

BEFORE

THE OHIO POWER SITING BOARD

In the Matter of the Application of 6011)
Greenwich Windpark, LLC for a)
Certificate to Construct a Wind-Powered) Case No. 13-990-EL-BGN
Electric Generation Facility in Huron)
County, Ohio.)

OPINION, ORDER, AND CERTIFICATE

The Ohio Power Siting Board (Board), coming now to consider the above-entitled matter, having appointed its administrative law judge (ALJ) to conduct the hearings, having reviewed the evidence presented in this matter, including the Joint Stipulation and Recommendation of the parties, and being otherwise fully advised, issues its Opinion, Order, and Certificate in this case, as required by R.C. Chapter 4906.

APPEARANCES:

Bricker & Eckler, LLP, by Sally W. Bloomfield and Dylan Borchers, 100 South Third Street, Columbus, Ohio 43215, on behalf of 6011 Greenwich Windpark, LLC.

Mike DeWine, Ohio Attorney General, by John Jones and Ryan O'Rourke, Assistant Attorneys General, Public Utilities Section, 180 East Broad Street, 6th Floor, Columbus, Ohio 43215, on behalf of the Board's Staff.

Chad A. Endsley, Chief Legal Counsel, 280 North High Street, 6th Floor, Columbus, Ohio 43215, on behalf of the Ohio Farm Bureau Federation.

OPINION:

I. SUMMARY OF THE PROCEEDINGS

All proceedings before the Board are conducted according to the provisions of R.C. Chapter 4906 and Ohio Adm.Code Chapter 4906.

On April 19, 2013, 6011 Greenwich Windpark, LLC (Greenwich or Applicant) filed with the Board, a preapplication notice and a motion for waivers of four provisions in Ohio Adm.Code 4906-17-04 and 4906-17-05. More specifically, Applicant requested waiver from the requirement to: perform an extensive site selection study as required by Ohio Adm.Code 4906-17-04(A); provide a map showing, among other things, vegetative cover that may be removed during construction, pursuant to Ohio Adm.Code 4906-17-05(A)(3)(g); provide maps and corresponding cross-sectional views showing geological

features of the proposed project area and the location of test borings, pursuant to Ohio Adm.Code 4906-17-05(A)(4); and describe the layout and construction of the proposed site and a description of proposed major structures showing the grade elevation which would be modified during construction, pursuant to Ohio Adm.Code 4906-17-05(B)(2)(h). On June 13, 2013, Staff filed a letter stating that Staff did not object to Applicant's request for waivers. By Entry issued June 17, 2013, Greenwich's request for waivers was granted.

On May 28, 2013, Greenwich filed its proof of publication for the public informational meeting held on May 22, 2013, as required by Ohio Adm.Code 4906-5-08(B). Notice of the public informational meeting was published in the *Norwalk Reflector* on May 9, 2013, and in the *Greenwich Enterprise Review* on May 14, 2013.

On November 15, 2013, as amended on December 9, 2013, Applicant filed agricultural district land maps as required by Ohio Adm.Code 4906-17-08(F)(1). Commencing on December 23, 2013, and continuing through December 27, 2013, Greenwich filed with the Board an application for a certificate to construct a wind-powered electric generation facility pursuant to Ohio Adm.Code Chapter 4906-17.

Pursuant to Ohio Adm.Code 4906-5-05, within 60 days after receipt of an application for a major utility facility, the Chairman of the Board shall notify an applicant of the acceptance or rejection of the application as complete. By letter filed on February 19, 2014, the Board notified Greenwich that its application was sufficiently complete to permit Staff to commence its review and investigation of the application. Further, the letter directed Applicant to serve appropriate government officials and public agencies with copies of the application.

On January 9, 2014, the Ohio Farm Bureau Federation (Farm Federation) filed a motion to intervene. By Entry issued March 10, 2014, the Farm Federation's motion was granted.

Greenwich served copies of the application upon local government officials and filed its proof of service of the application with the Board on February 21, 2014. On February 27, 2014, Greenwich also submitted the application fee to the Board, pursuant to Ohio Adm.Code 4906-5-11.

By Entry issued March 10, 2014, the ALJ scheduled this matter for a local public hearing on May 6, 2014, at South Central High School, in Greenwich, Ohio and an evidentiary hearing on May 19, 2014, at the offices of the Board, in Columbus, Ohio. The March 10, 2014 Entry also directed Greenwich to publish notice of the application and hearings, in accordance with Ohio Adm.Code 4906-5-08, and directed that petitions to intervene be filed within 30 days following publication of the first notice but by no later than April 18, 2014.

Greenwich filed its proofs of publication of the hearings, pursuant to Ohio Adm.Code 4906-5-09, on March 25, 2014, and May 12, 2014. Notice of the hearings was published on March 12, 2014, and April 14, 2014, in the *Norwalk Reflector*, and on March 18, 2014, and April 22, 2014, in the *Greenwich Enterprise Review*, newspapers of general circulation in Huron County. On April 18, 2014, Staff filed its report of investigation of that application (Staff Report). On July 15, 2014, Greenwich filed executed copies of a setback waiver from affected property owners.

The hearings were held, as scheduled. At the local public hearing two witnesses offered testimony. Three witnesses offered testimony at the evidentiary hearing. Further, the Board notes that numerous comments were filed in support of and in opposition to the proposed wind-powered electric generation facility. On May 23, 2014, a Joint Stipulation and Recommendation (Stipulation) was filed by Greenwich, Farm Federation, and Staff. The evidentiary hearing was conducted on June 2, 2014.

On August 21, 2014, Omega Crop Co., LLC (Omega) filed a late-filed motion to intervene. Omega, which is owned by Gerald and Connie Oney, states that it owns approximately 1, 200 acres of farmland adjacent to land that has been or will be leased to Greenwich. Omega avers that it has a real and substantial interest in this proceeding that is not represented by any other party. Further, Omega submits that its request for intervention will not unduly prolong or delay the case and will significantly contribute to the development of the record. Omega agrees to be bound by arrangements and other matters previously made except for the Stipulation. Omega contends that the public hearing was held at a time when the local farming community would likely be unable to attend. Omega further argues that Omega, other similarly situated property owners, local officials, and members of the General Assembly have repeatedly requested that the Board hold an additional public hearing so the Board may witness the level of opposition to the proposed project.

On August 22, 2014, Greenwich filed a memorandum contra Omega's late-filed request for intervention. Greenwich argues that Omega's motion for intervention is inappropriate given that the matter is to be considered on the Board's agenda on August 25, 2014. Further, Greenwich argues that Omega has failed to demonstrate extraordinary circumstances or good cause, as required by Ohio Adm.Code 4906-7-04(C). Greenwich notes that Omega was provided notice of the application as an adjacent property owner, as evident in the proof of service filed on February 21, 2014. Further, according to Greenwich, a second letter was sent to adjacent property owners on March 31, 2014. Greenwich argues that, when an affected person receives actual notice but simply fails to intervene in a timely manner, no extraordinary circumstances exist. Further, Applicant contends that Omega has not illustrated good cause for its failure to intervene three months after the proceedings have concluded. Greenwich also notes that Omega has

refused to accept the record as it exists. Greenwich argues that, if late intervening parties do not accept the record, as it exists when they intervene, chaos would reign in the Board's proceedings, and applicants would be severely prejudiced. Accordingly, Applicant requests that Omega's late-filed motion to intervene be denied.

On August 25, 2014, Omega filed a reply. Omega notes that, while Greenwich argues that the record in this matter closed on May 19, 2014, Greenwich has filed new information in the case for the Board's consideration. Omega requests the Board grant the motion for intervention in the interest justice and fundamental fairness and, at the very least, hold a second public hearing.

Pursuant to Entry issued the intervention deadline was April 18, 2014. R.C. 4906.08(B) and Ohio Adm.Code 4906-7-04(C) provide that, in extraordinary circumstances and for good cause shown, the Board may grant an untimely petition for leave to intervene. In such circumstances, the petition must contain a statement of good cause for failing to timely file and shall be granted only upon a finding that extraordinary circumstances justify granting the petition and that the intervenor agrees to be bound by agreements previously made in the proceeding. Omega's petition to intervene was filed 125 days after the filing deadline for petitions to intervene, and fails to set forth any statement of good cause for failing to timely file its request for intervention and no showing that extraordinary circumstances justify granting the motion. Finally, the Board notes that Omega specifically refuses to be bound by Stipulation previously filed by the parties in this matter. Consequently, the Board finds that Omega's motion to intervene fails to comply with Ohio Adm.Code 4906-7-04 and should be denied.

II. PROPOSED FACILITY

Greenwich is based in Ann Arbor, Michigan, and is a wholly-owned subsidiary of Windlab Developments USA, Limited (Windlab). Windlab Systems Proprietary Limited, a global wind energy development company based in Canberra, Australia, is the sole owner of Windlab. (Co. Ex. 1 at 1-2; Staff Ex. 1 at 5.)

The proposed wind facility would be located in Huron County, approximately 15 miles north of Mansfield, Ohio. The proposed Greenwich project will consist of up to 25 wind turbine generators, access roads, underground electrical interconnection, an interconnection substation, a laydown yard for construction staging, an operations and maintenance (O&M) facility, and two meteorological towers to be located in Greenwich Township, Huron County. Each turbine will have a nameplate capacity of 2.4 megawatts (MW), for a total generating capacity of 60 MW. The proposed facility will be connected at a single point of interconnection to the Greenwich-South Greenwich 69 kilovolt (kV) transmission line which is owned by American Electric Power Corporation (AEP). The wind facility is expected to operate at an average annual capacity factor of 40 percent,

collectively generating approximately 210,000 MW of electricity per year. The Greenwich project will be located on approximately 4,650 acres of leased land, involving 26 landowners, in Greenwich Township, Huron County. (Co. Ex. 1 at 1-2; Staff Ex. 1 at 5, 21.)

To prepare for the installation of each wind turbine, Greenwich would grade and remove the vegetation within a maximum 150 feet radius. Applicant would perform test borings at the site-specific locations and conduct a geotechnical investigation during the final design stage. Greenwich is considering two types of foundations, spread footing foundations and rock anchored pile-supported foundations, both commonly used foundation designs for wind turbines. The final turbine foundation design would be determined based on the results of the site-specific geotechnical investigation. Greenwich does not expect to need to blast for turbine foundation construction. However, if blasting should become necessary, Applicant will submit a blasting plan to Staff for review and acceptance in advance of any blasting. Where feasible, construction materials will be delivered directly to each turbine site, otherwise Greenwich proposes to use a 10-acre construction laydown yard. The construction laydown area would be located at the northwest corner of the intersection of Base Line Road East and Olivesburg-Greenwich Road. (Staff Ex. 1 at 6-7.)

The Greenwich wind project will include approximately 9.1 miles of access roads. The access roads would be up to 40 feet wide during construction. After construction, most access roads would be reduced to a width of 16 feet. A 34.5 kV underground electric collection system would be installed to transfer the power from each wind turbine location to a step-up transformer in a new 69 kV single breaker interconnection switching station facility connected to AEP's Willard-South Greenwich 69 kV distribution line and to the grid. The collection switching substation would be located at the northwest corner of the intersection of State Route 13 and Plymouth East Road. (Staff Ex. 1 at 6-7.)

