphur Springs II geothermal project in Elko County, Nev. (PFR, 3/11). She said the company is "looking at other opportunities" for acquisitions.

—Jeanine Preziosos

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**Institutional  
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INTELLIGENCE FIRST

## Good Energies Invests In Calif. Solar Co.

Good Energies has made a \$13.2 million investment for a stake in utility-scale solar generator **Agile Energy**. Agile will use the funds to cover operating expenses and develop its 400 MW pipeline of utility-scale solar projects across the U.S., Mexico and Canada.

The company is keeping its eye on states with a lot of sunshine which have also embraced renewable portfolio standards. "Those two things are together in the southwest and California and correspondingly we are developing projects there," **Glen Davis**, ceo and one of the founders of Agile in San Bruno, Calif., told *PFR*.

Agile plans to develop ground-mounted photovoltaic or concentrating photovoltaic solar projects of about 5 MW each. As projects get to the project financing stage, the company will decide on a case-by-case basis whether to sell or develop them, Davis adds.

## Calif. Geo Project Lands Loan

**Catalyst Renewables** and **Hannon Armstrong** have landed a roughly \$300 million loan from four banks to develop its 50 MW Hudson Ranch I geothermal project in Salton Sea, Calif.

**WestLB**, **ING**, **Société Générale** and **Helaba** are the leads. Details of the loan are still being worked out. Bank officials either declined comment or did not return calls.

The price tag of the project is thought to be roughly \$380 million (*PFR*, 11/25).

**Eric Spomer**, president of Catalyst in Dallas, Texas, and **Jeff Eckel**, president and ceo of Hannon in Annapolis, Md., were unavailable for comment.

## enXco Hunts PPA, Sale To Revive Minn. Project

enXco is likely looking for a new offtaker for its planned 201 MW Lakefield wind project in southwestern Minnesota, as the company prepares to dispute **Indianapolis Power & Light Co.**'s termination of its 20-year offtake agreement March 1. IPL backed out because provisions in the **Indiana Utility Regulatory Commission** order approving the contract made "the agreement unacceptable to IPL," says an IPL spokeswoman. She declined further comment because enXco is considering how to dispute the decision.

The cancellation halts the financing process, says a banker familiar with the deal. Calls to officials at IPL, a sub of **AES**, were not returned. "How do you resurrect this? You got to find a new offtaker," says the banker. enXco, a unit of **EDF**, is

reportedly trying to sell the project but landing a buyer without a PPA is just as unlikely as arranging financing right now, bankers in New York say.

The EDF unit was working with four banks—**CoBank**, **Dexia Credit Local**, **Banco Santander**, **Société Générale**—to arrange financing for the 201 MW project (*PFR*, 2/19). Calls to enXco officials in Vermont and California were not returned. Officials at the banks either declined to comment or did not return calls. A spokeswoman at the **IURC** in Indianapolis declined to comment.

## Fla. Biomass Co. Probes Financing Options

**Florida Biomass Energy** is exploring financing options for its maiden 60 MW biomass project near Port Manatee, Fla. The developer plans to have financing in the bag for the \$180 million project by year end, says **Richard Jensen**, president in Bradenton.

"We're investigating a number of ways to finance it," Jensen says, adding that construction loans, equity and bonds are all being considered. Private equity shop **Imperium Capital** and **Macquarie Capital** are interested in investing in biomass developments in the southeast, where solar and wind resources are light (*PFR*, 10/20).

The 60 MW Manatee project will be on a farm that grows special vegetation, called e-grass, for a continuous fueling, in addition to burning waste wood. It is scheduled to be online by the end of 2012. A 20-year offtake agreement with **Progress Energy** starts in January 2013. **FB Energy** is financing development with private funds from individual investors, Jensen says. He declined to name backers.

## Pattern Energy Acquires Farm It Developed

**Pattern Energy**, a spin-off of **Babcock & Brown**, has acquired a 283 MW operating wind farm, essentially buying it back from its former parent company.

Pattern was formed last year out of B&B with funding from **Riverstone Holdings** and equity from the Pattern managers to house development assets. This is the first operational wind farm it has purchased, in line with plans to become an integrated venture that will develop, own and operate assets. "We were uniquely placed to acquire it because we developed it and built it and knew it," **Mike Garland**, ceo of Pattern in San Francisco, says of why it acquired the Gulf Wind project.

The project has 118 turbines in **Kenedy County**, Texas. Pattern reportedly paid about \$540 million, a discount to the



development cost of \$640 million. **Marathon Capital** advised Babcock & Brown and Pattern did not use an advisor. **Ted Brandt**, ceo of Marathon in Bannockburn, Ill., declined comment.

Pattern plans to expand its wind portfolio by 300-400 MW per year through greenfield development over the next three-five years. It says it is open to other acquisitions. "The board is pretty supportive if we find the right opportunity," Garland says. Apart from its plans for wind, its development pipeline includes eight transmission projects, some solar projects and a few gas-fired projects. Garland says the company expects to begin development on two more wind projects this year, but does not have a timeframe for development for the other generation types.

## WestLB Director Exits

**Tim Page**, executive director, left WestLB the week of March 8. The power and energy group is under going some reorganization and several people have left over the last few weeks but WestLB does not expect to reduce the size of its team, bankers say.

Page reported to **Manish Taneja**, global head of syndication, and worked primarily in the energy sector as well as public-private partnerships. A spokeswoman confirmed his departure and declined to comment on the reorganization and whether there are other departures.

Details regarding Page's plans or contact information were not available. **Jonathan Cody**, managing director, left earlier this month (PFR, 3/8).

## Southern, Turner Scout Contracted Solar

The Southern Co. and **Ted Turner's** solar development partnership will scout contracted solar projects to fill out its project pipeline. Projects will need to have a low risk profile and not be on a merchant basis, says a Southern spokesman in Atlanta. The partnership will look at acquisitions and greenfield development. He declined to say whether the duo is eyeing other specific deals or provide the target pipeline size.

The duo bought a 30 MW shovel ready project in New Mexico from **First Solar**. Southern financed its portion on balance sheet, says the spokesman. He declined to give the purchase price. A Turner spokesman in Atlanta declined to comment. Whether either side used an advisor could not be learned.

