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(161)

IN THE SUPREME COURT OF OHIO

In the Matter of the Application of Champaign Wind, LLC, for a Certificate to Construct a Wind-Powered Electric Generating Facility in Champaign County, Ohio	**Case No. 13-1874**
	On Appeal from the Ohio Power Siting Board, Case No. 12-160-EL-BGN

NOTICE OF APPEAL OF APPELLANTS CHAMPAIGN COUNTY AND GOSHEN, UNION AND URBANA TOWNSHIPS

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Appellants Champaign County and Goshen, Union and Urbana Townships (collectively "Appellants County and Townships") hereby give notice of their appeal, pursuant to R.C. §4906.12, R.C. §4903.11, and R.C. §4903.13, to the Ohio Supreme Court from the following attached orders of the Ohio Power Siting Board ("Board") in Case No. 12-0160-EL-BGN ("Project"): (1) Opinion, Order and Certificate entered on May 28, 2013; and (2) Entry on Rehearing entered on September 30, 2013 (hereinafter also referred to collectively as "Orders").

Appellants County and Townships are and were parties of record in Case No. 12-0160-EL-BGN and timely filed their Application for Rehearing of the Board's Opinion, Order and Certificate of May 28, 2013 pursuant to R.C. §4903.10. Appellant's Application for Rehearing was denied with respect to the issues on appeal herein, by entry entered September 30, 2013. The Orders are unlawful and unreasonable in the following respects:

The Board erred in failing to ensure the Project will serve the "public interest, convenience and necessity" as required by R.C. §4906.10(a)(6) as follows:

A. **The Ohio Power Siting Board erred in failing to require Applicant to post financial assurance for decommissioning the Project in an amount sufficient to cover the total decommissioning costs. There was no evidence presented at hearing nor any rationale presented by the Administrative Law Judge to demonstrate that the Board's decision to allow Applicant to provide financial assurance on a per turbine basis would adequately covers the costs of decommissioning. As such, the Ohio Power Siting Board's Orders are unsupported by the record and, therefore, unreasonable and unlawful.**

B. **The Ohio Power Siting Board erred in failing to include as a condition the requirement that setbacks from the turbines to non-participating landowners' property lines conform to the manufacturer's setback recommendation if in excess of the minimum setback provided by rule. Therefore, the Orders are unreasonable and unlawful.**

C **The Ohio Power Siting Board erred in failing to conduct its proceedings to afford the parties "due process" in its hearings as the Appellants**

County and Townships had no meaningful ability to cross-examine "experts" regarding parts of the Application, and, therefore, the Orders are unreasonable and unlawful.

Accordingly, Appellants County and Townships submit that the Orders of May 28, 2013 and September 30, 2013 are unlawful and unreasonable and should be reversed. This Honorable Court should remand the Orders to the Ohio Power Siting Board with instructions to correct the errors identified herein.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that, on November 26, 2013 a copy of the foregoing Notice of Appeal was served upon the Chairman of the Public Utilities Commission and the Ohio Power Siting Board, by leaving a copy at his office at 180 East Broad Street, Columbus, OH 43215, and upon the following counsel and parties of record by electronic mail:

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CERTIFICATE OF FILING

I hereby certify that, on November 26, 2013 a copy of the foregoing Notice of Appeal was filed with the Docketing Division of the Public Utilities Commission and the Ohio Power Siting Board, by leaving a copy at his office at 180 East Broad Street, Columbus, OH 43215.

Jane A. Napier (0061426)
Assistant Prosecuting Attorney

BEFORE

THE OHIO POWER SITING BOARD

In the Matter of the Application of Champaign Wind, LLC, for a Certificate to Construct a Wind-Powered Electric Generating Facility in Champaign County, Ohio.	)))))	Case No. 12-160-EL-BGN

ENTRY ON REHEARING

The Board finds:

(1) On May 15, 2012, Champaign Wind, LLC (Champaign or Applicant), filed, with the Ohio Power Siting Board (Board), an application pursuant to the provisions of Chapter 4906-17, Ohio Administrative Code (O.A.C.), for a certificate to construct a wind-powered electric generation facility in Champaign County, Ohio.

(2) On May 28, 2013, the Board issued its opinion, order, and certificate approving the application, with modifications, and ordering that a certificate be issued, subject to 72 conditions set forth in the opinion, order, and certificate.

(3) Section 4906.12, Revised Code, states, in pertinent part, that Sections 4903.02 to 4903.16 and 4903.20 to 4903.23, Revised Code, apply to a proceeding or order of the Board as if the Board were the Public Utilities Commission of Ohio (Commission).

(4) Section 4903.10, Revised Code, provides that any party who has entered an appearance in a Commission proceeding may apply for rehearing with respect to any matters determined by the Commission within 30 days after the entry of the order upon the journal of the Commission.

(5) Rule 4906-7-17(D), O.A.C., states, in relevant part, that any party or affected person may file an application for rehearing within 30 days after the issuance of a Board order in the manner and form and circumstances set forth in Section 4903.10, Revised Code.

(6) On June 27, 2013, timely applications for rehearing of the May 28, 2013, opinion, order, and certificate were filed by Diane McConnell, Robert McConnell, Julia Johnson, and Union Neighbors United, Inc. (collectively, UNU), and the Board of Commissioners of Champaign County, Ohio, with the Boards of Trustees of the Townships of Union, Urbana, and Goshen (collectively, County/Townships).

(7) By entry issued July 25, 2013, in accordance with Rule 4906-7-17(I), O.A.C., the administrative law judge (ALJ) granted the timely applications for rehearing filed by UNU and the County/Townships solely for the purpose of affording the Board additional time to consider the issues raised in these applications for rehearing.

(8) The Board has reviewed and considered all of the arguments on rehearing. Any arguments on rehearing not specifically addressed herein have been thoroughly and adequately considered by the Board and are being denied. In considering the arguments raised, the Board will address the merits of the assignments of error by party and in the order in which they were addressed in the opinion, order, and certificate.

The City of Urbana's Filing

(9) The Board notes that the city of Urbana (Urbana) filed a document purporting to be an application for rehearing on June 28, 2013.

(10) Thereafter, on July 8, 2013, Champaign filed a motion to strike the document filed by Urbana, noting that the purported application for rehearing was filed 31 days after the issuance of the Board's opinion, order, and certificate. Consequently, Champaign argues that the Board has no jurisdiction to entertain an application for rehearing that is filed subsequent to the statutory deadline, citing *Dover v. Pub. Util. Comm. of Ohio*, 126 Ohio St. 438, 185 N.E. 833 (1933), *Pollitz v. Pub. Util. Comm. of Ohio*, 98 Ohio St. 445, 121 N.E. 902 (1918). (Co. Motion to Strike at 3-4.)

(11) On July 11, 2013, Urbana filed a response to Champaign's motion to strike. In its response, Urbana initially argues that

the deadline for applications for rehearing was July 1, 2013, and not June 27, 2013. In support, Urbana cites Rule 4901-1-07, O.A.C., which provides that three days shall be added to a prescribed period of time where service is made by mail. Urbana argues that this rule requires that three days be added to the statutory 30-day rehearing period set forth in Section 4903.10, Revised Code. In the alternative, Urbana argues that any delay in filing its application for rehearing was excusable because: no service by hand delivery was made on Urbana on May 28, 2013, despite the fact that Board Staff member Matt Butler indicated a press release would be issued later in the day; the order was not electronically filed in the Board's docket until 3:55 p.m. on May 28, 2013, which was only five minutes before the close of Urbana's business day; the service notice was not docketed until 4:48 p.m., when Urbana's offices were closed, and was not served upon Staff Attorney Breanne Parcels, despite her designation as trial attorney, in accordance with Rule 4906-7-11, O.A.C.; Urbana was not served with the order via email; and Urbana was not served with a hard copy by mail until May 30, 2013. (Urbana Response at 2-3.)

(12) On July 15, 2013, Champaign filed a reply to Urbana's response. In its reply, Champaign reiterates that the Board cannot exercise jurisdiction over an application for rehearing unless the appeal has been perfected in accordance with the statute. Champaign adds that nothing within Section 4903.10, Revised Code, permits an application for rehearing to be filed within 30 days of the *service* of the order (emphasis added). (Co. Response at 1-2.)

(13) Section 4906.12, Revised Code, notes that certain sections, including Section 4903.10, Revised Code, shall apply to any proceeding or order of the Board under Chapter 4906. Section 4903.10, Revised Code, explicitly provides that applications for rehearing must be filed within 30 days *after the entry of the order upon the journal of the Board* (emphasis added). Upon review of Urbana's application for rehearing, we find that it was not filed within the 30-day time requirement and, therefore, it is untimely filed. Accordingly, the Board has no jurisdiction to consider Urbana's application for rehearing. *See Greer v. Pub. Util.*

Comm. of Ohio, 172 Ohio St. 361, 176 N.E.2d 416 (1961); *Dover v. Pub. Util. Comm. of Ohio*, 126 Ohio St. 438, 185 N.E. 833 (1933). *See also In The Matter of the Application of the Cleveland Electric Illuminating Company for a Certification of the Rachel 138 kV Transmission Line Project*, Case No. 95-600-EL-BTX, Entry (May 19, 1997).

Although Urbana correctly points out that the date of the event shall not be included, the thirtieth day after the entry of the order into the Board's journal is June 27, 2013. In addition, the Board notes that Urbana's reliance on Commission Rule 4901-1-07, O.A.C., is misguided, as Board Rule 4906-1-04, O.A.C., dictates the computation of time for Board proceedings. Even if the Board could rely on Rule 4901-1-07, O.A.C., the rule unambiguously applies only to pleadings or other papers *served* by a party to a proceeding, not an opinion and order issued by the Board or Commission (emphasis added). Therefore, as the Board has no jurisdiction to even consider Urbana's late-filed application for rehearing, the Board finds Champaign's motion to strike is moot and need not be considered.

The County/Townships' Application for Rehearing

Procedural Matters

(14) In their application for rehearing, the County/Townships allege that the Board failed to afford the County/Townships due process during the adjudicatory hearing. In support of this assignment of error, the County/Townships provide that Champaign witnesses Speerschneider and Crowell were unable to answer some of the questions posed by counsel for the County/Townships. The County/Townships believe that this demonstrates that Champaign's witnesses were not qualified to testify and, therefore, the County/Townships were deprived of the opportunity to cross-examine experts on the application. Consequently, the County/Townships conclude that the Board's admission of the application as evidence was improper. (County/Townships App. at 11-12.)

In its memorandum contra, Champaign explains that it is longstanding practice to allow an application and its

corresponding exhibits through witness testimony of an officer or experienced employee of an applicant. Champaign points out that Champaign witness Speerschneider is an officer with Applicant and has extensive experience in the industry. Champaign adds that Champaign witness Crowell was the senior project manager in ecological matters and, as such, an expert, the admission of his testimony into the record was appropriate. (Co. Memo Contra at 5-7.)

As noted in the opinion, order, and certificate, Board precedent allows for the introduction of an application or study by a sponsoring witness who had significant responsibility in the production of an exhibit. The County/Townships fail to present any justification for the Board to depart from its past precedent, and the record reflects that Champaign witnesses Crowell and Speerschneider had significant roles in compiling the application and its exhibits, as well as extensive industry experience. The Board also finds the County/Townships' due process arguments to be without merit. We note that not only did the County/Townships cross examine these witnesses, nothing precluded the County/Townships from conducting depositions of Champaign witnesses Crowell and Speerschneider prior to the hearing in order to determine whether either of the witnesses was familiar with the County/Townships' areas of concern within the application. Further, nothing prevented the County/Townships from subpoenaing other individuals who may have contributed to the items that were compiled by Champaign witnesses Crowell and Speerschneider. In fact, the County/Townships requested a subpoena during the adjudicatory hearing, which the ALJs granted, in order to call a Staff witness to testify on a specific area of the Staff Report on which the County/Townships had questions. (Order at 12-13; Tr. at 2435-2443.) Accordingly, as the County/Townships fail to show that their due process rights were in any way violated, the County/Townships' application for rehearing should be denied.

Setbacks - Blade Shear and Fire

(15) In their application for rehearing, the County/Townships argue that the opinion, order, and certificate is unreasonable

unless the Board requires that setbacks from the turbines to nonparticipating landowners' property lines conform to manufacturers' setback recommendations. More specifically, the County/Townships argue that multiple turbine safety manuals set forth greater setback recommendations than those required by the opinion, order, and certificate, including a Gamesa safety manual that the County/Townships claim is uncontroverted evidence of a recommended setback greater than the minimum statutory setback. (County/Townships App. at 9-11.)

In its memorandum contra the County/Townships' application for rehearing, Champaign notes that the County/Townships have cited turbine safety manuals' temporary clearance recommendations in the event of fire or overspeed, arguing that these distances ought to be used as a permanent setback. Champaign points out that the Board specifically found in the opinion, order, and certificate that the County/Townships confuse the temporary clearance recommendations in the event of temporary safety situations, which are akin to temporary evacuations that might take place during a gas leak, with the actual manufacturer setback recommendations. Further, Champaign notes that Staff witness Conway testified that he contacted all potential turbine manufacturers in this case and, with Staff's recommendations, confirmed that the project will exceed all manufacturer setback recommendations. (Co. Memo Contra at 4-5.)

The Board declines to grant the County/Townships' application for rehearing on the issue of blade shear and setbacks. Initially, the Board emphasizes that the County/Townships have raised no new arguments that were not raised at hearing and discussed in the opinion, order, and certificate. As the Board explained in the opinion, order, and certificate, the County/Townships misunderstood the cited provisions from the turbine safety manuals, as these were not minimum setback recommendations, but recommended temporary clearance areas in the event of temporary safety situations, such as fire or overspeed, akin to temporary evacuations during a gas leak from a gas pipeline. Further, contrary to the

County/Townships' argument, the safety manuals are not uncontroverted evidence of manufacturer setback recommendations. In fact, as discussed in the opinion, order, and certificate, Staff witness Conway testified that he contacted all potential turbine manufacturers in this case and confirmed that, with Staff's conditions, the project will exceed all manufacturer setback recommendations. (Order at 41-42.) Consequently, the Board finds that the County/Townships' application for rehearing on this issue should be denied.

Decommissioning

(16) In their application for rehearing, the County/Townships argue that the opinion, order, and certificate is unreasonable and unlawful unless the Board revises Condition (52)(h) to require financial assurance for decommissioning in an amount sufficient to cover the total costs of decommissioning (County/Townships App. at 7-8).

In its memorandum contra the County/Townships' application for rehearing, Champaign argues that the County/Townships' request is unreasonable and reflects a misunderstanding of the project. Champaign points out that, pursuant to the opinion, order, and certificate, no more than 52 turbines will actually be constructed, depending on the turbine model selected. Under the County/Townships' request, Champaign asserts, financial assurance would be required for turbines that may never be built. Further, Champaign points out that the County/Townships' witness Knauth never provided a substantive reason why the County/Townships' requested approach was necessary, other than it was "preferable" in his opinion. (Co. Memo Contra at 3-4.)

The Board finds that the County/Townships have presented no new arguments that were not raised at hearing and addressed in the opinion, order, and certificate. As the Board found in the opinion, order, and certificate, the County/Townships' proposed condition would require Champaign to post financial assurance without considering the number of turbines actually constructed or under construction, and would require a revised decommissioning

plan every three years, which is too short to be practical and does not align with the Board's most recent decisions on decommissioning (Order at 72). Consequently, the Board finds that the County/Townships' application for rehearing on this issue should be denied.

Conditions

(17) In their application for rehearing, the County/Townships argue that the order is unreasonable and unlawful unless the Board revises Condition (29) to include the Boards of Township Trustees as additional holders of the bonds or financial assurance. The County/Townships point out that the County Engineer has no authority over township roads and would not be the entity responsible for the roads if Champaign fails to repair them after the project. Further, the County/Townships point out that the Board has found that Champaign can enter into agreements with the Boards of Township Trustees for any township roads utilized in the plan. Consequently, the County/Townships state that they believe the failure to include the township trustees as to bonds/financial assurance was merely an oversight. The County/Townships request that the Board revise Condition (29) to include the relevant boards of township trustees. (County/Townships App. at 6-7.)

In its memorandum contra the County/Townships' application for rehearing, Champaign argues that the Board should reject the request for rehearing on this point. Champaign argues that the "appropriate public authority" referred to in the Board's Condition (29) is the county engineer, because Section 5543.01, Revised Code, gives the county engineer general charge of the construction, reconstruction, resurfacing, or improvements of roads by boards of township trustees. Further, Champaign argues that a county engineer, and not the boards of township trustees, would have the appropriate experience to determine the condition of a road and that it was appropriate for the Board to leave this issue to the county engineer. Finally, Champaign argues that the Board is not required by law to provide financial assurance for pre- and post-construction roadwork for a major utility and, although the Board elected to require it for the county in this case, it

was not unreasonable or unlawful for the Board to decline to require it for each township. (Co. Memo Contra at 1-3.)

In the opinion, order, and certificate, the Board included Condition (29), which requires Applicant to promptly repair any damaged public roads and bridges to their preconstruction state under the guidance of the appropriate public authority. Nevertheless, Condition (29) requires Champaign to provide financial assurance to the Board of Commissioners of Champaign County that it would restore the public county and township roads to their preconstruction condition. The Board finds, as the condition expressly provides, that repairs must be made "under the guidance of the appropriate public authority." Therefore, it is logical that financial assurance should be made to the public official or body possessing the appropriate statutory authority. Consequently, the Board grants the County/Townships' application for rehearing to the extent necessary in order to clarify this language. The Board finds that Condition (29) should be modified as follows:

> Applicant must repair damage to government-maintained (public) roads and bridges caused by construction activity. Any damaged public roads and bridges must be repaired promptly to their preconstruction state by Applicant under the guidance of the appropriate public authority. Any temporary improvements must be removed, unless the public official or body possessing the appropriate statutory authority requests that they remain. Applicant must provide financial assurance to the public official or body possessing the appropriate statutory authority that it will restore the public county and township roads in Champaign County it uses to their preconstruction condition. Applicant must also enter into a road use agreement with the public official or body possessing the appropriate statutory authority prior to construction and subject to Staff review and confirmation that it complies with this

condition. The road use agreement must 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 Applicant to restore the roads to the same or better condition as they were prior to the 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.

(Order at 84.)

UNU's Application for Rehearing

Procedural Process

(18) In its application for rehearing, UNU argues that the opinion, order, and certificate suggests that the certificate amends the previously issued certificate to Buckeye Wind, LLC, in *In re Application of Buckeye Wind, LLC*, Case No. 08-666-EL-BGN (*Buckeye Wind I*), Opinion, Order, and Certificate (Mar. 22, 2010). UNU argues that, if the opinion, order, and certificate was intended as an amendment of the certificate issued in *Buckeye Wind I*, the order is unlawful. (UNU App. at 3-4.)

In its memorandum contra UNU's application for rehearing, Champaign asserts that its application in this case was not an amendment application and nothing in the opinion, order, and certificate implies that the Board was approving an amendment application. Champaign points out that the Board merely discussed the Board's procedural process for certificates and amendment applications and, additionally,

clearly articulated that Champaign was applying for a certificate in this case. (Co. Memo Contra at 1-2.)

The Board affirms that the application in this proceeding was not an amendment application and the Board did not approve an amendment application as part of its opinion, order, and certificate. The portions cited by UNU are taken from Section III, Procedural Process, of the opinion, order, and certificate, in which the Board gave an overview of its procedural process, including its process for amendment applications. The Board provided this information to clarify its amendment process because UNU's posthearing brief exhibited confusion regarding whether any modifications of the certificate sought by a party after the certificate was issued would be subject to any process (UNU Reply Br. at 30, 39-40). Accordingly, the Board finds that UNU's application for rehearing on this issue should be denied.

Evidentiary Rulings

(19) In its application for rehearing, UNU argues that the Board should allow discovery and testimony about the drafts of the application and the Staff Report. (UNU App. at 87-89.)

Champaign responds that the ALJs denied the motion to compel the production of application drafts on the ground that it was not relevant to the current application and not reasonably calculated to lead to admissible evidence. Champaign points out that UNU was still able to ask Staff witness Conway several questions about a draft version of the Staff Report. (Co. Memo Contra at 56-57.)

The Board finds that UNU raises, verbatim, the same argument in its application for rehearing that it presented to the Board in its initial brief in this matter. The Board notes that UNU was given the opportunity to question Staff's witness on matters relating to the Staff Report, including how staff members arrived at their conclusions in the Staff Report. Accordingly, as we have already addressed the arguments UNU raised in its initial brief in the opinion, order, and certificate, we find that UNU's assignment of error should be denied. (Order at 11-12; Tr. at 2555-2558; UNU Br. at 66.)

(20) In its next assignment of error, UNU claims that records related to turbine sites sold to Champaign are germane to the certificate. UNU requests that the Board order Champaign to produce these records and its witness should be recalled to answer questions about the records. (UNU App. at 89-90.)

Champaign responds that these records are not relevant, and the request for these records was overly broad and overly burdensome. Champaign further points out that UNU has not presented any new arguments to justify reversal of the Board's ruling. (Co. Memo Contra at 57-58.)

The Board finds that UNU's recitation of its arguments raised in its initial brief fails to present anything new for the Board's consideration. (Order at 13-14; UNU Br. at 67.) Therefore, UNU's assignment of error should be denied.

(21) UNU requests the Board reopen discovery and the hearing to find, admit, and consider evidence about environmental and safety hazards caused by turbine models other than those listed in Champaign's application. In support of its request, UNU states that Champaign's witness, as well as Champaign's counsel and the ALJs, admitted that information about noise at other wind farms, even those with different turbine models, is relevant to this application. UNU contends that the order relies heavily on Champaign's representations about other turbine models' environmental and safety records as support for the Board's findings. (UNU App. at 90-91.)

Champaign replies that UNU does not make any specific arguments as to any specific evidentiary ruling and, thus, should not be considered by the Board. (Co. Memo Contra at 58.)

The Board is unclear on what UNU is seeking in its request to reopen discovery and the adjudicatory hearing in order to consider evidence about information not included in the application at hand. It is difficult for the Board to address UNU when it broadly requests that we consider all rulings, including our final order. Further, we find that UNU's credibility in this matter is undermined by its false assertion

that the ALJs admitted that noise complaints at other wind projects are pertinent to the matter at hand. To the contrary, UNU's citation relates to admission of Champaign witness testimony, over UNU's objections, in which the ALJ determined that the admission of witness testimony was consistent with the previous ruling in which the ALJ, at UNU's urging, denied Champaign's motion *in limine*, stating that parties, including UNU, should be able to present evidence on a broad range of issues that relate to the application in this matter. UNU is essentially seeking a double standard for considering evidence that the Board declines to adopt. Nonetheless, we find that the ALJs' rulings were consistent by allowing for all parties in this matter to present evidence that was relevant to the application in this proceeding. (UNU App. at 91; Tr. at 248-249, 943-944.) Accordingly, we find UNU's assignment of error should be rejected.

(22) UNU contends that the Board should reopen discovery in order to reissue UNU's subpoenas that were quashed, as well as reopen the hearing to admit the evidence produced pursuant to the subpoenas. UNU claims that GE did not object to the subpoena and was in the process of complying with it when the ALJ quashed it, thus, the ALJ's ruling was erroneous. UNU reiterates that the subpoenas were not in any way overbroad and notes that subpoena requesting information on the Vestas turbine model would have provided information germane to Champaign's application. (UNU App. at 92-95.)

Further, UNU believes that subpoenas limited to turbine models listed in Champaign's application would have been meaningless, as the turbine models are often new and have a limited operational history. UNU adds that it offered to narrow the scope of the subpoenas, as stated in its memorandum, but the subpoenaed companies had no interest in producing any records and declined to cooperate with UNU. UNU offers that it did not file for amended or revised subpoenas because the subpoenaed companies refused to tell UNU's counsel what was necessary to refine them. In addition, UNU states that it could not obtain the subpoenaed blade throw evidence from other sources

outside of the subpoenas, and the ALJs suppressed UNU's attempts to question Staff on blade throw incidents throughout the adjudicatory hearing. (UNU App. at 92-95.)

Champaign responds that the ALJs correctly ruled that the subpoenas sought a host of information unrelated to the specific matter at hand and were overly broad and unduly burdensome. Champaign also points out that UNU was allowed to ask Staff witness Conway about the blade throw incident at a wind project certificated by the Board in *In the Matter of Paulding Wind Farm II, LLC*, Case No. 10-369-EL-BGN (*Timber Road II*), Opinion and Order (Nov. 18, 2010). (Co. Memo Contra at 58-59.)

Initially, the Board notes that there is nothing within the record indicating that General Electric Company, LLC (GE) did not object to UNU's subpoena or was in the process of complying with it. Assuming, arguendo, that UNU's allegation is correct, the Board finds it puzzling that UNU did not make any reference to its assertion in its memorandum contra the various motions to quash. This assertion is contradicted by its own application for rehearing, in which UNU explained that "[a]s revealed by the subpoenaed companies' continued pursuit of the motions to quash, and their lack of response to UNU's offer, the subpoenaed companies had no interest in producing any records and declined to cooperate with UNU's attempts to work for them." (UNU App. at 94.) Further, nothing precluded UNU from exercising its right to file an interlocutory appeal of the ALJ's entry granting various motions to quash, or filing a new or amended subpoena. In fact, UNU did file amended subpoenas after it initially filed defective subpoenas on September 24, 2012, that it ultimately cured and refiled on September 28, 2012.

Furthermore, as UNU repeats similar arguments raised in its initial brief, we find no merit in its request to reopen the evidentiary hearing in this matter. In an exercise of gamesmanship, UNU failed to formally object to the ALJ's October 22, 2012, entry granting the motions to quash, in part, until it filed in its initial brief in this matter on January 16, 2013, almost three months after the entry was issued and over a month after the adjudicatory hearing in this matter

had concluded. If UNU truly believed that it was without the means to obtain information that it alleged was "being hidden by the subpoenaed companies," it appears suspect that no formal objections were raised until well after the hearing concluded. While we understand that Rule 4906-7-15, O.A.C., permits any party electing not to file an interlocutory appeal to raise the propriety of any ruling in its initial brief, but are concerned that, assuming arguendo, had this information been germane to UNU's presentation of its case, UNU had several avenues available to remedy this alleged error that it chose to decline. Again, UNU had the opportunity to file an interlocutory appeal of the October 22, 2012, ALJ entry, as well as new subpoenas that were more narrowly tailored to the documents UNU was seeking to obtain. We find UNU's argument that it declined to file amended or revised subpoenas because the subpoenaed companies refused to tell UNU's counsel what was necessary to refine their request to be without merit. (Order at 7-9.)

Finally, we again note the mischaracterization of UNU's assertion that it was not permitted to question any witnesses on blade throw incidents. To the contrary, as indicated in the opinion, order, and certificate, UNU, as well as other interveners and the ALJ, cross examined both Staff and UNU's witness on the incident at *Timber Road II* (Timber Road II incident). (Order at 9; Tr. at 1300-1303, 1315-1316, 1318-1320, 1328-1332, 2485-2486, 2550-2553, 2566-2572.) Accordingly, the Board finds that UNU's assignment of error on this issue is without merit and should be denied.

(23) In its application for rehearing, UNU argues that the evidence presented by Champaign and Staff on shadow flicker is entirely based on inadmissible hearsay. UNU claims that Champaign and Staff utilized lay witnesses to render expert opinions on shadow flicker that they were not qualified to give. UNU opines that Champaign's shadow flicker report is highly technical and detailed and contains multiple modeling scenarios with WindPRO inputs and outputs. UNU contends that it was improper for the Board to allow for the admission of this exhibit because the witness sponsoring the application did not have any first hand-

knowledge of the shadow flicker modeling analysis. UNU provides that the fact that a witness may be qualified to testify as an expert in one discipline does not make the expert qualified in a related discipline or subdiscipline. (UNU App. at 95-98.)

Champaign counters that UNU ignores the experience of Champaign's witnesses. Champaign asserts that both witnesses were able to sufficiently answer questions about the shadow flicker report, the methodology used, and the assumptions and inputs. Champaign further replies that calculating shadow flicker is a basic physics problem and UNU's claim that it is "highly technical" is unfounded. (Co. Memo Contra at 60-61.)