The proposed Greenwich project also includes an approximately 6,000 square foot O&M building for operations personnel, parking, and storage. Applicant expects to make use of an existing structure, but it is possible that a new building would be constructed. If a new O&M building is constructed, Greenwich states that it would require a permanent land disturbance of less than three acres. The proposed location for the O&M building is at the northwest corner of the intersection of State Route 13 and Plymouth East Road. As a part of this project, Greenwich has installed a permanent 262 feet meteorological tower to monitor wind resources in the project area. A second, identical meteorological tower may be installed at a later date. Applicant estimates that construction would commence in mid-2015 and the facility would be placed into operation in late 2015. (Co. Ex. 1 at 11; Staff Ex. 1 at 7-8.)

III. CERTIFICATION CRITERIA

Pursuant to R.C. 4906.10(A), the Board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the Board, unless it finds and determines all of the following:

- (1) The basis of the need for the facility if the facility is an electric transmission line or gas or natural gas transmission line.
- (2) The nature of the probable environmental impact.
- (3) The facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations.
- (4) In the case of an electric transmission line or generating facility, such facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility system and that the facility will serve the interests of electric system economy and reliability.
- (5) The facility will comply with R.C. Chapters 3704, 3734, and 6111 and all rules and standards adopted under those chapters and under R.C. 1501.33, 1501.34, and 4561.32.
- (6) The facility will serve the public interest, convenience, and necessity.
- (7) The impact of the facility on the viability as agricultural land of any land in an existing agricultural district established under R.C. Chapter 929 that is located within the site and alternate site of the proposed major facility.
- (8) The facility incorporates maximum feasible water conservation practices as determined by the Board, considering available technology and the nature and economics of various alternatives.

The record in this case addresses all of the above-required criteria. In accordance with R.C. Chapter 4906, the Board promulgated rules which are set forth in Ohio

Adm.Code Chapter 4906-17 prescribing regulations regarding wind-powered electric generation facilities and associated facilities.

IV. SUMMARY OF THE EVIDENCE

A. Hearings

1. Local Public Hearing

At the local hearing held on May 6, 2014, two witnesses testified, one in support of Greenwich's application and one witness who expressed concerns about the project. One witness testified in support of the proposed wind project for the jobs it would bring to the community and the lease payments to be made to land owners. The witness noted that Ohio wind-powered electric generation facilities are supported by state law and help the local and state economy. (Local Tr. at 7-11.)

The other witness, a Greenwich Township Trustee, had a few concerns about the proposed project. The trustee had concerns about whether the revenue associated with the Greenwich project would reach the community, as promised, how the construction of the proposed project would impact traffic on the local roads, and how damage sustained to the roads caused by the construction of project would be repaired. (Local Tr. at 12-18; Evidentiary Tr. at 11-12.)

2. Evidentiary Hearing

As previously noted the evidentiary hearing was held on May 19, 2014. Admitted into the record at the evidentiary hearing were: Greenwich's application (Co. Ex. 1); proof of service of the application (Co. Ex. 2); the proofs of publication filed with the Board on March 25, 2014 (Co. Ex. 3) and on May 12, 2014 (Co. Ex. 4); the testimony of Greenwich witness Monica Jensen (Co. Ex. 5); the Staff Report filed on April 18, 2014 (Staff Ex. 1); the testimony of Staff witness Grant Zeto (Staff Ex. 2); and the Stipulation filed on May 16, 2014 (Joint Ex. 1). Greenwich witness Jensen and Staff witness Zeto offered testimony in support of the Stipulation.

B. Basis of Need – R.C. 4906.10(A)(1)

R.C. 4906.10(A)(1) specifies that it applies only if the proposed facility is an electric transmission line or a gas or natural gas transmission line. In this case, the proposed project is an electric generation facility. Accordingly, Staff recommends the Board find that R.C. 4906.10(A)(1) is not applicable to this project. (Staff Ex. 1 at 20.)

C. Nature of Probable Environmental Impact – R.C. 4906.10(A)(2)

Pursuant to certification criteria, the Board must determine the nature of the probable environmental impact of the proposed wind facility. The Staff Report notes the following regarding the nature of the probable environmental impact of the proposed Greenwich wind project:

- (1) The population of Huron County was 59,626 in 2010. The demographics of the project area are not expected to change significantly over the next 20 years as the population in the county is projected to experience a decrease of 4.5 percent over this period. Based on population projections, population densities, and population center distributions, the facility is unlikely to limit future population growth or have a measurable impact on the demographics of the region.
- (2) The proposed facilities would be located on approximately 4,650 acres of leased land. The installation of wind turbines, access roads, substations, and other ancillary structures would convert 28.4 acres of land from its current use to permanent facility use. Approximately 90 percent or 25.5 acres of land converted for the proposed project is currently used for agricultural production.
- (3) There are seven recreational areas within three miles of the project area: Crall Woods in Ashland County; Greenwich Reservoir Park, Millstone Hills Golf Course, Freedom Valley Campground, New London Recreation Park, and the New London Upground Reservoir in Huron County; and Fowler Woods Nature Preserve in Richland County. The nearest turbine is approximately 1.13 miles from the Greenwich Reservoir Park. Greenwich Reservoir Park is located in the Village of Greenwich. The park facilities include picnic areas, activity areas, and fishing access. Wind turbines would be visible from various vantage points at the recreational areas listed. While visual impacts would be reduced to varying degrees by vegetative screening, the size of the turbines limits the extent to which they can be totally obscured from view. The wind farm, however, would not alter the land use of any recreational land.

- (4) Applicant conducted a literature and cultural resources records review and assessment for the area within a five-mile radius of the project. There are five properties listed in the National Register of Historic Places (NRHP), one historic district, 103 Ohio Historic Inventory Resources historic structures, 83 Ohio Archaeological Inventory Resources, and 37 cemeteries identified by the Ohio Genealogical Society. Other cultural resources within a five-mile radius of the project include five individual properties previously determined eligible for listing in the NRHP and one Ohio Historic Bridge Inventory site. These cultural resources have been previously identified in Ohio Historic Preservation Office (OHPO) databases. There are no National Historic Landmarks located within the five-mile study area. Greenwich intends to conduct a targeted Phase I field study to further analyze the impacts that the proposed project may have on above-ground and below-ground cultural resources within the project area. Based on the information provided in the application, Staff concludes that direct physical impacts to known cultural resources would be minimal.
- (5) The project, specifically the overall dimensions of the proposed turbines, would create visual and aesthetic impacts to surrounding residences. The aesthetic impact would be location-specific and would vary depending on the distance between the viewer and the turbines, the number of turbines visible, the amount of screening, atmospheric conditions, and the presence of other vertical elements such as utility poles and communication towers. The project would also incorporate up to two free-standing meteorological towers that would be approximately 262 feet tall. Applicant intends to utilize an existing building for O&M; however, if a new building would need to be constructed, it would be less than 6,000 square feet in size and aesthetically blend with the agricultural buildings prevalent within the project area. The proposed substation would have minor visual impacts, as the rural characteristic of the project area limits the number of residences nearby. Further, some wooded areas would provide screening to some nearby residences. Other visual impacts would be associated with construction and would be temporary in nature.
- (6) The estimated capital and intangible costs for the project are approximately \$119,906,000 or \$1,998 per kilowatt. The

estimated annual operation costs would be \$215,000 per year for the first two years. Maintenance costs are estimated to range between \$1,320,464 and \$1,923,082 per year.

- (7) Construction of the facility is projected to take four to six months, and Applicant estimates construction employment at approximately 100 people for the construction crew, with an estimated payroll of \$8 million. Greenwich intends to hire approximately half of the construction crew locally. Once the facility is operational, approximately three to four employees would be hired to support the direct operation of the facility, with an estimated payroll of \$215,000.
- (8) Construction of the facility would impact five streams, most of the water resource impacts would be limited to manmade agricultural or roadside ditches. To minimize surface water impacts, Applicant would install the electric collection lines using horizontal directional drilling (HDD). Due to the use of HDD, Staff would require Applicant to submit a detailed frac-out contingency plan for Staff review and approval. The turbine pads, O&M building, construction laydown, concrete batch plant, and substation have been sited to avoid wetland resources. The construction of access roads, crane paths, and collection lines would result in a total temporary wetland impact of approximately 0.5 acres. The permanent impact to wetlands would be approximately 0.1 acres. Greenwich is currently coordinating with the Ohio Environmental Protection Agency (Ohio EPA) and the United States (U.S.) Army Corps of Engineers (USACE) to ensure that all anticipated wetland and stream impacts are properly permitted. Applicant anticipates coverage under the USACE Nationwide Permit 51 for proposed impacts to surface water resources. Additional measures to reduce water quality impacts would be taken through the development of a Storm Water Pollution Prevention Plan (SWPPP), as part of the Ohio EPA issued National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge associated with construction activities, to help control potential sedimentation, siltation, and run-off. No ponds or lakes would be impacted by the facility during construction or operation. No proposed facility components are within the 100-year floodplain.

- (9) Applicant requested information from the Ohio Department of Natural Resources (ODNR) Division of Wildlife (DOW) and the United States Fish and Wildlife Service (USFWS) regarding state and federally listed threatened and endangered plant and animal species. Additional information was provided through field assessments, review of published ecological information, siting and preconstruction surveys for the proposed project since 2011. Based on the studies, the proposed facility is within the range of several state-listed species and one federally-endangered species, the Indiana bat. The project would be within the range of one federally-listed candidate species, the Eastern massasauga, and the proposed federally-endangered northern long-eared bat. In addition, bald eagles were discovered nesting just outside of the project area boundaries during raptor nesting surveys in 2012. Greenwich will continue to coordinate with USFWS and ODNR-DOW on minimizing wildlife impacts. Applicant is working with USFWS to apply for an Incidental Take Permit (ITP) consistent with the regional Habitat Conservation Plan (HCP), pursuant to the Endangered Species Act.
- (10) Although Bald Eagles are no longer a federally-listed species, they are protected under the Migratory Bird Treaty Act, and are afforded additional legal protection under the Bald and Golden Eagle Protection Act. Bald eagles discovered nesting just outside of the project boundaries could be impacted during operation. Applicant is currently coordinating with USFWS on avoidance and minimization measures, and would continue to coordinate until an ITP is obtained.
- (11) As an interim measure until Applicant has obtained an ITP, Applicant would sign a technical assistance letter with USFWS to protect bats during migratory seasons. Additionally, Staff recommends the turbine blades be feathered (i.e., remain stationary or nearly stationary) at least until the manufacturer-set cut-in speed is reached to measurably reduce bat mortality.
- (12) In order to reduce potential negative impacts to the Indiana bat, a tree-roosting species, Applicant shall adhere to seasonal cutting dates of October 1 through March 31 for removal of suitable Indiana bat habitat trees, if avoidance measures cannot be achieved. If it is not practical for Applicant to adhere to the

seasonal cutting restrictions, then Applicant shall coordinate with USFWS and ODNR for tree clearance.