First Solar will build and maintain the 30 MW photovoltaic Cimarron I project near Cimarron, N.M., near Turner's Vermejo Park Ranch. **Tri-State Generation and**

**Transmission Association**, which supplies 44 co-ops, has a 25-year offtake agreement with Cimarron I, which will be operational by year-end.

First Solar bought **DT Solar**, Turner's first venture in renewable power, for about \$34 million in Dec. 2007.

## Minn. Wind Co. Attracts Foreign JV Interest

**Wind Energy America** is in advanced talks with several companies about forming a joint venture to build a 250 MW project in Wyoming.

The company is being courted by two foreign developers and a European turbine manufacturer, says **Brian Hill**, chief development officer in Winnetka, Ill. They are coming up with the term sheets now to see how the ventures would be structured under the different partners, he says, adding there is no timeline for wrapping discussions. He declined to disclose the potential partners.

WEA has so far financed the development of **Weston Wind 1** on its own and is looking to bring in a partner with a large balance sheet that can provide equity, Hill says. "We're not one of the 800 pound gorillas in the industry—at least not yet—so sharing makes sense," he explains. The developer has applied for interconnection with **Black Hills Power** and is in early stage talks with utilities for offtake agreements, he says.

The Lane Eden Prairie, Minn.-based company is also developing three projects, a 100 MW project in the MISO queue as well as 50 MW and 20 MW projects, in Minnesota and is commissioning one in Iowa. WEA has is working on a few projects in other areas, it hasn't announced yet, Hill adds.

## Terra-Gen Pockets Alta Wind Financing

**Terra-Gen Power** wrapped a \$394 million financing package for its Alta Wind 1 project last Thursday. The financing consists of a seven-year construction and term loan, a bridge loan and a U.S. Department of Energy cash grant.

**Credit Agricole** and **Natixis** are co-bookrunners and structuring leads. Other lenders were **Union Bank**, **Prudential Investment Management**, **Rabobank** and **Banco Santander**. Funds from the deal will take out a \$140 million term financing the **ArcLight Capital Partners**-backed developer used to purchase 100 **General Electric** 1.5 MW turbines (PFR, 3/1). Officials at banks were unavailable or did not return calls and the terms of the deal could not be

mediately learned.

Alta Wind 1 is the initial phase of the 3 GW Alta Wind Energy Center that has a 1.5 GW offtake agreement with Southern California Edison. The first 150 MW in Tehachapi, Calif., is slated to be online in 2011.

## Ga. Law Firm Expands To Portland

Law firm Troutman Sanders will focus on utility reliability and renewable integration issues at its new energy-focused branch in Portland, Ore. The initial staff of three will work with existing utility and renewable development clients in addition to scouting new ones, says Clifford Sikora, partner and head of the energy group in Washington, D.C. He declined to name the clients.

The Atlanta, Ga.-based law firm chose Portland because of its proximity to clients and the Bonneville Power Administration, which is working on wind integration plans, Sikora says. Managing partner Lara Skidmore will head the office which opens next month.

## Infigen Rounds Up Final Bids

Final bids for Infigen Energy's 1.1 GW wind portfolio were due to auctioneers UBS and Marathon Capital last Thursday.

Bidders include infrastructure funds, strategics and private equity shops, a banker says. Neither the number nor names of prospective bidders could be learned. Calls to Infigen, Marathon and UBS officials were not returned.

UBS is offering a staple financing package. The amount or pricing could not be learned. The former Babcock & Brown portfolio of 18 operating farms in nine states went on the block in the fall (PFR, 9/15).

### Infigen Energy Assets

Project	Location	MWs	Offtake Agreement
Allegheny Ridge	Cambria & Blair Counties, Penn.	80	contracted
Aragonne	Guadalupe County, N.M.	90	contracted
Bear Creek	Bear Creek, Penn.	24	contracted
Blue Canyon	Lawton City, Okla.	74	contracted
Buena Vista	Altamont Pass region, Calif.	38	contracted
Caprock	Quay County, N.M.	80	contracted
Cedar Creek	Weld County, Colo.	300	contracted
Combine Hills	Umatilla County, Ore.	41	contracted
Crescent Ridge	Bureau County, Ill.	54	contracted
GSG	Lee & La Salle Counties, Ill.	80	merchant
Jersey-Atlantic	Atlantic City, N.J.	7.5	contracted
Kumeyaay	San Diego, Calif.	50	contracted
Mendota Hills	Compton, Ill.	52	contracted
Sweetwater 1	Nolan County, Texas	37	contracted
Sweetwater 2	Nolan County, Texas	91	contracted
Sweetwater 3	Nolan County, Texas	135	contracted
Sweetwater 4	Nolan County, Texas	240	contracted
Sweetwater 5	Nolan County, Texas	80	merchant

## Corporate Strategies

### NSTAR Refis, Pays Down Capex

NSTAR issued \$300 million worth of bonds to pre-fund the refinancing of an upcoming maturity and pay down costs associated with its capex. A \$125 million issuance, carrying a 7.8% coupon, matures in May.

It's unlikely the utility will head to the bond market again this year because there are no more significant maturities on the horizon, says John Moreira, director of investor relations in Boston, Mass. "It depends on what's happening, NSTAR is fortunate to have a very strong cash position, it's more than enough to meet a capex and dividend requirements," he notes, adding there are no significant maturities on the horizon.

The 30-year senior unsecured notes carried a 5.5% coupon. They priced 90 basis points over U.S. Treasuries. Moody's Investors Service rated the bond A1 and A+ by Standard & Poor's. Relationship banks, Citigroup and JPMorgan, acted as joint bookrunners. Calls to bank officials were not returned before press time.

### Entergy La. Takes Down Higher Coupon Debt

Entergy Louisiana sold \$150 million worth of bonds to refinance a 2032 maturity which had a higher coupon. The issuance was originally planned to be \$100 million but the Entergy sub increased it so it could completely buy back the older maturity with a 7.6% coupon, says Mike Burns, spokesman in New Orleans, La. "We elected to issue to lock in the interest savings we will obtain," he says. This week's 2032 notes carry a 6% coupon.