The Board finds that UNU's assignment of error should be rejected. As indicated in the opinion, order, and certificate, the record reflects that Champaign witnesses Poore and Speerschneider, along with Staff witness Strom, were qualified to testify on shadow flicker based on their educational backgrounds and experience in the industry. Further, the record reflects that the software referred to in the application is regularly relied upon in the industry. There is no evidence within the record to support UNU's repeated claims that the shadow flicker reports or corresponding testimony are in any way unreliable; accordingly, we find that UNU's assignment of error should be rejected. (Order at 51-52.)

(24) In a similar assignment of error, UNU asserts that Champaign's witnesses should not have been able to sponsor portions of the application for which they were not qualified as an expert because their testimony constituted hearsay. UNU accuses the Board of liberally bending the hearsay rule and evidentiary principles applicable to expert testimony for Champaign, while applying a more stringent standard on UNU's witnesses, including UNU witnesses Palmer and McCann. UNU believes that the ALJs erred by striking portions of the testimony of witnesses Palmer and McCann. Specifically, UNU states that the ALJs struck portions of UNU witness McCann's testimony on the basis that it was outside his area of expertise, indicating that the ALJs applied a double standard. UNU believes that portions

of the testimony of UNU witness Palmer, likewise, should have been admitted, as he is an undisputed safety expert. (UNU App. at 98-100.)

Champaign asks the Board to reject these arguments. Champaign notes that the admission of the application was consistent with the Board's long-standing practice to allow an applicant to sponsor an application and exhibits through the testimony of a witness that is an officer or experienced employee of the applicant. Champaign further asserts that the ALJ and Board decisions did not result in one standard for Champaign and a different evidentiary standard for UNU. Champaign claims that its witnesses were adequately qualified and expressed a deep understanding for the application contents. On the other hand, Champaign claims that UNU witness Palmer had no experience in the wind industry and sought to testify on information that he was not responsible for compiling. (Co. Memo Contra at 62-63.)

The Board finds that UNU's arguments should be rejected. UNU fails to provide any justifiable reason for the Board to admit items that are hearsay and do not fall within any of the hearsay exceptions. As noted in the opinion, order, and certificate, Board precedent allows for the introduction of an application or study by a sponsoring witness who had significant responsibility in the production of an exhibit. We see no reason to depart from Board precedent, particularly in light of the fact that Champaign's witnesses have considerable experience in the industry. Further, not only did UNU cross examine these witnesses, but UNU also had the opportunity to conduct depositions and engage in discovery on matters related to their testimony. Moreover, nothing precluded UNU from subpoenaing other individuals that assisted in the compilation of Champaign's application. We note that the County/Townships chose to exercise their right to subpoena during the course of the adjudicatory hearing. UNU's choice to not avail itself of all of the tools available to parties in Board proceedings does not justify reversal of the Board's order. (Tr. at 2435-2443.)

Nor are we convinced that the Board created an evidentiary double standard between Champaign and UNU. While UNU deceptively asserts that UNU witness McCann's

testimony was struck on the basis that it was outside his area of expertise, the record actually indicates that a portion of his testimony was struck because it was admittedly a quotation copied from Wikipedia, which is undeniably hearsay (Tr. at 1010). Likewise, while UNU witness Palmer does have experience as an engineer, he has no experience in the wind industry and it would have been unreasonable for the Board to admit testimony about the wind industry from an internet website that consists entirely of third-party information. Accordingly, the Board does not see any inconsistency between Board rulings admitting exhibits that were compiled under the direction of witnesses with extensive industry experience, as opposed to testimony derived from internet websites where any third party can post information or data. (Order at 9-10, 12-13; Tr. at 1020-1021.) Accordingly, UNU's request for rehearing on this issue should be denied.

(25) In its application for rehearing, UNU argues that the Board wrongfully denied UNU's motion to reopen the record in this proceeding. UNU opines that the Board's assertion that the evidence UNU sought to introduce was cumulative is improper. UNU alleges that the evidence contradicts the testimony and evidence previously offered by Champaign. (UNU App. at 55-56.)

Champaign responds that UNU did not meet its burden to reopen the proceeding under Rule 4906-7-17(C), O.A.C. Champaign asserts that UNU attempted to present cumulative evidence that did not relate to new and distinct facts. Given that UNU presented evidence from its witnesses on infrasound measurements and cross-examined Champaign's witnesses on low frequency noise (LFN), Champaign concludes that the Board correctly denied UNU's request to reopen the record to submit additional evidence on LFN and infrasound. (Co. Memo Contra at 36-38.)

Consistent with the opinion, order, and certificate, the Board finds that UNU's request to reopen the record should be denied. While UNU believes that the information it sought to introduce would not be cumulative, as required by Rule 4906-7-17(C), O.A.C., the record reflects that UNU actually

presented two witnesses who alleged that LFN exists from wind turbines and leads to adverse health effects. Nothing within the report UNU now seeks to introduce contradicts the testimony of UNU's witnesses. Not only was the information that UNU was seeking to supplement into the record cumulative in nature, but we point out that UNU cross-examined Champaign witness Hessler on his conclusions from the Wisconsin proceeding. Although UNU could have requested to admit the report as a late-filed exhibit, UNU instead chose to file its request to reopen the record 24 days after the report was issued. Accordingly, as the information UNU sought to introduce is cumulative to the evidence UNU previously submitted in the record, UNU's assignment of error should be denied. (Order at 14-15; UNU Ex. 19 at 8 and 29;UNU Ex. 23 at 8-12, 15-16, 25; Tr. at 818, 865-866.)

Socioeconomic Impacts

(26) In its application for rehearing, UNU claims that the project does not serve the public interest, convenience, and necessity because there are socioeconomic and environmental detriments that outweigh the project's economic benefits. In support of its claim, UNU argues that: Champaign failed to produce a witness with knowledge of the socioeconomic benefits; the benefits of the project are negligible; the project's socioeconomic detriments far outweigh any socioeconomic benefits; and the Board's reliance on Section 4928.64(B), Revised Code, is improper because it forces Ohio utilities to purchase alternative energy generated in Ohio, thus, violating the federal commerce clause. UNU maintains that the opinion, order, and certificate fails to analyze any of these deficiencies. (UNU App. at 14-16.)

In its memorandum contra UNU's application for rehearing, Champaign counters that the facility does represent the minimum adverse environmental impact and that the facility will serve the public interest, convenience, and necessity. Regarding UNU's arguments that Ohio's renewable energy standards are unconstitutional, Champaign provides that the standards remain in place regardless of any future rulings on the constitutionality of the renewable energy statute. (Co. Memo Contra at 6-7.)

The Board finds that, with the exception of its argument that Section 4928.64(B), Revised Code, is unconstitutional, UNU fails to raise any new arguments for the Board's consideration. While UNU accuses the Board of accepting misrepresentations from Staff and Champaign, UNU fails to provide any meaningful economic analysis, study, or research to rebut Champaign's reports that were included with its application. We agree with UNU's assertion that the burden of proof is on Champaign; however, Champaign sustained its burden of proof of showing that the facility will serve the public interest, convenience, and necessity, to which UNU failed to rebut with any meaningful or persuasive evidence. Further, we find UNU's repeated allegation that the project will cause widespread damage throughout the county to be meritless as well. The Board emphasizes that, in addition to ensuring the project has a positive economic impact, we find it extremely important to preserve the nature and scenery when considering whether a proposed project benefits the public interest. The record in this proceeding reflects that this project will not alter the scenery in Champaign County as it will blend with the previously certificated wind-powered energy project and, as a representative of the Ohio Farm Bureau Federation explained, it will protect the agricultural landscape that is prevalent throughout Champaign County. (Order at 23-24.)

Next, we turn to UNU's argument that the Board improperly relied upon Section 4928.64(B), Revised Code, in approving the application, on the basis that it violates the federal commerce clause. The Board finds that this question of constitutionality of a statute extends beyond the scope of the Board's designated authority and is only appropriate for determination by the Court. Consequently, the Board must continue to follow the statute until directed otherwise by the Court, as it lacks the jurisdiction to adjudicate whether Section 4928.64(B), Revised Code, violates the federal commerce clause. *See Panhandle E. Pipeline Co. v. Pub. Util. Comm. of Ohio*, 56 Ohio St.2d 334, 346, 383 N.E.2d 1163 (1978), citing *The East Ohio Gas Co. v. Pub. Util. Comm. of Ohio*, 137 Ohio St. 225, 238-239, 28 N.E.2d 599 (1940). Nevertheless, even if Section 4928.64(B), Revised Code, were not at issue, the Board finds that the project serves the

purpose of delivering energy to Ohio's bulk power transmission system in order to serve the generation needs of electric utilities and their customers, as discussed in the application. (Co. Ex. 1 at 2.) Accordingly, the Board finds that UNU's application for rehearing regarding the socioeconomic impacts should be denied.

Aviation

(27) In its application for rehearing, UNU contends that the Board failed to require Champaign to fully comply with Section 4906.10, Revised Code, in order to ensure that none of the turbines pose an aviation hazard. UNU acknowledges that the Staff Report represents that Staff engaged in the required consultation with the Ohio Department of Transportation's Office of Aviation (ODOT-OA) and received clearances for all turbines. Nevertheless, UNU argues that the Board should disregard Staff's representation in the Staff Report because correspondence included in the application from ODOT-OA only pertains to 28 out of the 56 turbine sites that were reviewed. Further, UNU states that the correspondence included in the application provides that the clearance expired on November 1, 2012, prior to the Board's hearing. UNU contends that the order fails to address this deficiency and that the Board may not issue a certificate until ODOT-OA issues valid, unexpired clearances to ensure that none of the turbines will pose an aviation hazard. (UNU App. at 83-84.)

In its memorandum contra UNU's application for rehearing, Champaign asserts that, as confirmed by Staff, ODOT-OA has approved all turbine locations, although UNU continues to imply that this did not occur. Champaign points out that the Staff Report makes clear that all turbines associated with this case were cleared by ODOT-OA after being contacted by Staff, in accordance with Section 4561.32, Revised Code. (Co. Memo Contra at 51-52.)

The Board points out that, as set forth in the opinion, order, and certificate, the Staff Report notes that a determination of no hazard has been issued by the Federal Aviation Administration (FAA) for all 56 turbine locations in the proposed project and that Staff contacted ODOT-OA and

received notices of clearance for all turbines associated with the proposed project. Although the application may have only included correspondence regarding 28 out of the 56 turbine site clearances, and the correspondence reflecting ODOT-OA's approval included a date prior to the adjudicatory hearing, the Board stresses that Staff confirmed in the Staff Report that all 56 sites were cleared by ODOT-OA, and UNU has pointed to no requirement that the application must contain written correspondence reflecting ODOT-OA's approval in addition to Staff's unrefuted confirmation in the Staff Report that all sites were approved. Although UNU may choose not to believe Staff's representation that all 56 sites were cleared by ODOT-OA, it is apparent from the opinion, order, and certificate that the Board determined that the Staff Report was credible on this issue and that Staff's affirmation meets the requirement that Staff consult with ODOT-OA. (Order at 33-34.) Further, the Board notes that UNU had the opportunity to cross-examine the Staff witness responsible for authoring the aviation portion of the Staff Report, but UNU did not question that witness on the assertion in the Staff Report that all turbine sites were cleared by the ODOT-OA (Tr. at 2036, 2094). Consequently, the Board finds that UNU's application for rehearing on this issue should be denied.

Setbacks - Blade Shear and Fire

(28) In its application for rehearing, UNU argues that turbine blades pose a threat to public safety and that a person struck by a blade is likely to die or be seriously injured. Further, UNU contends that the Timber Road II incident, as well as other worldwide incidents, reveals that blade shear occurs regularly in the wind industry. Initially, regarding the Timber Road II incident, UNU contends that the Board erred in finding UNU witness Schaffner's testimony to be unreliable. Further, UNU argues that the Board erred in speculating that children had carried turbine pieces into their yard because no one would logically clutter their own yard, and that the Board erred in determining that wind could have lifted up pieces of turbine blade after they fell and deposited them away from the turbine tower. UNU continues that Champaign, Staff, and the ALJs engaged in

"subterfuge" to block UNU's questions about the blade piece travel distances and other information relating to the Timber Road II incident. UNU also contends that, although the Board's order relied on safety precautions against blade shear that were generally referred to in the application, the Board failed to include a condition requiring these safety precautions, including independent braking systems, automatic shutdown under certain conditions, certification under international standards, pitch controls, sensors, speed controls, third-party oversight in manufacturing, quality assurance process, inspections, maintenance, limits on remote fault access, and training. Finally, UNU argues that the Board erred in concluding that blade failure rarely occurs, citing evidence from the Caithness Database that was not admitted into the record. (UNU App. at 59-73, 76-78.)

In addition, UNU argues that the Board erred in finding that turbine manufacturer safety manuals are not relevant in determining setbacks. Although UNU concedes that the Board determined the safety manuals only referred to temporary clearance areas during emergency situations, UNU contends that turbine manufacturers have developed the clearance areas because their experiences have shown them that turbine blades can fly that distance. Further, UNU asserts that UNU's members will be threatened if turbines are installed within 1,000 feet of any public road, and contends that Staff witness Conway testified that Staff failed to measure the distances between the turbine sites and public roads. (UNU App. at 73-75.)

In its memorandum contra UNU's application for rehearing, Champaign argues that UNU has mischaracterized the evidence in the record in its assertion that the hazards of blade shear are prevalent in the wind industry. Specifically, Champaign points out that UNU ignores the fact that none of its witnesses could point to a member of the general public that has been injured due to blade shear, despite the fact that hundreds of thousands of turbines operate throughout the world. Further, Champaign points to the testimony of Champaign witness Speerschneider and Staff witness Conway for the position that blade shear events are extremely rare. Champaign goes on to argue that UNU was

permitted to introduce testimony on the Timber Road II incident, but mischaracterizes that evidence by claiming that pieces of the blade landed in a yard near a public road, when testimony by Staff witness Conway tended to show that smaller, lighter pieces of the fiberglass blade were blown around the site, which was actually acknowledged by UNU witness Schaffner. Further, Champaign points out that UNU witness Schaffner traveled to the site days after the blade shear incident; unlike Staff witness Conway, who visited the site the day after the incident. (Co. Memo Contra at 41-43.)

Champaign next argues that, in its application for rehearing, UNU inappropriately relied on a database spreadsheet that was not admitted into evidence. Champaign further points out that, although UNU claims that the manufacturer safety manuals support UNU witness Palmer's setback proposal, these distances in the turbine safety manuals refer to temporary clearance recommendations during emergency situations, such as measures that would be taken in the event of a gas leak. Champaign further contends that the alleged distances set forth in the page allegedly taken from a Vestas manual produced at hearing by UNU witness Johnson are irrelevant because they cannot be found in the entire Vestas safety manual, which was included in the application. Further, Champaign points out that Staff witness Conway testified at hearing that he contacted Vestas and confirmed that the setbacks proposed in the application exceed Vestas' minimum setback recommendations. Champaign notes that Staff witness Conway testified that Staff's recommended setbacks in this case exceed the setbacks required by GE. Consequently, Champaign states that the setbacks approved by the Board are sufficient to protect the public from the already low risk of blade throw, and the Board did not err in rejecting UNU's request for a 1,640 foot setback from property lines and 1,000 foot setback from public roads. (Co. Memo Contra at 46-47.)

The Board declines to grant rehearing on the issue of setbacks due to the risk of blade shear. More specifically, the Board notes that UNU raises no new arguments on rehearing, and the Board specifically rejected in the opinion, order, and certificate UNU's assertion that blade shear is

prevalent in the wind industry. In so finding, the Board determined that no evidence was presented that any member of the general public has ever been injured due to blade shear, and that the occasions of blade shear in Sandusky, Ohio, cited by UNU did not involve commercial grade wind turbines such as those at issue in the application. (Order at 41.)

Next, the Board finds that UNU misrepresents the record by asserting that Champaign, Staff, and the ALJs engaged in "subterfuge" to block UNU's questions about blade piece travel distances and other information relating to the Timber Road II incident. To the contrary, the record contains numerous questions and answers concerning the Timber Road II incident that the ALJs found were relevant to the application at issue in this case, which were asked by UNU, other interveners, and the ALJs, and were answered by Staff witness Conway and UNU witness Schaffner (Tr. at 1300-1303, 1315-1316, 1318-1320, 1328-1332, 2485-2486, 2550-2553, 2566-2572). Further, the Board specifically enumerated the reasons that it found more credibility with the official report of the Timber Road II incident, which was moved into evidence by UNU and admitted by the Board, than UNU witness Schaffner's testimony, including that: he did not view the pieces until days after the incident; he did not measure the pieces until four to five days after the incident; he acknowledged that the small pieces of fiberglass may have blown further away from their original landing spots; he acknowledged that he did not know whether the pieces had been moved; and children in the area were picking up the pieces. Further, although UNU argues that a Paulding County family experienced a near hit on their home, nothing UNU cites in the record supports this statement. (Order at 41.)

As discussed in the order, the Board found that the rare occurrence of blade shear would be reduced by the certification of turbines according to international engineering standards, independent braking systems, pitch controls, sensors, speed controls, monitoring systems that provide automatic shut down at certain wind speeds, vibrations, or rotor stress, third- party oversight in the

manufacturing process, quality assurance processes, inspections, proper maintenance practices, limitations on remote fault resets, and training. Although UNU believes the Board erred in not specifically requiring these precautions as part of the certificate, UNU's argument is misguided. Initially, the Board notes that it provided, in the opinion, order, and certificate that, if Champaign should wish to use a turbine model not considered in the order, Champaign would be required to file an amendment application pursuant to Section 4906.06, Revised Code (Order at 42). As set forth in the Staff Report, *all* of the turbine models under consideration for the project are certified to international engineering standards, have two independent braking systems, pitch controls, lightning protection system, monitoring systems that provide automatic shut down at excessive wind speeds, vibrations, and stress (Staff Report at 31). Further, the application provides that all turbine models under consideration are independently certified as meeting international design standards by independent product safety organizations (Co. Ex. 1 at 48). At hearing, Champaign witness Speerschneider testified that these international entities provide standards for the manufacturing process and quality control (Tr. at 308-309). In addition, Champaign witness Speerschneider testified that Everpower regularly inspects and repairs minor defects in turbine blades (Tr. at 318). The application also states that the most common cause of blade failure is human error in interfacing with control systems and that, consequently, manufacturers have reduced that risk by limiting human adjustments that can be made in the field. In addition, the application states that Applicant will provide annual training for its personnel, as well as local first responders (Co. Ex. 1 at 83).

Moreover, as stated in the opinion, order, and certificate, the Board found that UNU misunderstood the cited provisions taken from the turbine safety manuals, as these were not minimum setback recommendations, but temporary clearance areas in the event of temporary safety situations, akin to evacuations during a gas leak. (Order at 42.)

Finally, the Board notes that, in its posthearing briefs, UNU contended that Staff failed to measure the distances between the turbine sites and public roads. UNU repeats this falsity in its application for rehearing, alleging that Staff witness Conway testified Staff failed to measure the distances between the turbine sites and the public roads. In fact, the testimony selectively cited by UNU in support is the testimony of Staff witness Burgener where he stated that he did not personally measure the setbacks to roadways in his review of the project (Tr. at 2455-2456). Staff witness Conway testified that he did measure the distances between turbine sites and arterial roadways (Tr. 2488-2489, 2491).

For the reasons stated above, the Board finds that the issues raised by UNU were thoroughly addressed in the opinion, order, and certificate, that UNU raises no new additional arguments, and that rehearing should be denied on these issues.

Setbacks - Ice Throw

(29) In its application for rehearing, UNU alleges that the Board should reexamine and expand setbacks to prevent ice from entering roads or nonparticipants' lands. Initially, UNU acknowledges that the Board found in the opinion, order, and certificate that the clearance areas discussed in the turbine safety manuals only pertain to temporary clearance areas during emergencies. UNU surmises, however, that turbine manufacturers must have developed these emergency evacuation zones because their experiences demonstrate that turbines throw ice that distance. UNU further criticizes the Staff Report and the opinion, order, and certificate, for requiring greater setback distances from heavily traveled roads than from lesser traveled roads, because UNU contends this ignores the safety of motorists on less traveled roads. UNU asserts that four turbines approved by the Board are located too close to roads that are heavily traveled, citing the testimony of UNU witness Johnson that these roads are heavily traveled. UNU goes on to argue that the safety of its members will be threatened if turbines are installed within 1,000 feet of any public road. Further, UNU argues that the Board unfairly found UNU witness Palmer's testimony that ice detectors do not work to

be unreliable because he had never worked in the wind industry or operated a wind turbine and contends that GE's safety manual states that ice may form on rotor blades more quickly than on the ice sensor. (UNU App. at 78-80.)

In its memorandum contra UNU's application for rehearing, Champaign argues that UNU's justification for public road setbacks of 1,000 feet is based solely on the testimony of UNU witness Palmer, and lacked any justification for this proposed setback and failed to perform any calculations on ice throw distances or risk due to ice throw. Further, Champaign points out that UNU does not cite any turbine safety manual that mandates a 1,000 foot setback for ice throw, and that only GE recommends a setback for ice throw in the event ice detectors are not used. Champaign further notes that all of Champaign's turbines will use ice detectors and that the Board's recommendation for setbacks was more conservative than GE's recommendations. Regarding public roads, Champaign points out that no evidence supports UNU's claim that some turbines are sited too close to public roads other than UNU witness Johnson's testimony. Champaign again stresses that no evidence was heard that a member of the general public has been killed or injured by ice from a turbine. Finally, Champaign contends that the risk of ice throw will be further minimized by Conditions (41) and (42) as set forth in the opinion, order, and certificate, requiring worker instruction and ice warning systems. (Co. Memo Contra at 47-49.)

The Board finds that UNU has provided no new arguments that were not raised at hearing and addressed in the opinion, order, and certificate. The Board specifically stated that it found UNU witness Palmer's testimony that ice detectors do not work to have minimal credibility, as he admitted he had never worked in the wind industry or operated a wind turbine. Further, the Board specifically addressed UNU's issue regarding the turbine safety manuals, finding that the manuals "all refer to recommended clearance in the event of temporary safety circumstances, not permanent setback recommendations." The record indicated that Staff witness Conway contacted all of the potential turbine manufacturers and found that, with Staff's conditions, the project exceeds

all manufacturer setback recommendations. The Board adds that, although UNU asserts turbine manufacturers' experiences have shown them that turbines throw ice a particular distance, UNU has not pointed to any record evidence to support this assumption about manufacturer experiences. Further, the Board points out that, per Staff's recommendation, two turbines proposed in the application were not approved due to their proximity to arterial roads and/or occupied structures. (Order at 44-45.) Accordingly, the Board affirms its decision that, with these conditions, the minimal risk of ice throw was not such as to render the proposed project contrary to the public interest, and, therefore, the Board finds that UNU's application for rehearing on this issue should be denied.

Aesthetics

(30) In its application for rehearing, UNU next argues, as it did at adjudicatory hearing, that the height of the turbines will destroy the community landscape with spinning, blinking turbines. UNU argues that the opinion, order, and certificate was not credible when it discussed the aesthetic impact of the proposed project. In support, UNU repeats the argument set forth in its post-hearing brief that the turbines will be visible during the daytime from 84 percent of the 242 square-mile area. Further, UNU reiterates its argument that UNU member Julie Johnson will be able to see all 56 of the proposed turbines from her property and the red aviation lights will obliterate her view of the sky. UNU also repeats its argument that studies show the appearance of a wind turbine can be perceived as intrusive. (UNU App. at 58-59.)

In its memorandum contra UNU's application for rehearing, Champaign asserts that the record does not support a finding that the visual impacts of the facility will degrade the surrounding area. Champaign contends that UNU witness Johnson's personal opinions supporting UNU's argument were unfounded and incorrect, and that UNU's assertion about the study that wind turbine appearances can be perceived as intrusive was incorrect and UNU has mischaracterized the text of the article. Finally, Champaign asserts that there is no basis for UNU's conclusion that the turbines will destroy the community's landscape, and that

the application demonstrated that Champaign County is a working agricultural landscape that will be compatible with the proposed facility. (Co. Memo Contra at 40-41.)

The Board initially notes that, in the opinion, order, and certificate, it recognized that some portion of the project would be visible in 84.4 percent of the area. However, the Board clarifies that, although UNU witness Johnson testified that she would be able to see all 56 of the proposed turbines from her property and that pulsing red aviation lights would obliterate her view of the sky, evidence was admitted into the record that a significant number of the turbines will be at least partially screened by trees and structures, and a cellular tower with red warning lights already exists near UNU witness Johnson's property. Further, as discussed in the opinion, order, and certificate, the Board also considered evidence that FAA warning lights are typically only installed on one-third to one-half of turbines in a project; that actual visibility of the turbines will be more limited due to slender blade profiles, distance, and screening from hedgerows, street trees, and structures; and that the collection system will be primarily buried. The Board found that, considering all of the factors, the aesthetic impact would not be so negative as to make the facility contrary to the public interest, convenience, or necessity. Here, the Board finds that UNU has raised no matters that were not thoroughly discussed and decided in the opinion, order, and certificate. (Order at 46-47.) Accordingly, the Board finds that UNU's application for rehearing on this issue should be denied.

Shadow Flicker

(31) In its application for rehearing, UNU repeats the argument from its posthearing briefs that Champaign failed to demonstrate compliance with the 30-hour per year shadow flicker standard. More specifically, UNU argues that the shadow flicker model used by Champaign was fundamentally flawed because it failed to consider the actual size of houses for which flicker exposure was being modeled. UNU opines that the model had the effect of overestimating the impact of obstacles in mitigating shadow flicker on receptors. UNU continues that, even if the shadow flicker model was not flawed, the report predicts

that as many as 11 nonparticipating residences are expected to experience shadow flicker levels beyond the 30-hour per year standard. Further, UNU contends that the Board should require modeling to evaluate flicker over the entirety of a nonparticipating parcel, not just the residence. Next, UNU argues that the Board should include in the certificate a statement that, if a particular form of mitigation is unacceptable to an affected landowner, Champaign is responsible for proposing and implementing alternative mitigation measures, so that it is not incumbent on an affected landowner to alter his property. UNU further states that Condition (47) of the opinion, order, and certificate is unenforceable because Staff or an affected neighbor will be unable to predict shadow flicker to the minute because, as UNU asserts, the shadow flicker model is flawed. (UNU App. at 81-82.)

In its memorandum contra UNU's application for rehearing, Champaign argues that the record does not support UNU's contention that the shadow flicker model was fundamentally flawed because the actual house size allegedly was not considered in the analysis. Champaign points out that the model used very conservative assumptions, including that the turbines would operate during all daylight hours and that a receptor would be exposed to light on all sides. Further, Champaign argues that UNU fails to give any examples of receptors where the size of the hypothetical receptor would be affected and, further, that UNU fails to quantify or explain how the alleged overestimation of topographical shadowing outweighs the conservative assumptions in the model. (Co. Memo Contra at 50.)

Next, Champaign posits that the record does not support UNU's contention that shadow flicker should be limited for an entire parcel, not just the residence. Champaign points out that, as Champaign witness Speerschneider testified, the 30-hour per year threshold is typical in the industry and has resulted in few complaints at wind projects. Champaign argues that, logically, if these levels applied to residential structures have been found to cause few complaints, then shadow flicker on other parts of properties will not be an issue. (Co. Memo Contra at 50.)

Finally, Champaign addresses UNU's arguments regarding Condition (47), arguing that they are unfounded. Champaign emphasizes that this condition ensures that nonparticipating residential structures are limited to less than 30 hours of shadow flicker per year and allows Staff to enforce this level, contrary to UNU's assertion that this condition defers important siting issues. Further, Champaign points out that this condition includes requirements of additional analysis and mitigation of complaints through the established complaint process. Champaign also argues that, read in its entirety, this condition does not require residents to undertake unwanted mitigation, as claimed by UNU, but provides adequate assurance that the project represents the minimum environmental impact. Champaign notes that, absent an agreement with a landowner, Champaign cannot force unwanted mitigation measures on a landowner and Condition (47) requires Champaign to conduct a review of the impact of all project-related shadow flicker complaints, which provides individual analysis and further review of complaint situations. (Co. Memo Contra at 50-51.)