- (13) Bird migration surveys within the project area revealed the presence of 100 bird species that include several state-listed species. Although no Northern harrier nests were located, the species was detected in the spring and fall surveys. To avoid potential impact to harriers nest and forage habitat areas, DOW recommends that construction not occur in marshes and grasslands during the species nesting period from May 15 to August 1. Operation of the facility would likely not affect this species, because it forages low to the ground.
- (14) According to DOW, there is the potential for the black sandshell, fawnsfoot, pondhorn, and other mussel species to exist in the project area. Therefore, DOW recommends Applicant provide documentation that mussel impacts would not occur at stream crossings, and other stream impact sites. Applicant will consult with DOW to determine which streams in the project area could provide suitable habitat for mussels and follow DOW recommendations to minimize impacts to streams as they relate to mussels. If common or state-listed mussels are located during construction activities, Staff recommends DOW immediately be consulted for further action.
- (15) Facility construction would result in minimal temporary and permanent impacts to vegetative communities within the project area. Construction activities that may result in impacts to vegetation include site preparation, earthmoving, excavation, and backfilling activities associated with construction of the laydown area, access roads, crane paths, foundations, and underground collection system. These construction activities would result in the cutting and clearing of vegetation and soil disturbance and exposure. No significant impacts are expected to any specific plant species as a result of this project.
- (16) Consistent with R.C. 4906.20(B)(2) and Ohio Adm.Code 4906-17-08(C)(1)(c), as effective at the time the Greenwich application was filed, the minimum distance from a wind turbine to the exterior of the nearest habitable residential structure located on an adjacent property must be no less than

1,125 feet in horizontal distance from the tip of the turbine's blade at 90 degrees to the structure. The maximum rotor diameter of turbines under consideration for the facility is approximately 383 feet. Using the maximum blade lengths presented in the application, this minimum setback calculates to 1,312 feet from the turbine base to the exterior of the nearest habitable residential structure.

- (17) One residential structure is currently under construction on property owned by a participating landowner. Turbine 9 is 1,117.5 feet from the residence under construction. The location of this residential structure was determined by the participating landowner after lease agreements were executed, and the landowner was aware of the proposed infrastructure associated with the project. Greenwich intends to execute a waiver of the minimum setback with this landowner. Staff recommends that, if a waiver is not executed, the turbine not be built.
- (18) The minimum distance from a turbine's base to the property line of the wind farm facility must be at least 1.1 times the total height of the turbine as measured from its base to the tip of the blade at its highest point. Assuming a maximum turbine height of 490.5 feet as proposed in the application, this minimum property line setback equates to a distance of 539.55 feet. For 16 of the 25 proposed turbine locations, the minimum setback of 1.1 times the structure height to the nearest adjacent property boundary is penetrated.¹ The adjacent landowners to each of these turbines are participating landowners in the project, who have leased parcels to Applicant. Greenwich has executed a waiver of the minimum property line setback with each of these landowners.
- (19) Interstate 71 and U.S. Highway 224 would be the primary routes utilized during the construction of the facility. Greenwich would utilize local routes including, but not limited to, State Route 13, Baseline Road, Rome Greenwich Road, Plymouth East Road, Nineveh Road, and Alpha Road. Greenwich evaluated the roadways and transportation infrastructure of the project area, including roads, bridges, and culverts. Applicant has entered into an agreement with the

¹ This includes turbine numbers 1, 3-7, 9-10, 12-15, 17, 21- 22, and 25.

Huron County Engineer's office for the use, repair, and improvement of roads within the project area, including preconstruction infrastructure inspections. The agreement includes the provision of financial assurance to Huron County to ensure that any damage during the construction period is adequately repaired. The existing condition of these tertiary roadways has been documented by Applicant and additional structural investigation would need to be completed prior to commencement of construction. Applicant would return all roadways to their preconstruction condition, or better, as the road use agreement (RUA) would outline.

- (20) A review of documented geologic structural and seismic information was conducted for the project area by Applicant. Seismic information was obtained from the ODNR, Division of Geological Survey (GS), and Ohio Seismic Network. The study area contains no fault zones. Historically, there have been two earthquake epicenters near the project area approximately three miles to the west in Ripley Township. These historical earthquakes would be inconsequential to the proposed facility.
- (21) The soil surveys indicate that the soils in the project area do not frequently flood or pond surface water runoff. Adequate surface water runoff drainage would be established and properly controlled at each proposed turbine construction site to minimize any increase in the moisture content of the subgrade material. The soil in the project area appears to be suitable for the construction of turbine foundations, buildings, and access roads. Further, it is not asserted that any underground or surface mines are located in the project area and there is no indication of former gravel pits or quarries in the project area.
- (22) The project area lies within the rural areas of Huron County. Residents within the project area rely upon private wells for their domestic water supply. Applicant does not anticipate any disruption or adverse effect to public and private water supplies during the construction or operation of the facility. Applicant would comply with any drinking water source protection plan for any part of the facility that is located within drinking water source protection areas of the local villages and cities.

- (23) There are at least two pipelines in the project area, one owned or operated by Columbia Gas Transmission Corporation and the other owned or operated by Inland Corporation d/b/a Sunoco Logistics. Staff recommends a minimum setback distance from gas pipelines of at least 1.1 times the total height of the turbine structure as measured from its tower's base, excluding the subsurface foundation, to the tip of its highest blade. Based on the tallest turbine proposed for this project with a tip height of 490.5 feet, the recommended pipeline setback is 539.55 feet. Greenwich must demonstrate that the recommended pipeline setback has been met before the start of construction.
- (24) Turbine designs have multiple safety features to address blade shear: two fully independent braking systems, a pitch control system, and turbine shut-offs in the event of excessive wind speeds, excessive blade vibration, or stress. These safety features, along with the implementation of setbacks, minimize the potential for blade shear impacts. Applicant has incorporated a wind turbine layout with an adjacent property residential setback distance of 1,312 feet and a property line setback of 539.55 feet.
- (25) The wind turbine selected by Applicant for this project, is designed to withstand extreme 10-minute average wind speeds of up to 84 miles per hour (mph) and to automatically shut down and stop producing energy at its cut-out speed of 44 mph. The proposed turbines have ice detection equipment and safety features that would shut down a turbine if the buildup of ice causes excess vibration or the speed to power ratio becomes too high.
- (26) Various activities associated with construction of the facility would have noticeable, but temporary, noise impacts. Noise impacts would primarily be associated with the operation of construction and delivery equipment. The adverse impact of construction noise would be minimal, because construction activities would be temporary and intermittent, limited to normal daytime working hours and primarily occur away from most residential structures.
- (27) Greenwich found the average ambient noise levels (L_{EQ}) across the project area ranged from 51 to 63 decibels (dBA) during the

day and from 46 to 62 dBA at night. The data provided by Applicant equates to an average project area daytime L_{EQ} of 55 dBA and an average project area nighttime L_{EQ} of 52 dBA. Greenwich proposes using a daytime L_{EQ} of 51 dBA and a nighttime L_{EQ} of 46 as a very conservative representation of ambient L_{EQ} of the project area. Applicant's noise model shows that the noise impact at nonparticipating sensitive receptors would be 44 dBA or less. Recognizing that actual sound output levels could be different when the wind farm is in operation, Staff recommends the certificate be conditioned upon the requirement that Applicant adhere to 51 dBA, nighttime and that Applicant establish a complaint resolution process through which complaints related to facility noise can be resolved.

- (28) Shadow flicker can occur when moving turbine blades pass in front of the sun, thereby creating alternating changes in light intensity. International studies and guidelines have suggested 30 hours of shadow flicker per year as the threshold of significant impact and has been the threshold applied in recent wind farm certificates in Ohio. Applicant conducted a shadow flicker analysis of the facility to calculate the yearly shadow flicker impact to 298 receptors within approximately 1,170 meters of turbines. According to Applicant's analysis, five nonparticipating receptors would be exposed to more than 30 hours of shadow flicker per year by the facility. After further evaluation, three of those five receptors were determined not to exceed the 30 hour limit using actual site-specific conditions including obstacles that would mitigate shadow flicker. Greenwich has agreed that any turbine forecasted prior to construction to create in excess of 30 hours per year of shadow flicker at a nonparticipating receptor would be subject to shadow flicker minimization measures and possible mitigation. Staff recommends that Applicant establish a complaint resolution process through which complaints related to shadow flicker from the facility can be resolved.
- (29) The proposed wind project is not expected to have any impacts on AM or FM radio, mobile phone, cable television, or satellite systems. Applicant would mitigate television reception impacts to the satisfaction of the affected receptor. Staff recommends Applicant be required to mitigate any impacts to

communication and Doppler weather radar systems, if they are observed during operation of the facility.

- (30) Applicant identified one licensed microwave path and three proposed microwave paths intersecting the project area. None of the turbine locations would obstruct the microwave paths. Applicant continues to evaluate other potential microwave communications in the project area.
- (31) Applicant has proposed a decommissioning plan that includes the removal of facility components at the termination of a lease, or if the project has not generated electricity for a continuous period of twelve months. Before the start of construction, Applicant would post financial assurance for decommissioning of the facility, as determined by an independent, registered Ohio professional engineer.

(Staff Ex. 1 at 21-39.)

In its report, Staff recommends the Board find the nature of the probable environmental impact has been determined for the proposed facility and that it complies with the requirements specified in R.C. 4906.10(A)(2), provided the certificate issued includes Staff's recommended conditions (Staff Ex. 1 at 39-40).

D. Minimum Adverse Environmental Impact – R.C. 4906.10(A)(3)

Pursuant to R.C. 4906.10(A)(3), the proposed facility must represent the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, along with other pertinent considerations.

Applicant selected the site for the Greenwich wind facility based on the quality of the wind resource, proximity to major transportation routes and electric transmission, compatible land uses, interested landowners willing to lease their land, limited population, appropriate geotechnical conditions, and the low risk of impacting sensitive ecological and cultural resources. Locations of individual turbines were based on maximizing energy yield, avoidance of sensitive ecological and cultural resources, limiting impacts to agriculture, noise and shadow flicker constraints, and land use constraints. Applicant's site selection criteria minimize the potential impact of the project while achieving the project's goal of generating renewable electricity. (Staff Ex. 1 at 41.)

Applicant states that it has sited and designed the Greenwich wind-powered electric generation facility to minimize potential impacts while meeting the need for the

project. Agricultural land accounts for approximately 90 percent of all land that would be impacted by construction of the proposed facility and less than one percent, 28.4 acres, of the land leased would be converted into permanent facilities. Greenwich has no plans to remove any existing structures during construction of the generation facility. (Staff Ex. 1 at 41.)

The proposed facility aligns with regional development planning and would have minimal impacts on local public services. Comprehensive plans for Huron County, as well as neighboring Richland and Ashland counties, signal a continuance of agricultural production in the region that includes the project area. The installation of a wind facility would coincide with agricultural production and would not impede regional plans. (Staff Ex. 1 at 41.)

Relatively few previously recorded cultural resources were identified in the immediate vicinity of the project. Therefore, a direct physical impact to known cultural resources is expected to be minimal. In order to avoid potential impacts to cultural resources within the project area, Greenwich would conduct a targeted Phase I field study to further analyze the impacts that this facility may have on above ground and below ground cultural resources. Staff also recommends Applicant conduct a targeted architectural survey of the project area. (Staff Ex. 1 at 41.)