The utility might go back to the bond market this year to secure lower coupons for some remaining maturities, says Dimitri Nikas, analyst at Standard & Poor's in New York. He noted that it had good liquidity and cash at year end so bonds would just be in the interest of saving. Burns declined to comment.

The 30-year first mortgage bonds were sold into the retail market. Moody's Investors Service rated them A3 and S&P rated them A-. Relationship banks Morgan Stanley and Wells Fargo acted as joint bookrunners. Morgan Keegan was co-manager.

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## Project Finance Deal Book

*Deal Book is a matrix of energy project finance deals that PFR is tracking in the energy sector. The entries below are of new deals or deals where there has been change in their parameters or status. To report updates or provide additional information on the status of financings, please call Jeanine Prezioso at (212) 224-3226 or e-mail [jprezioso@iineews.com](mailto:jprezioso@iineews.com).*

### Live Deals: North America

Sponsor	Project	Location	Lead(s)	Loan	Amount	Tenor	Notes
BP, Ridgeline	Goshen II (130 MW Wind)	Bonneville County, Idaho	TBA	TBA	TBA	TBA	Talking to Fowler Ridge lenders (PFR, 3/8/10).
Caithness Energy, GE Energy	Shepherds Flat (909 MW Wind)	Oregon	BoTM, WestLB, Morgan Stanley, Credit Suisse, RBS, Citi	TBA	TBA	TBA	FIPP guarantee expected (PFR, 3/8/10).
Catalyst Renewables, Hannon Armstrong	50 MW Hudson Ranch I (geo)	Salton Sea, Calif.	WestLB, ING, Société Générale, Helaba		\$300M		Details are being worked out (see story, page 3).
Edison Mission Energy	Cedro Hills (350 MW wind)	Texas	TBA	TBA	TBA	TBA	Banco Espirito Santo and WestLB dropped out of deal (PFR, 3/9).
Terra-Gen Power	Alta (150 MW Phase Wind)	Tehachapi, Calif.	Calyon, Natixis	Turbine takeout	TBA	7-yr	Banks wrap financing (see story, page 4).

For a complete listing of the Project Finance Deal Book, please go to [iipower.com](http://iipower.com).

## News In Brief

*News In Brief is a summary of publicly reported power news stories. The information has been obtained from sources believed to be reliable, but PFR does not guarantee its completeness or accuracy.*

### Americas

- The U.S. Federal Energy Regulatory Commission conditionally approved some requests by the sponsors of **Tres Amigas** for further review. The transmission hub that would link three power grids in Clovis, N.M., is slated to be in operation in 2014 (*Bloomberg*, 3/18).
- Southern California Edison released a call for independent power producers to bid rooftop solar projects in the 1–2 MW into its Solar Photovoltaic Program. The utility plans to acquire 250 MW and arrange offtake agreements for an equal amount in the next five-six years (*Recharge News*, 3/18).
- Duke Energy operates under the assumption that a national carbon policy and worldwide treaty exist, says **Jim Rogers**, ceo. Despite working within expected regulations, he doubts that a policy will be passed this year (*Bloomberg*, 3/17).
- Ice Energy started the initial phase of a 53 MW energy storage project for **Glendale Water & Power**. Ice Energy is backed by several investors, including Energy Capital Partners, Goldman Sachs and Good Energies (*Cleantech Group*, 3/17).
- Two Entergy subsidiaries have asked the Louisiana Public Service Commission to allow them to continue work on a nuclear generator project. If proved feasible, Entergy Louisiana and Entergy Gulf States Louisiana estimate the plant could be online in 2024 (*BusinessWeek*, 3/17).
- Xcel Energy is experimenting with ways to store wind power, including using sodium-sulfur battery, compressed air-storage and wind-to-hydrogen technologies (*Finance & Commerce*, 3/16).

- First Solar has joined the initial development team of Desertec, the solar project planned for the Sahara Desert. Twelve companies have signed on for a piece of the project that is projected to cost EUR400 billion (\$549.9 billion) (*Reuters*, 3/16).
- Legislation in the U.S. Senate would allow rural co-ops to issue bonds to pre-finance residential renewable installments. The bonds would be paid back by on-bill financing (*Cleantechnica*, 3/15).

### Europe/Asia

- Poland is likely to increase the sale of its stake in **Tauron Polska Energia** from 20% to 25% in the initial public offering planned for June (*BusinessWeek*, 3/17).
- Morgan Stanley Infrastructure Fund has led an investment consortium, including Goldman Sachs and General Atlantic, in injecting \$425 million in to **Asian Genco**. The IPP, which has generation assets in India, plans to build a portfolio of 10 GW by 2012 (*Reuters*, 3/17).
- Scottish & Southern Energy submitted a bid with Canada's Borealis for EDF's U.K. distribution grid. Others bidders could include Cheung Kong Infrastructure Holdings and National Grid (*Bloomberg*, 3/17).
- Pelamis Wave Power will wrap the sale of a P-2 wave energy converter to an undisclosed large European utility today. Pelamis, a U.K.-based renewable developer, expects to sell a third unit, capable of about 10 MW, to Vattenfall later this year (*Dow Jones Newswires*, 3/15).

## Conference Calendar

- EUCI will host Renewable Biomass for Affordable Power Generation tomorrow and Wednesday at the Hyatt Regency in Minneapolis. To register, visit [www.euci.com](http://www.euci.com) or call 303.741.0849.
- **Insight Information** will host the 7<sup>th</sup> Annual B.C. Power Summit Wednesday and Thursday at the Wosk Centre for Dialogue in Vancouver. To register, visit [www.insightinfo.com](http://www.insightinfo.com) or call 1.888.777.1707.
- EUCI will host Renewable Energy Development on Federal Lands March 30-31 at the Pointe Hilton Tapitio Cliffs in Phoenix. To register, visit [www.euci.com](http://www.euci.com) or call 303.770.8800.
- Platts will host the Global Power Markets Conference April 11-13 at the Venetian Resort Hotel in Las Vegas. To register, visit [www.platts.com](http://www.platts.com) or call 212.904.4358.
- **Insight Information** will host the 4<sup>th</sup> Annual Cap-And-Trade Forum April 12-13 at the St. Andrew's Club and Conference Centre in Toronto. To register visit [www.insightinfo.com](http://www.insightinfo.com) or call 416.777.2020.
- **Wind Energy Update** will host the US Wind Turbine Supply Chain Conference April 12-13 at the Wyndham Hotel in Chicago. To register, visit [www.windenergyupdate.com](http://www.windenergyupdate.com) or call 011.44.207.375.7577.