In the opinion, order, and certificate, the Board stressed that Champaign's shadow flicker analysis used: software commonly used and relied upon in the industry in order to model projected shadow flicker; and very conservative assumptions that the turbines would operate during all daylight hours and that the receptor will be exposed to light on all sides (Order at 51-52). Further, as pointed out by Champaign, UNU fails to give any examples where the size of the receptor would affect the shadow flicker analysis and failed to present any testimony to refute Champaign's shadow flicker analysis. Although the burden of proof is on Champaign, the Board finds that Champaign sustained its burden of proof in showing that the facility represents the minimum environmental impact as far as shadow flicker, and UNU has failed to rebut this showing with meaningful and persuasive evidence. Additionally, the Board notes that the complaint resolution process established in the opinion, order, and certificate allows for nonparticipating individuals to raise any and all concerns about shadow flicker (Order at 52). Consequently, the Board declines to find that the

shadow flicker model was fundamentally flawed by allegedly not using the specific measurements of each receptor.

The Board also declines to find merit to UNU's argument that shadow flicker should have been modeled for the entire nonparticipating property, not just the residence, on the basis that Champaign witness Speerschneider testified that the 30-hour shadow flicker threshold, which has applied to residences, has resulted in few complaints at wind projects (Tr. at 265). Consequently, the Board does not find that the risk of shadow flicker on an entire nonparticipating parcel renders the project contrary to the public interest, particularly given that any complaints about shadow flicker on another part of a nonparticipating parcel would still be subject to the complaint resolution process (Order at 52).

Additionally, in the opinion, order, and certificate, the Board emphasized that Condition (47) does not defer issues to Staff, but gives Staff the ability to enforce the Board's determination of appropriate shadow flicker against Champaign after the facility is constructed. Further, the Board found that Champaign's proposed mitigation measures did not constitute a requirement that nonparticipating homeowners take unwanted mitigation measures, but merely enumerated a list of possible methods to mitigate excess shadow flicker. The list of possible mitigation methods included curtailment of operation during select times, which would require no changes to the property of nonparticipating individuals not wishing to implement another mitigation measure. (Order at 51-52.) Consequently, the Board finds that UNU's application for rehearing on this issue should be denied.

Property Values

(32) In its application for rehearing, UNU argues that the Board erred in finding that concerns about property values did not render the project contrary to the public interest, convenience, and necessity. In support, UNU cites the testimony of UNU witness McCann that the project will reduce the market value of properties in the immediate area by 25 to 40 percent. Further, UNU claims that Champaign

witness Thayer's testimony diluted property value impacts associated with wind turbines by considering a vast data set and was, therefore, less reliable. UNU concludes that, consequently, the project does not serve the public interest and should not have been approved or, alternatively, that the Board should condition its approval on inclusion of a property value protection agreement. (UNU App. at 84-87.)

In its memorandum contra UNU's application for rehearing, Champaign contends that the record supports the Board's finding that concerns with property values do not render the project contrary to the public interest, convenience, and necessity. In support, Champaign notes that UNU relies solely on the testimony of UNU witness McCann who, Champaign points out, failed to control his real estate price comparison for the many variables that can affect prices; failed to include any analysis tying the isolated studies he relied on; used a very small sample size that was not tested for statistical significance; and lacked the formal education and field experience to conduct a true statistical study. (Co. Memo Contra at 52-55.)

In its opinion, order, and certificate, the Board noted that five studies were presented by Champaign witness Thayer concluding that similar wind projects in other locations did not affect property values in those areas, and two studies were presented by UNU witness McCann concluding that wind projects in other locations reduced the market value of properties in the immediate areas. As the Board explained in the opinion, order, and certificate, however, the studies presented by Champaign were more reliable than the studies presented by UNU, as the Lawrence Berkley National Laboratory Study in particular was a peer-reviewed, comprehensive statistical study that considered a much larger number of property transactions near 24 wind farms, and included a control group. Further, the Board noted the lack of a control group in UNU witness McCann's study, small sample size, and lack of testimony on statistical significance that lessened the credibility of that study. (Order at 53-54.) As UNU has presented no new arguments that have not been discussed and decided in the opinion, order, and certificate, the Board declines to reverse its

finding that Champaign's studies proved more reliable, and finds that UNU's application for rehearing on this issue should be denied.

Setbacks - Operational Noise

(33) In its application for rehearing, UNU alleges that Champaign's proposed sound limits for audible noise will cause widespread discomfort, annoyance, and sleep deprivation. UNU reiterates that both audible and inaudible sound waves from wind turbines can cause health disorders for those living too close to wind turbines, and the Board should not allow Champaign to increase noise levels imposed on nonparticipating neighbors to anything higher than five decibels (dBA) above the background sound level. (UNU App. at 20-25.)

In its memorandum contra, Champaign argues that the record reflects that audible sound from turbines will be at acceptable levels, with UNU repeating the same arguments made in its initial brief in both this proceeding and in *Buckeye Wind I*. Champaign points to the testimony of Champaign witness Hessler confirming that a project with mean sound levels under 45 dBA would result in few complaints. (Co. Memo Contra at 7-13.)

The Board finds that UNU fails to raise any new arguments for our consideration. UNU's allegations are, verbatim, the same arguments it raised in its initial brief. While UNU claims that the order dismissively ignores the risk of health disorders, the record reflects that there is no causal connection between health disorders and turbine noise. (UNU Br. at 10-15; UNU App. at 20-25; Order at 57, 62.) Accordingly, the Board finds UNU's assignment of error should be rejected.

(34) In its assignment of error, UNU repeats its request that all turbines be located at least 0.87 miles from the properties of all nonparticipating neighbors. Based on negative health effects associated with wind turbine noise, UNU argues that setbacks for the proposed project should be at least 0.87 miles in order to protect neighboring residences from health disorders. (UNU App. at 25-29.)

Champaign responds that, given the lack of evidence that turbines may cause health issues, UNU's proposed setback distance should be rejected. Champaign argues that it has presented sufficient evidence to support that the project, as sited, will not lead to adverse health effects. (Co. Memo Contra at 13-15.)

Similar to its previous assignment of error, the Board finds that UNU has not raised any new arguments for the Board's consideration but again recites the same argument, word for word, raised in its initial brief. (UNU Br. at 15-18; UNU App. at 25-29; Order at 57, 62-63.) Therefore, we find that UNU's assignment of error requesting a setback of 0.87 miles should be denied.

(35) UNU argues that a 35 dBA limit is justified regardless of whether or not turbine operation causes health problems. UNU opines that the opinion, order, and certificate fails to prevent annoyance and sleep disturbance and does not take steps to prevent Champaign from breaching its obligation to use its leases without harming its neighbors. (UNU App. at 29-32.)

Champaign replies that UNU is repeating its arguments from its initial brief in this proceeding, with the exception of its new argument that no one has a right to annoy or disturb their neighbors. Champaign argues that the record supports the Board's finding that operational noise levels are reasonable and, in the event neighbors are upset with the operational noise level, the complaint resolution process will protect the public interest. (Co. Memo Contra at 15-19.)

Although UNU notes that a noise limitation of 35 dBA is necessary regardless of whether there are any adverse health effects associated with wind turbine operation, UNU fails to provide any additional rationale in support of its request. Contrary to UNU's argument that the order fails to take steps to ensure nonleaseholders will not be harmed by the operation of wind turbines, we point out that an entire condition to Champaign's certificate is devoted to ensuring that nonleaseholders who allege annoyance or disturbance will receive due process through a complaint resolution process. The complaint resolution process allows for

nonleaseholders to raise any and all concerns about unacceptable noise levels. Further, we note that the order's condition incorporated a short-term deviation specification, at UNU's request, which we find not only makes the standard easy to reliably enforce, but also removes the uncertainty associated with the complaint resolution process that UNU raised concerns about. Therefore, the Board finds that UNU's assignment of error should be denied.

(36) UNU believes that the Board's opinion, order, and certificate wrongfully determined that Champaign witness Hessler's sound measurements were reliable. UNU argues that Champaign witness Hessler's background sound levels were 4 dBA higher than they were in the previous noise study in *Buckeye Wind I*. Specifically, UNU suggests that the opinion, order, and certificate fails to recognize that Champaign witness Hessler's background sound readings were inconsistent between stations and exposed to significant noise sources that elevated sound levels at all sites. UNU adds that Champaign witness Hessler's noise study also found unusually high noises at Station 7, which caused him to discard this station's test data. Further, UNU accuses the Board of missing the entire objective of a background noise study. (UNU App. at 32-36.)

Champaign contends that UNU's arguments are without merit and, regardless of what UNU claims, the ambient sound levels recorded by UNU's own witness are similar to those measured by Champaign's witness. Champaign asserts that the fact that Champaign's witness's measurements were almost identical to UNU's witness's measurements refutes UNU's criticisms of the background noise study work, as well as the claim that Champaign's witness had differing results between this proceeding and *Buckeye Wind I*. (Co. Memo Contra at 19-22.)

The Board finds UNU's assignment of error should be denied. Initially, we note that UNU relies exclusively on similar arguments previously made in this proceeding. Regarding UNU's first assertion, we find that Champaign witness Hessler's background noise levels are consistent with UNU witness James's noise levels. Specifically, Champaign witness Hessler testified that he measured a L90

background level of 33 dBA with a wind speed of six meters per second, which he explained is the typical critical wind speed. UNU witness James testified that, when he measured the background sound level, the wind speed was less than 0.2 meters per second, which in Champaign witness Hessler's study, would correlate to three meters per second, resulting in a mean nighttime dbA of 26. UNU witness James explained that this figure was very comparable to his numbers. UNU witness James confirmed, Champaign witness Hessler's mean daytime and nighttime L90 sound levels, as a function of wind speed, were reliable at 3 meters per second; therefore, the Board sees no reason why we should find the rest of Champaign witness Hessler's figures should be disregarded merely because the numbers were slightly different than the sound levels in *Buckeye Wind I*, particularly in light of the fact that the background noise level's validity was confirmed by UNU's own witness. (Tr. at 793, 1185-1186; Co. Ex. 1, Ex. O at 28.)

Similarly, we find UNU's assertions that Champaign's noise readings are inconsistent to be without merit. The variations in noise readings amongst the monitoring stations reflects Champaign witness Hessler's testimony that Applicant looks for a diversity of places to put the monitors and, subsequently, had the distribution of readings throughout the project area. Further, we are not persuaded that the nighttime reading at Station 7 correlates to all stations being exposed to contaminating noise, as the measurements reflected within the application, with the exception of the spiked periods, show that Station 7's readings are consistent with those of other monitors. (Co. Ex. 1, Ex. O at 20-25.)

Finally, UNU fails to persuade us that Champaign witness Hessler's background noise calculations were deceptive and skewed by noise from farm machinery and the surrounding vegetation. As we explained in the opinion, order, and certificate, it is inevitable that the noise stations may pick up on outdoor noise from sources, as even UNU's own witness testified. Contrary to UNU's assertions, the record does not reflect that Champaign witness Hessler made the conscious choice to include deciduous leaf rustle in his measurements in order to inaccurately portray background sound levels,

but rather, indicates that Champaign chose to put monitors in open areas away from woods and trees. (Order at 61; Tr. at 775.) The Board finds that UNU's misleading accusations on rehearing are meritless and should be rejected.

(37) UNU reiterates its belief that Champaign did not accurately measure background noise and claims that calculation of the background sound level should utilize the L90 metric, which measures the quietest 10 percent interval, not the average sound level (Leq) metric, which UNU posits is contrary to all prior practices of Champaign's noise consultant. UNU claims that the opinion, order, and certificate disregards the admission of Champaign's own witness that the Leq is an inappropriate measurement of background sound. Further, UNU suggests that the Board cannot utilize past Board orders that adopted Leq measurements as precedent because the use of the Leq was not contested by any opposition in those proceedings. (UNU App. at 37-42.)

Champaign points out that its witness took background measurements that utilized both the L90 metric and the Leq metric and still determined that a design goal of 44 dBA was appropriate. Champaign explains that very few complaints are recorded at project sound levels below 45 dBA and, regardless of whether L90 or Leq is presented as a site background level, the fact remains that the project is subject to a noise condition. Champaign reiterates that the Board has accepted similar noise conditions for two other wind farm projects in Ohio. (Co. Memo Contra at 22-25.)

The Board finds that UNU fails to provide any new arguments for the Board's consideration. While UNU alleges that Champaign witness Hessler admitted that the Leq is an inappropriate measurement of background sound, the Board finds that UNU again mischaracterizes the record in this matter. Champaign witness Hessler did testify that he has not utilized the Leq prior to this proceeding, however, he explained that the Leq is still the actual average level that is recorded over every 10-minute measurement period, and the poorest sound measurement is not the Leq but rather the LMax. In addition, while UNU may believe that Board precedent should be disregarded because no parties contested the use of the Leq in two other Board

proceedings, we disagree and find that UNU fails to provide any rationale for us to depart from past Board precedent. Contrary to UNU's position, we find it relevant that, of the two wind farms currently certificated in Ohio that have similar Leq noise conditions, only two noise complaints have been received. As the record reflects, one of the complaints was determined to be unrelated to wind turbine operation, but rather a pool pump. Accordingly, as set forth in our order, the record supports Champaign's use of the Leq metric for setting noise limits, and we find UNU's assignment of error should be rejected. (Order at 61-62; Tr. at 793-794, 2798-2799, 2821, 2831.)

(38) In its next assignment of error, UNU asserts that, if Champaign ultimately selects the Gamesa turbine model, it will not be able to comply with a noise standard of 45 dBA. (UNU App. at 42-43.)

Champaign responds that UNU fails to raise a new argument for the Board's consideration and, regardless of which turbine model is selected, operating sound levels cannot exceed 44 dBA at nighttime in accordance with Condition (46). (Co. Memo Contra at 26.)

The Board notes that UNU previously raised this argument in its initial brief and the Board subsequently found that the condition to the application considers the worst-case scenario noise limits that will be strictly enforced, regardless of the turbine model selected (Order at 62-63; UNU Br. at 30). Accordingly, as there are no new arguments for the Board's consideration, UNU's assignment of error should be rejected.

(39) UNU claims the Board erred by failing to conclude that no nonparticipating landowner should be exposed to more than 35 dBA of noise at any time. UNU argues that the opinion, order, and certificate places too much weight on Champaign witness Hessler's testimony that only two percent of all persons living within 2,000 feet of a wind turbine expressed complaints about turbine noise. Further, UNU provides that there is no credible evidence to support Staff witness Strom's testimony that there have been few noise complaints that have occurred at Ohio's two operating wind farms.

Furthermore, UNU suggests that the Board adopt a 40 dBA standard, as the Board acknowledges in its order that the World Health Organization (WHO) determined that 40 dBA is the threshold at which sound becomes intrusive and annoying. UNU opines that the Board approved a complaint resolution process that will not do anything to fix the noise problems that may arise with this project. (UNU App. at 43-50.)

Champaign responds that there is no support in the record for a 35 dBA limitation. Champaign points out that this recommendation is contrary to the 2009 WHO Night Noise guidelines which note that there is no sufficient evidence that the biological effects observed at a level below 40 dBA are harmful to health. Champaign explains that UNU mischaracterizes the WHO's noise guidelines, as they actually provide that the outside noise level of 40 dBA is equivalent to the lowest observed adverse effect. Champaign notes that the WHO study concluded that adverse effects were observed in the range of 40 to 55 dBA, meaning that Champaign's worst case modeling levels that kept all residences below 44 dBA, with the majority of residences actually under 40 dBA, are consistent with the lowest observed adverse effect levels. (Co. Memo Contra at 26-31.)

The Board notes that UNU fails to raise any new arguments for the Board's consideration. Regarding UNU's assertion that we overvalued Champaign witness Hessler's testimony regarding noise complaints of only two percent of the population living within 2,000 feet of wind turbines, we note that the testimony of Champaign witness Mundt corroborates Champaign witness Hessler's two percent figure. While UNU is quick to point out that Champaign witness Mundt responded to testimony read into the record indicating that 20 percent of the population exposed to turbine noise levels of 37.5 to 40 dBA were very annoyed and 36 percent of the population is very annoyed at levels above 40 dBA, UNU selectively ignores several key components of the study. In fact, the record reflects that only 20 percent of 40 respondents expressed annoyance at noise levels of 37.5 to 40 dBA, and 36 percent of

25 respondents indicated annoyance at levels above 40 dBA. By the Board's calculation, these statistics amount to 17 respondents being annoyed by turbine noise levels. Another important figure left out of UNU's arguments was the fact that this study consisted of 351 subjects, meaning only 4.8 percent of participants experienced annoyance at sound levels above 37.5 dBA. We note that this figure is much more closely aligned with Champaign witness Hessler's two percent figure than UNU's deceptive statistics. Accordingly, we are not persuaded that Champaign witness Hessler's testimony on noise complaints is unreliable. (Co. Ex. 29 at 34-35; Tr. at 2946-2947.)

Further, there is no evidence within the record that contradicts Staff witness Strom's testimony that there have only been two turbine noise complaints, of which only one was credible. Although UNU complains that the Board struck testimony from UNU witness Schaffner indicating that 14 families complained about noise from an Ohio wind farm, this testimony was clearly hearsay and was appropriately struck by the ALJs. Nothing precluded UNU from calling any witness in addition to UNU witness Schaffner to testify in regards to turbine noise complaints. (Tr. at 2798-2799.)

Turning to UNU's arguments on the WHO noise standards, we disagree with UNU's new request to impose a 40 dBA noise limitation. The record reflects that the WHO study did not adopt 40 dbA as a threshold, but rather that the WHO study concluded that adverse effects were observed within the range of 40 dBA to 55 dBA. We affirm our order, as the 44 dBA standard, which does reflect a worst-case noise modeling scenario, is consistent with the lower end of the WHO study's recommended noise threshold. (Tr. at 1736-1738.)

Finally, as we noted above, the complaint process condition required in the opinion, order, and certificate will ensure resolution of any turbine noise complaints from the public. We reiterate that the Board condition has clear guidelines, including provisions that UNU recommended, which Champaign must comply with in accordance with its

certificate. Therefore, we find that UNU's assignment of error should be rejected.

(40) UNU argues that the Board must require Champaign to include modeling or similar data identifying the level of LFN at neighboring property lines in order to comply with Rule 4906-17-08(A)(2)(b), O.A.C. UNU provides that LFN modeling is necessary, as it may be pervasive, invasive, and unpleasant, to which the Board should not allow the project's LFN to exceed 50 dbA. UNU believes that Champaign's noise study is bereft of the data necessary under Board rules. (UNU App. at 50-53, 56-57.)

Champaign responds that the application is complete and in compliance with Rule 4906-17-08(A)(2)(d), O.A.C. Champaign points out it offered testimony that modeling for the project covered the octave band frequency spectrum of the turbine sound power level down to 31 hertz. Champaign also asserts that the application included a discussion of the modeling effort for the low end of the frequency spectrum, as well as a detailed discussion on low frequency levels from wind turbines. Champaign explains that the application included a noise study of actual field measurements in dBC to show the lack of any significant low frequency noise levels as a result of wind turbine operation. (Co. Memo Contra at 31-32.)

The Board finds that UNU fails to raise any new arguments for our consideration. Accordingly, as UNU's allegations regarding LFN have been adequately addressed and dismissed in the opinion, order, and certificate, we find UNU's application for rehearing on this matter should be denied. (Order at 63-64; UNU Br. at 35-38.)

(41) In its application for rehearing, UNU posits that noise standards at the property lines of nonparticipating landowners should be implemented, not just noise limitations at nonparticipating landowners residences. UNU claims the Board has authorized Champaign to emit noise pollution of nonparticipating landowners properties that will deprive landowners their rights to enjoy their land. UNU argues that the Board should not sacrifice thousands of

citizens' land just so a single developer can make money from publicly subsidized energy. (UNU App. at 56-57.)

Champaign responds that worst-case scenario modeling set forth in the application shows the design goal of 50 dBA will be met in all but a handful of instances where sound levels would be in the 52 dBA range. Champaign asserts any small overages at nonparticipating properties will be negligible. Champaign also dismisses the argument that nonparticipating landowners will be deprived of their right to enjoy their land, as sound levels in the existing environment often exceed 50 dBA, such as 60 dBA levels created by birds chirping in the morning. (Co. Memo Contra at 38-39.)

The Board finds that UNU's application for rehearing should be denied on this issue. As the record reflects, the intent of a noise regulation is to control noise where people spend the majority of their time, particularly at night. Outside of a few speculative arguments, UNU fails to cite to any record evidence supporting its assertion that nonparticipating landowners' rights to fully use their properties will be eliminated but for a noise limitation. In addition, we note that the complaint resolution process is available to all nonparticipating landowners in the event there are any turbine noise disputes. (Tr. at 736.)

Conditions

(42) In its application for rehearing, UNU argues that the Board erred by finding that the vegetation management plan initially recommended in the Staff Report was unnecessary. In support of its assertion, UNU explains that aerial photographs in the application show that the project will cross streams and wooded areas, which UNU believes necessitates a vegetation management plan. (UNU App. at 101.)

In its memorandum contra UNU's application for rehearing, Champaign opines that, as noted in Champaign witness Speerschneider's testimony, this condition was initially recommended in the Staff Report and appears to have been copied from a transmission line report relating to

transmission right-of-way. Champaign argues that such a condition is not applicable to this facility, which will have primarily buried collection lines and turbines located in open fields, as confirmed by a Staff witness. Further, Champaign points out that various mitigation measures for streams and conditions regarding environmentally sensitive areas are included in the opinion, order, and certificate and are sufficient to cover UNU's concerns. (Co. Memo Contra at 64.)

The Board declined to include the condition initially recommended in the Staff Report regarding vegetation management for the reasons clearly set forth in the opinion, order, and certificate. UNU provides no justification in the record for the inclusion of a vegetation management program and the record indicates that the facility will utilize primarily buried collection lines and turbines in open fields, making the condition unnecessary. (Order at 26.) As UNU has provided no other argument or justification, the Board finds that UNU's application for rehearing should be denied.

(43) Next, UNU argues that the Board erred in only requiring Champaign to post bond for road repair with the county engineer, and not the township trustees, which UNU argues has resulted in "disastrous" consequences in other counties. In support, UNU cites testimony from County/Townships witness Wendel, Van Wert County Engineer, indicating that the county roads have patches, despite the fact that County/Townships witness Wendel filed a letter with the Board in September 2012 indicating that the roads were fully restored to their preconstruction condition. UNU states that this testimony demonstrates that County/Townships witness Wendel only filed the letter to "wash his hands" of the issue, resulting in road repair problems within Van Wert County. (UNU App. at 101-102.)

In its memorandum contra UNU's application for rehearing, Champaign argues that the Board is under no obligation to require financial assurance for pre- and post-construction roadwork for a major utility facility and, therefore, even though the Board chose in this case to require financial assurance, the Board did not err in requiring Champaign to provide financial assurance to only the Board of

Commissioners of Champaign County and not the townships. Champaign contends that, under Condition (29), Champaign will only have to provide financial assurance to one entity and, thus, will not be required to provide financial assurance to each township in the project area. (Co. Memo Contra at 64-65.)

Initially, the Board notes that it made no finding in the opinion, order, and certificate that there was any evidence of "disastrous" consequences regarding road repairs in other counties in conjunction with wind projects, and, the Board declines to make such a finding now. Further, the Board notes that there is no testimony in the record demonstrating that the Van Wert County Engineer filed untrue information with the Board, only UNU's bare speculation. Nevertheless, as discussed above in the Board's consideration of the County/Townships' application for rehearing in Finding (17), the Board has modified Condition (29) to require Champaign to provide financial assurance to the public official or body possessing the appropriate statutory authority. Consequently, the Board also finds merit to this portion of UNU's application for rehearing solely for the reasons articulated in Finding (17), and modifies Condition (29) accordingly as set forth in Finding (17).

(44) UNU provides in its application for rehearing that the Board erred in failing to include a condition that Champaign pay for monthly television subscription fees that neighbors would not have incurred but for turbine interference with television reception. UNU argues that the Board should amend its conditions to include this requirement. (UNU App. at 102-103.)

In its memorandum contra UNU's application for rehearing, Champaign argues that UNU's proposed modification is unnecessary. Champaign contends that UNU's request for a blanket requirement that Champaign pay for monthly television package fees ignores the fact that each complaint will be handled on an individual basis pursuant to Condition (5) in the opinion, order, and certificate. Further, Champaign points out that television charges are package dependent and vary. (Co. Memo Contra at 65-66.)

The Board initially notes that the opinion, order, and certificate noted that a study showed that, based on the low number of channels available and the distance of the closest full-power station, it was unlikely that off-air television stations were the primary mode of television service for the local communities. Nevertheless, Champaign's application indicated that, if the facility resulted in impacts to existing off-air television coverage, Champaign would address and resolve each problem individually by offering cable television hookups or direct broadcast reception systems. Further, the Board points out that Condition (5) of the opinion, order, and certificate requires that Champaign have in place a complaint resolution procedure to address any public grievances resulting from the project construction and operation, and that Champaign must work to mitigate or resolve any issues and forward any complaints to Staff. The opinion, order, and certificate requires Staff to review and confirm that the complaint resolution procedure complies with the requirements in Condition (5). The Board finds that, in light of this condition, in the unlikely event that television reception impacts occur and complaints are submitted to Champaign, the complaints would be handled under the approved complaint resolution procedure. (Order at 65-66.) In addition, the Board does not find it necessary, prior to any complaints, to enumerate specific television packages and prices to which members of the community experiencing reception issues may be entitled. We find that these issues are better handled on an individual basis through the approved complaint resolution process. Consequently, the Board finds that UNU's application for rehearing on this issue should be denied.

(45) Finally, in its application for rehearing, UNU reiterates its argument regarding good neighbor agreements that it initially raised in its posthearing brief. UNU argues that wind developers insist that nonparticipating neighbors experiencing wind farm damage sign "good neighbor agreements," as a precondition for the developers' mitigation of damage. UNU contends that the Board should add a condition to the opinion, order, and certificate prohibiting Champaign from entering into this type of

agreement relating to the proposed project. (UNU App. at 103.)

In its memorandum contra UNU's application for rehearing, Champaign contends that its right to enter into agreements with neighboring landowners in the project area is not subject to the Board's overview and that UNU's request is merely an attempt to interfere with Champaign's development of the proposed project. (Co. Memo Contra at 65-66.)

Initially, the Board notes that Champaign is required to follow the complaint process set forth in Condition (5) of the opinion, order, and certificate. Further, we emphasize that the Board is the final decision maker in any complaint proceeding and the Board encourages Champaign to work with constituents to informally resolve complaints. To the extent Champaign and an individual with a complaint have resolved the issue, they are free to enter into an agreement memorializing their resolution. However, the Board emphasizes that nothing in the opinion, order, and certificate permits Champaign to contract away the requirement that it comply with the conditions in the certificate. Consequently, the Board finds that UNU's application for rehearing on this issue should be denied.

It is, therefore,

ORDERED, That, as set forth in Finding (13), Champaign's motion to strike is moot. It is, further,

ORDERED, That the applications for rehearing filed by the County/Townships and UNU are granted only to the extent set forth in Findings (17) and (43), and in all other respects they are denied. It is, further,

ORDERED, That a copy of this entry on rehearing be served upon each party of record and any other interested persons of record.

THE OHIO POWER SITING BOARD

Todd A. Snitchler, Chairman
Public Utilities Commission of Ohio

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

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

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

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

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

Jeffrey J. Lechak, Board Member
and Public Member

JJT/MWC/sc

Entered in the Journal

SEP 30 2013

Barcy F. McNeal
Secretary

BEFORE

THE OHIO POWER SITING BOARD

In the Matter of the Application of Champaign Wind, LLC, for a Certificate to Construct a Wind-Powered Electric Generating Facility in Champaign County, Ohio.	)))))	Case No. 12-160-EL-BGN

OPINION, ORDER, AND CERTIFICATE

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The Ohio Power Siting Board (Board), coming now to consider the above-entitled matter, having appointed administrative law judges (ALJs) to conduct the hearings, having reviewed the exhibits introduced into evidence in this matter, and being otherwise fully advised, hereby issues its opinion, order, and certificate in this case, as required by Section 4906.20, Revised Code.

APPEARANCES:

Vorys, Sater, Seymour, and Pease LLP, by M. Howard Petricoff, Stephen M. Howard, Michael J. Settineri, Miranda R. Leppla, and Gretchen Petrucci, 52 East Gay Street, P.O. Box 1008, Columbus, Ohio 43216-1008, on behalf of Champaign Wind, LLC.

