

BEFORE

THE OHIO POWER SITING BOARD

In the Matter of the Application of )  
Hog Creek Wind Farm, LLC for an )  
Amendment to its Certificate of )  
Environmental Compatibility and ) Case No. 11-757-EL-BGA  
Public Need for the Wind-Powered )  
Electric Generation Facility in Hardin )  
County, Ohio. )

ORDER ON CERTIFICATE AMENDMENT

The Ohio Power Siting Board (Board), coming now to consider the above-entitled matter and having determined that a public hearing is not necessary, having reviewed the amendment application and being otherwise fully advised, hereby issues its order on certificate amendment in accordance with Chapter 4906, Revised Code.

OPINION:

A. History of the Proceeding:

On March 22, 2010, the Board issued an opinion, order, and certificate, granting the application of JW Great Lakes Wind, LLC (JWGL) for a certificate to construct, operate, and maintain a wind-powered electric generation facility in Hardin County, Ohio, in Case No. 09-277-EL-BGN (09-277). The Board granted JWGL's application pursuant to a joint stipulation and recommendation filed by JWGL, the Ohio Farm Bureau Federation (OFBF), and the Board's Staff (Staff), which included a number of specific conditions. In 09-277, the Board approved the construction of the facility implementing any one of three turbine models: Vestas V90 (1.8 megawatts (MW)), Siemens SWT-2.3-101 (2.3 MW), and Kenersys K100 (2.5 MW). The approved project layout consisted of 27 turbine locations with an aggregate generating capacity of 47.5 MW to 48.6 MW, depending on the turbine model selected.

By entry issued July 15, 2010, in 09-277, the Board granted a joint application filed by JWGL and Hog Creek Wind Farm, LLC (Hog Creek), approving the transfer of the certificate from JWGL to Hog Creek.

On February 11, 2011, as supplemented on March 24, 2011, and April 26, 2011, Hog Creek filed an application in this proceeding to amend the certificate issued in 09-277. In the amendment application, Hog Creek seeks approval of two additional

turbine models: GE 1.6-100 (1.6 MW) and Vestas V100 (1.8 MW). Hog Creek also proposes a new project layout that consists of 26 Vestas V100 turbines with a total nameplate capacity of 46.8 MW, or 31 GE 1.6-100 turbines with a total nameplate capacity of 49.6 MW. Additionally, Hog Creek proposes to revise the project boundary in the north central area by approximately 1,000 feet to the north in order to include the access road to Turbine No. 25 within the boundary. Hog Creek notes that this revision to the project boundary would include two parcels, which are currently leased under its wind energy land lease and easement agreement.

On April 29, 2011, Hog Creek filed proof of service with the Board, indicating that copies of the amendment application had been served upon local government officials and OFBF, in accordance with Section 4906.06, Revised Code, and Rule 4906-5-10(B), Ohio Administrative Code (O.A.C.). On May 19, 2011, Staff filed a report evaluating the amendment application. Public notice of the proposed amendment was published in *The Ada Herald* and *The Kenton Times*, and Hog Creek filed proof of publication with the Board on May 24, 2011, and May 31, 2011.

The Board received a letter dated June 30, 2011, from the Hardin County Chamber & Business Alliance in support of Hog Creek's application to amend the certificate. Additionally, on July 5, 2011, OFBF filed a letter stating that it does not object to Hog Creek's application. The Board received no other comments regarding the proposed amendment.

B. Applicable Law:

Hog Creek is a corporation and a person under Section 4906.01(A), Revised Code, and is certificated to construct, operate, and maintain an economically significant wind farm under Sections 4906.13(A) and 4906.20, Revised Code, in accordance with the Board's order in 09-277.

Pursuant to Section 4906.20, Revised Code, the Board's authority applies to economically significant wind farms and provides that such entities must be certified by the Board prior to commencing construction of a facility. In accordance with Chapter 4906, Revised Code, the Board promulgated rules, which are set forth in Chapter 4906-17, O.A.C., prescribing regulations regarding wind-powered electric generation facilities and associated facilities.