The proposed facility would have an overall positive impact on the local economy due to the increase in construction spending, wages, purchasing of goods and services, annual lease payments to the local landowners, and local tax revenues. The increase in local tax revenues is estimated to be up to \$540,000 annually for a 60 MW facility. (Staff Ex. 1 at 41.)

To minimize impacts to wetlands and streams, Greenwich has committed to using HDD to install the underground electric collection cable under all streams and wetlands, where possible. To minimize impacts related to frac-out, Applicant would be required to provide a frac-out contingency plan. Construction of the facility would require work within mapped 100-year floodplains. (Staff Ex. 1 at 41-42.)

Greenwich would consult with DOW to determine which streams in the project area could provide suitable habitat for mussels and follow DOW recommendations to minimized impacts to streams as it relates to mussels. Applicant acknowledged that construction, operation, maintenance, and decommissioning of the project may result in incidental take of listed birds and bats. Applicant coordinated with USFWS and DOW on wildlife protocols and study expectations. Applicant will continue to coordinate with USFWS and DOW on minimizing wildlife impacts. Applicant is working with USFWS to apply for an ITP by joining the Region 3 HCP and would sign a technical assistance letter with the USFWS that would stay in effect until an ITP can be obtained. If tree clearing is

necessary, Applicant would adhere to seasonal cutting dates of October 1 through March 31. (Staff Ex. 1 at 42.)

Several turbines are within the minimum property line setbacks. The adjacent landowners to each of these turbines are participating landowners in the project, with leased parcels, and have signed waivers of the minimum setback. One residential structure is currently under construction on property owned by a participating landowner, and is within the residential setback (1,117 feet away from the proposed turbine). Greenwich is currently in the process of executing a waiver of the minimum setback with this landowner. Applicant has indicated that various safety control mechanisms would be utilized to minimize the potential for blade shear and ice throw impacts. (Staff Ex. 1 at 42.)

Greenwich's proposed turbine layout is not likely to generate unacceptable levels of noise for nonparticipating residents. Applicant modeled shadow flicker impacts with respect to the proposed facility. Two nonparticipating receptors would be exposed to more than 30 hours of shadow flicker per year by the facility. Applicant is expected to provide mitigating measures to the two nonparticipating residents so that they receive no more than 30 hours of exposure to shadow flicker. Providing the mitigating measures to these nonparticipating residents would present the minimum adverse shadow flicker impact. (Staff Ex. 1 at 42.)

During construction of the proposed project, local, state, and county roads would experience a temporary increase in truck traffic due to deliveries of equipment and materials. A final delivery route plan will be developed through discussions with the Huron County Engineer and performed in conjunction with the Ohio Department of Transportation (ODOT) special hauling permit process and within an agreement signed between Applicant and the county engineer. (Staff Ex. 1 at 42.)

No impacts to AM or FM radio or radar systems are expected. Applicant would mitigate television reception impacts to the satisfaction of the affected receptor. Further study is recommended for potential impacts to microwave communication systems and mobile phones. Mitigation may be required for possible impacts to communication and Doppler weather radar systems determined during operation. (Staff Ex. 1 at 42.)

Given the size of the project area, it is imperative that Greenwich secure a financial instrument that best reflects the ability to completely decommission the facility and that the decommissioning funds are available at the start of construction. The decommissioning requirements outlined in the recommended conditions would ensure that the project meets the minimum adverse environmental impact. (Staff Ex. 1 at 42.)

Based on its review, the Staff concludes that the proposed project would result in both temporary and permanent impacts to the project area and surrounding areas. Staff

contends that, due to the low potential to impact land use, cultural resources, streams, wetlands, wildlife, communications, nonparticipating residents, in conjunction with Staff's recommended conditions to mitigate these impacts, the project represents the minimum adverse environmental impact. Staff recommends the Board find that the proposed facility represents the minimum adverse environmental impact and, therefore, complies with the requirements specified in R.C. 4906.10(A)(3), provided that any certificate issued by the Board for the proposed facility includes Staff's recommended conditions. (Staff Ex. 1 at 43.)

E. Electric Grid – R.C. 4906.10(A)(4)

Staff reviewed and evaluated the impact of interconnecting the proposed wind-powered electric generation facility into the existing regional electric transmission system. Greenwich plans to use a 34.5 kV collection system to gather the wind generators output at the project substation. The project substation would serve as the point of interconnection with the electric transmission system and transform the voltage from 34.5 kV to 69 kV. The project substation would connect the proposed facility to the regional grid via AEP's Willard-South Greenwich 69 kV transmission line. (Staff Ex. 1 at 44.)

PJM Interconnection, LLC (PJM), the regional transmission operator in Ohio, manages the regional transmission system and the wholesale electricity market and administers the interconnection process for new generation facilities. Further, the North American Electric Reliability Corporation (NERC) establishes federal reliability standards, applicable to all owners, operators, and users of the bulk power system. The proposed project was evaluated by PJM at a maximum output of 60 MW, with 7.8 MW capacity based on 2015 summer peak load conditions at normal, single contingency, and multiple contingency performance criteria. PJM analyzed the bulk electric system, with the proposed generation facility interconnected to the transmission grid, for compliance with AEP's, NERC's, and PJM's reliability criteria. PJM's studies did not reveal any reliability problems on the local or regional bulk electric system. However, PJM did find that the delivery of the energy portion at 60 MW may cause the regional transmission operator to curtail output during certain system conditions, if upgrades were not made. Greenwich may mitigate these curtailments by upgrading equipment on the transmission system. However, the upgrades are not required for system reliability and, therefore, Greenwich can elect to complete the upgrades or have the output curtailed under certain system conditions. (Staff Ex. 1 at 44-47.)

Staff notes that Greenwich has not yet executed a signed Construction Service Agreement or an Interconnection Service Agreement (ISA) with PJM for the proposed facility. PJM requires that a service agreement be finalized and signed before Greenwich could connect the proposed electric generation facility to the bulk electric transmission system. (Staff Ex. 1 at 45.)

Staff recommends the Board find that the proposed facility is expected to provide reliable generation to the bulk electric transmission system, is consistent with plans for expansion of the regional power system serving this state and interconnected utility systems, and would serve the interests of electric system economy and reliability. Staff avers that the facility would serve the public interest, convenience, and necessity by providing additional electrical generation to the regional transmission grid. Accordingly, Staff recommends the Board find that the proposed generation facility complies with the requirements specified in R.C. 4906.10(A)(4), provided that any certificate issued includes the conditions specified in the Staff Report. (Staff Ex. 1 at 47.)

F. Air, Water, Solid Waste, and Aviation – R.C. 4906.10(A)(5)

Pursuant to R.C. 4906.10(A)(5), the facility must comply with statutory requirements regarding air and water pollution control, withdrawal of waters of the state, solid and hazardous wastes, and air navigation.

-----Staff submits that operation of the proposed wind-powered electric generation facility would not produce air pollution and, on that basis, there are no applicable air quality limitations or air permit requirements for the operation of facility. Greenwich committed to comply with fugitive dust rules by the use of water spray or other appropriate dust suppressant measures whenever necessary. (Staff Ex. 1 at 48.)

Staff contends that construction and operation of the facility, as described in the application and data request responses and in accordance with the Staff's recommended conditions included in the Staff Report, would be in compliance with air emission regulations in R.C. Chapter 3704, and the rules and laws adopted thereunder (Staff Ex. 1 at 48).

Neither construction nor operation of the proposed wind-powered facility would require the use of significant amounts of water. Accordingly, requirements under R.C. 1501.33 and 1501.34 are not applicable to this project. Greenwich states that it would seek a NPDES construction storm water general permit, a permit 51 under Section 404 of the Clean Water Act, and an Ohio permit to install on-site sewage treatment under Ohio Adm.Code Chapter 3745-42, if necessary. Staff notes that in order to obtain the NPDES, an Ohio EPA Notice of Intent application, which includes the SWPPP, must be submitted 21 days before the commencement of construction. (Staff Ex. 1 at 48.)

According to the application, Greenwich would remove all temporary gravel and construction materials after the completion of construction activities, unless otherwise directed by the landowner, and restore impacted areas to preconstruction conditions in compliance with the NPDES permit obtained for the project and the approved SWPPP

created for this project. Greenwich would not dispose of gravel, or any other construction material, on agricultural land and all construction debris and all contaminated soil would be promptly removed and properly disposed of in accordance with Ohio EPA regulations. The Staff Report states that, with these measures, construction and operation of the Greenwich wind facility would comply with the requirements of R.C. Chapter 6111, and the rules and laws adopted thereunder. (Staff Ex. 1 at 48.)

According to Greenwich, waste removal would not be necessary prior to the start of construction. Any waste generated during construction would consist of a limited amount of plastic, wood, cardboard, and metal packaging materials, construction debris, and general refuse. Applicant submits that any solid waste generated during the construction or operation of the facility would be secured and removed from the project area and disposed of at a licensed disposal facility. The O&M facility and interconnection substation would utilize local solid waste recycling and disposal services. Staff states that, based on its investigation of the application, Applicant's solid waste disposal plans comply with solid waste disposal requirements in R.C. Chapter 3734. (Staff Ex. 1 at 49.)

----- No public or private airports are located in the vicinity of the proposed project area. -----
On that basis, neither the construction nor operation of the proposed facility is expected to have any significant impact on airports or the existing air travel network. The Federal Aviation Administration (FAA) conducted aeronautical studies of the proposed turbine layout. The FAA has determined that the proposed wind turbine project does not pose a hazard to aviation. In addition, consistent with R.C. 4561.32, Staff contacted the ODOT Office of Aviation (ODOT-OA) in order to coordinate review of potential impacts that the facility might have on local airports. ODOT issued a Construction/Alteration Permit for the proposed project. According to ODOT, construction of the proposed generation facility exceeds obstruction standards adopted under R.C. 4561.32, but will not affect the safe and efficient use of the airports nor affect the safety of persons and property on the ground provided any certificate issued includes the recommendations proposed by Staff in consultation with the FAA and ODOT-OA. (Staff Ex. 1 at 49.)

According to Staff, based on Greenwich's description of the construction and operation of the proposed project, the facility would be in compliance with the rules and regulations adopted in conformance with the air and emission requirements in R.C. Chapter 3704, the requirements under R.C. Chapter 6111, and the solid waste disposal requirements of R.C. Chapter 3734. Therefore, Staff believes the proposed facility complies with the requirements specified in R.C. 4906.10(A)(5), provided the certificate issued includes Staff's recommended conditions. (Staff Ex. 1 at 49.)

G. Public Interest, Convenience, and Necessity – R.C. 4906.10(A)(6)

According to the Staff Report, Greenwich began communicating with community members, elected officials, and the media regarding the proposed wind project in the spring of 2010. A second public meeting was held in the winter of 2011, to update the community on the progress of the project. On May 22, 2013, a public informational meeting was held at South Central High School, in Greenwich, Ohio, in accordance with Ohio Adm.Code 4906-5-08(B). In addition, Greenwich maintains a website for the project, www.greenwichwindpark.com, which features an overview of the project and information about wind energy development. Greenwich has employed and identified a project manager who frequents the project area and serves as a point of contact for any questions or concerns from the community. (Staff Ex. 1 at 50.)