Mike Dewine, Ohio Attorney General, by William L. Wright, Section Chief, and Werner L. Margard, Stephen A. Reilly, and Devin D. Parram, Assistant Attorneys General, Public Utilities Section, 180 East Broad Street, 6th Floor, Columbus, Ohio 43215-3793, and by Summer J. Koladin Plantz and Sarah Bloom Anderson, Assistant Attorneys General, Environmental Enforcement Section, 30 East Broad Street, 25th Floor, Columbus, Ohio 43215, on behalf of the Staff of the Board.

Van Kley & Walker, LLC, by Jack A. Van Kley, 132 Northwood Boulevard, Suite C-1, Columbus, Ohio 43235, and Christopher A. Walker, 137 North Main Street, Suite 316, Dayton, Ohio 45402, and on behalf of Union Neighbors United, Inc., Robert and Diane McConnell, and Julia F. Johnson.

Nick Selvaggio, Champaign County Prosecuting Attorney, and Jane Napier, Assistant Prosecuting Attorney, 200 North Main Street, Urbana, Ohio 43078, on behalf of The Board of Commissioners of Champaign County and the Boards of Trustees of the Townships of Goshen, Union, and Urbana.

Chad Endsley and Leah Curtis, Ohio Farm Bureau Federation, 280 North High Street, Columbus, Ohio 43218-2382, on behalf of the Ohio Farm Bureau Federation.

Gil Weithman, Urbana City Law Director, and Breanne Parcels, Staff Attorney, 205 South Main Street, Urbana, Ohio 43078, on behalf of the City of Urbana.

Thompson Hine, LLP, by Philip B. Sineneng, Kurt P. Helfrich, and Ann B. Zallocco, 41 South High Street, Suite 1700, Columbus, Ohio 43215-6101, on behalf of Pioneer Rural Electric Cooperative, Inc.

OPINION:

I. SUMMARY OF THE PROCEEDINGS

All proceedings before the Board are conducted according to the provisions of Chapter 4906, Revised Code, and Chapter 4906, Ohio Administrative Code (O.A.C.).

On January 6, 2012, Champaign Wind LLC (Champaign or Applicant), a wholly-owned subsidiary of EverPower Wind Holdings, Inc. (EverPower), filed a copy of the notice regarding an application for a certificate of environmental compatibility and public need (certificate) that it intended to file for the construction of electricity generating wind turbines and electrical substations to be located in Champaign County, Ohio, and that a public informational meeting would be held on January 24, 2012. The public informational meeting was held, as scheduled, on January 24, 2012.

The ALJs granted motions to intervene filed by the following: Diane McConnell, Robert McConnell, Julia Johnson, and Union Neighbors United, Inc. (collectively, UNU); the Ohio Farm Bureau Federation (Farm Federation); the Board of Commissioners of Champaign County, Ohio, and the Boards of Trustees of the Townships of Union, Urbana, and Goshen (collectively, County/Townships); the City of Urbana (Urbana); and the Pioneer Rural Electric Cooperative (Pioneer).

On May 9, 2012, Applicant filed a motion for waivers of various aspects of Chapter 4906-17, O.A.C., and the one-year notice period requirement contained in Section 4906.06(A)(6), Revised Code.1 Staff filed a response indicating that it did not object to Applicant's waiver requests on May 17, 2012. UNU filed a memorandum contra Applicant's request for a waiver of Section 4906.06(A), Revised Code. By entry issued August 2, 2012, the ALJ granted Champaign's request for waiver of the one-year notice period required by Section 4906.06(A)(6), Revised Code; the requirement that Applicant provide certain cross-sectional views and locations of borings, pursuant to Rule 4906-17-05(A)(4), O.A.C.; and the requirement that Applicant submit a map of the proposed electric power generating site showing the grade elevations where modified during construction pursuant to Rule 4906-17-05(B)(2)(h), O.A.C.

Champaign filed its application on May 15, 2012, for a certificate of environmental compatibility to construct a wind-powered electric generation facility in Champaign County, Ohio. The proposed project (Buckeye Wind II) consists of up to 56 wind turbine generators, access roads, electrical interconnection, construction staging areas, an operations and maintenance facility, substation, and up to four meteorological towers, to be located on approximately 13,500 acres of leased private land in Goshen, Rush, Salem,

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1 Section 4906.06(A)(6), Revised Code, was modified by the General Assembly, effective September 10, 2012, to no longer require a one-year notice period.

Union, Urbana, and Wayne Townships, in Champaign County, Ohio. The Board notes that the proposed project is adjacent to another wind project that has already been certificated in *In re Application of Buckeye Wind, LLC*, Case No. 08-666-EL-BGN (*Buckeye Wind I*), Opinion, Order, and Certificate (March 22, 2010).

By letter dated July 13, 2012, the Board notified Champaign that its application had been found to comply with Rule 4906-1, et seq., O.A.C. On July 20, 2012, Champaign filed a certificate of service of its accepted and complete application, in accordance with the requirements of Rule 4906-5-06, O.A.C.

By entry issued on August 2, 2012, the ALJ established a procedural schedule providing that the local public hearing would be held on October 25, 2012, at Triad High School Auditeria, 8099 Brush Lake Road, North Lewisburg, Ohio 43060, and the adjudicatory hearing would commence on November 8, 2012, at the offices of the Public Utilities Commission of Ohio in Columbus, Ohio. The August 2, 2012, entry also directed Champaign to publish notice in accordance with Rule 4906-5-08, O.A.C. Notice of the application was published in the Urbana Daily Citizen, a newspaper of general circulation in Champaign County. Champaign filed proof of publication of the first notice on September 13, 2012, and proof of publication of the second notice on November 6, 2012.

All of the parties, including the Board's Staff (Staff), conducted significant discovery and, on October 10, 2012, Staff filed a report of its investigation of the proposed facility (Staff Report).

The local public hearing was held, as scheduled, on October 25, 2012. The adjudicatory hearing commenced, as scheduled, on November 8, 2012. Initial testimony concluded on November 28, 2012. Rebuttal testimony was heard on December 6, 2012. At the hearing, Champaign presented ten witnesses, UNU presented six witnesses, the County/Townships presented four witnesses, the Farm Federation presented one witness, Pioneer presented one witness, Urbana presented five witnesses, and Staff presented eight witnesses. Champaign also presented one witness on rebuttal. Additionally, 122 exhibits were marked and 3,010 pages of testimony were transcribed.

Initial briefs were filed on January 16, 2013, by Champaign, Staff, UNU, the County/Townships, and Urbana. On January 28, 2013, reply briefs were filed by Champaign, Staff, UNU, the County/Townships, and Urbana.

II. PROPOSED FACILITY

According to the application, Champaign proposes to construct up to 56 wind turbine generators, access roads, electrical interconnection, construction staging areas, an operations and maintenance facility, substation, and up to four meteorological towers

located on approximately 13,500 acres of leased private land in Goshen, Rush, Salem, Union, Urbana, and Wayne Townships in Champaign County, Ohio (Co. Ex. 1 at 2).

In its application, Champaign proposes to install one of six models[2] of turbines: the REpower MM100, REpower MM92, Nordex N100, Gamesa G97, General Electric (GE)100, or GE103. Champaign explains that, because construction is not scheduled to begin until 2013, and, due to changing market factors such as availability and cost, a specific turbine model could not be selected at the time the application was submitted. The six turbines under consideration have nameplate capacity ratings ranging from 1.6 to 2.5 megawatts (MW). Champaign expects a capacity factor ranging from 30 to 35 percent. Additionally, Champaign estimates that the proposed wind facility will have a total generating capacity of 89.6 to 140 MW. The hub heights for the turbines will range from 98.5 to 100 meters (323 to 328 feet), with a rotor diameter ranging from 92.5 to 103 meters (303 to 338 feet); therefore, the total height of the turbines will range from 146 to 150 meters (479 to 492 feet), with the blade tip in its highest position. (Co. Ex. 1 at 10-11.)

The application proposes that the electric substation would be located in the town of Union, adjacent to the existing Urbana-Mechanicsburg-Darby transmission line and will transmit power carried by the 34.5 kilovolt (kV) collection lines serving the wind facility. Champaign also proposes an operations and maintenance building to accommodate operations personnel, equipment, materials, and parking. Applicant expects to purchase or lease an existing structure in the project vicinity for the operations and maintenance building, but asserts that, if Applicant must construct a building, it would not exceed 6,000 square feet and would be designed to resemble an agricultural building. (Co. Ex. 1 at 15.)

The application further proposes the construction of new or improved roads to provide access to the facility, expected to be about 25 miles of private access roads. Further, Applicant expects the use of three temporary construction staging areas, to be located on private leased land, in order to accommodate material and equipment storage, parking for construction workers, and construction trailers. In total, the application states that the staging areas will not exceed 23 acres. Finally, according to the application, Champaign plans to commence construction in 2013 and place the facility in service in late 2013. (Co. Ex. 1 at 14-16.)

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2 Although the application originally identified seven models under consideration, on October 1, 2012, prior to commencement of the hearing, Champaign filed correspondence in the docket indicating that the Vestas V100 model was no longer under consideration.

III. PROCEDURAL PROCESS

Pursuant to Section 4906.04, Revised Code, a certificate issued by the Board is required prior to the commencement of construction of a major utility. Section 4906.04, Revised Code, further provides that a certificate may only be issued pursuant to Chapter 4906, Revised Code. An application for a certificate is required to be filed with the Board and a copy of the application must be served on the chief executive officer of each municipal corporation and county, as well as the head of each public agency charged with environmental protection or land use planning in the area in which the facility is proposed to be located. Section 4906.06(B), Revised Code. Further, public notice of such an application is required to be given to persons residing in the municipal corporations and counties in which the facility is proposed to be located by newspaper publication. Section 4906.06(C), Revised Code. Upon receipt of an application in compliance with Section 4906.06, Revised Code, the Board is required to schedule a public hearing within a certain time frame and the chairperson is required to cause the application to be investigated and a report submitted to the board, applicant, and any person upon request, in accordance with Section 4906.07(A) and 4906.07(C), Revised Code. Additionally, Section 4906.02, Revised Code, governs the organization of the Board and provides that the chairperson may assign or transfer duties among the Board's Staff, with the exception of the authority to grant certificates pursuant to Section 4906.10, Revised Code. In accordance with Chapter 4906, Revised Code, the Board promulgated rules in Chapter 4906-17, O.A.C., regarding wind-powered electric generation facilities and associated facilities.

Notably, Chapter 4906, Revised Code, provides that a number of these provisions are also applicable to applications for an amendment of a certificate (amendment applications). Section 4906.06(E), Revised Code, provides that amendment applications should be in the form and contain information prescribed by the Board and that notice of an amendment application shall be given as required for an application in Section 4906.06(B) and 4906.06(C), Revised Code. Additionally, Section 4906.07(B), Revised Code, provides that the Board must hold a hearing on an amendment application if the proposed change would result in a material increase in any environmental impact[3] of the facility or substantial change in the location of any portion of the facility not provided for as an alternate in the original application. Rule 4906-5-10(B), O.A.C., pertaining to amendment applications provides, in pertinent part:

> (B) Applications for amendments to certificates shall be submitted in the same manner as if they were applications for a certificate,

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[3] The Board notes that environmental impact includes, but is not limited to, the following factors: demographics, land use, cultural and archaeological resources, aesthetics, economics, surface waters, threatened and endangered species, vegetation, setbacks, roads and bridges, geology and seismology, water supplies, pipeline protection, blade shear, high winds, ice throw, noise, shadow flicker, communications, and decommissioning.

unless such amendment falls under a letter of notification or construction notice pursuant to the appendices to rule 4906-1-01 of the Administrative Code.

(1) The board staff shall review applications for amendments to certificates pursuant to rule 4906-5-05 of the Administrative Code and make appropriate recommendations to the board and the administrative law judge.

(a) If the board, its executive director, or the administrative law judge determines that the proposed change in the certified facility would result in any significant adverse environmental impact of the certified facility or a substantial change in the location of all or a portion of such certified facility other than as provided in the alternates set forth in the application, then a hearing shall be held in the same manner as a hearing is held on a certificate application.

(b) If the board, its executive director, or the administrative law judge determines that a hearing is not required, as defined in paragraph (B)(1)(a) of this rule, the applicant shall be directed to take such steps as are necessary to notify all parties of that determination.

For examples of cases where the Board has considered amendment applications, see *In the Matter of the Application of Rolling Hills Generating, LLC, to Amend its Certificate*, Case No. 12-1669-EL-BGA, Entry (Jan. 16, 2013); *In the Matter of the Application of Hog Creek Wind Farm, LLC, for a Second Amendment*, Case No. 11-5542-EL-BGA, Order on Certificate Amendment (Nov. 28, 2011); *In the Matter of the Application of Blue Creek Wind Farm, LLC, for a Second Amendment*, Case No. 11-3644-EL-BGA, Order on Certificate Amendment (Nov. 28, 2011); *In the Matter of the Application of Hardin Wind Energy LLC for an Amendment*, Case No. 11-3446-EL-BGA, Order on Certificate Amendment (Aug. 29, 2011).

IV. CERTIFICATION CRITERIA

Pursuant to Section 4906.10(A), Revised Code, 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 systems and that the facility will serve the interests of electric system economy and reliability.

(5) The facility will comply with Chapters 3704, 3734, and 6111, Revised Code, and all rules and standards adopted under those chapters and under Sections 1501.33, 1501.34, and 4561.32, Revised Code.

(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 Chapter 929, Revised Code, 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.

V. PROCEDURAL ISSUES

A. Subpoenas

In its initial post-hearing brief, UNU asserts that the ALJs erroneously denied UNU's attempt to obtain information about other wind projects' noise limitations, shadow flicker complaints, and blade shear or blade throw incidents. UNU argues that the ALJs

should not have granted motions to quash UNU's subpoenas for neighbors' noise complaints and other records pertinent to turbine noise. Similarly, UNU states that its attempt to obtain meaningful information about Champaign's 30 hour per year shadow flicker limit was proper, and notes that even Champaign's witness testified that shadow flicker limitations are relevant for this proceeding. Finally, UNU opines that the ALJs wrongfully quashed UNU's subpoenas for records about blade shear incidents, including travel distances of the blade pieces. (UNU Br. at 28, 42, 47, 57.)

Champaign counters that the ALJs properly determined that UNU's subpoenas of General Electric, EDP Renewables, and Gamesa were overbroad and sought information unrelated to the proceeding. Champaign states that the ALJs' ruling regarding UNU's subpoenas should be affirmed. (Co. Br. at 41.)

The Board finds that UNU's request is improper and should be denied. UNU's assertion that the ALJs prevented UNU from obtaining any relevant information on noise limitations is erroneous and misleading, as the ALJs did not quash UNU's request for noise information for turbine models that are being considered in the application. (Oct. 22, 2012, ALJ Entry at 11-12). Regarding UNU's subpoenas to obtain shadow flicker complaints, the Board also affirms the ALJs' decision to quash parts of UNU's subpoenas. The subpoenas filed by UNU requested the following:

> All studies, reports, and other documents relating to adverse effects caused or potentially caused by wind turbines on humans, wildlife, aviation, property values, or the environment through noise, shadow flicker, blade throw, blade icing, wildlife collisions with turbines, or other effects. All documents relating to any complaints that wind turbines have caused the forgoing effects.

(UNU Subpoenas filed Sept. 28, 2012.) The request for information relating to shadow flicker complaints was extraordinarily overbroad and the Board concurs with the ALJs that it would be unreasonable to force a nonparty to expend its time and resources toward a request that is unlimited in scope. The unreasonableness of the request is further compounded by UNU's own admission that it could refine the scope of its requests, including narrowing the subject matter and the types of documents to be produced (UNU Oct. 15, 2012, Memorandum Contra Motion to Quash at 15-16). Despite UNU's offer to subpoenaed entities to narrow the scope of its requests, UNU never filed an amended or revised subpoena, therefore, we affirm the ALJs' decision to quash UNU's overly broad subpoena of all items that relate to shadow flicker complaints.

Finally, we affirm the ALJs' decision quashing subpoena matters relating to blade shear incidents for similar reasons. In its subpoenas, UNU sought "all studies, reports,

and other documents relating to the distance turbine blades can fly when released from wind turbines." (UNU Subpoenas filed Sept. 28, 2012.) Again, this request is overly broad and not focused on obtaining information that could be admissible before the Board. Further, in its memorandum contra the motions to quash, UNU did not identify any substantial need or undue hardship that would occur absent the subpoenas being enforced to overcome the burden that would be imposed on entities that were not parties in this proceeding. We do note that, while UNU's request pertaining to a blade shear incident at a wind farm certificated by the Board was not overbroad because it identified a specific incident at a specific time and place, the request related to turbine models that are not under consideration in the proposed project before us. Accordingly, UNU's request that the Board overturn the ALJs' determinations regarding UNU's subpoenas should be denied.

B. Request to Reopen Proceeding - Blade Shear Incidents

UNU argues that the ALJs improperly sustained objections related to blade shear incidents at the *Timber Road II* wind farm during the adjudicatory hearing.[4] UNU requests that the hearing be reopened to admit the evidence about the *Timber Road II* wind farm. (UNU Br. at 43.)

Champaign replies that the ALJs properly limited the details of Staff's investigation of the Timber Road II incident, and still permitted UNU to present evidence about the blade shear incident with regard to appropriate setbacks. (Co. Reply Br. at 42.)

The Board affirms the ALJs' rulings and finds that UNU's questions regarding the specific blade shear travel distances were outside the scope of the application before us. The distance in which turbine blades traveled at a different wind farm with a turbine model that is not under consideration in this proceeding is not a fact of consequence in determining whether the proposed setbacks considered within the application at hand are reasonable; thus, it is irrelevant. Furthermore, counsel for UNU was permitted to question Staff's witness on how the *Timber Road II* blade shear incident affected Staff's determination of appropriate setbacks in the instant application. Therefore, we find UNU's request to reopen the proceeding should be denied. (Tr. at 2570-2571.)

C. Request to Reopen Proceeding - Caithness Database

In its initial brief, UNU states that the ALJs wrongfully denied admission of the Caithness database into the record, as well as UNU witness Palmer's testimony regarding the database's accuracy. UNU adds that UNU witness Palmer not only testified that the

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4 Certificated in *In the Matter of Paulding Wind Farm II, LLC*, Case No. 10-369-EL-BGN, Opinion and Order (Nov. 18, 2010) (*Timber Road II*).

database is accurate, but also verified much of the data within the database, indicating it has probative value. UNU requests that the hearing be reopened to consider the database. Champaign responds that the ALJs properly determined that the evidence was inadmissible hearsay from third parties; therefore, it was properly stricken. (UNU Br. at 44, 48; Co. Reply Br. at 44-45.)

The Board finds that UNU's request to reopen the hearing should be denied. The Caithness database is an open, online forum, where information is obtained from individuals who can add information, documents, and data into the database. However, the database consists entirely of third-party information, in which UNU witness Palmer relied upon in creating his testimony. The website itself disclaims any accuracy of the items contained within its database, and there was no possible way for either UNU witness Palmer or the ALJs to independently verify who the author of the information was and whether the information was reliable. The website itself serves to function in a similar manner to other online forums, such as Wikipedia, where anyone can author or edit content without peer review or qualitative analysis.[5] Here, UNU witness Palmer, in formulating his conclusions, relied on data and information that had not been shown to be reliable, nor had the voluminous amounts of data contained within the database been subject to peer review or analysis. Accordingly, we affirm the ALJs' rulings and find that UNU's request to reopen the hearing should be denied. (Tr. at 1350-1352, 1356.)

D. Request to Strike Blade Shear Testimony of Champaign Witnesses Shears and Poore

UNU argues that the ALJs were inconsistent in their rulings and should not have allowed Champaign to introduce testimony indicating that blade shear is rare. Specifically, UNU notes that Champaign witness Shears was permitted to testify about wind farm safety incidents and Champaign witness Poore was able to use statistics from two PowerPoint presentations prepared by consultants in order to formulate his opinions on the wind industry. (UNU Br. at 44-45.)

Champaign points out that UNU actually elicited the evidence from Champaign witness Poore about the industry's safety. Champaign notes that both witnesses presented general statements based on personal knowledge and industry experience and, therefore, their testimony is admissible and properly included in the record. (Co. Reply Br. at 44.)

The Board finds that the ALJs' rulings were not inconsistent by allowing testimony of Champaign witnesses Poore and Shears into the record. First, the two PowerPoint presentations, while hearsay, are admissible under the learned treatise exception. Both

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[5] In the course of the adjudicatory hearing, the ALJs affirmed that references from Wikipedia are inadmissible hearsay and cannot be admitted as a learned treatise (Tr. at 1021).

presentations were relied upon by Champaign witness Poore in direct examination and were established as a reliable authority, as both authors of the presentations were known and their backgrounds were included. In addition, direct testimony questions about wind turbine incidents directly pertain to personal knowledge the witnesses had from their own experiences in the wind industry. Further, while UNU is critical of the inclusion of parts of Champaign witness Shears' testimony in the record, the questions and answers directly relate to his experience as the Chairman of the British Wind Energy Association and his 18 years of experience in the wind industry. However, we believe the sentence in Champaign witness Shears' testimony, which provides "[b]ut the operation of wind farms has far fewer safety related incidents even on a proportional basis then other means of obtaining energy such as the mining of coal or drilling for oil" is inadmissible hearsay, and no exception applies. Accordingly, this sentence should be stricken from the record. Accordingly, UNU's request to strike certain testimony of Champaign witnesses Poore and Shears relating to blade shear is granted, in part, and denied, in part as set forth above. (Co. Reply Br. at 44; Co. Ex. 12 at 3.)

E. Draft Versions of Staff Report and Application

UNU argues that an ALJ entry issued November 7, 2012, wrongfully denied its motion to compel Champaign to produce correspondence and draft documents of the proposed project application. UNU contends that the documents may have led to the discovery of relevant information and could have contained statements inconsistent with the application. UNU requests that the Board remand the application to conduct further discovery on the drafts of the application. (UNU Br. at 66-67.)

In addition, UNU states that the ALJs further erred in the adjudicatory hearing by failing to admit drafts of the Staff Report. UNU opines that the ALJs wrongfully cited and extended their ruling about the application's drafts to the draft of the Staff Report. UNU believes that the draft of the Staff Report shows that Staff accepted all of Champaign's recommendations at face value. Further, UNU argues that its right to discovery under Section 4903.082, Revised Code, was violated. (UNU Br. at 66-67.)

Champaign provides that it was appropriate for the ALJs to preclude admission of a draft of the Staff Report and questioning on the draft because the draft was not relevant. Further, Champaign points out that UNU was still able to make its point and asked Staff's witness several questions about the draft. (Co. Reply Br. at 43; Tr. at 2554-2555, 2566.)

The Board finds that UNU's request to remand the application for further discovery should be denied. While UNU is correct that Section 4903.082, Revised Code, provides parties with ample rights of discovery, under Ohio Civ.R. 26(B)(1), these rights extend only to matters that are relevant to the subject matter involved in the pending action. As Section 4906.10, Revised Code, sets forth, the Board's responsibility is to render a decision

upon the record either granting or denying the application as filed, or modifying and granting the application. The sole consideration of the Board is on the application, as filed. Accordingly, the admission of any drafts, whether it be an application or staff report, will not make it more or less probable that Champaign's application meets or does not meet the requirements of Section 4906.10, Revised Code. Therefore, UNU's requests to be provided with drafts of the Staff Report and the application should be denied.

F. Admission of Application and Testimony of Champaign Witnesses Speerschneider and Crowell

In its initial brief, the County/Townships contend that intervenors were not afforded due process at the adjudicatory hearing. The County/Townships argue that it was improper for Champaign to use a corporate executive to sponsor Champaign's application, and the ALJs wrongfully admitted the application into evidence despite objections by several parties. Furthermore, the County/Townships allege that the ALJs erroneously allowed Champaign witness Crowell to testify as an expert about Exhibit E of the application and improperly admitted the exhibit into the record. UNU adds that admission of the application, as well as Champaign witness Speerschneider's testimony, was inappropriate, as Champaign witness Speerschneider was not qualified to offer expert testimony on the application. (County/Townships Br. at 19-21; UNU Br. at 54-55.)

Staff argues that the County/Townships did not explain how due process was denied nor did they provide any support for their claims. Staff believes the Board should not be swayed by arguments without any merit or support, and the ALJs' rulings should be upheld. (Staff Reply Br. at 2.)

Champaign responds that the Board has a longstanding practice of allowing applicants to sponsor an application and its corresponding exhibits through the testimony of a witness that is an employee of the applicant. Champaign adds that the Board also has precedent of admitting a witness's testimony and related exhibits or studies that were performed at the applicant's request or under the direction of the applicant. (Co. Reply Br. at 40-41.)

The Board finds no error in the admission of the application and testimony of Champaign witnesses Speerschneider and Crowell into the record. As the ALJs explained at the adjudicatory hearing, Champaign witness Speerschneider has a wide range of experience in developing and permitting renewable energy projects, and, as a high-ranking corporate officer and the senior director of permitting, the answers to questions within his direct testimony clearly fell within his job description. (Tr. at 31-32.)

The Board also finds it was entirely appropriate to admit the application as an exhibit in this proceeding. As Champaign witness Speerschneider testified, he not only

directed and supervised the selection and work of third-party consultants that were utilized in developing the application, but he also managed the production of the entirety of the application, including the studies and exhibits contained within the application. In addition, Champaign witness Speerschneider was able to confirm that the information contained within the application was accurate and correct. Further, as Champaign correctly identified in its initial brief, Board precedent allows for the introduction of an application by a sponsoring witness who had significant responsibility in the creation and production of the application. (Tr. at 154-155.)

Similarly, Champaign witness Crowell's testimony was appropriately admitted into the record. Champaign witness Crowell is a senior project manager in ecological areas such as wetland surveys and permitting matters; thus, his testimony is appropriate and consistent with his job description. In addition, the transportation route study included within the application was conducted under his direction. Accordingly, we affirm the ALJs' rulings and find that Champaign witness Crowell's direct testimony and corresponding exhibits within the application are admissible. (Co. Ex. 19 at 1; Tr. at 1598.)

G. Denial of UNU's Motion to Compel Lease Agreements

By entry issued November 7, 2012, the ALJs granted in part, and denied in part, UNU's motion to compel discovery from Champaign. Specifically, the ALJs determined that certain documents, including private lease agreements between landowners and Champaign, were not relevant to the application and unlikely to lead to admissible evidence. In its initial brief, UNU contends that the ALJs wrongfully denied UNU's motion to compel all documents relating to leases of turbine sites in the project area that were obtained by Champaign from Invenergy. UNU provides that the ALJs erroneously precluded UNU from inquiring about the nature of records that Champaign had acquired from EverPower. UNU argues that it was seeking to determine what information still existed in order to seek immediate production of the items, or, in the alternative, to request sanctions against Champaign in the event that valuable evidence had been destroyed. (UNU Br. at 67-68.)

Champaign notes that the documents sought by UNU were not relevant to the proceeding at hand, and the request was overly broad and unduly burdensome. Champaign adds that UNU failed to present any new or different arguments to justify a reversal of the ALJs' ruling. (Co. Reply Br. at 44.)

The Board affirms the ALJs' rulings and finds that UNU's motion to compel and the corresponding questions in the adjudicatory hearing would not have lead to information that is relevant for this proceeding. UNU fails to present any persuasive reasoning as to how participating landowner lease agreements could lead to the production of relevant information. Rather, UNU attempts to loosely connect these lease agreements to

environmental characteristics of property sites, but UNU fails to provide any foundation as to how a private financial lease transaction between a company and a landowner would lead to relevant information for our evaluation of the application before us. UNU's request should be denied.

H. Motion to Reopen Hearing

On January 17, 2013, UNU filed a motion to reopen the hearing record for the admission of newly discovered evidence. UNU explains that the Wisconsin Public Service Commission conducted an evidentiary hearing on a proposed wind farm and recommended that a sound measurement study be conducted to assess low frequency noise (LFN) and infrasound noise. UNU states that four acoustical firms, including Hessler Associates, participated in the study and issued a report on December 24, 2012. UNU opines that the report provides important recommendations that Champaign witness Hessler was unable to provide in this proceeding. UNU believes the study resolves any uncertainty associated with Champaign witness Hessler's testimony and essentially supplements the testimony he has already provided. In support of its motion, UNU points to the Public Utilities Commission of Ohio's Rule 4901-1-34, O.A.C., which allows for the reopening of a proceeding with good cause shown prior to the issuance of a final order. UNU argues that the study's conclusions indicate the seriousness of noise issues related to turbines, showing that good cause exists for the reopening of this proceeding.