## ECP SHOPS

(continued from page 1)

Calls to NextLight officials **Brian Kunz**, v.p. of development, and **Nikolas Novograd**, v.p. of finance, and officials at ECP in Short Hills, N.J., and CS were not returned. A timeframe for the sale could not be determined.

Large, independent power producers and other developers will likely be interested in NextLight given the PPAs in its project pipeline, bankers and analysts say. NextLight has eight projects in late stage development, with 620 MW contracted. The 150 MW Boulder City project in Boulder City, Nev., will break ground this year. Projects with offtakers include:

- 50 MW Silver State pv project near Primm, Nev., has a 25-year PPA with NV Energy
- 230 MW AV Solar Ranch 1 project in Antelope Valley in Los Angeles County, Calif., has a PPA with Pacific Gas & Electric
- 290 MW Agua Caliente solar project in southwestern Arizona, has a PPA with PG&E

The NextLight portfolio is likely to garner more interest than other developers on the block, says one banker. He notes that the projects are closer to being built and several have offtake agreements, unlike Axio Power, which is also on the block but doesn't have any contracted projects in its 600 MW pipeline.

—Holly Fletcher



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## APS CONSIDERS

(continued from page 1)

APS signed a 30-year PPA with Abengoa in 2008 to buy power from the 280 MW Solana project near Gila Bend, Ariz. The roughly \$1 billion project is in the market for about \$300 million in equity and needs to begin construction by year-end to qualify for the U.S. Department of Energy cash grant. Abengoa is also applying for a DOE loan guarantee to fund the project.

In this case Abengoa would sell the project to a group of tax equity investors, which would include APS, and which would lease the project back to Abengoa.

James Hatfield, senior v.p. and cfo at parent Pinnacle West Capital Corp., APS's parent, has said that the utility plans to beef up its solar generation and partner with developers to that end (PFR, 1/29). Hatfield and Asier Aya, cfo at Abengoa in Denver, did not return calls for comment. —J.P.

## LS SALE

(continued from page 1)

On the lending side CoBank, General Electric Energy Financial Services, Royal Bank of Scotland, Union Bank and WestLB are in a club backing a specific bidder. There's also a Barclays Capital-led lending trio and Goldman Sachs is working with an unknown set of partners, but it was unclear whether it was to finance the deal or as an advisor, bankers in New York say. Calyon and BNP Paribas are also in the mix, the bankers note. Credit Suisse, which is leading the auction for LS, is also offering a financing. "There are too many moving parts to keep track of," one banker quipped.

Pricing on the acquisition loan for the Arlington, Ariz., plant could be in a range of 325–350 basis points over LIBOR, and is likely to go out seven years, bankers say. A \$300 million package was being floated (PFR, 2/5).

Officials at Barclays, CoBank, CS, LS Power, Union and WestLB declined to comment. Calls to officials at potential bidders were not returned. Officials at Calyon, Goldman, GE EFS and RBS could not be reached. —H.F.

### Tell Us What You Think!

Do you have questions, comments or criticisms about a story that appeared in *PFR*? Should we be covering more or less of a given area? The staff of *PFR* is committed as ever to evolving with the markets and we welcome your feedback. Feel free to contact **Jeanine Prezioso**, managing editor, at 212-224-3226 or [jprezioso@iineews.com](mailto:jprezioso@iineews.com).

## Alternating Current

### Prison Break?

### Greening Of Alcatraz After The Fact



The U.S. National Park Service will be using American Recovery and Reinvestment Act funds toward the greening of an unlikely attraction: Alcatraz. While the prison was in operation no one is said to have ever escaped successfully from it. We're wondering if anyone's ever tried to carve a hole in photovoltaic solar panels.

The island 1.5 miles off the coast of San Francisco Bay, immortalized by Clint Eastwood's portrayal of a risky, brilliant escape scheme in *Escape From Alcatraz*, will now foster 1,360 solar panels, according to a press release by the NPS.

One million tourists can start imagining Alcatraz as a place that will promote the national clean energy agenda—not just the home of mobsters like Al Capone and James "Whitey" Bulger.

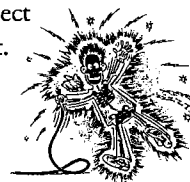
The 285 KW Alcatraz project will generate up to 60% of power demand and replace two diesel fired generators. The project is expected to save the tourist attraction in fuel costs in the long run. Eventually The Rock will be 100% power independent.

San Francisco's Golden Gate National Recreation Area is not releasing the estimated cost of the project in order to keep contractor bidding honest. Panels will be installed on the roofs of the main and laundry buildings and will largely be obscured by five-foot walls.



Alcatraz

Photo Credit: Kestrel.com



### Quote Of The Week

"We're not one of the 800 pound gorillas in the industry—at least not yet—so sharing makes sense." —**Brian Hill**, chief development officer of **Wind Energy America**, says of being in talks with potential joint venture partners, including a European turbine manufacturer and two foreign developers (see story, page 5).

### One Year Ago In Power Finance & Risk

SkyPower restarted the sale, run by Marathon Capital, of its wind project portfolio after the Ontario Ministry of Energy and Infrastructure announced its feed-in tariffs. [CPV Canada Development, a unit of Competitive Power Ventures, agreed to buy SkyPower's wind development spinoff Interwind (PFR, 1/22).]