Staff notes that a certificate application must include a description of any insurance programs for providing liability compensation for damages to the public during construction or operation of the proposed facility. Staff states that Greenwich has committed to maintain an insurance policy to cover any potential personal injury, death, and property damage associated with the operation of the proposed facility that would insure against claims of, at a minimum, \$1 million per occurrence and \$2 million in the aggregate. In addition, Applicant would maintain an umbrella insurance policy, which would cover potential personal injury, death, and property damage liabilities in excess of the primary insurance policy, throughout the construction and operation of the wind facility that would insure against claims of, at a minimum, \$10 million per occurrence and \$10 million in the aggregate. (Staff Ex. 1 at 50.)

The project is anticipated to increase annual tax revenue for the local tax base, which includes Huron County, Greenwich Township, the village of Greenwich, and the South Central School District. Applicant is currently working with the Huron County Board of Commissioners in order to achieve compliance with the requirements set forth in R.C. Chapter 5727.75, in order to qualify for an exemption on tangible personal property and real property as a qualified energy project. If exempted, the annual service payment in lieu of taxes is expected to be \$9,000 per MW of installed capacity, which would increase annual tax revenues by \$540,000 for a 60 MW facility. (Staff Ex. 1 at 51.)

Staff recommends the Board find the proposed facility will serve the public interest, convenience, and necessity and, therefore, complies with the requirements specified in R.C. 4906.10(A)(6), provided the certificate issued includes Staff's recommended conditions. (Staff Ex. 1 at 50-51.)

H. Agricultural Districts – R.C. 4906.10(A)(7)

In accordance with the provisions of R.C. Chapter 929, land is classified as agricultural district land through an application and approval process that is administered through the local county auditor's office. Agricultural district land is exempt from sewer, water, and electrical service tax and assessments.

According to the Staff Report, approximately 26.6 acres of agricultural district land would be temporarily disturbed by the construction of the facility and 4.4 acres of agricultural district land would be permanently converted from its current land use to house facility components. Staff notes that this agricultural district land is comparable to contiguous parcels of land. Staff states that approximately 195.8 acres of land that is currently cultivated for agricultural production or utilized as pastureland would be temporarily impacted by the construction of the facility. Slightly less than 26 acres of such lands would be permanently converted from its current land use to house facility components. (Staff Ex. 1 at 52.)

Therefore, Staff recommends the Board find the impact of the proposed facility on the viability of existing agricultural land in an agricultural district has been determined and that the project complies with the requirements specified in R.C. 4906.10(A)(7), provided the certificate issued includes Staff's recommendations. (Staff Ex. 1 at 52.)

I. Water Conservation Practice – R.C. 4906.10(A)(8)

According to the Staff Report, wind-powered electric generating facilities do not utilize water in the process of generating electricity. Therefore, water consumption associated with the proposed electric generation equipment does not warrant specific conservation efforts. While potable water will be used by the facility's O&M building employees, the amount of water consumed for these purposes would be minimal. On that basis, Staff recommends the Board find the requirements specified in R.C. 4906.10(A)(8) are not applicable to this project. (Staff Ex. 1 at 53.)

V. STIPULATION

On May 16, 2014, Greenwich, the Farm Federation, and Staff (collectively Signatory Parties) filed a Stipulation resolving the issues raised in the application (Joint Ex. 1). The Signatory Parties recommend the Board issue the certificate requested by Greenwich for the proposed wind project, subject to certain conditions. The following is a summary of the conditions agreed to by the Signatory Parties and is not intended to replace or supersede the Stipulation:

- (1) Greenwich shall install the facility, utilize equipment and construction practices, and implement mitigation measures as described in the application and as modified and/or clarified in supplemental filings, replies to data requests, and recommendations in the Staff Report.
- (2) Applicant shall not commence construction of the facility until it has a signed ISA with PJM, which includes construction, operation, and maintenance of system upgrades necessary to reliably and safely integrate the proposed generating facility into the regional transmission system. Greenwich shall provide a letter stating that the agreement with PJM has been signed or a copy of the signed ISA to Staff.
- (3) Applicant shall conduct a preconstruction conference prior to the start of any construction activities. Staff, Applicant, and representatives of the primary contractor and all subcontractors for the project shall attend the preconstruction conference. The conference shall include a presentation of the measures to be taken by Applicant and contractors to ensure compliance with all conditions of the certificate, and discussion of the procedures for on-site investigations by Staff during construction. Prior to the conference, Applicant shall provide a proposed conference agenda for Staff's review. Applicant may conduct separate preconstruction meetings for each stage of construction.
- (4) All changes outside the environmental survey areas and any changes within environmentally-sensitive areas shall be subject to Staff review and approval prior to construction in those areas and shall be provided to Staff in hard copy and as geographically-referenced electronic data.
- (5) Within 60 days after the commencement of commercial operation, Applicant shall submit to Staff a copy of the as-built specifications for the entire facility. If Applicant demonstrates that good cause prevents it from submitting a copy of the as-built specifications for the entire facility within 60 days after commencement of commercial operation, it may request an extension of time for the filing of such as-built specifications. Applicant shall use reasonable efforts to provide as-built drawings in both hard copy and as geographically-referenced electronic data.

- (6) The certificate shall become invalid if Applicant has not commenced a continuous course of construction of the proposed facility within five years of the date of journalization of the certificate.
- (7) As the information becomes known, Applicant shall provide to Staff the date on which construction will begin, the date on which construction was completed, and the date on which the facility begins commercial operation.
- (8) Prior to the commencement of construction activities that require permits or authorizations by federal or state laws and regulations, Greenwich shall obtain and comply with such permits or authorizations. Applicant shall provide copies of permits and authorizations, including all supporting documentation, to Staff within seven days of issuance or receipt by Applicant. Applicant shall provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference.
- (9) At least 30 days before the preconstruction conference, Greenwich shall submit to Staff, for review and acceptance, one set of detailed engineering drawings of the final project design, including the facility, temporary and permanent access roads, any crane routes, construction staging areas, and any other associated facilities and access points, so that Staff can determine that the final project design is in compliance with the terms of the certificate. The final project layout shall be provided in hard copy and as geographically-referenced electronic data. The final design shall include all conditions of the certificate and references at the locations where Applicant and/or its contractors must adhere to a specific condition in order to comply with the certificate.
- (10) If construction has commenced at a turbine location and it is determined that the location is not a viable turbine site, that site shall be restored to its original condition within 30 days.
- (11) Applicant shall avoid, where possible, or minimize to the maximum extent practicable, any damage to field tile drainage systems and soils resulting from construction, operation, and/or maintenance of the facility in agricultural areas. A log of all field tile drainage systems damaged resulting from the construction,

operation, and/or maintenance of the facility shall be maintained with coordinates of each location. Damaged field tile systems shall be promptly repaired to at least original conditions at Applicant's expense. If applicable, excavated topsoil shall be segregated and restored in accordance with Applicant's lease agreement with the landowner. Severely compacted soils shall be plowed or otherwise decompacted, if necessary, to restore them to original conditions unless otherwise agreed to by the landowner.

- (12) Prior to commencement of construction, Greenwich shall finalize a Phase I cultural resources survey program for archaeological work at turbine locations, access roads, substations, collection lines, and laydown areas acceptable to Staff. If the resulting survey work discloses a find of cultural or archaeological significance, or a site that could be eligible for inclusion on the NRHP, then Applicant shall submit an amendment, modification, or mitigation plan for Staff's acceptance. Any such mitigation effort, if needed, shall be developed in coordination with the OHPO with input from applicable local preservation officials and submitted to Staff for review and acceptance.
- (13) That prior to the commencement of construction, Greenwich shall conduct a targeted architectural survey of the project area. Applicant shall finalize a work program that outlines areas to be studied in the project area in coordination with Staff and the OHPO. If the architectural survey discloses a find of cultural or architectural significance, or a structure that could be eligible for inclusion on the NRHP, Applicant shall submit an amendment, modification, or mitigation plan for Staff's acceptance. Any such mitigation effort, if needed, shall be developed in coordination with the OHPO with input from applicable local preservation officials and submitted to Staff for review and acceptance.
- (14) No commercial signage or advertisements shall be located on any turbine, tower, or related infrastructure. If vandalism should occur, Greenwich shall remove or abate the damage within 30 days of discovery or as extended by Staff for good cause shown, to preserve the aesthetics of the project. Any abatement other than the restoration to prevandalism condition is subject to review by Staff to ensure compliance with this condition.

- (15) The facility shall be operated so that the facility noise contribution does not exceed the project area ambient nighttime L_{EQ} (46 dBA) by five dBA result at the exterior of any currently existing nonparticipating sensitive receptor. During daytime operation only from 7:00 a.m. to 10:00 p.m., the facility may operate at the greater of: the project area ambient nighttime L_{EQ} (46 dBA) plus five dBA; or the validly measured ambient L_{EQ} plus five dBA at the location of the sensitive receptor. After commencement of commercial operation, Greenwich shall conduct further review of the impact and possible mitigation of all facility-related noise complaints through its complaint resolution process.
- (16) The facility shall be operated so that the turbine shadow flicker does not exceed 30 hours per year for any nonparticipating sensitive receptor. Applicant shall confirm with Staff that the minimization measure or mitigation has been completed for the two receptors that the model and site specific analysis showed to be in excess of 30 hours per year of shadow flicker. The analysis shall show how modeled shadow flicker impacts have been reduced to 30 or fewer hours per year for each such receptor. The analysis shall be provided to Staff at least 30 days prior to the preconstruction conference, for review and confirmation that it complies with this condition. This analysis may incorporate shadow flicker reductions from trees, vegetation, buildings, obstructions, turbine line of sight, operational hours, wind direction, sunshine probabilities, and other mitigation confirmed by Staff to be in compliance with this condition. After commencement of commercial operation, Applicant shall conduct further review of the impact and possible mitigation of all facility-related shadow flicker complaints through its complaint resolution process.
- (17) General construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Impact pile driving, hoe ram, and blasting operations, if required, shall be limited to the hours between 10:00 a.m. to 5:00 p.m., Monday through Friday. Construction activities that do not involve noise increases above ambient levels at sensitive receptors are permitted outside of daylight hours when necessary. If Applicant seeks to conduct construction activities on a temporary basis between the hours of 7:00 p.m. or from dusk when sunset occurs after 7:00 p.m. to 7:00 a.m., that will involve noise increases

above ambient levels, Applicant shall submit for Staff approval a plan that includes, but is not limited to, the following: a description of planned construction activities; the length of time for the temporary construction; noise model results for affected nonparticipating receptors; a list of affected nonparticipating receptors; a mitigation plan for nonparticipating receptors that will be impacted by noise increases above ambient levels; and a plan for noise monitoring at affected nonparticipating receptors. Applicant shall notify property owners or affected tenants within the meaning of Ohio Adm.Code 4906-5-08(C)(3) of upcoming construction activities including potential for nighttime construction activities.