In its memorandum contra filed January 22, 2013, Champaign contends the Board should deny the motion as UNU has not sustained its burden pursuant to Rule 4906-7-17(C), O.A.C. Champaign states that the evidence UNU seeks to introduce is cumulative and notes that UNU presented two expert witnesses who testified on LFN, and UNU had the ability to cross-examine two Champaign witnesses that testified on LFN. Champaign explains that UNU is improperly trying to reopen the hearing for impeachment purposes of Champaign witness Hessler, and that, even if it were admitted, the report is not a definite statement on infrasound noise that could be material evidence for this proceeding. Champaign points out that the report is currently being contested before the Wisconsin Public Service Commission and provides only a snippet of information without providing all other relevant information, including Mr. Hessler's.

On January 25, 2013, UNU filed its reply in support of the motion to reopen the proceeding. UNU points out that nothing in the Board's rules or case law precludes reopening a hearing in order to impeach a witness. UNU notes that it is not trying to introduce the study solely to impeach Champaign witness Hessler, as the study resolves an important question that Champaign witness Hessler could not answer on cross-examination: that LFN can be measured from wind turbines. UNU argues the inclusion of the study would not be cumulative because it helps establish new and distinct facts.

On February 1, 2013, Champaign filed a motion for leave to file a surreply to UNU's reply in support of its motion to reopen the hearing. UNU filed a reply to Champaign's motion to file surreply on February 4, 2013, and Champaign docketed correspondence addressing the reply to the motion to file surreply on February 6, 2013.

The Board finds that UNU's motion to reopen the proceeding should be denied. Rule 4906-7-17(C), O.A.C., provides that an application to reopen a proceeding for further evidence must provide the nature and purpose of the evidence, including a statement that the evidence was not available at the time of the hearing and the evidence is not merely cumulative. Initially, we note that, despite providing the wrong rule reference, UNU did indicate the nature and purpose of the evidence within the report stating that it was to provide support for the claim that LFN is a serious issue and may affect the future of the wind industry. However, UNU not only had ample opportunity to question Champaign witness Hessler on his findings in the pending Wisconsin proceeding during the adjudicatory hearing, but UNU also presented two witnesses who testified that wind turbine noise includes LFN which causes adverse health effects. Any additional evidence on LFN would be cumulative in nature and would not add anything to the record. Moreover, a review of the information within the LFN study reveals that it is neither inconsistent nor contradictory with the position that UNU presents in this proceeding. It would be in poor practice for the Board to establish precedent that allows parties to delay proceedings in order to add cumulative information already contained within the record. Accordingly, UNU's request to reopen the proceeding should be denied. (Tr. at 864.)

I. Gamesa Motion for Protective Order

By entry issued on October 22, 2012, the ALJs ruled on a motion to quash filed by Gamesa Wind, US, LLC (Gamesa), regarding motions for issuances of subpoenas duces tecum filed by UNU on Gamesa. In the entry, the ALJs granted, in part, and denied, in part, the motions to quash and ordered Gamesa to deliver the requested records not quashed to UNU. Thereafter, on October 26, 2012, Gamesa elected, on its own volition, to file redacted copies of records under seal with the Board, accompanied by a motion for protective order. By entry issued November 5, 2012, the ALJs found that, as Gamesa had chosen to file records with the Board, thereby making them subject to public records regulations, Gamesa should file unredacted versions of those records under seal so that the Board could appropriately rule on the accompanying motion for protective order. Thereafter, on November 13, 2012, Gamesa filed the unredacted records accompanied by a motion for protective order.

In its November 13, 2012, motion for protective order, Gamesa argues that the records, consisting of a Gamesa General Characteristics Manual for the G97 turbine model, contain proprietary, trade secret information concerning the noise levels of its G97 turbine;

that Gamesa does not share this information with the general public; and that, if the redacted information was made public, it would place Gamesa at a competitive disadvantage.

Rule 4906-7-07(H)(4), O.A.C., provides that, upon motion of any party or person filing a document with the Board's Docketing Division relative to a case before the Board, the Board may issue any order, which is necessary to protect the confidentiality of information contained in the document, to the extent that state or federal law prohibits release of the information, including where it is determined that both of the following criteria are met: the information is deemed by the Board to constitute a trade secret under Ohio law, and where nondisclosure of the information is not inconsistent with the purposes of Title 49 of the Revised Code. Any order issued under this rule should minimize the amount of information protected from public disclosure.

The Board has reviewed the information included in Gamesa's motion for protective order, as well as the assertions set forth in the supportive memorandum. Applying the requirements that the information have independent economic value and be the subject of reasonable efforts to maintain its secrecy pursuant to Section 1333.61(D), Revised Code, as well as the six-factor test set forth by the Ohio Supreme Court,[6] the Board finds that the redacted information contained in the Gamesa General Characteristics Manual for the G97 turbine model contains trade secret information. Its release is, therefore, prohibited under state law. The Board also finds that nondisclosure of this information is not inconsistent with the purposes of Title 49 of the Revised Code. Therefore, the Board finds that Gamesa's motion for protective order is reasonable with regard to the redacted information contained in the Gamesa General Characteristics Manual for the G97 turbine model and should be granted.

Confidential treatment shall be afforded for a period ending 18 months from the date of this entry or until November 28, 2014. Until that date, the docketing division should maintain, under seal, the information filed confidentially.

Rule 4906-7-07(H)(6), O.A.C., requires a party wishing to extend a protective order beyond 18 months to file an appropriate motion in advance of the expiration date, including a detailed discussion of the need for continued protection from disclosure. If Gamesa wishes to extend this confidential treatment, it should file an appropriate motion at least 45 days in advance of the expiration date. If no such motion to extend confidential treatment is filed, the Board may release this information without prior notice to Gamesa.

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6 See *State ex rel. The Plain Dealer v. Ohio Dept. of Ins.*, 80 Ohio St.3d 513, 524-525, 687 N.E.2d 661 (1997).

VI. DISCUSSION

The Board will review the evidence presented in this case with regard to each of the criteria by which we are required to evaluate this application. After reviewing the evidence of each subject matter area, the Board will set forth its conclusion on the specific topical item and then, later in the order, we will evaluate and determine whether, as a whole, the application meets the statutory requirements. Any evidence not specifically addressed herein has still been considered and weighed by the Board in reaching its final determination.

Further, the Board notes that the numbering of Staff's recommended conditions differs between the Staff Report filed on October 10, 2012, and Staff's modified recommended conditions attached to its brief filed on January 16, 2013, due to deletion and modification of some conditions. Throughout this Opinion, Order, and Certificate, the Board will utilize the numbering of Staff's modified recommended conditions of January 16, 2013.

A. Local Public Hearing

At the local public hearing, 45 people testified. Of the 45 witnesses who testified, 34 opposed the proposed facility, while 11 witnesses testified in support of the project. There were 138 people in attendance at the public hearing that signed Board petitions, with 28 signatures in favor of the project, and 110 opposed to the project.

Witnesses in opposition to the project voice concerns about diminishing property values of homes in and around the project footprint. Multiple witnesses argue the proposed project should have greater setback requirements and express apprehension about potential health effects that may be associated with wind turbines. Numerous witnesses present arguments against the wind industry, with some expressing support for the use of coal and other traditional energy sources. Others oppose the use of government subsidies to develop wind energy projects. Many witnesses also oppose the use of turbines that are manufactured outside the United States.

Witnesses in favor of the proposed facility note that the community will benefit from increased tax revenue, particularly local schools faced with recent budget cuts. One witness explains that local infrastructure will be upgraded and improved at no cost to taxpayers, while another witness testified in favor of renewable energy projects. Several witnesses state that the proposed project will allow Champaign County to retain its rural and agricultural character, as it will bring additional revenue to struggling farmers and prevent farmland from being sold for residential and commercial development.

In addition to the testimony heard at the public hearing, the Board received over 400 public comments which were docketed in the "public comments" section of the docket card for this case. The public comments raised similar arguments to those expressed at the public hearing.

B. Basis of Need - Section 4906.10(A)(1), Revised Code

Staff notes that, as an electric generation facility, pursuant to Section 4906.10(A)(1), Revised Code, the basis of need for the proposed facility is inapplicable to this electric generating project. (Staff Report at 19.)

No party raised issues related to the basis of need for the project. The Board recognizes that Section 4906.10(A)(1), Revised Code, provides that it applies to the Board's determination process only if the facility proposed is exclusively an electric transmission line or a gas or natural gas transmission line. Give that the application in this case concerns a wind-powered electric generation facility, the Board finds that Section 4906.10(A)(1), Revised Code, is inapplicable.

C. Nature of Probable Environmental Impact and Minimum Adverse Environmental Impact - Sections 4906.10(A)(2) and 4906.10(A)(3), Revised Code

Staff evaluated the application to determine the nature of the probable environmental impact and whether the proposed facility represents the minimum adverse environmental impact. As part of its evaluation, Staff discusses factors regarding the nature of the probable environmental impact of the construction and operation of the proposed wind-powered electric generation facility. These factors include demographics, land use, cultural and archaeological resources, aesthetics, economics, surface waters, threatened and endangered species, vegetation, setbacks, roads and bridges, geology and seismology, public and private water supplies, pipeline protection, blade shear, high winds, ice throw, construction noise, operational noise, shadow flicker, communications, and decommissioning. (Staff Report at 20-37.)

Additionally, Staff evaluated the site selection process to determine whether the proposed facility represents the minimum adverse environmental impact. (Staff Report at 38-39.)

To the extent intervenors have raised an issue regarding the nature of the probable environmental impact or the proposed facility's minimum adverse environmental impact, the Board will address only the more significant issues in this order. As many of the factors and issues raised by intervenors pertaining to the nature of probable environmental impact and minimum adverse environmental impact under Sections

4906.10(A)(2) and 4906.10(A)(3), Revised Code, overlap with the factors considered under the public interest, convenience, and necessity under Section 4906.10(A)(6), Revised Code, those factors, including setbacks (aesthetics, blade shear, ice throw, noise, and shadow flicker), roads and bridges, communications, and decommissioning will be discussed in Section (VI)(F) of this Opinion, Order, and Certificate. Where a party has raised an issue as to the nature of the environmental impact or the minimum adverse environmental impact, and the Board does not specifically address the issue in this decision, it is hereby denied.

1. Socioeconomic Impacts

In its application, Champaign indicates that its consultant, Camiros, Ltd. (Camiros), conducted a population and socioeconomic analysis of the proposed project area. Champaign explains that the economic activity created by the proposed project will not only benefit Champaign County, but also the surfounding rural counties and nearby population centers. Champaign's population projections indicate that there are approximately 61,000 residents located within five miles of the proposed facility, with a slight increase of 3.9 percent projected over the next ten years. Champaign County has a population density of 93 persons per square mile, significantly lower than the statewide average of 282 persons per square mile. (Co. Ex. 1 at 66-67, Ex. G.)

Champaign explains that agricultural land occupies almost 97 percent of the total impacts, demonstrating the rural character of the region. Residential development around the proposed facility is mostly single-family homesteads located along rural roads. In considering land use impacts, Champaign notes that, while the proposed facility will utilize leases of private land, any temporary impacts that may occur will be on private land and compatible with agricultural land uses that are predominant within the project footprint. (Co. Ex. 1 at 135-138.)

Champaign provides that a cultural and archaeological resource study was conducted by Cultural Resource Analysts, Inc. The study indicates that there are 32 historic properties located within the five mile project radius, four historic districts, 791 previously identified historic structures, 260 archeological sites, and 55 cemeteries. Champaign states that five archaeological sites are located within or adjacent to lands leased for the proposed facility, but notes that none are eligible for listing in the National Register of Historic Place (NRHP), indicating no further work is required. Further, as construction and operation of the facility will not physically alter any NRHP listed or eligible structures, any potential impacts are limited to indirect visual effects. Champaign notes that Staff recommends the development of a historic mitigation plan, but believes the plan should not include any specific provisions in order to avoid unnecessary complications. Champaign also proposes to include a provision within the condition

providing that no part of the plan shall limit the operation of the turbines within the proposed project. (Co. Ex. 1 at 144-146, Co. Ex. 5 at 15.)

In addition, Champaign notes that a field review study reveals that some of the proposed turbines may be visible from portions of Urbana, Mechanicsburg, Woodstock, and Catawba, especially from properties on the outskirts of city and village limits that are not screened by other buildings. Champaign offers that it will utilize a mitigation plan for impacts to architectural resources. The mitigation plan will promote the preservation of the area's rural history and limit the alteration of the cultural landscape of the project area. Champaign provides that it will continue to consult with the Board, the Champaign County Historical Society, the Ohio Historic Preservation Office (OHPO), and the Champaign County Preservation Alliance to finalize a formal mitigation plan. (Co. Ex. 1 at 146-151.)

Champaign adds that the economic impact report prepared by Camiros utilizes the Job and Economic Development Impact Wind Model (JEDI), which evaluates economic impacts of wind-powered electric generation facilities. The JEDI model evaluates the effects of the construction phase of the project, as well as operations and maintenance phases. Champaign indicates that it intends to maximize the number of local workers throughout the construction process, with approximately 50 to 85 percent of all workers to be hired locally, but adds that workers with specialized skills of constructing wind farms will likely come from other locations. Champaign provides that the construction phase of the project will utilize 86 employees over a 12-month period, with an anticipated payroll of $4.9 million. At the conclusion of the construction phase, the application explains that there will be seven full-time workers with total wages estimated at $400,000 per year. In addition, Champaign notes that another 391 jobs and $19.8 million in earnings will be generated by indirect impacts stemming from inter-industry economic activity caused by the project. Further, Champaign states that there will be induced impacts resulting from changes in local household spending, with an estimate of an additional 121 jobs and approximately $5.1 million in wages and salaries. (Co. Ex. 1 at 138-140.)

Champaign provides that it will pay real and personal property taxes between $6,000 and $9,000 per megawatt (MW) of nameplate capacity per year throughout the life of the facility. According to the application, the increase in local tax revenues, based on an aggregate nameplate capacity of 140 MW, will be between $840,000 and $1.26 million. The distribution of the tax revenue will be approximately 25.9 percent for Champaign County, 10.3 percent for the local townships, and 63.8 percent to the local schools. The application provides that the annual lease payments to local landowners is not only a direct benefit to all participating landowners, but will also enhance the ability for those in the agricultural industry to continue farming. (Co. Ex. 1 at 140-141.)

Urbana expresses concern that the proposed project location will harm the city's future growth. Specifically, Urbana explains that geographic constraints to the west of the city require that all future residential and commercial growth occur to the city's east side. Urbana argues that Champaign fails to consider that the proposed project is directly in the path of the city's planned growth. (Urbana Br. at 20-21; Tr. at 1997-1999.)

Urbana asserts that Champaign overestimates the proposed project's potential tax benefits, noting that, under the current taxation system, Urbana would receive no tax revenue because the proposed project footprint is outside city limits. Urbana requests that the Board require Champaign to establish a permanent office within the city limits, noting that, although the proposed project will have a substantial impact on the Urbana community, impacted city residents may be unwilling or unable to drive to the local office in Bellefontaine. Urbana points out that the establishment of a permanent office in Urbana would allow Urbana to receive tax benefits for any Champaign employees that would work in an office located in Urbana. Urbana also believes that Staff testimony on the proposed project's socioeconomic benefits should be given little weight due to a Staff member incorrectly testifying that Bellefontaine is located in Champaign County, despite the fact that Bellefontaine is located in Logan County. (Urbana Br. at 23-24; Tr. at 2235-2236, 2378.)

The County/Townships add that the consideration of tax revenue should not be a determinative factor in considering whether the public interest is served by the proposed project, as Champaign has not yet made a request to the Champaign County Board of Commissioners to pay an amount in lieu of taxes (PILOT) pursuant to Section 5727.75, Revised Code. (County/Townships Br. at 14; Tr. at 67-69.)

Champaign responds that population estimates within the record indicate that Urbana's concerns over future development are unfounded, as Urbana's township population is expected to drop by a percent in the next decade, while the project area townships are expected to grow by up to 13 percent. Champaign opposes Urbana's proposal to open an office in Champaign, noting that Urbana will receive economic benefits from the increase of construction workers and equipment that is necessary to build the project, as acknowledged by Urbana's mayor. In response to the County/Townships' tax concerns, Champaign explains that the payment of taxes to the County/Townships are guaranteed if the project is built and will occur either through the PILOT program or annual property taxes, and adds that the PILOT program alone would result in an increase in tax revenues of $840,000 to $1.26 million. (Co. Reply Br. at 34-35; Co. Ex. 1 at 140; Tr. at 1989.)

UNU asserts that the project is not necessary to preserve agriculture in eastern Champaign County, as the project area is not threatened by any development, with the exception of the proposed project. UNU argues that Champaign failed to support its

claims that the proposed project will provide socioeconomic benefits. UNU contends that, while Staff's witness was familiar with Camiros, Staff failed to conduct its own study utilizing the JEDI model and could not independently verify the data inputs the consultant used to calculate the proposed project's economic benefits. UNU points out that the socioeconomic study assumed facts that have not been demonstrated to be true, including the assumption that leaseholders and construction workers will be local and spend their earnings in the local communities. Further, UNU explains that the local tax revenues are inflated, as the project may not produce more than 89 MW hours of electricity as opposed to 140 MW, and taxpayers will ultimately pay higher electricity prices. (UNU Reply Br. at 2-5; Tr. at 2637-3638, 2657-2673.)

In addition, UNU opines that the socioeconomic study ignores detriments that could result from approval of the proposed project. UNU notes that there was no consideration as to whether the jobs of any workers at traditional coal-fired plants would be eliminated, or whether lost job creation opportunities might occur as a result of employers being discouraged from siting new facilities due to the turbines' presence. Similarly, UNU explains that there could be indirect job losses through the ripple effect from losing important functions of Grimes Field Airport (Grimes Field) and any companies whose owners leave Champaign County to avoid the turbines. UNU also points out that, while Champaign agrees to submit a historic preservation mitigation plan, it is unacceptable to give Champaign veto authority as to whether the turbines may need to be shut down to protect the area's historic resources. (UNU Br. at 65; UNU Reply Br. at 36.)

Staff concludes that the demographics of the project area are unlikely to experience significant change within the next 20 years. Staff points out that, while Champaign County's population growth is projected to increase by 11.3 percent over the next 20 years, the population growth of the townships located within the five-mile radius of the proposed project is only projected to increase by 3.9 percent. Staff opines that the project is unlikely to limit any future population growth or have a substantial impact on the region's demographics. (Staff Ex. 2 at 20.)

In addition, Staff states that the development of a wind farm is consistent with regional land use plans to conserve farmland and promote economic diversity. Staff points out that there may be an increase in demand for temporary housing and retail services during construction of the proposed facility, but no long-term impacts are expected on housing or commercial demand. (Staff Ex. 2 at 20-21.)

Staff adds that avoiding or minimizing cultural and archaeological impacts for wind generation projects is not always practical, but Staff believes the mitigation plan proposed by Champaign will promote the continued meaningfulness of the area's rural history. However, Staff notes that it believes the historic preservation plan should still be

submitted with specific information and should not include a provision granting Champaign the discretion to determine when its operations and activities may be inhibited. Staff states that Champaign will also conduct a targeted Phase I archaeological reconnaissance survey to analyze potential impacts within five miles of the project area. Staff also believes a cultural resources avoidance plan should be developed. (Staff Br. at 36-37; Staff Ex. 2 at 21-22.)

Staff concludes the proposed facility would have an overall positive impact on the local economy. In support of its conclusion, Staff notes the increase in construction spending, wages, purchasing of goods and services, local tax revenues, and annual lease payments to the local landowners. (Staff Ex. 2 at 22.)

Upon consideration of the evidence presented, the Board finds that the proposed project will undoubtedly have a positive impact on the region. First, the tax revenues associated with the project will provide significant value to the local communities and the County/Townships. We understand the County/Townships' concern about whether Champaign elects to utilize the PILOT program or the normal property tax provisions, but, as the County/Townships' own witness Bialczak explains, regardless of which route Champaign elects to take, the County will receive revenues subject to its own discretion. If Champaign seeks and obtains a PILOT, the money will go into the County's general revenue fund and may be used in any way the county or local government officials choose. On the other hand, if Champaign chooses the traditional tax route, all tax dollars generated become local tax dollars to the taxing jurisdictions in which the proposed project is located; thus, providing even more revenue for the local governments. Therefore, we find that the regional tax revenue is a valuable benefit for the proposed project. (Tr. at 206-207, 2235-2236, 2235-2237.)

With regard to Urbana's concern that it may not receive tax benefits, we find this argument to be unfounded. The Board lacks any statutory authority to order Champaign to distribute revenue to a jurisdiction that is outside the proposed project area, and any proposed statutory changes should best be left to the General Assembly. However, we do note that, as County/Townships witness Bialczak points out, if Champaign chooses the PILOT program, Urbana may still be able to receive tax benefits from the county treasurer. Further, as Urbana witness Bean testified, there are several businesses located within the Urbana city limits that stand to benefit from the proposed project, which would contribute additional tax revenues. In addition, we find the record conflicts with Urbana's arguments that its growth could be impeded by the proposed project. In fact, Urbana witness Bean explains growth is only limited on the west side of the city, and that his vision is to help Urbana grow "whether it's east, north, south...." (Tr. at 1987-1989, 2008-2009, 2235-2236.)

Furthermore, the Board finds that the proposed project benefits the public by allowing the townships within the proposed footprint to maintain their agricultural

character and allowing for the continuation of agricultural activities without the risk of farmland being lost to development. We note that, while UNU raises concerns over potential economic detriments that may arise as a result of the proposed project, UNU fails to cite to any record support or introduce any evidence confirming its suspicions. Furthermore, although Staff relies on the JEDI model utilized by Camiros in reviewing the socioeconomic impact of the proposed project, there is no evidence in the record indicating the study is unreliable or should be disregarded. To the contrary, the economic model was established by an urban planning and economic development firm whose analysis was reviewed by Staff and deemed to be accurate. Finally, Champaign's proposal to make its historical preservation mitigation plan less specific should be rejected. Champaign's speculative claim of unnecessary complications is insufficient for us to determine that the condition is too stringent. Therefore, Champaign's request is denied. (Ohio Farm Bureau Ex. 1 at 8; Champaign Ex. 17 at 7-8, Staff Ex. 5 at 2; Tr. at 1560, 2653-2654.)

2. Ecological Impacts

Champaign explains that the proposed project will have almost no impact on surface waters. Champaign indicates that it will employ mitigation measures to minimize temporary and permanent impacts to streams located within the footprint of the proposed project. Champaign intends to develop a Storm Water Pollution and Prevention Plan (SWPPP) to control sedimentation, siltation, and run-off. (Co. Ex. 1 at 116-122.)

Champaign utilizes an environmental consultant, Hull & Associates, to study the potential impact of the proposed facility on threatened and endangered species. The study determines that the Indiana Bat, a federally endangered species, has a presence within the project area. Champaign notes that the proposed project will implement a habitat conservation plan (HCP) and shall obtain an incidental take permit (ITP) in order to minimize any adverse impacts to the Indiana bat. Champaign witness VanDeWalle adds that construction impacts may be minimized by limiting tree clearing from November 1 to March 31. Further, Champaign witness VanDeWalle explains that the HCP provides appropriate conservation measures to allow for the protection of endangered species. (Co. Ex. 1 at 108; Co. Ex. 19 at 4; Co. Ex. 7 at 7.)

Champaign adds that the siting of the proposed project will be away from sensitive habitats like forestlands and, due to the majority of the facility being located within agricultural active lands, additional impact on threatened or endangered species is unlikely. Champaign explains that, while 12.7 acres of forest and 1.7 acres of scrub-shrub habitat will be impacted by construction, most is temporary in nature. (Co. Ex. 1 at 136-137.)

Staff provides that the proposed facility would cross 31 streams and notes that Champaign has committed to installing buried collection lines by horizontal directional

drilling. While access roads and crane paths cross streams within the proposed project area, the Staff Report explains that the development of the SWPPP will reduce water quality impacts. In addition, through information obtained by the Ohio Department of Natural Resources (ODNR) and the Federal Emergency Management Agency, the Staff Report notes that flooding is unlikely to impact the proposed turbine locations. (Staff Report at 23.)

Staff explains that the primary threat to the Indiana bat would occur during operation of the facility due to collision and barotrauma, but that Champaign's commitment to its HCP addresses these issues. In addition to the HCP, Staff points out that ODNR Division of Wildlife (ODNR-DOW) recommends a post-construction bat monitoring program during the first two years of operation. The program would include a sample of turbines to be searched daily in accordance with ODNR protocols, and establishes a requirement that any consultant hired to conduct the program possess appropriate federal and state permits prior to any monitoring. As a condition, Staff also recommends that Champaign conduct a presence survey for the Eastern massasauga rattlesnake at the 20-acre wetland. (Staff Report at 28, 55.)

In addition, Staff recommends that Champaign enter into a cooperative agreement with ODNR or obtain any suggested permits that ODNR recommends in order to avoid liability for the impacts that the proposed project may have on wildlife species. Breeding bird studies conducted in 2008 indicate that 6,000 birds consisting of 97 different species were observed, above the average passage rates found in other wind project preconstruction surveys. Staff indicates that ODNR was concerned with its observations of the birds, and explains that, in the event of a mortality of a state-endangered species, ODNR-DOW would recommend that Champaign develop an effective avoidance, minimization, and mitigation strategy. Regarding vegetation, Staff adds that the proposed layout indicates a collection line that connects to a turbine would impact more of an adjacent wood lot than is necessary, but notes that Champaign indicated it is working with the landowner to reroute the line in order to minimize any negative impacts. (Staff Report at 21-28.)

Champaign responds that avian and bat monitoring set forth in Staff's proposed conditions is necessary, but should allow for flexibility in the protocol between Champaign and ODNR-DOW and should remove language requiring a daily turbine sampling. Champaign proposes the language in the condition be changed to allow Champaign and ODNR-DOW to determine if a better monitoring alternative is available by including the phrase "[u]nless otherwise agreed to by the DOW and Staff." In addition, Champaign suggests that the language requiring Champaign to develop and implement an avian monitoring program should be revised to state that Champaign will work with Staff and ODNR-DOW to develop a plan. (Co. Ex. 5 at 18-19.)

Staff disagrees with Champaign's recommended revisions, noting that ODNR's standardized protocols call for daily samplings, and adds that Champaign should be required to comply with the protocols as set forth within the condition. UNU adds that Staff's condition should be adopted as proposed, noting that other wind farms are required to perform these daily searches. (UNU Reply Br. at 38; Staff Ex. 1 at 2-4; Tr. at 2022-2023.)

UNU contends that the Board should include the former Staff condition requiring a vegetation management plan. UNU opines that the application shows the proposed project's collector lines and access roads will travel through wooded areas and a number of streams. In addition, UNU proposes that the former Staff condition to prevent the indiscriminate use of herbicides in natural vegetated areas be included if the certificate is approved. UNU opines that Staff has no justification for a change in its position, noting Staff witness Rostofer testified that spraying herbicides is not a best practice. (UNU Reply Br. at 37; Tr. at 2152-53.)

Upon review, the Board finds that the evidence in the record, as well as the addition of Staff's recommended conditions, supports the conclusion that the proposed project will appropriately mitigate any ecological impacts on the local environment. Champaign's request to revise Staff condition should be rejected, as it is clearly consistent with Board precedent in other proceedings. Champaign will not be permitted to self-regulate its own monitoring protocols, and we find Champaign's request is both inappropriate and unnecessary. (Staff Ex. 1 at 2-4.)

Likewise, we believe UNU's request to include Staff's original conditions regarding vegetation management and herbicides should be denied. UNU provides no justification in the record for the inclusion of a vegetation management program. Regarding any potential use of herbicide, the record actually indicates that the facility will utilize buried collection lines in open fields, making the condition unnecessary. Further, in order to use any commercial grade herbicides, Champaign would need to acquire an applicator's license, and report the use of herbicides around sensitive streams and wetlands to the Ohio Environmental Protection Agency (EPA). (Tr. at 2151-2152.)