Section 4906.07, Revised Code, requires that, when considering an application for amendment of a certificate, the Board shall hold a hearing "if the proposed change in the facility would result in any material increase in any environmental impact of the facility or a substantial change in the location of all or a portion of such facility...." An applicant is required to provide notice of its application for amendment in accordance with Section 4906.06(B) and (C), Revised Code, and Rule 4906-5-10(B), O.A.C.

C. Staff Investigation of Proposed Amendment:

In its report filed on May 19, 2011, Staff represents that Hog Creek provided information, in its original application in 09-277, on the Vestas V90, Siemens SWT 2.3-101, and Kenersys K100 turbine models, with a project layout consisting of 27 turbine locations with an aggregate generating capacity of 47.5 MW to 48.6 MW, depending on the turbine model ultimately chosen for the project.

In its amendment application filed in this case, Hog Creek proposes alternative layouts using new technologies, the GE 1.6-100 and Vestas V100 turbine models, with a new project layout consisting of up to 31 turbine locations with a total nameplate capacity of 49.6 MW. Staff explains that the ability to select from these turbine models will allow Hog Creek flexibility in project design, thereby ensuring optimal energy production and project success. Staff notes that, although interconnection studies are currently based on the Siemens SWT 2.3-101 turbine model, PJM Interconnection, LLC (PJM) has indicated that changing the turbine model should not pose a problem for the electric grid, as the total nameplate capacity of the project will not exceed the current nameplate capacity in PJM's Facilities Study.

Staff reports that Hog Creek evaluated the GE 1.6-100 turbine layout because it would have the greater impact on the project area. According to Staff, Hog Creek determined that all turbine locations in the amendment would be located at least 1,000 feet from the nearest habitable residence and 541 feet from the nearest nonparticipating property boundary, which are in compliance with minimum setback requirements. Additionally, Staff notes that Hog Creek has revised the north central area of the project boundary in order to include the access road to Turbine No. 25, which shifts the boundary approximately 1,000 feet to the north and includes parcels that are currently leased pursuant to Hog Creek's wind energy land lease and easement agreement.

Further, Staff reports that Hog Creek provided both cumulative and noncumulative shadow flicker model results for Staff's review. The cumulative results are for the total proposed project area in Hardin County, as proposed in this case and Hog Creek's pending case regarding the next phase of the project, Case No. 10-654-EL-BGN (Hog Creek II). Staff notes that Hog Creek's models were completed in both worst case (glass house, no obstructions, etc.) and realistic (with obstructions) modes. The cumulative, worst case analysis and cumulative, realistic analysis modeled 27 and 12 nonparticipating receptors, respectively, to receive shadow flicker in excess of 30 hours per year. When the cumulative impact of Hog Creek II was excluded from the analysis, 20 receptors were identified to exceed 30 hours per year in worst case mode. With existing screening and obstructions included, only eight receptors were shown to exceed 30 hours per year. Staff notes that Hog Creek is subject to the

mitigation requirements of the certificate's original conditions with regard to any shadow flicker in excess of 30 hours per year, as measured at a nonparticipating receptor.

Additionally, Staff notes that all turbine locations at the new hub height have been submitted for review by the Federal Aviation Administration and have received determinations of no hazard to aviation. Staff also states that Hog Creek found no new impacts on microwave paths; radio, television, or cellular phone reception; and military radar systems. Staff reports that final turbine foundation designs were submitted for the turbine hub height proposed in the amendment, noting that Hog Creek is considering two typical designs for wind turbine foundation systems, the spread footer foundation and a rock-anchored, pile-supported foundation.