- (18) Applicant shall develop a complaint resolution process that shall include procedures for responding to complaints during construction and operation of the facility. The complaint resolution process shall include procedures by which complaints can be made by the public; how complaints will be tracked by Applicant; steps that will be taken to interact with the complainant and respond to the complaint; steps that will be taken to verify the merits of the complaint; and steps that will be taken to mitigate valid complaints. Mitigation, if required, shall consist of either reducing the impact so that the facility contribution does not exceed the requirements of the certificate, or other means of mitigation reviewed by Staff for confirmation that it complies with this condition.
- (19) Greenwich shall prepare a construction and maintenance access plan based on final plans for the facility, access roads, and types of equipment to be used. At least 30 days prior to commencement of construction, Applicant shall submit the plan to Staff for review and acceptance. The plan shall consider the location of streams, wetlands, wooded areas, and sensitive plant species, as identified by the ODNR-DOW, and shall explain how impacts to all sensitive resources will be avoided or minimized during construction, operation, and maintenance. The plan shall provide specific details on all wetlands, streams, and/or ditches to be crossed by the Greenwich wind project, including those where construction or maintenance vehicles and/or project components such as access roads cannot avoid crossing the waterbody. In such cases, specific discussion of the proposed crossing methodology for each wetland and stream crossing, such as

culverts, and post-construction site restoration, will be included. The plan shall include the measures to be used for restoring the areas around all temporary access points, and a description of any long-term stabilization required along permanent access routes. The plan shall include a detailed frac-out contingency plan for stream and wetland crossings that are expected to be completed via HDD.

- (20) At least 30 days prior to commencement of construction, Applicant shall submit the plan for vegetation clearing to Staff, for review and confirmation that it complies with this condition. The plan shall identify all areas of proposed vegetation clearing for the facility, specify the extent of clearing and describe how clearing will be done so as to minimize removal of woody vegetation, and describe how trees and shrubs along access roads at construction staging areas, during maintenance operations, and in proximity to any other facilities would be protected from damage.
- (21) For both construction and maintenance, Greenwich shall limit, to the greatest extent possible, the use of herbicides in proximity to surface waters. Individual treatment of tall growing woody plant species is preferred, while general, widespread use of herbicides during initial clearing or maintenance should only be used where no other options exist, and with prior approval from the Ohio EPA. Prior to commencement of construction, Applicant shall submit a plan to Staff for review and confirmation that it complies with this condition, describing the planned herbicide use for all areas in or near any surface waters during initial project construction and/or maintenance.
- (22) Applicant shall have a Staff-approved environmental specialist on site during construction activities that may affect sensitive areas, as mutually agreed upon between Applicant and Staff, and as shown on Applicant's final approved construction plan. Sensitive areas include, but are not limited to, areas of vegetation clearing, designated wetlands and streams, and locations of threatened or endangered species or their identified habitat. The environmental specialist shall be familiar with water quality protection issues and potential threatened or endangered species of plants and animals that may be encountered during project construction.

- (23) Greenwich shall contact Staff, ODNR, and the USFWS within 24 hours if state or federal listed species are encountered during construction activities. Construction activities that could adversely impact the identified plants or animals shall be halted until an appropriate course of action has been agreed upon by Applicant, Staff, and ODNR in coordination with the USFWS. Nothing in this condition shall preclude agencies having jurisdiction over the facility with respect to wildlife from exercising their legal authority over the facility consistent with applicable law.
- (24) Construction in northern harrier preferred habitat types shall be avoided during the species' nesting period of May 15 to August 1.
- (25) Applicant shall adhere to seasonal cutting dates of October 1 through March 31 to avoid clearing of habitat when breeding birds would be present and during bat maternity season.
- (26) Turbine blades shall be feathered, i.e., remain stationary or nearly stationary, at least until the manufacturer-set cut-in speed is reached, as a measure to minimize bat strikes at operating turbines.
- (27) Applicant shall consult with DOW to determine which streams in the project area could provide suitable habitat for mussels and follow DOW recommendations to minimize impacts to streams as it relates to mussels. If common or state-listed mussels are located during construction activities, DOW will be immediately consulted for further action.
- (28) Sixty days prior to the first turbine becoming commercially operational, Greenwich shall submit a post-construction avian and bat monitoring plan for DOW and Staff review and acceptance. Applicant shall also provide the monitoring plan to and seek confirmation from the USFWS. Applicant's plan shall be consistent with ODNR approved, standardized protocol, as outlined in ODNR's On-Shore Bird and Bat Pre- and Post-Construction Monitoring Protocol for Commercial Wind Energy Facilities in Ohio. Applicant shall obtain the necessary permits from ODNR and USFWS to collect bat and migratory bird carcasses. The post-construction monitoring shall begin within two weeks of operation and be conducted for a minimum of two

seasons (April 1 to November 15), which may be split between calendar years. If monitoring is initiated after April 1 and before November 15, then portions of the first season of monitoring will extend into the second calendar year (e.g., start monitoring on July 1 and continue to November 15; resume monitoring April 1 and continue to June 30). Applicant may request that the second monitoring season be waived at the discretion of ODNR and Staff. The monitoring start date and reporting deadlines shall be provided in the DOW approval letter and the Board concurrence letter. If it is determined that significant mortality, as defined in ODNR's approved, standardized protocols, has occurred to birds and/or bats, DOW and Staff will require Applicant to develop a mitigation plan. If required, Applicant shall submit a mitigation plan to the DOW and Staff for review and approval within 30 days from the date reflected on ODNR letterhead, in coordination with Staff, in which the DOW is requiring Applicant to mitigate for significant mortality to birds and/or bats. Mitigation initiation timeframes will be outlined in the DOW approval letter and the Board concurrence letter.

- (29) At least 60 days prior to the first turbine becoming operational, Greenwich shall obtain a technical assistance letter from the USFWS. The technical assistance letter shall include feathering of turbines during low wind speed conditions at night during migratory seasons. This documentation shall be reviewed by Staff to confirm compliance with this condition.
- (30) Applicant shall complete a full detailed geotechnical exploration and evaluation at each turbine site to confirm that there are no issues to preclude development of the wind facility. The geotechnical exploration and evaluation shall include borings at each turbine location to provide subsurface soil properties, static water level, rock quality description, percent recovery, and depth and description of the bedrock contact and recommendations needed for the final design and construction of each wind turbine foundation, as well as the final location of the transformer substation and interconnection substation. Applicant must fill all boreholes, and borehole abandonment must comply with state and local regulations. Applicant shall provide copies of all geotechnical boring logs to Staff and to the ODNR-GS prior to construction.

- (31) Greenwich shall adhere to a setback distance of at least 1.1 times the total height of the turbine structure, as measured from its tower's base, excluding the subsurface foundation, to the tip of its highest blade, from any gas or hazardous liquid pipeline in the ground at the time of commencement of construction.
- (32) Applicant shall comply with the turbine manufacturer's most current safety manual and shall maintain a copy of that safety manual in the O&M building of the facility.
- (33) At least 30 days before the preconstruction conference, Applicant shall submit to Staff for review and confirmation that it complies with this condition, a proposed emergency and safety plan to be used during construction, to be developed in consultation with the fire department(s) having jurisdiction over the area.
- (34) Before the first turbine is operational, Greenwich shall submit to Staff for review and confirmation that it complies with this condition, a fire protection and medical emergency plan to be used during operation of the facility, which shall be developed in consultation with the first responders having jurisdiction over the area.
- (35) Applicant shall instruct workers on the potential hazards of ice conditions on wind turbines and install and utilize an ice warning system that may include an ice detector installed on the roof of the nacelle, manufacturer warranted ice detection software for the wind turbine controller, or an ice sensor alarm that triggers an automatic shutdown.
- (36) Within six months of commencement of operation of the facility, Applicant shall register the as-built locations of all underground collection lines with the Ohio Utilities Protection Service. Applicant shall also register with the Ohio Oil and Gas Producers Underground Protection Service, if it operates in the project area. Confirmation of registration(s) shall be provided to Staff.
- (37) Should site-specific conditions warrant blasting, Applicant shall submit a blasting plan, at least 60 days prior to blasting, to Staff for review and confirmation that it complies with this condition. Applicant shall submit the following information as part of its blasting plan:

- (a) The name, address, and telephone number of the drilling and blasting company.
 - (b) A detailed blasting plan for dry and/or wet holes for a typical shot. The blasting plan shall address blasting times, blasting signs, warnings, access control, control of adverse effects, and blast records.
 - (c) A plan for liability protection and complaint resolution.
- (38) The blasting contractor shall utilize two blasting seismographs that measure ground vibration and air blast for each blast. One seismograph shall be placed at the nearest dwelling and the other placed at the discretion of the blasting contractor.
- (39) At least 30 days prior to the initiation of blasting operations, Applicant must notify, in writing, all residents or owners of dwellings or other structures within 1,000 feet of the blasting site. Applicant or the explosive contractor shall offer and conduct a preblast survey of each dwelling or structure within 1,000 feet of each blasting site, unless waived by the resident or property owner. The survey must be completed and submitted to Staff at least 10 days before blasting begins.
- (40) Prior to the use of explosives, Applicant or the explosive contractor shall obtain all required local, state, and federal licenses/permits. Applicant shall submit a copy of the license or permit to Staff within seven days of obtaining it from the local authority.
- (41) Applicant shall monitor the microwave paths to ensure there are no adverse impacts. At least 30 days prior to the preconstruction conference, Applicant shall conduct a microwave path study that identifies all existing microwave paths that intersect the selected route, and a worst-case Fresnel zone analysis for each path. A copy of this study shall be provided to the path licensee(s), for review, and to Staff for review and confirmation that Applicant is complying with this condition. The assessment shall conform to the following requirements:

- (a) An independent and registered surveyor, licensed to survey within the state of Ohio, shall determine the exact locations of the termini and worst-case Fresnel zone dimensions of all known microwave paths or systems operating within the project area, including all paths and systems identified by the electric service providers that operate within the project area. In addition, the surveyor shall determine the center point of all turbines within 1,000 feet of the worst-case Fresnel zone of each system. The surveyor may rely on Comsearch data for the microwave paths.
 - (b) Provide the distance in feet between the nearest rotor blade tip of each surveyed turbine identified within section (a) above and the surveyed worst-case Fresnel zone of each microwave system path.
 - (c) Provide a map of the microwave paths, center points, and boundaries at a legible scale.
 - (d) Describe the specific, expected impacts of the project on all paths and systems considered in the assessment.
- (42) All existing licensed microwave paths, Doppler weather radar systems, and licensed communication systems shall be subject to avoidance or mitigation. Applicant shall complete avoidance or mitigation measures prior to commencement of construction for impacts that can be predicted in sufficient detail to implement appropriate and reasonable avoidance and mitigation measures. After construction, Applicant shall mitigate all observed impacts of the project to microwave paths, Doppler weather radar systems, and licensed communication systems within seven days or within a longer time period acceptable to Staff. Avoidance and mitigation for any known point-to-point microwave paths, Doppler weather radar systems, and licensed communication systems shall consist of measures acceptable to Staff, Applicant, and the affected path owner, operator, or licensee. If interference with an omni-directional or multi-point system is observed after

construction, mitigation would be required only for affected receptors.