3. Conclusion – Environmental Impact

The Board finds that the nature of the probable environmental impact, specifically the socioeconomic and environmental impacts, has been determined for the proposed facility and complies with Section 4906.10(A)(2), Revised Code, and the proposed project represents the minimum adverse impact consistent with Section 4906.10(A)(3), Revised Code. We note that this conclusion relates only to socioeconomic and environmental impacts, and Sections 4906.10(A)(2) and 4906.10(A)(3), Revised Code, will be further

reviewed in Section VI(F)(8), in conjunction with our consideration of the public interest, convenience, and necessity of the proposed project.

D. Electric Grid - Section 4906.10(A)(4), Revised Code

Section 4906.10(A)(4), Revised Code, requires that the feasibility and impact of connecting a proposed electric generation facility to the regional electric power grid be determined prior to the issuance of a certificate to an applicant. In order to address this requirement, PJM Interconnection (PJM), the applicable regional transmission system operator, prepared a feasibility study (PJM Feasibility Study) and a system impact study (PJM Impact Study). Further, a stability and short circuit analysis (PJM Stability Study) is included in the PJM Impact Study. According to the application, the PJM Feasibility Study identified conditions under which the facility's output could be curtailed, but several of the conditions identified in the PJM Feasibility Study are based on outdated rating data, and should be removed from the list. Consequently, the application notes that the remaining congestion issues listed are based on very specific system conditions that have a low probability of occurrence at any given time. Further, the application asserts that a curtailment of the proposed facility to something less than full output for a few hours, if the conditions ever exist, would not have an adverse effect on the overall operation of the facility. (Co. Ex. 1 at 50-51, Exs. C-D.)

The PJM Impact Study evaluated a 200 MW interconnection that would be injected along the Givens-Mechanicsburg 138 kV line and interconnected at a new switching station located along the Dayton Power & Light, Inc. (DP&L) Urbana-Darby 138 kV circuit. The new switching station will be owned and operated by DP&L and will consist of three 138 kV breakers configured as a ring-bus, a 138 kV revenue meter, and other associated facilities. Further, compliance with reliability criteria was assessed for summer peak conditions in 2012. The PJM Impact Study identified two facilities that would likely experience thermal overloads, and three breakers that would be over-dutied as a result of the proposed facility. To correct these violations, Champaign asserts that the following upgrades are required: (1) replacement of the line terminal equipment at the Urbana substation; (2) reconductoring of approximately 4.3 miles of circuit; and (3) replacement of three 69 kV circuit breakers at Urbana. (Co. Ex. 1 at 51-52, Exs. C-D.)

According to Champaign, the results of the PJM Stability Study revealed no operating issues other than identifying operating voltage and power factor ranges. Further, PJM's deliverability testing concluded that the project would not result in any deliverability or transmission system congestion problems. (Co. Ex. 1 at 52.)

In the Staff Report, Staff explains that it reviewed the studies regarding interconnection of the proposed facility to the existing regional transmission system. Staff notes that Champaign submitted its proposed project to PJM on March 18, 2006.

Additionally, Staff notes that Applicant has not yet signed a construction service agreement or an interconnection service agreement with PJM for the proposed facility, but that an interconnection service agreement would need to be signed before PJM would allow Applicant to interconnect the proposed facility to the bulk electric transmission system. (Staff Report at 40.)

Staff reports that it reviewed the PJM Feasibility Study and PJM Impact Study for the proposed project and that, pursuant to the North American Electric Reliability Corporation (NERC) reliability standards, the proposed facility would not overload the system in the presence of no contingencies or one contingency, but that multiple contingencies would likely cause an outage or breaker failure. Staff further indicates that this overload issue can be alleviated by upgrading and reconductoring several lines, and that the studies indicate that three circuit breakers and a set of transformer fuses and holders would need replacement. (Staff Report at 41-42.)

Additionally, Staff indicates in its report that, as set forth in the application, no stability problems were identified as a result of the proposed project and no overloads were identified as a result of earlier projects or projects in earlier queue positions (Staff Report at 42).

The Staff Report concludes that, with the upgrades identified in the PJM studies, the proposed facility is expected to provide reliable generation to the bulk electric transmission system, the facility is consistent with plans for expansion of the regional power system, and the facility will serve the interests of electric system economy and reliability. Finally, Staff concludes that the proposed facility will serve the public interest, convenience, and necessity by providing additional electric generation to the regional transmission grid. (Staff Report at 42.)

The Board initially notes that no intervenor in this proceeding raised issues regarding the interconnection studies or the portion of the Staff Report discussing interconnection issues. In light of the evidence in this proceeding, the Board finds that the proposed facility is consistent with the plans for expansion of the regional power grid as set forth in the PJM Impact Study, PJM Feasibility Study, and PJM Stability Study, and that the proposed facility will serve the interests of electric system economy and reliability. Consequently, the Board finds that the proposed facility complies with the requirements set forth in Section 4906.10(A)(4), Revised Code, provided that the certificate issued includes Staff's recommended Condition (14) . (Co. Ex. 1 at 50-52, Exs. C-D; Staff Report at 40, 42.)

E. Air, Water, Solid Waste, and Aviation - Section 4906.10(A)(5), Revised Code

1. Air

In the Staff Report, Staff states that the operation of the proposed facility would not produce air pollution; thus, there are no applicable air quality permits. Staff notes, however, that Applicant may need to obtain the Ohio EPA General Permit for Unpaved Roadways and Parking Areas, with a maximum of 120,000 vehicle miles traveled per year. Additionally, Staff notes that Applicant plans to minimize fugitive dust generated during construction by using best management practices (BMPs), such as applying water or other dust suppressants to open soil surfaces to prevent emission. Staff concludes that construction and operation of the facility, as described by Applicant and in accordance with the conditions included in the Staff Report, would be in compliance with air emissions regulations in Chapter 3704, Revised Code, and the rules adopted under that chapter. (Staff Report at 43.)

2. Water

The Staff Report notes that neither construction nor operation of the proposed facility would require the use of significant amounts of water; thus, requirements under Sections 1501.33 and 1501.34, Revised Code, are not applicable to this project. However, Staff reports that Applicant has indicated it will apply for the following permits: Ohio National Pollutant Discharge Elimination System (NPDES) construction storm water general permit; Ohio NPDES general permit for storm water discharges associated with construction activity in the Big Darby Creek watershed; permit under Section 404 of the Clean Water Act, if necessary; Water Quality Certification from the Ohio EPA, if necessary; Ohio Isolated Wetland Permit, if necessary; and, Ohio Permit to Install on-site sewage treatment, if necessary. Staff additionally notes that approximately 68 acres of impervious surface would be generated as a result of the facility, but that the facility will not significantly alter flow patterns or erosion and no significant modifications in the direction, quality, or flow patterns of storm water run-off are anticipated. (Staff Report at 43.)

Staff further notes that Applicant will mitigate effects to changes in quality and quantity of aquatic discharges by obtaining an NPDES Construction Water Permit from the Ohio EPA, preparing a SWPPP, and preparing a Spill Prevention, Containment, and Countermeasure (SPCC) plan. Staff concludes that, with these measures, construction and operation of the facility would comply with requirements of Chapter 6111, Revised Code, and the rules adopted under this chapter. (Staff Report at 44.)

Urbana asserts that blasting could disrupt and contaminate groundwater supplies for the city of Urbana. Urbana argues that Exhibit F of the application, the groundwater study, identified the buried aquifers in the project area as required by Rule 4906-17-

05(A)(5)(c), O.A.C., but failed to consider the city of Urbana's aquifer, the Mad River aquifer, which is located six miles west of the nearest turbine. Urbana argues that, due to concerns about groundwater supplies, the Board should require a condition that Applicant post an escrow amount to be determined by the City Water Superintendent to protect water during turbine construction. (Urbana Br. at 19-20; Urbana Reply Br. at 5.)

Champaign responds that Urbana has no basis for its requested condition requiring an escrow amount to protect water, as the city presented no evidence that blasting could disturb or contaminate the Mad River aquifer, which is located six miles from the nearest turbine in the proposed project according to Urbana's brief (Co. Reply Br. at 49-50).

Staff responds to Urbana's argument by pointing out that Exhibit F of the application, admitted into evidence, specifically discusses groundwater resources, identifies the presence of the Mad River Buried Valley Aquifer, indicates that there are multiple groundwater Source Water Protection Areas (SWPAs) in the eastern portion of Champaign County, but that only one SWPA is within close proximity to the project area and would not be affected by the proposed facility. Staff also points out that Urbana introduced no evidence that construction activities could impact groundwater supplies and that Applicant indicated blasting was not anticipated for the project. (Staff Reply Br. at 9-10; Co. Ex. 1 at 32-33, 60-61, Ex. F at 5-7; Staff Report at 30.)

3. Solid Waste

The Staff Report indicates that the construction of the facility will result in generation of solid waste including packing materials, plastic, wood, cardboard, metal packing, construction scrap, and general refuse. Further, Staff notes that Champaign intends to remove construction debris from work areas and to dispose of them in dumpsters in laydown yards to be collected by a private contractor. Additionally, Staff notes that the operations and maintenance facilities will utilize local solid waste and disposal services. Staff concludes that, with these measures, Applicant's solid waste disposal plans comply with solid waste disposal requirements in Chapter 3734, Revised Code, and the rules adopted under this chapter. (Staff Report at 44.)

4. Aviation

Grimes Field Airport and CareFlight, an emergency medical helicopter service located at Grimes Field Airport, are located in proximity to the proposed project. Staff remarks in its report that a determination of no hazard has been issued by the Federal Aviation Administration (FAA) for all 56 turbine locations in the proposed project. Staff notes that, given the preliminary FAA determination of no hazard to air navigation, neither construction nor operation of the facility is expected to create any adverse impact on the airport or existing air travel network. Staff also asserts that, in accordance with

Section 4561.32, Revised Code, Staff contacted the Ohio Department of Transportation, Office of Aviation (ODOT-OA), during its review of Champaign's application, in order to coordinate review of potential impacts the facility might have on public use airports. Staff reports that Applicant filed with ODOT-OA and received notices of clearance for all turbines associated with the proposed project. Additionally, Staff indicates that it implemented ODOT-OA and/or FAA recommendations where deemed justified in creating its recommended conditions. Staff recommends that all turbines be marked and/or lit in accordance with FAA marking and lighting standards; that, during construction, all turbines reaching 200 feet in height be temporarily marked and lit until permanent lighting is installed; that Applicant provide flight service stations with notices to airman (NOTAM) that include the latitude and longitude coordinates for all structures exceeding 200 feet in height; and that Applicant develop a medical needs service plan in coordination with CareFlight that incorporates measures assuring immediate shut-down of any portion of the facility necessary to allow direct routes for emergency medical helicopter services within the vicinity of the facility. (Staff Report at 44.)

UNU argues that wind turbines pose a challenge for pilots who fly near them, and that, consequently, the proposed project will delay emergency evacuation in and around the project via CareFlight. More specifically, UNU argues that aircraft cannot safely fly over a wind farm during periods of low visibility and would be forced to fly around the wind farm in these conditions, citing the testimony of Champaign witness Marcotte. UNU argues that, because of this possibility, the Board should deny the application. However, UNU states that, if the certificate is granted, the Board should require Applicant to shut down turbines when CareFlight is responding to a medical emergency in the project area. (UNU Br. at 61; UNU Reply Br. at 32-34; Tr. at 706-707, 926, 2040.)

Urbana argues that the Board should require Champaign to provide notice of the project to airports within 20 miles of the project area, including Grimes Field, regardless of whether operations would be altered. Additionally, although Urbana states that it supports Staff's conditions pertaining to aviation, Urbana expresses concern that compliance with FAA requirements may not adequately protect navigable airspace. More specifically, Urbana claims that Champaign's aeronautical report, contained in Exhibit S of the application, demonstrates that 19 of the turbines the FAA designated as "no hazard" exceed obstruction standards for navigable airspace, that the no hazard determinations were not circulated for public comment, and that the letter from ODOT-OA in Exhibit S only pertains to 28 of the 56 turbines. Urbana continues that, despite the FAA's no hazard determination, pilots who fly using visual flight rules might avoid Grimes Field due to safety concerns from decreased clearance when approaching the airport from certain directions near the proposed project. Further, Urbana contends that several major recreational attractions occur at Grimes Field including the Mid-Eastern Regional Fly-in for vintage, recreational, and experimental aircraft, and a hot air balloon festival, and that turbines in the flight paths for Grimes Field should be shut down during these events due

to safety concerns. Further, Urbana argues that, if the organizers for the Fly-in or hot air balloon festival cancel or change venues due to safety concerns because of the turbines, Champaign should be required to compensate Urbana for its economic loss. (Urbana Br. at 11-16; Urbana Reply Br. at 5-7; Co. Ex. 1, Ex. S; Tr. at 1920, 1942, 1955, 1965.)

Urbana also argues that Staff's proposed condition regarding emergency medical helicopter services should not solely address CareFlight, but should be expanded to include other regional emergency medical helicopter services including MedFlight. Additionally, Urbana argues that, if CareFlight cancels its sublease at Grimes Field due to the proximity of turbines, Champaign should be required to compensate Urbana for its economic loss. Finally, Urbana argues that there is a high volume of emergency medical helicopter responses in the project area and that, consequently, Champaign should construct one or two helipads on company-leased property in the project area. (Urbana Br. at 16-19; Urbana Reply Br. at 4; Tr. at 959-960, 2179.)

In response to UNU's arguments, Champaign cites testimony of Champaign witness Marcotte that wind turbines and aircraft are compatible, having coexisted for years and that emergency medical helicopter services will not be affected because it is possible to safely operate helicopters near a wind farm, both day and night. Additionally, Champaign argues that UNU's claim that Champaign witness Marcotte testified that helicopters would have to fly around the wind farm in low visibility is false, noting that the transcript does not contain this statement. Further, Champaign points out that Urbana is erroneous in its argument that only 19 of the turbines were determined to be "no hazard" by the FAA. Champaign specifies that: the FAA concluded that all of the proposed turbines were not hazardous, including the 19 turbines specifically cited by Urbana; although Urbana argues that the no hazard determinations were not circulated for public comment, the FAA specifically stated in its determinations filed as part of Exhibit S that it exempts certain proposals from circulation and the 19 turbines at issue fell into this exemption; and although Urbana claims the ODOT-OA has only cleared some of the turbines, Staff confirmed that the ODOT-OA cleared all 56 proposed turbines. In response to Urbana's argument that the proposed project will impair aviation, Champaign also points out that Urbana witnesses Hall and Rademacher both recognized that the proposed project is further from Grimes Field than turbines already certificated in *Buckeye Wind I*, and that pilots can make adjustments to their approaches due to any obstructions around the airport. Champaign also notes that pilots will have necessary information about the turbines, including updated sectional maps. Finally, Champaign contends that, despite Urbana's concerns regarding the Fly-in and hot air balloon festival, as previously stated, there are turbines already certificated in *Buckeye Wind I* to be built closer to the airport than those at issue in the proposed project. Moreover, Champaign asserts that Urbana presented no evidence that either event will be affected if the proposed project is certificated and the Board has no statutory authority to order monetary compensation as proposed by Urbana under Section 4906.03, Revised Code. (Co. Reply Br. at 31, 35-38;

Staff Report at 44; Co. Ex. 1, Ex. S; Co Ex. 10 at 3-5; Tr. at 665-666, 707, 1907-1908, 1910-1912, 1922, 1939-1940, 1948-1949, 1964-1965.)

Concerning emergency medical helicopter services, Champaign contends that no such service expressed opposition to the proposed project or participated in this proceeding. Citing the testimony of Champaign witness Marcotte, Champaign argues that it is not feasible to shut down turbines during every emergency medical helicopter flight, and contends that Staff's recommended condition regarding turbine shut-down during emergency medical helicopter flights when necessary, should not be adopted. Champaign also reiterates that the Board has no statutory authority to order monetary compensation as proposed by Urbana should CareFlight terminate its lease with Grimes Field due to the proximity of turbines. Finally, Champaign points out that no witness testified that helipads should be constructed in the project area. (Co. Reply Br. at 37-39; Tr. at 683-685, 689, 691, 695, 698, 700-701, 715-716, 725-726.)

5. Conclusion - Air, Water, Solid Waste, and Aviation

Staff recommends that the Board find that the proposed facility, with Staff's recommended conditions, will comply with the requirements specified in Section 4906.10(A)(5), Revised Code. No intervenor raised any concerns regarding this criterion as it relates to air or solid waste.

Regarding water, the Board finds that there is no evidence in the record to support Urbana's assertion that blasting could disrupt or contaminate groundwater supplies in the city of Urbana. Further, both Applicant and Staff concluded that SWPAs would not be affected by the proposed facilities. Consequently, the Board finds that Urbana's proposed condition requiring an escrow amount is unnecessary. (Co. Ex. 1 at 32-33, 60-61, Ex. F at 5-7; Staff Report at 30.)

Regarding aviation, the Board finds that this project will not substantially interfere with aviation near the proposed project area. The Board acknowledges Urbana's stated concerns about the FAA findings and ODOT-OA certifications, but finds that Champaign addressed these issues by pointing to record evidence that the FAA concluded that all of the proposed turbines were not hazardous and that the FAA noted exemptions for 19 of the turbine determinations from circulation in which the public had the opportunity to comment. Further, the Board stresses that Staff confirmed in the Staff Report that ODOT-OA cleared all 56 proposed turbines. The Board also finds that the proposed project will not substantially interfere with aviation near Grimes Field, as pilots can make adjustments during their approach of the airport and because the proposed project is further from the airport than an already certificated project. (Staff Report at 44; Co. Ex. 1, Ex. S; Tr. at 1907-1908, 1919, 1922.)

Next, although Champaign argues that shut-down of any portion of the project would not be necessary during emergency medical helicopter services, Staff's recommended condition is appropriate because it does not require shut-down during all emergency medical helicopter flights; rather it only requires that Champaign develop a plan with CareFlight that incorporates shut-down of portions of the facility during emergency medical helicopter flights when *necessary* to allow direct routes for such services within the vicinity of the facility. The Board finds that Staff's recommended condition is reasonable and practical to address UNU's and Urbana's safety concerns; however, the Board does not find that there is evidence in the record to support Urbana's requested condition requiring Champaign to construct helipads or UNU's assertion that safety concerns as to emergency medical helicopter services should result in denial of the application. Further, the Board finds that there is not sufficient, credible evidence in the record to demonstrate that the proposed project should be shut down during events at Grimes Field, particularly given that the turbines at issue in the proposed project are situated even further from the airport than turbines included in an already certificated wind project that does not require such shut-down as a condition of the certificate. *See Buckeye Wind I*, Opinion and Order (Mar. 22, 2012) at 33-34. Finally, as Champaign points out, the Board does not have authority to order monetary compensation as requested by Urbana. (Staff Report at 44; Co. Ex. 1, Ex. S; Tr. at 1907-1908, 1919, 1939-1940.)

In consideration of all of the evidence, including the findings of both the ODOT-OA and the FAA, which determined that none of the proposed turbine sites would pose hazards to aviation, the Board finds that any aviation safety concerns are adequately addressed by Staff's recommended condition requiring Champaign to provide flight service stations with NOTAM that include the latitude and longitude coordinates for all structures exceeding 200 feet in height; that all turbines be marked and/or lit in accordance with FAA marking and lighting standards; that, during construction, all turbines reaching 200 feet in height be temporarily marked and lit until permanent lighting is installed; and that Champaign develop a medical needs service plan in coordination with CareFlight that incorporates measures assuring immediate shut-down of any portion of the facility necessary to allow direct routes for emergency medical helicopter services within the vicinity of the facility.

Accordingly, the Board finds that the proposed facility complies with the requirements specified in Section 4906.10(A)(5), Revised Code, provided the certificate issued includes Staff's recommended Conditions (61), (62), (63), (64), (65), (66), and (67), as modified by the Conclusion and Conditions section of this Opinion, Order, and Certificate. (Staff Report at 44.)

F. Public Interest, Convenience, and Necessity - Section 4906.10(A)(6), Revised Code

1. Alternative Energy Portfolio Standards

In its application, Champaign asserts that Ohio's Alternative Energy Portfolio Standards (AEPS) of Substitute Senate Bill 221, require that, by 2025, at least 25 percent of all electricity sold in the state comes from alternative energy resources. Of that 25 percent, at least half must be generated by renewable resources in state. Champaign indicates that the electricity generated by the proposed facility would be available within the PJM regional transmission system, but that it is anticipated that the power will be sold within Ohio so that electricity companies may meet the AEPS. (Co. Ex. 1 at 19; Co. Ex. 5 at 3-4.)

The Staff Report acknowledges that AEPS require a portion of the electricity sold to retail customers in Ohio to come from renewable energy resources. Additionally, the Staff Report notes that renewable energy resources, as defined by statute, include wind generating technologies. Consequently, the Staff Report provides that the proposed facility would likely qualify as an in-state renewable energy resource under the AEPS and could help affected entities comply with their statutory requirements under the AEPS. (Staff Report at 47-48.)

The Board recognizes that Section 4928.64, Revised Code, requires Ohio's electric utilities to procure, at a minimum, 50 percent of the renewable energy requirement from resources located within the state of Ohio. Consequently, the Board is aware that an electric utility may fulfill a portion of its AEPS requirements by entering into an electric utility supply contract with the owner of a wind facility, such as the proposed facility in the application at issue. The Board believes that this potential benefit of the project adds support to a finding that the proposed project is in the public interest, convenience, and necessity as required by Section 4906.10(A)(6), Revised Code. (Co. Ex. 5 at 3-4; Staff Report at 47-48.)

2. Setbacks

a. General – Setbacks

Champaign states that the proposed turbines are sited with setbacks from residential structures and property lines consistent with Rule 4906-17-08(C)(1)(c)(i) and (ii), O.A.C., which provides, in pertinent part:

> (i) The distance from a wind turbine base to the property line of the wind farm property shall be at least one and one-tenth 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.

(ii) The wind turbine shall be at least seven hundred fifty feet in horizontal distance from the tip of the turbine's nearest blade at ninety degrees to the exterior of the nearest habitable residential structure, if any, located on adjacent property at the time of the certification application.

In the present case, the requirements of Rule 4906-17-08(C)(1)(c)(i) and (ii), O.A.C., translate to a required setback of 541 feet from nonparticipating property lines, and 919 feet from residential structures. This calculation takes into consideration the worst-case scenario, meaning the tallest turbine with the longest rotor blade proposed under the application. (Co. Br. at 13; Co. Ex. 1 at 136.)

Champaign states that, as proposed, the distance from each turbine to the nearest residential structure ranges from 934 to 2,642 feet, averaging 1,512. Consequently, no turbines are currently sited within the 919 foot setback requirement. (Co. Ex. 1 at 136.)

In its report, Staff asserts that proposed Turbine 129 will be located 613 feet from a residential structure; however, Staff indicates that this residence has been abandoned, is no longer habitable, and is scheduled to be demolished. Further, in its brief, Staff states that it has heard of new construction that will result in a property line being within the minimum recommended setback for proposed Turbine 79. Staff continues that it heard at the local public hearing that a landowner decided not to become a participating leaseholder, which will result in a residence being within the recommended setback for proposed Turbine 95. (Staff Report at 28; Staff Br. at 13-15; Tr. at 2031-2032.)

Additionally, in its report, Staff recommends a minimum setback distance from gas pipelines of at least 1.1 times the total height of the turbine structure. Staff further notes that, in the course of its investigation, it found that certain turbine models proposed had safety standards pertaining to blade shear and ice throw risks that exceeded the statutory minimum. More specifically, GE recommended a setback of 150 percent the sum of the hub height and rotor diameter of the turbine from occupied structures and roads, or use of an ice detector if a lesser setback is utilized. Consequently, although ice detectors will be required on any turbine model selected, as discussed further below, Staff determined that the minimum setback from any occupied structure or heavily travelled road should be 150 percent the sum of the hub height and rotor diameter of the selected turbine. This formula requires a setback of approximately 991 feet for the GE turbine models proposed in the application. (Staff Report at 30-32; Staff Br. at 13-15; Tr. at 2489, 2492, 2560.)

In its brief, Champaign acknowledges Staff's concerns regarding setbacks and Turbines 79 and 95. Champaign proposes that the following condition be added to the certificate in order to allow Applicant to complete leasing or perform micrositing and to ensure that the turbines will only be constructed if the statutory minimum setbacks are met:

> Champaign Wind shall not construct Turbines 79 and 95 as proposed unless Staff confirms that the turbines satisfy the minimum property line and residential setbacks. If Champaign Wind elects to modify the location of proposed Turbines 79 or 95, Champaign Wind shall provide Staff a hard copy of the geographically referenced electronic data, all changes in relation to the proposed relocation of Turbine 79 or 95, and [any] associated facilities. All changes will be subject to staff review and approval prior to construction to ensure compliance with the conditions set forth in this opinion, order, and certificate.

(Co. Br. at 14; Tr. at 414-415, 2031-2032.)

Regarding setbacks in general, the Board finds that Champaign has accurately calculated the setbacks required by Rule 4906-17-08(C)(1)(c)(i) and (ii), O.A.C., using the tallest possible turbine model proposed under the application: 541 feet from non-participating property lines and 919 feet from residential structures. The Board also acknowledges Staff's findings that proposed Turbines 79 and 95 do not meet Staff's minimum recommended setbacks and Champaign's proposed condition to address Staff's concerns. However, the Board does not find that it would be appropriate to adopt Champaign's condition, as this would permit Champaign to modify the location of proposed Turbines 79 and 95, and no alternate locations for these turbines were proposed in the application. Consequently, the Board finds that Turbines 79 and 95 should not be constructed, and has modified Staff's proposed condition accordingly. The Board finds that, provided the certificate issued includes Staff's recommended Conditions (44) and (68), as modified by the Conclusions and Conditions section of this Opinion, Order and, Certificate, the proposed setbacks adhere to the requirements set forth in the statute and support a finding that the proposed project is in the public interest, convenience, and necessity. (Co. Ex. 1 at 136, Staff Report at 28; Tr. at 414-415, 2031-2032.)

b. Blade Shear and Fire

Champaign indicates in its application that blade shear, or blade throw, occurs when a rotor blade drops or is thrown from the nacelle, and that, while such occurrences are rare, they can be dangerous. Additionally, Champaign asserts that there are no

reported instances of a member of the public having been injured as a result of a blade failure of a wind turbine. Champaign goes on to explain that past occurrences of blade shear have generally been the result of design defects during manufacturing, poor maintenance, control system malfunction, or lightning strikes, and that the most common cause of blade failure is human error in interfacing with control systems. Champaign indicates, however, that this risk has been reduced by manufacturer limits on human adjustments that can be made in the field, technological improvements and mandatory safety standards during turbine design, manufacturing, and installation, as well as widespread introduction of wind turbine design certification and type approval, which typically includes quality control audits. (Co. Ex. 1 at 82-84.)

In support of the application, Champaign contends that modern utility-scale turbines are certified according to international engineering standards that include ratings for withstanding hurricane-strength winds. Additionally, Champaign asserts that the engineering standards of the turbines proposed in the application are of the highest level and meet all applicable federal, state, and/or local codes, and include state-of-the-art braking systems, pitch controls, sensors, and speed controls. Champaign specifically notes that the wind turbines proposed for the facility will be equipped with two fully independent braking systems that allow the rotor to be brought to a halt under all foreseeable conditions and that the turbines will automatically shut down at wind speeds over the manufacturers' threshold. Further, Champaign contends that the turbines will cease operation if significant vibrations or rotor blade stress is sensed by the monitoring systems. Champaign concludes that all of these features reduce the risk of blade shear. (Co. Ex. 1 at 83.)