Finally, Staff reports that Hog Creek performed an initial archaeological literature review in 2009, architectural and history studies in the spring of 2010, and a Phase I archaeological field study in the summer of 2010. According to Staff, these studies and the subsequent findings and recommendations encompassed the location of infrastructure for the original project layouts and will need to be updated to reflect any shifts in turbine location, underground cable work, access roads, and view-shed, as needed for this amendment.

In its report, Staff recommends that Hog Creek be directed to adhere to all conditions of the certificate issued in 09-277. Additionally, Staff recommends that Hog Creek update, prior to construction, the Phase I archaeological survey of June 1, 2010, to reflect changes in the project as described in Hog Creek's amendment, as acceptable to Staff. If the resulting additional survey work discloses a find of cultural or archaeological significance, or a site that could be eligible for inclusion on the National Register of Historic Places, Staff recommends that Hog Creek submit a modification or mitigation plan for Staff's acceptance. Further, Staff recommends that any such mitigation effort be developed in coordination with the Ohio Historic Preservation Office, with input from the Hardin County Historical Society, and submitted to Staff for review and acceptance.

Finally, Staff recommends that the photo simulations included in the original application in 09-277 be updated to include pertinent views that might change due to the proposed amended turbine layout, and that Hog Creek's architectural survey be revised, as needed, to reflect additional information related to the amended plan. Staff recommends that these revisions be submitted to Staff for review prior to construction.

Subject to these recommended conditions, Staff recommends that the Board find that the proposed amendment to the certificate poses minimal social and environmental impact.

D. Decision:

Upon review of the record, the Board finds, pursuant to Section 4906.07, Revised Code, that the proposed amendment to the certificate issued in 09-277 does not result in any material increase in any social or environmental impact, or a substantial change in the location of the certificated facility. Although Hog Creek proposes to revise the north central area of the project boundary in order to include the access road to Turbine No. 25 within the boundary, this minor revision only shifts the boundary by approximately 1,000 feet to the north, and impacts only two parcels that are already leased pursuant to Hog Creek's wind energy land lease and easement agreement. Therefore, the Board finds that a hearing is not necessary under the circumstances presented by this case. Additionally, the Board concludes that, pursuant to Chapter 4906, Revised Code, Hog Creek's amendment application should be approved. Hog Creek's certificate issued in 09-277 should be amended to add the GE 1.6-100 (1.6 MW) and Vestas V100 (1.8 MW) turbines as turbine models suitable for the project, with a new project layout consisting of up to 31 turbine locations with a total nameplate capacity of 49.6 MW. Further, Hog Creek's certificate should be amended to reflect the relocation of the project boundary in the north central area by approximately 1,000 feet to the north in order to include the access road to Turbine No. 25. Finally, the certificate conditions adopted in 09-277 are hereby amended to incorporate the recommendations set forth in the report filed by Staff on May 19, 2011, in this proceeding.

FINDINGS OF FACT AND CONCLUSIONS OF LAW:

- (1) Hog Creek is a corporation and a person under Section 4906.01(A), Revised Code.
- (2) Hog Creek's wind-powered electric generation facility is an economically significant wind farm under Section 4906.13(A), Revised Code.
- (3) On February 11, 2011, as supplemented on March 24, 2011, and April 26, 2011, Hog Creek filed an application in this proceeding to amend the certificate issued in 09-277, in accordance with Rule 4906-5-10, O.A.C.
- (4) The proposed amendment would add the Vestas V100 and GE 1.6-100 turbines as suitable turbine models, resulting in a new project layout consisting of up to 31 turbine locations with a total nameplate capacity of 49.6 MW, and shift the project boundary in the north central area by

approximately 1,000 feet to the north in order to include the access road to Turbine No. 25.