- (43) Prior to commencement of construction activities that require transportation permits, Applicant shall obtain all such permits. Applicant shall coordinate with the appropriate authority regarding any temporary or permanent road closures, lane closures, road access restrictions, and traffic control necessary for construction and operation of the proposed facility. Coordination shall include, but not be limited to, the county engineer, ODOT, local law enforcement, and health and safety officials. This coordination shall be detailed as part of a final traffic plan submitted to Staff prior to the preconstruction conference for review and confirmation that it complies with this condition.
- (44) Applicant shall provide the final delivery route plan and the results of any traffic studies to Staff and the county engineer 30 days prior to the preconstruction conference. Applicant shall complete a study on the final equipment delivery route to determine what improvements will be needed in order to transport equipment to the wind turbine construction sites. Applicant shall make all improvements outlined in the final delivery route plan prior to equipment and wind turbine delivery. Applicant's delivery route plan and subsequent road modifications shall include, but not be limited to, the following:
 - (a) Perform a survey of the final delivery routes to determine the exact locations of vertical constraints where the roadway profile will exceed the allowable bump and dip specifications and outline steps to remedy vertical constraints.
 - (b) Identify locations along the final delivery routes where overhead utility lines may not be high enough for over-height permit loads and coordinate with the appropriate utility company if lines must be raised.
 - (c) Identify roads and bridges which are not able to support the projected loads from delivery of the wind turbines and other facility components and make all necessary upgrades.

- (d) Identify locations where wide turns would require modifications to the roadway and/or surrounding areas and make all necessary alterations. Any alterations for wide turns shall be removed and the area restored to its preconstruction condition unless otherwise specified by the County Engineer(s).
- (45) Applicant shall repair damage to government-maintained, public roads and bridges caused by construction or maintenance activity. Any damaged public roads and bridges shall be repaired promptly to their previous condition by Applicant under the guidance of the appropriate regulatory agency. Any temporary improvements shall be removed unless the county engineer requests that they remain. Applicant shall provide financial assurance to the counties that it will restore the public roads it uses to their condition prior to construction or maintenance. Applicant shall also enter into an RUA with the county engineer prior to construction and subject to Staff review and confirmation that it complies with this condition. The RUA shall contain provisions for the following:
- (a) A preconstruction survey of the conditions of the roads.
 - (b) A post-construction survey of the condition of the roads.
 - (c) An objective standard of repair that obligates the Applicant to restore the roads to the same or better condition as they were prior to construction.
 - (d) A timetable for posting of the construction road and bridge bond prior to the use or transport of heavy equipment on public roads or bridges.
- (46) The facility owner and/or operator shall repair damage to government-maintained, public roads and bridges caused by decommissioning activity. Any damaged public roads and bridges shall be repaired promptly to their predecommissioning state by the facility owner and/or operator under the guidance of the appropriate regulatory agency. Applicant shall provide

financial assurance to the counties that it will restore the public roads and bridges it uses to their pre-decommissioning condition. These terms shall be defined in an RUA between Applicant and the county engineer prior to construction. The RUA shall be subject to Staff review and confirmation that it complies with this condition, and shall contain provisions for the following:

- (a) A predecommissioning survey of the condition of public roads and bridges conducted within a reasonable time prior to decommissioning activities.
 - (b) A post-decommissioning survey of the condition of public roads and bridges conducted within a reasonable time after decommissioning activities.
 - (c) An objective standard of repair that obligates the facility owner and/or operator to restore the public roads and bridges to the same or better condition as they were prior to decommissioning.
 - (d) A timetable for posting of the decommissioning road and bridge bond prior to the use or transport of heavy equipment on public roads or bridges.
- (47) Applicant, facility owner, and/or facility operator shall comply with the following conditions regarding decommissioning:
- (a) Applicant, facility owner, and/or facility operator shall provide the final decommissioning plan to Staff and the county engineer for review and confirmation of compliance with this condition, at least 30 days prior to the preconstruction conference. The plan shall:
 - (i) Indicate the intended future use of the land following reclamation.
 - (ii) Describe the following: engineering techniques and major equipment to be used in decommissioning and reclamation; a surface water drainage plan and any proposed impacts that would occur to surface and ground

water resources and wetlands; and a plan for backfilling, soil stabilization, compacting, and grading.

- (iii) Provide a detailed timetable for the accomplishment of each major step in the decommissioning plan, including the steps to be taken to comply with applicable air, water, and solid waste laws and regulations and any applicable health and safety standards in effect as of the date of submittal.
- (b) Applicant, facility owner and/or facility operator shall file a revised decommissioning plan to the Staff and the county engineer every 5 years from the commencement of construction. The revised plan shall reflect advancements in engineering techniques and reclamation equipment and standards. The revised plan shall be applied to each five-year decommissioning cost estimate. Prior to implementation, the decommissioning plan and any revisions shall be reviewed by Staff to confirm compliance with this condition.
- (c) Applicant, facility owner and/or facility operator shall, at its expense, complete decommissioning of the facility, or individual wind turbines, within 12 months after the end of the useful life of the facility or individual wind turbines. If no electricity is generated for a continuous period of 12 months (assuming no force majeure or impediment beyond the facility owner's and/or facility operator's control) and no payments have been made to landowners during the 12-month period, or if the Board deems the facility or turbine to be in a state of disrepair warranting decommissioning, and the facility owner and/or operator is unable to reasonably restore the facility or specified individual turbine(s) to a normal state of operation, the wind energy facility or individual wind turbines will be presumed to have reached the end of its useful life. The Board may extend the useful life period for the wind energy facility or individual

turbines for good cause as shown by the facility owner and/or facility operator. After notice and hearing, the Board may also require decommissioning of individual wind turbines due to health, safety, wildlife impact, or other concerns based on scientifically verifiable information that prevent the turbine from operating within the terms of the certificate and that Applicant, facility owner and/or facility operator have been unable to correct within a reasonable period, not to exceed three months.

- (d) Decommissioning shall include the removal and transportation of the wind turbines off site. Unless otherwise mutually agreed upon by Applicant, facility owner and/or facility operator and the landowner, decommissioning shall also include the removal of:
 - (i) Buildings, cabling, electrical components, access roads, and any other associated facilities; and
 - (ii) All physical material pertaining to the facility and associated equipment shall be removed to a depth of at least 36 inches beneath the soil surface and transported off site. The disturbed area shall be restored to the same physical condition that existed before erection of the facility. Damaged field tile systems shall be repaired to the satisfaction of the property owner.
- (e) During decommissioning, all recyclable materials, salvaged and nonsalvaged, shall be recycled to the furthest extent practicable. All other nonrecyclable waste materials shall be disposed of in accordance with state and federal law.
- (f) The facility owner and/or facility operator shall not remove any improvements made to the electrical infrastructure if doing so would disrupt the electric grid, unless otherwise approved by the applicable

regional transmission organization and interconnection utility.

- (g) Subject to confirmation of compliance with this condition by Staff, and seven days prior to the preconstruction conference, an independent, registered professional engineer, licensed to practice engineering in the state of Ohio, shall be retained by Applicant, facility owner, and/or facility operator to estimate the total cost of decommissioning in current dollars, without regard to salvage value of the equipment. Said estimate shall include: an identification and analysis of the activities necessary to implement the most recent approved decommissioning plan including, but not limited to, physical construction and demolition costs assuming good industry practice and based on ODOT's Procedure for Budget Estimating and RS Means material and labor cost indices or any other publication or guidelines approved by Staff; the cost to perform each of the activities; an amount to cover contingency costs, not to exceed 10 percent of the above-calculated reclamation cost. Said estimate will be converted to a per-turbine basis (the "Decommissioning Costs"), calculated as the total cost of decommissioning of all facilities as estimated by the professional engineer divided by the number of turbines in the most recent facility engineering drawings. This estimate shall be conducted every five years by the facility owner and/or facility operator.
- (h) Applicant, facility owner and/or facility operator shall post and maintain for decommissioning, at its election, funds, a surety bond, or similar financial assurance in an amount equal to the per-turbine Decommissioning Costs multiplied by the sum of the number of turbines constructed and under construction. The funds, surety bond, or financial assurance need not be posted separately for each turbine so long as the total amount reflects the aggregate of the Decommissioning Costs for all turbines constructed or under construction. For purposes of this condition, a turbine is considered to be under construction at the commencement of

excavation for the turbine foundation. The form of financial assurance or surety bond shall be a financial instrument mutually agreed upon by the Board and Applicant, the facility owner, and/or the facility operator. The financial assurance shall ensure the faithful performance of all requirements and reclamation conditions of the most recently filed and approved decommissioning and reclamation plan. At least 30 days prior to the preconstruction conference, Applicant, the facility owner, and/or the facility operator shall provide an estimated timeline for the posting of decommissioning funds based on the construction schedule for each turbine. Prior to commencement of construction of each individual turbine, Applicant, the facility owner, and/or the facility operator shall provide a statement from the holder of the financial assurance demonstrating that adequate funds have been posted for the scheduled construction of each individual turbine. Once the financial assurance is provided, Applicant, facility owner and/or facility operator shall maintain such funds or assurance throughout the remainder of the applicable term and shall adjust the amount of the assurance, if necessary, to offset any increase or decrease in the Decommissioning Costs.

- (i) The decommissioning funds, surety bond, or financial assurance shall be released by the holder of the funds, bond, or financial assurance when Applicant, facility owner and/or facility operator has demonstrated, and the Board concurs, that decommissioning has been satisfactorily completed, or upon written approval of the Board, in order to implement the decommissioning plan.
- (48) At least seven days before the preconstruction conference, Applicant shall submit to Staff, for review and acceptance, a copy of all NPDES permits including its approved SWPPP, approved Spill Prevention, Containment, and Countermeasure procedures, and its erosion and sediment control plan. Any soil issues must be addressed through proper design and adherence to the Ohio

EPA best management practices related to erosion and sedimentation control.

- (49) Applicant shall meet all recommended and prescribed FAA and ODOT-OA requirements to construct an object that may affect navigable airspace. This includes submitting coordinates and heights for all towers exceeding 200 feet above ground level for ODOT-OA and FAA review prior to construction, and the nonpenetration of any FAA Part 77 surfaces.
- (50) All applicable structures, including construction equipment, shall be lit in accordance with FAA circular 70/7460-1 K Change 2, Obstruction Marking and Lighting; or as otherwise prescribed by the FAA. This includes all cranes and construction equipment.
- (51) Applicant shall remove all temporary gravel and other construction staging area and access road materials after completion of construction activities, as weather permits, unless otherwise directed by the landowner. Impacted areas shall be restored to preconstruction conditions in compliance with the NPDES permit(s) obtained for the project and the approved SWPPP created for this project.
- (52) Applicant shall not dispose of gravel or any other construction material during or following construction of the facility by spreading such material on agricultural land. All construction debris and all contaminated soil shall be promptly removed and properly disposed of in accordance with Ohio EPA regulations.
- (53) Applicant shall comply with fugitive dust rules by the use of water spray or other appropriate dust suppressant measures whenever necessary.

(Joint Ex. 1 at 2-15.)