UNU contends that the Board should increase the setbacks proposed in order to protect the public from potential blade shear, which UNU alleges is prevalent in the wind industry, and fire, which UNU argues can be spread by flying debris from blade shear. In support, UNU cites the testimony of UNU witness Palmer for the proposition that blades and blade parts, if propelled through the air, pose a threat to the public because they could strike and seriously injure or kill a person on an adjoining property or road. UNU also contends that blade shear incidents occur regularly in the wind industry. In support, UNU cites two occasions where turbines at Perkins High School in Sandusky, Ohio, experienced blade shear. Further, UNU argues that two blades on a turbine certificated by the Board in *Timber Road II* experienced blade shear due to a manufacturing defect and operating error and scattered "large chunks of metal debris in many directions." UNU contends that evidence presented at the hearing establishes that, as a result of the blade shear at the Timber Road II wind farm, one piece of a blade traveled 764 feet from the tower base as set forth in an incident report submitted by EDP Renewables North America, LLC, to the Board in that case. UNU further asserts, regarding the Timber Road II incident, that the testimony of UNU witness Schafner establishes that a blade piece traveled approximately 1,200 feet from the turbine tower and that several blade pieces

traveled approximately 1,500 feet from the tower. Finally, UNU contends that evidence demonstrates that the wind industry conceals incidents of blade failure at wind farms. (UNU Br. at 40-43; UNU Reply Br. at 23-24; UNU Ex. 21 at 3-4; UNU Ex. 22 at 11-13, Ex. A-7 - A-9; Tr. at 1330-1332, 2509-2510.)

UNU argues that, due to the risk of blade shear discussed above, the Board should require greater setbacks than are proposed in the application and should measure the setbacks from the property lines of nonparticipating landowners, rather than from residences. More specifically, UNU asserts that available data about blade shear supports a setback of 1,640 feet between turbines and the property lines of nonparticipating landowners. UNU supports this proposed setback by asserting that it represents the maximum distance a piece of a turbine blade has been reported to be thrown, and because the REpower safety manual for the MM92 turbine model instructs wind farm operators to cordon off an area this distance around a turbine afflicted by overspeed or fire. UNU points out that a safety manual from Gamesa recommends clearance of 1,312 feet around a burning turbine, and a safety manual from Vestas recommends clearance of 1,300 feet from turbines unless necessary to approach. UNU notes that an electric utility in Ontario advocates a setback distance of 1,640 feet between turbines and power lines. Further, UNU argues that the risk of blade shear requires a minimum of 1,000 feet setback from all public roads. UNU supports this setback from roads by citing the testimony of UNU witness Palmer that persons in vehicles are at risk of serious injury or death from blade shear distances of at least 1,000 feet from a turbine. Based on its proposed setbacks from property lines of nonparticipating landowners and public roads, UNU specifies that 35 of the proposed turbine locations are unacceptable because of their proximity to roadways and/or buildings. UNU complains that Staff failed to measure distances between the proposed turbine sites and public roads, and contends that the Board should direct Staff to measure these distances and to keep a detailed record. (UNU Br. at 48-50; UNU Reply Br. at 23-24; UNU Ex. 17, Ex. K; UNU Ex. 22 at 15, 23-25; UNU Ex. 29 at 76-77; Tr. at 908, 1433, 1472, 2526.)

Urbana contends, similar to UNU, that the statutory minimum setback from roads, property lines, and structures is inadequate to protect the public from the risk of blade shear. In support of this argument, Urbana cites the testimony of UNU witnesses Palmer and Schafner. The County/Townships make this argument as well, contending that the clearance areas set forth in the Gamesa safety manual in the event of a turbine fire should be used as the minimum setbacks for the project, rather than the statutory minimum setback. (Urbana Br. at 21-22; County/Townships Br. at 15-16; Co. Ex. 1, Ex. R, at 42; Tr. at 908, 1301-1303, 1419).

In its reply brief, Champaign contends that the record does not support UNU's proposed setback of 1,640 feet from nonparticipating residences and 1,000 feet from all public roads in order to protect against blade shear. Champaign points out that none of

UNU's witnesses were able to point out an incident where a member of the general public was injured as the result of a thrown blade, and that UNU witness Palmer admitted that one is more likely to be killed in an automobile accident or to strike an animal while driving than to be struck by a piece of a turbine blade. Champaign also emphasizes that Champaign witnesses Shears and Poore testified that they were unaware of any incident by which a member of the general public was injured by blade shear. Additionally, Champaign points out that Staff witness Conway testified that his research indicated that blade shear events were extremely rare and that his research did not reveal any instance of injury to a member of the general public as a result of blade shear. (Co. Reply Br. at 23; Co. Ex. 12 at 3; Co. Ex. 9 at 5; Staff Ex. 7 at 5-6; UNU Ex. 22 at 15; Tr. at 1432, 2493, 2547.)

Champaign counters UNU's argument that the Timber Road II blade shear incident involved metal pieces being thrown by pointing out that turbine blades are not made out of metal, but fiberglass. Further, Champaign points out that, despite UNU's argument that pieces from the Timber Road II blade shear incident landed in a residential yard across a public road, Staff witness Conway testified that the smaller pieces were blown around the site and UNU witness Schafner acknowledged that smaller, lighter pieces of fiberglass were likely blown further from their original landing site and that children in the area were picking up the pieces. Champaign also points out that UNU witness Schafner did not view the site until days after the incident and could not state that the blade pieces had not been moved from their original landing spots. Finally, Champaign addresses UNU's argument that blade failures have occurred at a high school in Sandusky, Ohio, by pointing out that Staff witness Conway testified those blade failures did not involve commercial grade wind turbines. (Co. Reply Br. at 24-25; Tr. at 1318-1320, 2509-2510, 2567-2568.)

Champaign additionally cites the testimony of Champaign witness Poore in support of the proposition that the low risk of blade shear can be even further reduced by third-party oversight in the manufacturing process; quality assurance processes; inspections based on the experience of the selected turbine model; use of proper maintenance practices; limitations on remote fault resets; and training. Champaign points out that Champaign witness Speerschneider testified that many of these practices will be used in the proposed project. Further, Champaign refutes UNU's assertion that the minimum setback from nonparticipating property lines should be 1,640 feet because a REpower manual and Gamesa manual instruct operators to cordon off such an area in the event of a burning turbine. Champaign points out that both of these instances involve dangerous events akin to measures that would be taken in the event of a gas leak near a road. Champaign further addresses UNU's argument that a Vestas manual instructs employees to stay 1,300 feet from a turbine unless necessary to approach by pointing out that this exhibit was obtained through the internet by UNU witness Johnson and that no such reference can be found in the complete Vestas safety manual, which is included in Exhibit R of the application. Further, Champaign points out that Staff witness Conway

contacted Vestas and was informed that Vestas does have a minimum setback recommendation, which was exceeded by the setback proposed by Champaign in the application. (Co. Reply Br. at 25-27; Co. Ex. 9 at 7-9; Tr. at 909-910, 2538.)

Staff also contends that UNU's proposed setback of 1,640 feet is unsupported and unnecessary. Staff points out that the applicable rule does not require that all danger or risk be eliminated, but only that impacts be identified and reasonably minimized. Staff explains that the distances discussed in Gamesa's turbine safety manual are not minimum setbacks intended to be permanent restrictions; but are recommendations for temporary clearance areas in the temporary event of a fire. Further, Staff indicates that Staff witness Conway contacted all of the potential turbine manufacturers and, with Staff's recommended conditions, the project will exceed all manufacturer setback recommendations. Finally, Staff notes that, contrary to the assertions of UNU, Staff measured distances from arterial roadways. Therefore, Staff concludes that the setbacks proposed by Champaign, as modified by Staff's recommendations, are adequate to protect public safety. (Staff Report at 28; Staff Br. at 13-17; Staff Reply Br. at 4-5, 7, 13-16; Tr. at 2498-2499, 2578.)

The Board acknowledges that, although rare, blade shear has occurred. However, the Board declines to find that the record indicates a need for a 1,640 foot setback between turbines and property lines of nonparticipating landowners and a 1,000 foot setback from all public roads in response to the assertions made regarding blade shear. Although UNU argues that blade shear is prevalent in the wind industry, UNU did not present any evidence that a member of the general public has ever been injured. In fact, UNU witness Palmer testified that an individual is more likely to be killed in an automobile accident or strike an animal in the roadway than be struck by a turbine blade. Additionally, although UNU cited two occasions of blade shear in Sandusky, Ohio, the evidence demonstrates that these incidents did not involve commercial grade wind turbines, such as the ones that are being considered in this application. Further, although UNU claims that testimony regarding the Timber Road II blade shear incident demonstrates that sheared blade pieces have travelled a distance of approximately 1,500 feet, the Board notes that UNU witness Schafner acknowledged that: he did not view the pieces until two to three days after the incident; he did not actually measure distances until four to five days after the shear occurred; the small pieces of fiberglass may have been blown further from their original landing spots; he did not know whether the pieces had been moved; and children in the area were picking up the blade pieces. Consequently, the Board does not find that the distance measured by this witness is reliable for purposes of determining an appropriate setback for blade shear purposes. The Board finds more credibility lies with the official report of the Timber Road II blade shear incident, which notes a travel distance of approximately 233 meters, or 764 feet, from the tower base for the largest piece of debris. The Board finds that this documented distance of a rare blade shear is consistent with

Staff's recommended setback distances. (Staff Report at 31; UNU Ex. 22 at 15, Ex. A-7 - A-9; Tr. at 1303, 1315-1316, 1318-1320, 1336, 1432, 2509-2510.)

The Board also finds that, although UNU, Urbana, and the County/Townships contend that turbine safety manuals recommend setbacks of approximately 1,300 feet, these parties misunderstand those provisions. As explained by Staff, these turbine safety manuals cited by UNU, Urbana, and the County/Townships refer to recommended temporary clearance areas in the event of temporary safety situations such as fire or overspeed, akin to temporary evacuations that might take place during a gas leak, and are not recommended permanent setback distances. To the contrary, Staff witness Conway testified that he contacted all of the potential turbine manufacturers and that, with Staff's recommended conditions, the project will exceed all manufacturer setback recommendations. Further, both Champaign's expert witness and one of Staff's expert witnesses testified that blade shear events are extremely rare and that research by such experts did not reveal any instances of injury to the general public as a result of blade shear. We note that Staff witness Conway testified that a full blade failure at nominal rotor speed and mechanical braking speed has a failure rate of 1 in 2,400 turbines per year, a full blade failure at mechanical braking two times the nominal rotor speed has a failure rate of 1 in 20,000 turbines per year, and the failure rate of a tip or a piece of a blade is 1 in 4,000 turbines per year. Under the Board's calculation, the failure rate is as high as 0.0004 percent and as low as 0.00005 percent. (Co Ex. 9 at 5-9; Co. Ex. 12 at 3; Staff Ex. 7 at 3; Tr. at 909-910, 2493, 2498-2499, 2538, 2536-2538, 2567-2568, 2578.)

The Board also stresses that evidence demonstrates that the rare occurrence of blade shear is even further reduced by certification of turbines according to international engineering standards, two fully independent braking systems, pitch controls, sensors, speed controls, monitoring systems that provide automatic shut down at wind speeds over a threshold, significant vibrations, or rotor blade stress, third-party oversight in the manufacturing process, quality assurance processes, inspections, proper maintenance practices, limitations on remote fault resets, and training. Additionally, the Board finds that the conditions proposed by Staff would further minimize the uncommon occurrences of blade shear, including restriction of public access and warning signs. Therefore, the Board finds that, provided the certificate issued includes Staff's recommended Condition (26), the setbacks currently proposed in the application are sufficient to protect residents from the risk of blade shear or turbine fire, and that the risk of blade shear or fire is not such that it renders the proposed project contrary to the public interest. (Staff Report at 28, 31-32; Co. Ex. 1 at 82-83.)

c. Ice Throw

Ice throw, or shedding, refers to the accumulation of ice on rotor blades that subsequently breaks free and falls to the ground. According to the application, under

certain weather conditions, ice can build up on the rotor blades and/or sensors, slowing rotational speed and potentially causing an imbalance in the weights of individual blades. Champaign contends that the effect of ice accumulation can be sensed by the turbine's computer controls and typically results in the turbine being shut down until the ice melts. Champaign notes that the tendency is for ice to drop off the rotors and land near the base of the turbine. Champaign explains that, although uncommon, ice can potentially be "thrown" when it begins to melt and stationary turbine blades begin to rotate again. Champaign contends, however, that turbines do not usually restart until the ice has largely melted and fallen straight down near the bases, and that no injuries have been reported due to ice throw. (Co Ex. 1 at 81-82.)

In its brief, Champaign points out that Champaign witness Speerschneider testified that there are hundreds of thousands of wind turbines operating throughout the world and that events such as ice throw are rare. Further, Champaign witness Shears, with 18 years of experience in the wind industry, testified that he was unaware of any incident where a member of the public was injured by ice throw. Champaign further asserts that the conditions proposed by Staff to further minimize any impact of ice throw are all agreeable to Champaign. (Co. Br. at 19-20; Co Reply Br. at 28; Co. Ex. 5 at 9-10; Co. Ex. 12 at 3.)

In the Staff Report, Staff recommends a number of safety measures in order to minimize the impacts of ice throw, including restriction of public access with appropriately placed warning signs, warning workers of potential hazards of ice, and ice detection software and alarms that trigger an automatic shutdown. Additionally, as previously discussed, Staff recommends a setback in excess of the statutory minimum near arterial roads and occupied structures to further mitigate the effects of ice throw. This increased setback distance is 150 percent of the sum of the hub height and rotor diameter of the selected turbine. Staff states that this requirement will make it necessary for Champaign to relocate and/or resize proposed Turbines 87 and 91. Staff contends that a lesser setback distance from non-arterial roads of 110 percent of the sum of the hub height and rotor diameter is reasonable given the expected level of traffic, citing the testimony of Staff witness Conway. (Staff Br. at 30-32; Staff Report at 31-32; Tr. at 2492.)

In its brief, UNU contends that ice detection and sensor alarms are ineffective to shut down turbines experiencing ice accumulation, citing testimony of UNU witness Palmer that, in Ontario, he observed that a turbine was still rotating even though ice on its blades had been thrown. Additionally, UNU contends that GE Energy's safety manual warns that wind farm personnel should stay at least 1,148 feet away from a rotating turbine with ice on its blades and the Vestas safety manual warns personnel to stay at least 1,312 feet away from a rotating turbine with ice on its blades. Consequently, UNU argues that the Board should adopt UNU witness Palmer's recommendation that a setback from all public roads of 1,000 feet should be utilized to protect motorists from ice throw. UNU

contends that, as a result, in addition to Turbines 87 and 91, identified by Staff as too close to heavily-traveled public roads, there are nine other turbines that should be moved due to proximity to public roads. (UNU Br. at 51-52; UNU Reply Br. at 27-29; UNU Ex. 22 at 32-33; Tr. at 1449.)

Urbana contends that the statutory minimum setbacks to roads, property lines, and structures are inadequate to protect the public from the risk of ice throw. More specifically, Urbana argues that the state minimum setback of 541 feet from roads is insufficient to protect the safety of motorists, citing the testimony of UNU witnesses Palmer and Schafner. Additionally, Urbana points out that Champaign witness Shears testified that, in the event of fire, one turbine manufacturer manual recommends evacuating a distance of 1,300 feet around a turbine. (Urbana Br. at 21-22; Tr. at 908, 1301-1303, 1419.)

The County/Townships contend again, with regard to ice throw, that the setbacks from turbines to nonparticipating landowners' property lines should be calculated in accordance with the manufacturers' setback recommendations, citing the turbine safety manual for the Gamesa turbine model indicating that, in the event of a fire, the area around the turbine should be cordoned off at a radius of 1,300 feet. (County/Townships Br. at 15-16; County/Townships Reply Br. at 8-10; Co. Ex. 1, Ex. R at 42.)

In its reply brief, Champaign disputes UNU's assertion that the turbines should be set back at least 1,000 feet from all public roads and nonparticipating landowners' property lines. Champaign claims that UNU's proposition was based solely upon the testimony of UNU witness Palmer and that he gave no legitimate justification for this distance. Additionally, Champaign contends that, although UNU witness Palmer testified that ice detection equipment on turbines does not work, he has never worked in the wind industry or operated a wind turbine. Finally, Champaign contends that Staff's recommended conditions regarding worker training, ice warning systems, and icing setbacks will minimize the already low risk to the general public of ice throw. (Co. Reply Br. at 27-28; Co. Ex. 1 at 82; Tr. at 1443, 1456, 1465-1466, 1468-1469, 1472.)

The Board acknowledges that, although rare, ice throw can occur. However, as with blade shear, the Board declines to find that the record indicates a need for a 1,640 foot setback between turbines and property lines of nonparticipating landowners and a 1,000 foot setback from all public roads. Although UNU witness Palmer testified that ice detection equipment on turbines does not work, the Board finds minimal credibility to this particular statement in his testimony because he also testified that he has never worked in the wind industry or operated a wind turbine. Further, as the Board found regarding blade shear and fire risks, the turbine safety manuals cited by UNU, Urbana, and the County/Townships all refer to recommended clearance in the event of temporary safety circumstances, not permanent setback recommendations. Again, the Board notes that Staff

contacted all potential turbine manufacturers and found that, with Staff's recommended conditions, the project exceeds all manufacturer setback recommendations. Further, the Board finds that the conditions proposed by Staff would further minimize the uncommon occurrence of ice throw, including restriction of public access and warning signs, warning workers of potential hazards, ice detection software and alarms that trigger automatic shutdown, and a setback distance of 150 percent of the sum of the hub height and rotor diameter of the selected turbine from occupied structures and arterial roads. The Board stresses that this setback distance is even more cautious than the recommendation by GE, as GE recommends this setback distance, or the use of an ice detector when the setback distance is not used. Additionally, Staff notes that Turbines 87 and 91, as proposed in the application, will not comply with this increased setback distance from occupied structures and arterial roads, and the Board finds that proposed Turbines 87 and 91 should not be approved. Therefore, provided the certificate issued includes Staff's recommended Conditions (41), (42), (43), and (44), as modified by the Conclusions and Conditions section of this Opinion, Order, and Certificate, the Board finds that the setbacks proposed in the application are sufficient to protect residents from risk of ice throw, and that the risk of ice throw is not such that it renders the proposed project contrary to the public interest. (Staff Report at 31-32; Co. Ex. 1 at 81-82; Co. Ex. 5 at 9-10; Co. Ex. 12 at 3; Tr. at 1443, 1456, 1465-1466, 1468-1469, 1472, 2492, 2498-2499, 2578.)

d. Aesthetics

In the application, Champaign asserts that each wind turbine consists of three major components: the tower, the nacelle, and the rotor. The tower height, or hub height, will be a maximum of 328 feet, and the nacelle height will be a maximum of 338 feet. Consequently, the total turbine height will be a maximum 492 feet. The towers will be painted white to make the structure visible to aircraft and to decrease visibility from ground vantage points. (Co. Ex. 1 at 40-41.)

Staff reports that Applicant conducted a visual assessment of the area within five miles of the proposed project to consider the cumulative impacts of both the project certificated in *Buckeye Wind I* and the proposed project, and finds that turbines would be visible throughout most of the study area, but, in some areas, turbines would be partially screened by buildings and vegetation (Staff Report at 22).

Staff further reports that visual impacts vary depending on the distance between the viewer and turbines, the number of turbines visible, the amount of screening, atmospheric conditions, and the presence of other elements such as utility poles and communication towers. Further, Staff notes that visual impact varies for each viewer depending on the viewer's value of the existing landscape, as well as his personal attitudes toward wind power. (Staff Report at 22.)

Champaign analyzes project visibility under a "worst-case" scenario, without considering the screening effect of existing vegetation and structures, and determined that the proposed project could potentially be visible in approximately 95.6 percent of the five-mile radius study area. Continuing under the worst-case analysis, Champaign found that, in most areas, the majority, 29 to 56, of the proposed turbines could be visible. Additionally, under the worst-case analysis, Champaign found that, at nighttime, the proposed project could potentially be visible in approximately 93.2 percent of the five-mile radius study area. Finally, Champaign stresses that this nighttime analysis likely overstates visibility because the analysis was based on the conservative assumption that all turbines would be equipped with FAA warning lights, when actual lighting of turbines typically results in warning lights being installed on about one-third to one-half of the turbines in a typical project. (Co. Ex. 1, Ex. Q at 28-29.)

Champaign's analysis of project visibility factors in vegetation for a more accurate reflection of predicted visibility. Considering vegetation, Champaign finds that some portion of the proposed project would likely be visible by 84.4 percent of the area, and that visibility would be eliminated in small areas throughout the area containing blocks of forest vegetation. Champaign further emphasizes that areas of actual visibility are anticipated to be more limited than indicated by the analysis due to the slender profile of turbine blades, the effects of distance, and screening from hedgerows, street trees, and structures, which were not considered in the analysis. (Co Ex. 1, Ex. Q at 29.)

Additionally, as part of the visual impact assessment, Champaign asserts that the project will involve approximately 47 miles of collection systems to support the project's energy generation, but that 41.6 miles will be underground, and only 5.4 miles overhead. Champaign asserts that these lines will be a very minor visual component of the project as these types of lines often run along rural roadways and will not appear out of place in the setting. (Co Ex. 1, Ex. Q at 7-8.)

Champaign further explains that the substation will be located near the intersection of Pisgah Road and Route 56 in the town of Union, which will be approximately 715 by 315 feet in size and will be enclosed by a chain link fence. Champaign further asserts that the substation will generally only be visible from foreground locations where natural screening is lacking. (Co Ex. 1, Ex. Q at 8.)

UNU asserts that the proposed facility will destroy the community's landscape. In support, UNU contends that UNU witness Johnson will be able to see all 56 of the turbines proposed from her property, in addition to approximately 50 turbines approved in the *Buckeye Wind I* project. UNU cites UNU witness Johnson's testimony that the pulsing red aviation warning lights will obliterate the view of the night sky. Further, UNU cites the testimony of Champaign witness Mundt for the proposition that studies have shown the appearance of a wind turbine can be perceived as intrusive and that the visual intrusion

can inhibit restful recovery. (UNU Br. at 39-40; UNU Reply Br. at 20; UNU Ex. 17 at 5, 11; Tr. at 2958-2959.)

In its reply, Champaign asserts that UNU witness Johnson's testimony that she will be able to see all of the approved turbines from her property is unfounded, as the visual impact assessment, included as Exhibit Q of the application, demonstrates that a significant number of the turbines will be at least partially screened by trees and structures, and because a cellular tower with red warning lights already exists near her property. Additionally, Champaign denies that Champaign witness Mundt testified that a wind turbine's appearance can inhibit restful recovery, instead noting that the record reflects an article was read into the record remarking that "[i]nability to disregard visual and audible intrusion possibly adds to the impression that the environment is unsuitable for restoration." Finally, Champaign contends that UNU has no basis for claiming that the turbines will destroy the community landscape, asserting that Champaign County is a working agricultural landscape that is compatible with the facility. (Co. Reply Br. at 22-23; Co. Ex. 1 at 42; Tr. at 972-973, 2957-2958.)

The Board recognizes that the proposed facility would alter the community landscape. However, the evidence in the record also demonstrates that: FAA warning lights are typically installed on only one-third to one-half of turbines in a project; some portion of the project would be visible in 84.4 percent of the area, but actual visibility will be more limited due to slender blade profiles, distance, and screening from hedgerows, street trees, and structures; and the collection system will be primarily buried, with only 5.4 miles of collection lines planned overhead. Considering all of these factors, the Board finds that the aesthetic impact will not be so negative that it will make the facility contrary to the public interest, convenience, or necessity. (Staff Report at 22; Co. Ex. 1 at 40-42, Ex. Q at 7-8, 28-29; Tr. at 972-973, 2957-2958.)

e. Shadow Flicker

Shadow flicker refers to the moving shadows that occur when an operating wind turbine rotor falls between the sun and a receptor. Champaign submits, as part of its application, a shadow flicker report conducted by its consultant, edr Companies. (Co. Ex. 1, Ex. P at 1.)

Champaign notes that, the introduction to the shadow flicker report states that shadow flicker does not occur when fog or clouds obscure the sun, or when the turbines are not operating. Additionally, Champaign asserts that, at distances of 1,030 meters or greater, shadow flicker is essentially undetectable. Champaign explains that its shadow flicker report utilized WindPRO, a computer modeling software package developed for design and evaluation of wind projects, to input turbine coordinates, shadow receptor/structure coordinates, topographic mapping, turbine specifications, joint wind

speed and direction frequency distribution, and monthly sunshine probabilities. The model then calculated the hours of shadow flicker for the turbine sites. Further, Champaign indicates that the study utilized the GE103 turbine model, because, among the turbines under consideration, this model represents the worst-case scenario as to shadow flicker. (Co Ex. 1 at 85, Ex. P at 1-2.)

Champaign indicates that there are currently no national, state, county, or local standards for acceptable frequency or duration of shadow flicker, but that it utilized 30 hours per year as a shadow flicker threshold. Based on the results of the initial shadow flicker analysis, Champaign's consultant determined that, of the 880 structures within 1,100 meters of a proposed turbine, 50 were expected to experience greater than 30 hours of shadow flicker per year. Of those 50 structures, there were 11 nonparticipating residential structures, 7 of which were classified as "pending" at the time of the application, indicating that the respective landowner is anticipated to become a participant. Consistent with its objective of projecting the worst-case scenario, however, Champaign's analysis considered the pending structures, as their participation or nonparticipation was uncertain. (Co Ex. 1 at 85, Ex. P at 5.)

Champaign indicates that, regarding the 11 residential structures at issue, flicker was projected under the initial analysis, a worst-case scenario analysis, to range from 31 to 57 hours per year. However, Champaign notes that the initial analysis did not consider the actual location or orientation of windows, or screening effects due to vegetation and/or buildings. When the screening effects of obstacles were considered in the obstacle analysis, 8 nonparticipating residential structures were expected to receive greater than 30 hour per year of shadow flicker, ranging from 31 to 57 hours per year. Champaign contends that this projection represents the worst-case scenario as far as turbine models and that the analysis will be reconducted if a turbine other than the GE103 turbine model is chosen. Champaign also indicates that, based upon the cumulative impact of shadow flicker of the Buckeye Wind I and Buckeye Wind II projects, less than a dozen nonparticipating receptors would be exposed to greater than 30 hours of shadow flicker per year. Further, Champaign states that, if necessary, shadow flicker minimization measures, including screening by vegetative planting or window treatments, and/or curtailment of operation during select times, will be utilized so that no nonparticipating receptors are exposed to more than 30 hours per year of shadow flicker. (Co. Ex. 1 at 87, Ex. P at 6.)

In its report, Staff confirms that Ohio law does not provide standards for frequency or duration of shadow flicker from wind turbine projects. Staff notes, however, that international studies and guidelines from Germany and Australia have suggested 30 hours of shadow flicker per year as the threshold of significant impact, or at the point at which shadow flicker is commonly perceived as an annoyance. Further, Staff notes that the 30-hour per year standard is used in at least four other states, including Michigan,

New York, Minnesota, and New Hampshire. Staff also points out that this is the threshold that has been applied in recent wind farm certificates in Ohio. Accordingly, Staff agrees with Champaign's use of a threshold of 30 hours of shadow flicker per year in its analysis. (Staff Report at 33.)

Staff acknowledges that shadow flicker at certain frequencies may potentially affect persons with epilepsy. However, Staff notes that flashing lights most likely to trigger seizures are between the frequency of 5 to 30 blade flashes per second, or hertz (Hz). In the proposed project, Staff contends, the maximum wind turbine rotor speed would equate to a frequency of approximately 0.9 Hz and, therefore, it would not trigger seizures. (Staff Report at 34.)

Additionally, Staff recognizes that Champaign's initial shadow flicker analysis indicated that fewer than one dozen nonparticipating residences were expected to experience more than 30 hours of shadow flicker per year. Further, Staff recognizes that, considering the cumulative impact of shadow flicker from the Buckeye Wind I and Buckeye Wind II, less than one dozen nonparticipating residences would be exposed to greater than 30 hours of shadow flicker per year by facility. Staff also finds that Champaign's assertion that it will use shadow flicker minimization measures to ensure nonparticipating residences are not exposed to more than 30 hours per year of shadow flicker should be achievable. (Staff Report at 34.)

Staff recommends that the certificate be conditioned upon the requirement that Champaign operate the facility so that no more than 30 hours of shadow flicker per year are actually experienced at any nonparticipating sensitive receptor, including the cumulative shadow flicker associated with both the Buckeye Wind I and Buckeye Wind II projects. Further, Staff recommends that Champaign implement a complaint resolution process through which complaints related to shadow flicker from the facility can be resolved. (Staff Report at 34.)