		Year	Age group	Gender	Total	Males	Females	% Male	% Female	Risk ratio	P-value				
BCE-23	2010-WTE-2886-OE	DNE	3/31/2010	34.640781	101.732641	40	58	17.78	84	32	49.55	740	428	1168	WPSRL
BCE-24	2010-WTE-2885-OE	DNE	3/31/2010	34.648572	101.725156	40	58	49.87	84	32	26.33	740	428	1168	WPSRL
BCE-25	2010-WTE-2884-OE	DNE	3/31/2010	34.6077896	101.76046	40	58	18.79	84	31	52.03	735	428	1163	WPSRL
BCE-26	2010-WTE-2883-OE	DNE	3/31/2010	34.6155745	101.7530675	40	59	12.00	84	31	35.79	735	428	1163	WPSRL
BCE-27	2010-WTE-2975-OE	DNE	3/31/2010	34.623652	101.74525	40	58	47.93	84	31	37.36	735	428	1163	WP
BCE-28	2010-WTE-2882-OE	DNE	3/31/2010	34.639235	101.730284	40	58	41.86	84	31	24.37	735	428	1163	WPSRL
BCE-29	2010-WTE-2974-OE	DNE	3/31/2010	34.6151554	101.7495759	40	56	18.60	84	32	44.88	745	428	1173	WPSRL
BCE-3	2010-WTE-3035-OE	DNH	3/31/2010	34.622105	101.742893	40	55	19.95	84	33	28.69	755	428	1183	WP
BCE-30	2010-WTE-2881-OE	DNE	3/31/2010	34.6295691	101.7357107	40	56	57.56	84	33	30.28	745	428	1173	WPSRL
BCE-4	2010-WTE-2972-OE	DNE	3/31/2010	34.637688	101.727927	40	55	15.07	84	32	30.28	755	428	1183	WPSRL
BCE-5	2010-WTE-2880-OE	DNH	3/31/2010	34.6449092	101.7210004	40	55	8.85	84	32	13.30	755	428	1183	WPSRL
BCE-6	2010-WTE-2879-OE	DNE	3/31/2010	34.612767	101.748018	40	55	16.36	84	31	1.54	750	428	1178	WPSRL
BCE-7	2010-WTE-2878-OE	DNE	3/31/2010	34.6274967	101.7338033	40	55	23.07	84	31	17.12	745	428	1178	WPSRL
BCE-9	2010-WTE-2877-OE	DNE	3/31/2010	34.636142	101.725571	40	56	1.07	84	32	16.44	750	428	1178	WPSRL

116	149	2010-WTE-2908-OE	DNE	3/31/2010	34.643812	101.756623	40	59	41.61	84	33	57.76	735	428	1163	WPSRL
117	151	2010-WTE-2983-OE	DNE	3/31/2010	34.6553315	101.7495692	40	59	13.10	84	33	58.76	740	428	1168	WP
118	152	2010-WTE-2907-OE	DNE	3/31/2010	34.6103659	101.7849018	40	59	6.05	84	33	51.78	740	428	1168	WPSRL
119	153	2010-WTE-2906-OE	DNE	3/31/2010	34.62668	101.769227	41	0	35.74	84	34	1.94	730	428	1158	WPSRL
120	154	2010-WTE-2982-OE	DNE	3/31/2010	34.6344096	101.7617921	41	0	27.60	84	33	55.11	730	428	1158	WP
121	155	2010-WTE-2905-OE	DNE	3/31/2010	34.642266	101.754266	41	0	5.30	84	33	37.20	735	428	1163	WPSRL
122	156	2010-WTE-2904-OE	DNE	3/31/2010	34.6539422	101.7469874	40	59	56.19	84	33	29.66	735	428	1163	WP
123	157	2010-WTE-2903-OE	DNE	3/31/2010	34.6087308	101.7825989	41	0	50.82	84	33	21.32	730	428	1158	WPSRL
124	159	2010-WTE-2902-OE	DNE	3/31/2010	34.6249692	101.7670166	41	0	25.09	84	33	3.30	730	428	1158	WPSRL
125	161	2010-WTE-2981-OE	DNE	3/31/2010	34.64072	101.751908	41	0	8.61	84	32	52.90	730	428	1158	WP
126	162	2010-WTE-2901-OE	DNE	3/31/2010	34.6526612	101.7443864	40	59	57.40	84	32	45.57	730	428	1158	WPSRL
127	164	2010-WTE-2900-OE	DNE	3/31/2010	34.6359531	101.7373284	41	0	22.84	84	32	11.41	730	428	1158	WPSRL
128	165	2010-WTE-2899-OE	DNE	3/31/2010	34.6156194	101.7721478	41	0	36.58	84	31	47.92	730	428	1158	WPSRL
129	166	2010-WTE-2898-OE	DNE	3/31/2010	34.623589	101.764513	41	0	26.86	84	31	42.09	730	428	1158	WP
130	167	2010-WTE-2897-OE	DNE	3/31/2010	34.654758	101.734584	41	0	2.98	84	31	19.42	730	428	1158	WPSRL
131	BCE-1	2010-WTE-2896-OE	DNH	3/31/2010	34.614725	101.769636	40	55	14.47	84	33	6.31	750	428	1178	WPSRL
132	BCE-10	2010-WTE-2980-OE	DNE	3/31/2010	34.622043	101.762157	40	56	10.94	84	32	25.64	750	428	1178	WP
133	BCE-11	2010-WTE-2895-OE	DNE	3/31/2010	34.6309221	101.7536574	40	56	3.44	84	31	34.11	745	428	1173	WPSRL
134	BCE-12	2010-WTE-2979-OE	DNE	3/31/2010	34.653212	101.732227	40	56	12.09	84	31	43.15	750	428	1173	WP
135	BCE-13	2010-WTE-2894-OE	DNE	3/31/2010	34.612704	101.7672707	40	56	13.31	84	31	6.18	745	428	1173	WPSRL
136	BCE-14	2010-WTE-2893-OE	DNE	3/31/2010	34.6198145	101.7604139	40	56	39.27	84	31	30.26	745	428	1173	WPSRL
137	BCE-15	2010-WTE-2978-OE	DNE	3/31/2010	34.62829	101.752319	40	56	22.10	84	31	14.67	745	428	1173	WP
138	BCE-16	2010-WTE-2977-OE	DNE	3/31/2010	34.643874	101.737354	40	56	30.29	84	31	22.76	745	428	1173	WP
139	BCE-17	2010-WTE-2892-OE	DNE	3/31/2010	34.651665	101.72987	40	57	27.19	84	32	43.09	745	428	1173	WP
140	BCE-18	2010-WTE-2976-OE	DNE	3/31/2010	34.611158	1										