- (5) In accordance with Section 4906.06, Revised Code, and Rule 4906-5-10(B), O.A.C., Hog Creek served copies of the amendment application upon local government officials and OFBF and filed its proof of service on April 29, 2011. Public notice of the proposed amendment was also published in Hardin County, Ohio. On May 24, 2011, and May 31, 2011, Hog Creek filed its proof of publication.
- (6) On May 19, 2011, Staff filed a report evaluating the amendment application.
- (7) The Board received a letter dated June 30, 2011, from the Hardin County Chamber & Business Alliance in support of Hog Creek's amendment application. On July 5, 2011, OFBF filed a letter stating that it does not object to Hog Creek's application. The Board received no other comments regarding the proposed amendment.
- (8) The proposed changes to the certificated facility do not result in any material increase in any social or environmental impact, or a substantial change in the location of the facility; therefore, in accordance with Section 4906.07, Revised Code, a hearing is not necessary.
- (9) Based on the record, in accordance with Chapter 4906, Revised Code, the certificate of environmental compatibility and public need for Hog Creek's wind-powered electric generation facility issued in 09-277 should be amended to permit use of the GE 1.6-100 and Vestas V100 turbine models, with a new project layout consisting of up to 31 turbine locations with a total nameplate capacity of 49.6 MW, and to permit relocation of the project boundary in the north central area by approximately 1,000 feet to the north, as described in this order and subject to the conditions set forth in 09-277, as amended in this order.

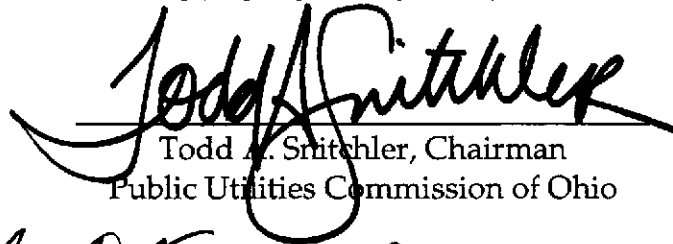
ORDER:

It is, therefore,

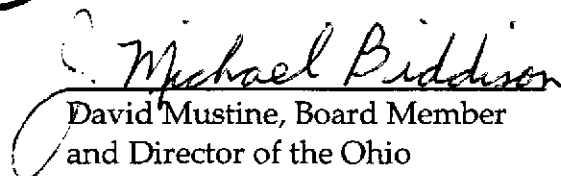
ORDERED, That the application filed by Hog Creek to amend the certificate issued in 09-277 be granted, as described in this order and subject to the conditions set forth in 09-277 and this order. It is, further,

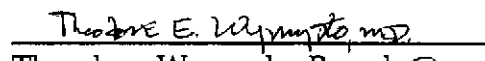
ORDERED, That a copy of this order on certificate amendment be served upon all interested persons of record.

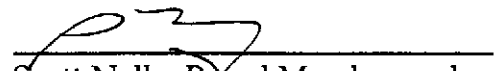
## THE OHIO POWER SITING BOARD

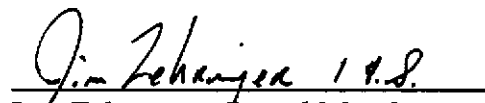
  
Todd A. Smithler, Chairman  
Public Utilities Commission of Ohio

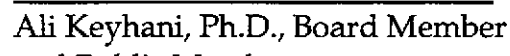
  
James Leftwich, Board Member  
and Director of the Ohio  
Department of Development

  
David Mustine, Board Member  
and Director of the Ohio  
Department of Natural Resources

  
Theodore Wymyslo, Board  
Member and Director of the  
Ohio Department of Health

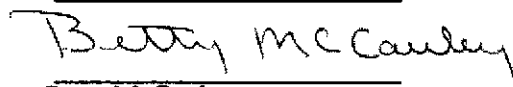
  
Scott Nally, Board Member and  
and Director of the Ohio  
Environmental Protection Agency

  
Jim Zehringer, Board Member  
and Director of the Ohio  
Department of Agriculture

  
Ali Keyhani, Ph.D., Board Member  
and Public Member

SJP/sc

Entered in the Journal **JUL 25 2011**

  
Betty McCauley  
Secretary