VI. CONCLUSION

Ohio Adm.Code 4906-7-09 authorizes parties to Board proceedings to enter into stipulations concerning issues of fact. Although not binding on the Board, pursuant to Ohio Adm.Code 4906-7-09(C), the terms of such an agreement are accorded substantial weight. The standard of review for considering the reasonableness of a stipulation has been discussed in a number of prior Board proceedings. *See, e.g., In re Northwest Ohio Wind Energy, LLC*, Case No. 13-197-EL-BGN (Dec. 16, 2013); *In re American Transm. Systems*

Inc., Case No. 12-1727-EL-BSB (Mar. 11, 2013); *In re Rolling Hills Generating, LLC*, Case No. 12-1669-EL-BGA (May 1, 2013); *In re AEP Transm. Co., Inc.*, Case No. 12-1361-EL-BSB (Sept. 13, 2013); *In re Hardin Wind LLC*, Case No. 13-1177-EL-BGN (Mar. 17, 2014). The ultimate issue for the Board's consideration is whether the stipulation, which embodies considerable time and effort by the signatory parties, is reasonable and should be adopted. In considering the reasonableness of a stipulation, the Board has used the following criteria:

- (1) Is the settlement a product of serious bargaining among capable, knowledgeable parties?
- (2) Does the settlement, as a package, benefit ratepayers and the public interest?
- (3) Does the settlement package violate any important regulatory principle or practice?

In the Stipulation, the Signatory Parties agree and recommend that the Board issue a certificate for construction, operation, and maintenance of the wind generation facility, as described in the application, as modified and/or clarified in supplemental filings, subject to the provisions of the Stipulation. The Signatory Parties also aver that the Stipulation is the product of serious bargaining among capable and knowledgeable parties which are represented by counsel and technical consultants. Ms. Jensen, Vice President of Development for Windlab testified that the Stipulation includes refinements to the conditions initially recommended in the Staff Report which will better serve the public and improve the wind project. (Joint Ex. 1 at 2; Co. Ex. 5 at 1-4, 23.)

The Board finds that the Stipulation appears to be the product of serious bargaining among capable, knowledgeable parties. The Board notes that all the parties to the proceeding are signatories of the Stipulation. We further recognize that counsel for each of the parties has participated in several other Board proceedings and is, therefore, familiar with Board proceedings and certificate requirements. Consequently, the Board finds that, based upon the record, the first prong is satisfied.

Greenwich and Staff contend that the Stipulation, as a package, benefits the public interest. Both Ms. Jensen and Mr. Zeto testified that the Greenwich Wind facility would provide economic benefits to the community, in the form of landowner lease payments, increased tax revenue and wages during construction and operation of the facility (Evidentiary Tr. at 23-24, 28; Co. Ex. 5 at 3-4). Further, Ms. Jensen offered that the project supports the electric needs of Ohio (Evidentiary Tr. at 19).

The Board notes that the concerns regarding local traffic, road closures, and damage to and repair of local roads as a result of construction and decommissioning of the

proposed project are thoroughly addressed by the conditions agreed to in the Stipulation. Specifically, the Board recognizes that the Stipulation requires Greenwich to acquire all necessary transportation permits, coordinate with appropriate local officials any road or lane closures, to evaluate and improve, as necessary, the public roads and bridges along the equipment delivery route and to repair any damage to public roads and bridges caused by the construction, maintenance, and/or the decommissioning of the Greenwich wind facility. Further, road closures will be coordinated with county officials and the community will be provided reasonable notice. (Evidentiary Tr. at 20-21, 26-27; Joint Ex. 1 at 10-12.)

Upon review, the Board finds that, as a package, the Stipulation benefits the public interest by resolving the issues raised on the record in this matter. We find that, based on the evidence of record, the proposed project will generate clean electric energy, increase tax revenue for schools and local government, and create construction and manufacturing jobs in the Greenwich community.

The Signatory Parties agree that the Stipulation does not violate any important regulatory principle or practice. Similarly, Staff witness Zeto testified that the Stipulation does not violate any important regulatory principle or practice (Joint Ex. 1 at 1; Evidentiary Tr. at 29). Upon review, the Board finds that the Stipulation does not violate any important regulatory principle or practice. Moreover, the conditions contained within the Stipulation adequately address all statutory requirements for such projects.

Based upon the record in this proceeding, the Board finds that all of the criteria established in R.C. Chapter 4906 are satisfied for the construction, operation, and maintenance of the wind-powered electric generation facility, as described in Greenwich's application, as supplemented, subject to the conditions set forth in the Stipulation and this Opinion, Order, and Certificate. Accordingly, based upon all of the above, the Board approves and adopts the Stipulation and hereby issues a certificate to Greenwich in accordance with R.C. Chapter 4906.

FINDINGS OF FACT AND CONCLUSIONS OF LAW:

- (1) Greenwich is a corporation and a person under R.C. 4906.01(A).
- (2) The proposed Greenwich project is a wind-powered electric generation facility and a major utility facility under R.C. 4906.01(B)(1).
- (3) On April 19, 2013, Greenwich filed its preapplication notice. On May 28, 2013, Greenwich filed its proof of publication of the informational public meeting held on May 22, 2013. Notice of

the informational public meeting was published in the *Norwalk Reflector* on May 9, 2013, and in the *Greenwich Enterprise Review* on May 14, 2013.

- (4) On April 19, 2013, Greenwich filed a motion for waivers of four provisions contained in Ohio Adm.Code 4906-17-04 and 4906-17-05. By Entry issued June 17, 2013, the ALJ granted Greenwich's request for waiver of: Ohio Adm.Code 4906-17-04(A), regarding the extensive site selection study; Ohio Adm.Code 4906-17-05(A)(3)(g), the requirement that Greenwich provide a map showing the vegetative cover to be removed during construction; Ohio Adm.Code 4906-17-05(A)(4), requiring Greenwich to provide maps and certain cross-sectional views and locations of test borings; and Ohio Adm.Code 4906-17-05(B)(2)(h), the requirement to provide a description of the grade elevation around the turbine pedestals and a map showing modifications in grade elevations modified during construction.
- (5) On November 15, 2013, as amended on December 9, 2013, Applicant filed the agricultural district land maps.
- (6) Commencing on December 23, 2013, and continuing through December 27, 2013, Greenwich filed its application for a certificate to site a wind-powered electric generation facility in Greenwich Township, Huron County, Ohio.
- (7) On February 19, 2014, the Board notified Greenwich that its application had been found to be complete.
- (8) Greenwich served copies of the application upon local government officials and filed proof of service of the application on February 21, 2014.
- (9) Greenwich filed its notice of the proposed project on property owners, affected tenants, and adjacent property owners, pursuant to Ohio Adm.Code 4906-05-08(C)(3) on March 13, 2014.
- (10) On January 9, 2014, the Farm Federation filed a motion to intervene, which was granted by Entry issued March 10, 2014. On August 21, 2014, Omega made a late-filed request to intervene. Omega's request for intervention should be denied.

- (11) By Entry issued March 10, 2014, local public and evidentiary hearings were scheduled in this matter.
- (12) On April 18, 2014, Staff filed its report of investigation of Greenwich's application.
- (13) The local public hearing was held on May 6, 2014, at South Central High School, in Greenwich, Ohio.
- (14) On May 16, 2014, Greenwich, Staff, and the Farm Federation filed a Stipulation.
- (15) The evidentiary hearing was held on May 19, 2014.
- (16) On March 25, and May 12, 2014, pursuant to Ohio Adm.Code 4906-5-09, Greenwich filed its proofs of publication of the hearings.
- (17) Adequate data on the Greenwich wind-powered electric generation facility has been provided to make the applicable determinations required by R.C. Chapter 4906 and the record evidence in this matter provides sufficient factual data to enable the Board to make an informed decision.
- (18) Greenwich's application, as amended and supplemented, complies with the requirements of Ohio Adm.Code Chapter 4906-17.
- (19) The record establishes that the basis of need, under R.C. 4906.10(A)(1), is not applicable.
- (20) The record establishes that the nature of the probable environmental impact of the facility has been determined and it complies with the requirements in R.C. 4906.10(A)(2), subject to the conditions set forth in the Stipulation.
- (21) The record establishes that the proposed facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations under R.C. 4906.10(A)(3), subject to the conditions set forth in the Stipulation.

- (22) The record establishes that the facility is consistent with regional plans for expansion of the electric power grid and will serve the interests of electric system economy and reliability, under R.C. 4906.10(A)(4), subject to the conditions set forth in the Stipulation.
- (23) The record establishes, as required by R.C. 4906.10(A)(5), that the facility will comply with R.C. Chapters 3704, 3734, and 6111, and R.C. 1501.33 and 1501.34, and all rules and standards adopted under these chapters and under R.C. 4561.32.
- (24) The record establishes that the facility will serve the public interest, convenience, and necessity, as required under R.C. 4906.10(A)(6).
- (25) The record establishes that the facility will not impact the viability of any land in an existing agricultural district, under R.C. 4906.10(A)(7).
- (26) The record establishes that the facility will comply with water conservation practice under R.C. 4906.10(A)(8).
- (27) Based on the record, the Board finds that Greenwich's application should be approved and a certificate should be issued, pursuant to R.C. Chapter 4906, for construction, operation, and maintenance of the Greenwich wind-powered electric generation facility, subject to the conditions set forth in the Stipulation.

ORDER:

It is, therefore,

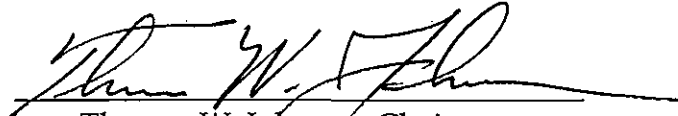
ORDERED, That Omega's late-filed motion to intervene be denied. It is, further,

ORDERED, That the Stipulation be approved and adopted. It is, further,

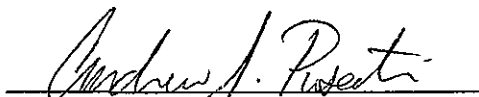
ORDERED, That a certificate be issued to Greenwich for the construction, operation, and maintenance of the wind-powered electric generation facility, subject to the conditions set forth in the Stipulation and this Order. It is, further,

ORDERED, That a copy of this Opinion, Order, and Certificate be served upon each party of record and all other interested persons of record.

THE OHIO POWER SITING BOARD



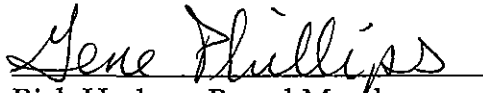
Thomas W. Johnson, Chairman
Public Utilities Commission of Ohio



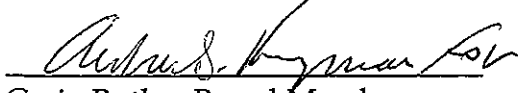
David Goodman, Board Member
and Director of the Ohio
Development Services Agency



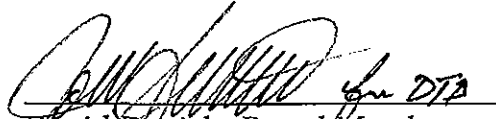
James Zehringer, Board Member
and Director of the Ohio
Department of Natural Resources



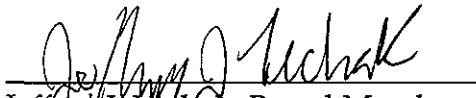
Rick Hodges, Board Member
and Director of the Ohio
Department of Health



Craig Butler, Board Member
and Director of the Ohio
Environmental Protection Agency



David Daniels, Board Member
and Director of the Ohio
Department of Agriculture



Jeffrey J. Lechak, Board Member
and Public Member

GNS/dah

Entered in the Journal

AUG 25 2014



Barcy F. McNeal
Secretary