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866	110	2010-WTE-2999-OE	DNE	3/31/2010	34.66088	101.763286	40	57	51.83	84	35	43.74	745	428	1173	WPSRL
867	112	2010-WTE-2922-OE	DNE	3/31/2010	34.676685	101.7480842	40	57	23.79	84	36	16.83	750	428	1178	WPSRL
888	113	2010-WTE-2998-OE	DNE	3/31/2010	34.620364	101.798325	40	57	18.65	84	36	6.36	750	428	1178	WP
89	115	2010-WTE-2997-OE	DNE	3/31/2010	34.6278395	101.7906002	40	57	10.82	84	35	56.13	750	428	1178	WP
90	116	2010-WTE-2996-OE	DNE	3/31/2010	34.6355836	101.7821149	40	57	2.29	84	35	49.39	750	428	1178	WP
91	118	2010-WTE-2995-OE	DNH	3/31/2010	34.651541	101.76841	40	56	23.79	84	36	23.44	755	428	1183	WP
92	119	2010-WTE-2921-OE	DNH	3/31/2010	34.659334	101.760928	40	56	13.30	84	36	15.84	755	428	1183	WPSRL
93	120	2010-WTE-2994-OE	DNH	3/31/2010	34.667127	101.753445	40	56	34.26	84	35	55.78	750	428	1178	WP
94	121	2010-WTE-2920-OE	DNH	3/31/2010	34.618819	101.795968	40	56	26.42	84	35	49.66	750	428	1178	WPSRL
95	122	2010-WTE-2919-OE	DNH	3/31/2010	34.6258406	101.78862	40	56	27.15	84	35	8.55	750	428	1178	WPSRL
96	123	2010-WTE-2993-OE	DNE	3/31/2010	34.6436466	101.774196	40	58	21.32	84	35	16.82	745	428	1173	WPSRL
97	124	2010-WTE-2992-OE	DNE	3/31/2010	34.649995	101.766053	40	58	11.42	84	35	11.47	745	428	1173	WP
98	126	2010-WTE-2991-OE	DNE	3/31/2010	34.665581	101.751087	40	57	32.16	84	35	11.03	745	428	1173	WP
99	127	2010-WTE-2918-OE	DNE	3/31/2010	34.673373	101.743602	40	57	21.77	84	35	5.89	750	428	1178	WPSRL
100	128	2010-WTE-2917-OE	DNE	3/31/2010	34.6242136	101.7861694	40	58	55.31	84	34	31.08	740	428	1168	WPSRL
101	131	2010-WTE-2990-OE	DNE	3/31/2010	34.640656	101.771176	40	58	24.43	84	34	46.61	745	428	1173	WP
102	132	2010-WTE-2916-OE	DNE	3/31/2010	34.64845	101.763695	40	58	11.66	84	34	40.71	745	428	1173	WPSRL
103	135	2010-WTE-2989-OE	DNE	3/31/2010	34.664035	101.748729	40	58	47.87	84	34	10.55	740	428	1168	WP
104	137	2010-WTE-2915-OE	DNE	3/31/2010	34.6153234	101.7916601	40	57	52.97	84	34	11.71	745	428	1173	WPSRL
105	138	2010-WTE-2988-OE	DNE	3/31/2010	34.6226517	101.7837161	40	57	44.32	84	34	6.95	745	428	1173	WP
106	139	2010-WTE-2914-OE	DNE	3/31/2010	34.639111	101.768819	40	56	32.85	84	34	2.64	745	428	1173	WPSRL
107	140	2010-WTE-2987-OE	DNH	3/31/2010	34.6574041	101.7554061	40	56	22.79	84	33	54.53	750	428	1178	WP
108	141	2010-WTE-2913-OE	DNH	3/31/2010	34.662489	101.746371	40	56	13.05	84	33	45.66	750	428	1178	WPSRL
109	142	2010-WTE-2912-OE	DNE	3/31/2010	34.6136135	101.7894474	41	0	22.44	84	35	40.03	735	428	1163	WPSRL
110	143	2010-WTE-2911-OE	DNE	3/31/2010	34.6212002	101.7812933	41	0	35.20	84	35	14.33	735	428	1163	WPSRL
111	144	2010-WTE-2986-OE	DNE	3/31/2010	34.637565	101.766461	41	0	24.00	84	35	8.15	735	428	1163	WP
112	145	2010-WTE-2910-OE	DNE	3/31/2010	34.6552745	101.7535511	40	59	55.98	84	35	7.18	735	428	1163	WPSRL
113	146	2010-WTE-2909-OE	DNE	3/31/2010	34.6119917	101.7871418	41	0	30.85	84	34	37.89	730	428	1158	WPSRL
114	147	2010-WTE-2985-OE	DNE	3/31/2010	34.628226	101.771584	41	0	23.41	84	34	32.42	735	428	1163	WP
115	148	2010-WTE-2984-OE	DNE	3/31/2010	34.636019	101.764104	40	59	51.72	84	34	4.97	735	428	1163	WP



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567	67	2010-WTE-2940-OE	DNE	3/31/2010	34.6446013	101.7974067	41	0	24.43	84	39	51.17	745	428	1173	WPSRL
57	68	2010-WTE-2939-OE	DNE	3/31/2010	34.660814	101.782558	41	0	34.23	84	39	23.14	745	428	1173	WPSRL
58	69	2010-WTE-2938-OE	DNE	3/31/2010	34.6285047	101.8096931	41	0	26.42	84	39	17.54	745	428	1173	WP
59	70	2010-WTE-2937-OE	DNE	3/31/2010	34.636089	101.8029393	41	0	1.40	84	39	8.29	750	428	1178	WPSRL
60	71	2010-WTE-2936-OE	DNE	3/31/2010	34.6448908	101.7926058	41	0	8.23	84	38	38.88	745	428	1173	WPSRL
61	72	2010-WTE-3011-OE	DNE	3/31/2010	34.659268	101.7802	40	59	54.90	84	38	29.74	745	428	1173	WP
62	73	2010-WTE-2935-OE	DNE	3/31/2010	34.667062	101.772718	41	0	33.89	84	38	15.16	745	428	1173	WPSRL
63	74	2010-WTE-2934-OE	DNE	3/31/2010	34.6774122	101.7644355	41	0	26.93	84	38	1.36	740	428	1168	WP
64	76	2010-WTE-2933-OE	DNE	3/31/2010	34.6270789	101.8072281	41	0	4.64	84	38	1.17	745	428	1173	WPSRL
65	77	2010-WTE-2932-OE	DNE	3/31/2010	34.634339	101.800279	40	59	38.62	84	38	15.29	750	428	1178	WPSRL
66	79	2010-WTE-2931-OE	DNE	3/31/2010	34.6427807	101.7907581	40	58	49.81	84	38	13.93	750	428	1178	WPSRL
67	81	2010-WTE-3010-OE	DNE	3/31/2010	34.665517	101.77036	40	59	1.91	84	37	34.05	745	428	1173	WPSRL
68	84	2010-WTE-3009-OE	DNE	3/31/2010	34.67331	101.762877	40	58	36.86	84	37	28.62	750	428	1178	WPSRL
69	85	2010-WTE-2930-OE	DNE	3/31/2010	34.681103	101.755392	40	59	13.62	84	37	3.96	745	428	1173	WPSRL
70	86	2010-WTE-3008-OE	DNE	3/31/2010	34.624999	101.805398	40	59	4.74	84	37	0.04	745	428	1173	WP
71	87	2010-WTE-2929-OE	DNE	3/31/2010	34.6330412	101.7977186	41	0	56.63	84	37	6.86	740	428	1168	WPSRL
72	88	2010-WTE-3007-OE	DNE	3/31/2010	34.6407106	101.7888533	41	0	47.18	84	37	1.30	740	428	1168	WP
73	89	2010-WTE-3006-OE	DNE	3/31/2010	34.663971	101.768002	41	0	37.42	84	36	55.48	740	428	1168	WP
74	90	2010-WTE-2928-OE	DNE	3/31/2010	34.671764	101.760519	41	0	28.71	84	36	49.11	740	428	1168	WPSRL
75	92	2010-WTE-2927-OE	DNE	3/31/2010	34.679557	101.753034	41	0	47.40	84	36	26.88	740	428	1168	WPSRL
76	93	2010-WTE-2926-OE	DNE	3/31/2010	34.6238896	101.8026165	40	59	42.32	84	36	15.72	740	428	1168	WPSRL
77	94	2010-WTE-3005-OE	DNE	3/31/2010	34.638656	101.7869246	40	59	37.20	84	35	59.02	740	428	1168	WP
78	96	2010-WTE-3004-OE	DNE	3/31/2010	34.654632	101.773126	40	59	32.14	84	35	40.64	740	428	1168	WPSRL
79	99	2010-WTE-2925-OE	DNE	3/31/2010	34.662426	101.765644	40	59	1.83	84	36	7.94	740	428	1168	WPSRL
80	100	2010-WTE-2924-OE	DNE	3/31/2010	34.678011	101.750676	40	58	41.95	84	36	28.48	745	428	1173	WPSRL
81	101	2010-WTE-3003-OE	DNE	3/31/2010	34.621909	101.800693	40	58	51.43	84	36	0.93	740	428	1168	WP
82	103	2010-WTE-3002-OE	DNE	3/31/2010	34.6298172	101.792568	40	58	42.05	84	35	45.46	745	428	1173	WPSRL
83	106	2010-WTE-2923-OE	DNE	3/31/2010	34.636828	101.7847853	40	58	16.27	84	36	13.99	745	428	1173	WPSRL
84	107	2010-WTE-3001-OE	DNE	3/31/2010	34.6448907	101.7780539	40	57	49.52	84	36	27.76	750	428	1178	WPSRL
85	109	2010-WTE-3000-OE	DNE	3/31/2010	34.653087	101.770768	40	57	58.28	84	35	53.27	745	428	1173	WP

	Date	Category	Value	Unit	Location	Status	Type	Code	Notes	Remarks				
26	2010-WTE-3028-OE	DNE	34.698105	101.78134	40	57	17.96	84	39	44.18	765	428	1193	WP
27	2010-WTE-3027-OE	DNE	34.673175	101.801427	40	57	8.08	84	39	33.60	760	428	1188	WP
28	2010-WTE-3026-OE	DNE	34.688765	101.786464	40	56	59.39	84	39	24.11	765	428	1193	WPSRL
29	2010-WTE-2953-OE	DNE	34.696559	101.77898	40	56	37.67	84	39	42.20	765	428	1193	WPSRL
30	2010-WTE-3025-OE	DNH	34.671163	101.799068	40	56	3.74	84	39	48.83	765	428	1193	WP
31	2010-WTE-3024-OE	DNH	34.6799452	101.792379	40	55	54.66	84	39	45.12	765	428	1193	WPSRL
32	2010-WTE-3023-OE	DNH	34.687125	101.784105	40	56	8.80	84	39	19.32	765	428	1193	WPSRL
33	2010-WTE-2952-OE	DNH	34.6625913	101.804602	40	55	32.33	84	39	20.95	765	428	1193	WPSRL
34	2010-WTE-3022-OE	DNH	34.670085	101.796709	40	55	23.22	84	39	18.12	765	428	1193	WP
35	2010-WTE-2951-OE	DNH	34.685674	101.781746	40	55	13.88	84	39	15.25	765	428	1193	WPSRL
36	2010-WTE-2950-OE	DNH	34.6534697	101.8095649	40	54	47.61	84	39	38.12	765	428	1193	WPSRL
37	2010-WTE-2949-OE	DNH	34.6610531	101.8022151	40	54	41.92	84	39	25.88	765	428	1193	WPSRL
38	2010-WTE-3021-OE	DNH	34.684129	101.779387	40	55	31.34	84	38	33.27	760	428	1188	WP
39	2010-WTE-2948-OE	DNH	34.691923	101.771903	40	55	20.97	84	38	24.07	760	428	1188	WPSRL
40	2010-WTE-2947-OE	DNE	34.6354617	101.8148185	40	57	57.37	84	38	46.93	755	428	1183	WPSRL
41	2010-WTE-3020-OE	DNE	34.651404	101.80695	40	57	55.39	84	38	10.70	750	428	1178	WPSRL
42	2010-WTE-3019-OE	DNE	34.6594638	101.799833	40	57	45.36	84	38	2.34	755	428	1183	WP
43	2010-WTE-3018-OE	DNE	34.666995	101.791992	40	57	30.80	84	38	46.89	755	428	1183	WPSRL
44	2010-WTE-3017-OE	DNE	34.690377	101.769544	40	57	23.89	84	38	24.04	755	428	1183	WP
45	2010-WTE-3016-OE	DNE	34.6335323	101.8127706	40	57	0.10	84	38	46.52	760	428	1188	WP
46	2010-WTE-2946-OE	DNE	34.649859	101.804592	40	56	51.73	84	38	29.79	760	428	1188	WPSRL
47	2010-WTE-2945-OE	DNH	34.6580093	101.7972131	40	56	25.34	84	38	46.49	760	428	1188	WPSRL
48	2010-WTE-3015-OE	DNH	34.66545	101.789633	40	56	7.59	84	38	10.05	760	428	1188	WP
49	2010-WTE-2944-OE	DNH	34.688832	101.767185	40	55	59.26	84	38	5.51	760	428	1188	WPSRL
50	2010-WTE-2943-OE	DNE	34.6486333	101.8019129	40	57	16.70	84	37	24.79	750	428	1178	WPSRL
51	2010-WTE-3014-OE	DNE	34.6640156	101.8071196	40	57	7.17	84	37	21.41	750	428	1178	WP
52	2010-WTE-3013-OE	DNE	34.663904	101.787275	40	56	58.40	84	38	16.64	755	428	1183	WPSRL
53	2010-WTE-3012-OE	DNH	34.687286	101.764826	40	55	57.17	84	38	38.72	760	428	1	

Blue Creek Wind Project  
Nearest City: Scott, OH  
Datum: NAD 83

4/15/2010 12:12 PM


## Warnock, Matthew

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**From:** Litchfield, Dan [dlitchfield@iberdrolausa.com]  
**Sent:** Thursday, April 15, 2010 10:30 AM  
**To:** Bloomfield, Sally; Warnock, Matthew  
**Subject:** FW: 09-1066-EL-BGN Data Requests



Dan Litchfield  
Business Developer  
110 N Brockway Street, Suite 340, Palatine, IL 60067  
Mobile: 773-318-1289 Office: 847-241-1364 Fax: 847-241-1367

 In the interests of the environment, please print only if necessary and recycle. And beware of our two extra paragraphs in English and Spanish.

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**From:** Litchfield, Dan  
**Sent:** Monday, April 12, 2010 10:46 AM  
**To:** 'O'Dell, James'  
**Cc:** DeCaro, Dave  
**Subject:** RE: 09-1066-EL-BGN Data Requests

Jim –

Here are answers:

We are seeking the cash grant option for the Blue Creek Wind Farm. To meet that requirement, we need to begin construction by the end of 2010 or document that at least 5% of the project's construction cost has been incurred.

We currently have no specific proposal in front of the local authorities. Earlier discussions had centered around an approximately 95% tax abatement, but that rate has proven too aggressive and is off the table. Just last week, Union Township adopted a resolution to join the Van Wert County Enterprise Zone. Now an Enterprise Zone is in place for the entire project area in both Van Wert and Paulding Counties. When the State of Ohio's Department of Development formally acknowledges that Union Township has joined the Enterprise Zone, we plan to file a formal Enterprise Zone Abatement Application and begin the negotiations. However, the exact schedule is dependent on a variety of factors including the farmers' schedule for planting.

Tying the two questions together, pending receipt of a certificate from the OPSB and a significant but reasonable reduction in taxes (either through state legislation or a local abatement), we intend to begin construction early this fall and as soon as possible.



Dan Litchfield  
Business Developer  
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Mobile: 773-318-1289 Office: 847-241-1364 Fax: 847-241-1367

4/15/2010



**From:** O'Dell, James <James.ODell@puc.state.oh.us>  
**To:** DeCaro, Dave  
**Sent:** Mon Apr 12 15:43:55 2010  
**Subject:** 09-1066-EL-BGN Data Requests

Dave,

Here's two more data requests.

The applicant intends to take advantage of the investment tax credit provided by the Stimulus Bill and claims any delay that would push construction beyond 2010 would jeopardize the facility's eligibility for the credit (p. 3-12 and 6-6). Staff's understanding, however, is the investment tax credit is available until 2012. Does the applicant plan to take advantage of the investment tax credit (Section 45 credit) or the cash grant option provided by the Stimulus Bill (i.e., Section 1603 grant), which does expire in 2010?

On page 2-9 of the application, the Applicant claims "Discussions concerning enterprise zone property tax abatement are ongoing between the Applicant and Van Wert and Paulding Counties" and the Applicant's "proposal to both Van Wert and Paulding Counties would provide approximately \$8 million in combined new tax revenues over a period of 15 years." Elsewhere, however, the Applicant claims the proposal "would provide a combined \$10 million in new tax revenues over a period of 15 years (p. 8-63)." What is the estimated impact of the Applicant's proposal on tax revenues over a period of 15 years?

Jim

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4/15/2010

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**11/23/2010 3:45:46 PM**

**in**

**Case No(s). 09-1066-EL-BGN**

Summary: Correspondence submitting Responses to Staff Data Requests - Part 1  
electronically filed by Teresa Orahod on behalf of Heartland Wind Energy LLC