UNU contends that neither Champaign nor Staff presented a qualified expert witness that could testify regarding the facility's shadow flicker impacts. More specifically, UNU argues that Champaign witnesses Speerschneider and Poore and Staff witness Strom had no expertise in shadow flicker modeling. Additionally, UNU argues that the shadow flicker modeling used by Champaign is fundamentally flawed because it does not consider the actual size of the residences receptive to the shadow flicker. Further, UNU argues that the proposed turbines will cast excessive shadow flicker on neighboring land and residences and that the modeling used should have taken into consideration entire nonparticipating properties, not just residential structures. UNU also argues that Champaign's proposed minimization measures would force nonparticipating landowners to accept changes to their property including window treatments or shrubbery. Finally, UNU contends that the condition proposed by Staff is unenforceable because a member of

the public could not be expected to determine whether the shadow flicker at a residence was in compliance with the threshold, and that the condition is inappropriate because it calls for additional modeling after the certificate is issued. (UNU Br. at 52-53, 57-60; UNU Reply Br. at 29-30; Co. Ex. 1, Ex. P at 4; Co. Ex. 9 at 9-10; Tr. at 263, 540, 559, 2800.)

In its reply brief, Champaign responds that both Champaign witnesses Speerschneider and Poore were qualified to discuss the facility's shadow flicker impact. Champaign points out that witness Speerschneider holds a bachelor of science (B.S.) in physics, a bachelor of arts in environmental studies, a master of science (M.S.) in technology and policy, and an M.S. in materials science and engineering. Further, Champaign indicates that witness Speerschneider has worked for Everpower since 2004, with involvement in all facets of developed projects and operations. Next, Champaign contends that witness Poore holds a B.S. in mechanical engineering and has been employed in the wind industry for over 30 years. Further, Champaign contends that witness Poore has extensive experience working around wind energy project sites and turbines, and that an employee under his direction analyzed the shadow flicker studies. (Co. Reply Br. at 29-30; Co. Ex. 5 at 2; Co. Ex. 9 at 1.)

In its reply brief, Staff also responds to UNU's argument, noting that it has been the Board's longstanding practice to allow an applicant to sponsor exhibits to the application without the need for witnesses with specific knowledge thereof:

> The Board notes that it is a long-standing practice in Board proceedings for an applicant to sponsor exhibits to an application through the testimony of a witness that is an officer or experienced employee of the applicant. The Board has admitted the testimony of a witness, and the related exhibits, where the witness demonstrates that the exhibits or studies were performed at the applicant's request, under the witness' direct or indirect supervision, and that the officer is sufficiently knowledgeable about the information in the exhibit or study to offer testimony. We have found this process to be an efficient method by which to introduce large amounts of data necessary to process certificate applications. Further, the Board notes that, pursuant to Section 4906.07, Revised Code, the Board is required to direct an investigation of the application and file a written report of the investigation.

Buckeye Wind I, Opinion and Order (Mar. 22, 2010) at 12. Additionally, Staff points out that the shadow flicker report in the application was performed at Champaign's request, under its witnesses' direct or indirect supervision. (Staff Reply Br. at 16-18.)

Next, Champaign responds to UNU's contention that the shadow flicker study was fundamentally flawed because the actual size of residences was not considered in the analysis. Champaign points out that the model used very conservative assumptions, including turbines operating during all daylight hours and a receptor that was exposed to light on all sides. Furthermore, the field analysis of obstacles that was conducted for the 11 receptors initially modeled to receive over 30 hours of shadow flicker per year. As a result of the effect of screening, three receptors were below the 30-hour threshold. Champaign contends that, contrary to UNU's claim, the use of a field analysis was appropriate to estimate the effect of screening on the 11 residences. Champaign also argues that the record does not support UNU's assertion that the 30-hour threshold should apply to an entire nonparticipating property, rather than just residences. Champaign contends that Champaign witness Speerschneider testified that the 30-hour threshold has resulted in few complaints at wind projects, causing the logical conclusion that shadow flicker on other parts of a nonparticipating property will not be an issue. (Co. Reply Br. at 30-31; Co. Ex. 1 at 86-87, Ex. P at 2, 4; Tr. at 265.)

Further, Champaign contends that Staff's recommended condition regarding shadow flicker does not defer important siting issues, but enables Staff to enforce the appropriate threshold of 30 hours of shadow flicker per year for nonparticipating residential structures. Finally, Champaign contends that this condition is enforceable because shadow flicker can be predicted to the minute based on the location of the receptor, turbine, and sun. Further, although UNU contends that Champaign's proposed minimization measures would force landowners to accept changes to their property, Champaign points out that the condition does not require residents to undertake unwanted mitigation steps. (Co. Reply Br. at 29-31.)

The Board finds that, in light of their experience and educational backgrounds, Champaign witnesses Speerschneider and Poore were qualified to offer testimony regarding the shadow flicker report in the application and that Staff witness Strom was also qualified to discuss this portion of the Staff Report. The Board also notes that no expert testimony on shadow flicker was presented by any other party. Further, the Board finds that the evidence in the record demonstrated that Champaign's shadow flicker analysis utilized software commonly used and relied upon in the industry in order to model projected shadow flicker and that only eight nonparticipating or pending residences were projected to receive over the 30-hour threshold, even under conservative assumptions that the turbines will operate during all daylight hours and that the receptor will be exposed to light on all sides. Further, although UNU again argues that the Board is deferring important issues such as shadow flicker, the Board stresses that the shadow flicker analysis considered the turbine model under consideration that represents the worst-case scenario as to shadow flicker. Thus, even if Champaign selects one of the other turbines under consideration, the shadow flicker will not exceed the amount projected under the shadow flicker report. Further, Condition (47) does not defer issues to Staff, but

reflects the Board's determination of the appropriate amount of shadow flicker and gives Staff the ability to enforce that determination against Champaign after the facility is constructed. (Staff Report at 33-34; Co. Ex. 1 at 85-87, Ex. P at 1-6; Co. Ex. 5 at 2; Co. Ex. 9 at 1; Tr. at 265.)

Finally, although UNU argues that Champaign's proposed minimization measures will require nonparticipating homeowners to take unwanted action, this is not the case. Staff's recommended condition requires that Champaign operate the facility so that no more than 30 hours of shadow flicker per year are experienced at any nonparticipating sensitive receptor, and that a complaint resolution process be implemented through which complaints related to shadow flicker can be resolved. Champaign has merely noted that minimization measures can include screening by vegetative planting, window treatments, as well as curtailment of operation during select times. Consequently, Champaign has not asserted that it intends to force changes to the property of unwilling participants, but has listed multiple methods to minimize shadow flicker at the eight receptors in question, which includes curtailment of operation during select times. The Board finds that, in light of the intermittent nature of shadow flicker and the available mitigation methods, and provided the certificate issued includes Staff's recommended Condition (47), as modified by the Conclusions and Conditions section of this Opinion, Order, and Certificate, shadow flicker concerns are not so excessive as to render the project contrary to the public interest as required pursuant to Section 4906.10(A)(6), Revised Code. (Staff Report at 33-34; Co. Ex. 1 at 85-87, Ex. P at 1-6.)

f. Property Values

In support of its application, Champaign submits the testimony of witness Mark Thayer. Champaign witness Thayer testifies that, in his opinion, the proposed facility would have no impact on local property values, based upon a study he coauthored conducted by the Lawrence Berkley National Laboratory (LBNL Study) that analyzed 7,459 single family residences before, during, and after wind farm development in the United States (U.S.). Champaign asserts that the LBNL Study considered these sales by using multi-variable regression techniques, adjusted for the differences in each sale for square footage, scenic views, current market conditions, and various other pricing components in order that the only variable left was distance to a wind turbine. Further, Champaign asserts that the LBNL Study underwent statistical studies to verify the results in addition to being subject to peer review. Additionally, Champaign witness Thayer utilizes four other empirical studies conducted since December 2009, known as the Hinman Study, Carter Study, Clarkson Study, and Lempster Study, that also came to the conclusion that, post operation/construction, there was no identifiable effect of wind farms on nearby residential property values. Champaign witness Thayer further explains that there may be negative property value effects in the post-announcement, preconstruction phase due to anticipation stigma. However, he adds that the anticipation

stigma may be a result of the publicity by opponents to the wind project, but that, once construction is complete, prices will return to their former levels. (Co. Br. at 39-40; Co. Reply Br. at 32-34; Co. Ex. 8 at 2-6, 19.)

UNU argues that, contrary to Champaign's assertions, the project will substantially reduce the value of neighboring land and residences. In support, UNU cites the testimony of UNU witness Michael McCann, a professional appraiser, who opined that the proposed project will reduce the market value of properties in the immediate project area by 25 to 40 percent. UNU witness McCann's opinion was based upon his knowledge of actual repeat and paired sales of residential properties near wind farms, as well as a study known as the Lansink Appraisal Study. UNU also criticizes Champaign witness Thayer's testimony, arguing that his testimony focused on elaborate statistical regression studies that are not reliable for determining property value related to wind power projects. Further, UNU criticizes Champaign witness Thayer's use of the LBNL Study, arguing that the property value impacts associated with turbines were diluted because the data set included 7,459 separate property transactions near 24 wind farms in nine states. Additionally, UNU argues that the LBNL Study excluded data on sales that were clearly affected by the presence of turbines. UNU concludes that, due to property value concerns, the Board should require a condition requiring Champaign to offer nonparticipating landowners price protection with a property value protection agreement. (UNU Br. at 62-64; UNU Reply Br. at 34-35; UNU Ex. 18 at 9, 11-12, 23; Tr. at 1083, 1085, 1087-88.)

Champaign replies that the Board should not rely on UNU witness McCann's own study because: it was not controlled for the many variables that can affect prices; it utilized a very small sample size that has not been tested for statistical significance; and UNU witness McCann lacks the formal education and field experience to be qualified to conduct true statistical studies. Champaign points out that UNU witness McCann testified that he had no training in statistics, lacked a college degree, and did not have a basic understanding of regression analysis. Further, Champaign argues that, while UNU witness McCann's study is based on a hand-selected, small sampling of sales data, the LBNL Study relied upon by Champaign witness Thayer is a peer-reviewed, comprehensive statistical study that is more reliable because it considered 7,459 home sales before, during, and after wind farm development. Additionally, Champaign points out that, although UNU witness McCann criticized the LBNL Study for excluding certain data points, he testified that he did not know why these sales were excluded from the study or whether the data points were outliers. Further, Champaign argues that UNU's criticisms ignore the four other studies discussed by witness Thayer. (Co. Brief at 40-41; Co. Reply Br. at 32-34; Co. Ex. 8 at 2-6, 19; Tr. at 1053-1054, 1057-1060, 1062.)

The Board is mindful that five studies were presented by Applicant demonstrating that similar wind projects in other locations have not affected property values in those areas and that two studies were presented by UNU demonstrating that wind projects in

other locations have reduced the market value of properties in the immediate project area. However, the Board finds that the lack of a control group in UNU witness McCann's study, small sample size, and lack of testimony on statistical significance lessen the credibility of this study. In particular, the Board notes that the LBNL Study presented by Champaign was a peer-reviewed, comprehensive statistical study that considered a much larger number of property transactions near 24 wind farms, with a control group. Consequently, in light of the studies in the record, the Board finds more reliable the studies evincing that similar projects in other locations have not affected property values in those areas, and that concerns with property values do not render the project contrary to the public interest, convenience, and necessity. Additionally, in light of the Board's conclusion, the Board finds it is unnecessary to require Applicant to enter into a property value protection agreement as a condition of the certificate. (Co. Ex. 8 at 2-6, 19; Tr. at 1053-1054, 1057-1060, 1062.)

g. Operational Noise

In its application, Champaign explains that the operational noise associated with the facility will have a minimal impact on surrounding landowners. Champaign points out that it sited turbine locations in order to keep the modeled sound level at nonparticipating residences below the average sound level (Leq) for the site, plus 5 decibels (dBA), consistent, noting this methodology is consistent with the Board's acceptable noise conditions in recently approved facility certificates. In support of its assertion that the operational noise of the facility will provide minimal impacts, Champaign relies on the modeling performed by Champaign witness Hessler, a noise consultant. (Co. Ex. 1 at 73-74.)

Champaign witness Hessler reasons that sound levels associated with turbine rotors correlate with meteorological tower data on wind speeds, indicating that wind speed accounts for the largest differential between turbine noise and background noise levels. According to Champaign witness Hessler, the wind speed differential, known as the critical wind speed, results in a wind speed of 6 meters per second. In establishing a nighttime design goal, Champaign witness Hessler utilized the critical wind speed to determine an average nighttime Leq of 39 dBA. Therefore, Champaign's nighttime noise design goal for the project, based on the average Leq of 39 dBA sound level, plus 5 dBA, is 44 dBA. (Co. Ex. 1 at 76; Co. Ex. 11 at 7; Co. Ex. 11 at 5.)

Champaign witness Hessler explains that his model focuses on the worst-case scenario, meaning he assumes Champaign will select the noisiest turbine model (Nordex) of the five being considered. The noise model indicates that, in order to achieve the 44 dBA design goal under the worst-case scenario, 16 of the turbines would need to be operated in low-noise mode to ensure sound levels below the 44 dBA. Champaign's application indicates that, while some property boundaries may experience dBA levels as

high as 52 dBA, all nonparticipating residences will experience sound levels below 43 dBA, remaining outside the 44 dBA design goal. In addition, the application provides that the majority of nonparticipating residences would experience levels lower than 40 dBA, based on the worst-case scenario. (Co. Ex. 1 at 76; Co. Ex. 11 at 7.)

In support of Champaign's dBA design goal, Champaign witness Hessler explains that complaints are rare when sound levels remain below 45 dBA, pointing out that the rate of complaints for project sound levels between 40 and 45 dBA is only about 2 percent of the population within 2,000 feet of a turbine. In addition, Champaign notes that the World Health Organization (WHO) found that an outside noise level of 40 dBA is equivalent to the lowest observed adverse effect level for night noise, and that the WHO has a recommended interim target level of 55 dBA for outside night noise. (Co. Ex. 11 at 7.)

Regarding LFN from turbines, Champaign indicates that modern wind turbines do not generate significant LFN or infrasonic noise. While Champaign witness Hessler acknowledges that he is currently studying LFN and infrasound noise in a pending Wisconsin proceeding; Champaign witness Mundt points out that there is no evidence to support the claim that noise from wind turbines, including infrasound noise, causes adverse health effects. (Co. Ex. 1 at 77; Co. Ex. 29 at 28.)

UNU opines that Champaign's proposed design goal of 44 dBA will cause widespread discomfort, annoyance, sleep deprivation, and health disorders. In support of its assertion, UNU relies on the testimony of Richard James, an acoustical engineer, indicating that Champaign's proposed noise limit is excessive, and Champaign's methodology in calculating its proposed noise limit is questionable and contrary to traditional acoustical engineering methodologies. Specifically, UNU witness James explains that the ambient background sound level must be measured to accurately reflect existing noise levels and should utilize the L90 metric as opposed to the Leq metric. UNU explains that the L90 metric is preferable because it measures the quietest 10 percent of a time interval, filtering out short-term noise spikes. (UNU Br. at 21-29, Tr. at 786-788.)

UNU explains that Champaign witness Hessler's background sound readings were inconsistent and varied substantially between the reading stations. UNU points out that the daytime sound range varies as much as 11 dBA and the nighttime ranges were up to 10 dBA apart. In addition, UNU alleges that all ten noise stations were exposed to significant noise sources, including harvesting machinery and roads, elevating the sound levels at the sites. UNU also questions why Champaign witness Hessler disregarded the results from one of the testing stations, noting that the average dBAs are essentially the same as the averages from other monitoring stations. While Champaign witness Hessler acknowledged some of the wind noise in the background noise measurements result from the sound of wind blowing through trees, UNU explains that the inclusion of leaf rustle in

background noise measurements violates typical acoustic practices. (UNU Br. at 21-24; UNU Ex. 19 at 17.)

In addition, UNU states that Champaign witness Hessler's L90 background sound level of 33 dBA is significantly higher than his 29 dBA critical wind speed calculation from *Buckeye I*, and noticeably higher than UNU witness James' measurement of 27 dBA. UNU witness James explains that conditions in the project area remain the same from the previous background measurements, therefore, Champaign witness Hessler's previous study results should still be valid. (UNU Br. at 24-25; UNU Ex. 19 at 13.)

UNU also argues that the L90 metric is superior to the Leq methodology that Champaign witness Hessler utilized in his study. UNU witness James explains that the acoustical engineering profession prefers the L90 statistical sound level, which measures the quietest 10 percent interval and identifies the sound level available to mask turbine noise. In addition, UNU witness James explains that the L90 measure removes sporadic noise spikes that could taint the Leq noise study, which instead focuses on the average sound level during a specific measurement period. UNU notes that Champaign witness Hessler's consulting firm and his testimony in other proceedings supports the preference for the use of the L90 metric. (UNU Br. at 26-28.)

UNU witness James elaborates that Champaign's proposed noise limits are flawed as they focus only on measurements representing windy conditions, as stable atmospheric conditions might result in light winds at ground level but sufficient wind conditions at the level of the turbine blades to power the wind turbine. When stable atmospheric conditions occur, UNU explains that there is no ground level wind noise to mask the noise emitted from the wind turbines. In addition, UNU questions whether the proposed project would not exceed the design goal of 44 dBA and points out that Champaign witness Hessler relied on computer modeling software that was not designed for wind turbines. UNU proposes that the sound levels estimated by Champaign be increased by 5 dBA to more accurately reflect actual noise levels, as supported by UNU witness James's testimony. (UNU Br. at 31-32, 34; UNU Ex. 19 at 15-18; Tr. at 786-787.)

UNU proposes that a design goal of 35 dBA is more appropriate for the proposed project. In support of its proposition, UNU witness James testifies that 10 percent of the population experience annoyance with turbine noise levels of 30 to 35 dBA and this increases to 20 percent when exposed to turbine noise of 37.5 to 40 dBA. In addition, he states that up to 36 percent of the population experiences annoyance at sound levels above 40 dBA. In further support of UNU's proposed 35 dBA design limit, UNU witness James points out that WHO recommends noise levels of 40 dBA or below, and the United States EPA suggests a standard of 30 dBA at night for rural regions. Further, UNU opines that Champaign's model does not accurately represent a worst-case noise mode, as the Gamesa

G97 model has no low noise operating mode, and produces much louder noise than the Nordex turbine model. (UNU Ex. 19 at 14, Tr. 2793-2794, 2946.)

In addition to its contentions with Champaign's noise models conducted by Champaign witness Hessler, UNU argues that Champaign failed to model or evaluate LFN that is anticipated from the proposed project and, thus, failed to comply with Rule 4906-17-08(A)(2)(b), O.A.C. UNU explains that the noise wind turbines produce is primarily LFN, which travels further and with less attenuation over distance that higher frequency noise. Not only is LFN quantification feasible, UNU explains, but UNU witness James and other acousticians have measured LFN both inside and outside of homes near wind turbines and recorded substantially high levels of LFN. UNU adds that turbine manufacturers have LFN test data that can easily be modeled in order to comply with Rule 4906-17-08(A)(2)(b), O.A.C. (UNU Br. at 35-38.)

UNU contends that, in addition to annoyance, turbine noise can lead to health disorders for neighbors living near the proposed project area. In support of its assertion, UNU relies on the testimony of audiologist Jerry Punch. UNU witness Punch explains that adverse health effects from noise begin between 30 and 40 dBA and worsen at 40 dBA, as observed by WHO, with children and the elderly being particularly vulnerable. According to UNU witness Punch, audible sounds from wind turbines can not only cause annoyance but may also create stress, loss of concentration, loss of sleep, and may lead to serious health consequences. (UNU Br. at 7-10; UNU Ex. 23 at 11-23.)

While UNU believes that the WHO's recommendation is important, UNU opines that it would not provide sufficient protection for neighbors near wind turbines, because turbine noise is more intrusive, as evidenced by Dr. Punch's interview and visit with families living near wind turbines. UNU witness Punch explains that one family suffered from pressure, pulsations, and tinnitus when nearby wind turbines were operating. (UNU Ex. 23 at 20.)

UNU contends that nonparticipating neighbors near the project footprint could be adequately protected from negative health consequences associated with turbine noise by preventing any wind turbines from being located within 0.87 miles (4,594 feet) of nonparticipating property owners. In support of its proposed 4,594 foot setback, UNU witness Punch relies on two wind project studies that found residents located within 0.87 miles of a wind turbine suffered more health consequences than those living at distances greater than two miles away. UNU witness Punch adds that the health scores directly correlate with noise exposure levels. (UNU Br. at 15-18; UNU Ex. 23 at 14-16.)

UNU also expresses concern that the proposed noise standards pertain to residences of nonparticipating landowners, as opposed to nonparticipating landowners' property lines. UNU reasons that the wind project should comply with appropriate noise

standards at the property lines, not just the residences. UNU notes that even Champaign witness Hessler concedes that Champaign's consideration of only residences in evaluating noise levels could discourage property owners from utilizing their entire property. (UNU Br. at 38-39; Tr. at 744-745.)

Champaign asserts that there is no epidemiological evidence that confirms that residential proximity near wind turbines can cause disease or serious harm to human health. In support of its argument that turbine noise will not cause health disorders, Champaign relies on the testimony of witness Kenneth Mundt, an epidemiologist. Champaign witness Mundt explains that, while some people may find turbine noise distracting or annoying, there is no scientific or epidemiological evidence to support UNU's claims that turbine noise harms human health. Champaign witness Mundt adds that it is inappropriate to conclude there are any causal health effects until there is affirmative and qualitative scientific evidence to support the premise. (Co. Ex. 29 at 17, 33-38.)

Champaign argues that, not only are there no causal relationships between turbine noise and health disorders, but the evidence presented by UNU witness Punch is not credible and should be disregarded by the Board. Champaign witness Mundt explains that UNU witness Punch relied on deposition transcripts from court proceedings to develop his treatise and failed to offer any citations or conduct an appropriate peer review in support of his opinions. Champaign adds that self-reported symptoms are not sufficient to support any causal connection and are unlikely to be objectively peer reviewed by medical professionals. In addition, Champaign points out that, while UNU witness Punch may be an expert in audiology, he is not a medical doctor and does not understand how infrasound can result in adverse health effects. (Co. Reply Br. at 3-4.)

Champaign urges the Board to disregard UNU's suggestion of a proposed setback of 0.87 miles, as it is unwarranted due to the lack of credible evidence supporting a causal relationship between turbine noise and health problems. Specifically, Champaign points out that UNU's reliance on a study conducted by Dr. Michael Nissenbaum falls short of epidemiological standards, as it relied on self-reported measures and utilized subjectively titled surveys to gather information. (Co. Ex. 29 at 30.)

Champaign notes that Champaign witness Hessler utilized the L90 metric in taking background measurements. Champaign explains that, while Champaign witness Hessler used Leq measurements as well, UNU's arguments are misguided because the relevant consideration is that the turbines are modeled for the project and the nighttime noise will not exceed 44 dBA. In addition, Champaign argues that UNU's proposed sound limitation of 35 dBA is unwarranted and unnecessary. Champaign points out that, while WHO's noise guidelines are merely recommendations, they are at odds with UNU's recommendation. Further, Champaign provides that Champaign witness Hessler did

address UNU's concerns about stable atmospheric conditions in the adjudicatory hearing, noting that, while these conditions frequently occur, there are very few complaints, as long as the long-term noise level remains below 45 dBA. (Co. Reply Br. at 12-14.)

Champaign responds to UNU's allegations of background noise interference by pointing out that Champaign witness Hessler spoke with the majority of property owners about their property activities and that there were no known harvesting activities occurring during the study. Champaign adds that UNU's allegations of interference by wind noise through leaves and grass is unfounded, as Champaign witness Hessler indicated that there was a correlation between wind speed and the L90 background levels, which increased as the wind speed increased. Champaign witness Hessler explains that, while there were some sound increases as a result of wind blowing through trees, it was inevitable, considering measurements were taken over a period of 18 days. Champaign points to UNU witness James' study in which he took background measurements in areas with trees and hedges. Finally, Champaign notes that property line noise limits are unnecessary, as the point of a noise regulation is to control the noise where people spend the majority of their time, particularly at night. (Co. Reply Br. at 10-12; Co. Ex. 1, Ex. O at 26; Tr. at 774-775, 1168-1169.)

Furthermore, Champaign believes its application adequately addresses LFN and is compliant with Rule 4906-17-08(A)(2)(b), O.A.C. Champaign points out that several sections in its application contain discussions of modeling on lower ends of the frequency spectrum, as well as information on low frequency levels from wind turbines, including a graph of field measurements indicating no significant LFN levels as a result of turbine operation. Champaign argues it is a stretch for UNU to use testimony of Champaign witness Hessler from a separate state proceeding where he stated he was uncertain whether homeowners were bothered by LFN noise as supportive evidence that LFN will be heard and lead to serious health consequences. Accordingly, Champaign believes LFN noise limits are unnecessary. (Co. Reply Br. at 18; Co. Ex. 1 at 77-78; Tr. at 865-866.)

UNU contends that, despite concluding there is no causal relationship between wind turbines and negative health consequences, Champaign witness Mundt is unqualified to formulate this opinion because he has no training in acoustics and has never actually interviewed anyone suffering from health disorders due to wind turbine noise. UNU adds that Champaign witness Mundt admitted that it is common for epidemiologists to have contrary opinions, and that it is impossible to perform a perfect epidemiological study. (UNU Br. at 17; UNU Reply Br. at 15; Tr. at 2863-2864, 2885-2886.)

Staff indicates that, upon review of Champaign's noise modeling, it is unlikely that the worst-case scenario operation sound levels will generate nighttime noise levels above 44 dBA for nonparticipating residences. In addition, Staff witness Strom explains that, of the two operating wind farms in Ohio, both of which have similar noise conditions

imposed, only two complaints have been received, one of which turned out to be noise coming from an outside source and not a wind turbine. Nonetheless, Staff recommends that, as a precaution, Champaign operate its turbines at no more than 44 dBA during nighttime hours, and no more than the greater of 44 DBA or the actual measured ambient Leq, plus 5 dBA, at the location receptor during daytime hours. In addition, Staff recommends Champaign establish a complaint resolution process for any complaints that may arise due to excessive noise. Staff also explains that, while short-term deviations are likely, because they are impossible to determine, it is especially important to have a complaint resolution process included in the certificate. (Staff Report at 59; Tr. at 2798-99.)

Staff believes Champaign witness Hessler's noise assessment was reasonable. Staff acknowledges that both UNU witness James and Champaign witness Hessler utilized different methodologies in establishing their noise models. However, Staff notes that there is no uniform standard that exists in this field of study and, therefore, the Board should continue to review the studies on a case-by-case basis. Staff adds that the focus should remain on the fact that the likelihood of noise complaints is minimal, as long as the average sound level remains below 45 dBA, regardless of whether the Leq or L90 model is adopted. Staff witness Strom explains that, of the two fully-developed wind farms in Ohio with similar noise restrictions, only two complaints have been raised with Staff, one of which was entirely unrelated to wind turbine noise. Staff explains that this supports the assertion that sound levels below 45 dBA will result in minimal complaints. (Staff Br. at 19-25; Tr. at 2798-2799.)

Furthermore, Staff explains the noise mitigation condition recommended in the Staff Report will provide even more restrictive noise limitations during the nighttime hours in order to ensure noise levels are properly mitigated for nonparticipating property owners. Therefore, Staff recommends the Board find that Champaign's noise assessment, coupled with Staff's proposed noise condition, are reasonable. (Staff Report at 59; Staff Br. at 42-43.)

UNU questions the validity of Staff's recommendations, noting Staff witness Strom has no training in acoustical engineering, and he was unaware that UNU witness Milo Schaffner, who lives in the Blue Creek Wind Farm footprint, is experiencing discomfort from the wind turbine noise. Regarding Staff's noise recommendation, UNU opines that both Champaign witness Hessler and UNU witness James testified that the Board should not use the Leq method to set the nighttime noise standard. UNU adds that the condition allows for short-term duration above the noise level and lacks noise protection for nonparticipating landowners' entire premises. UNU points out that the condition again wrongly relies on the Leq standard for daytime noise limitations, fails to employ an LFN standard, and does not include the averaging period for calculating the Leq limits of the turbine noise. (UNU Reply Br. at 17-19.)

Champaign believes that, by establishing a set dBA limit during nighttime hours, Staff fails to take into account potential increases in ambient noise that may occur during periods of high winds. Champaign points out that Staff witness Strom agreed that turbine noise may not be detectible if there is high ambient wind. (Co. Br. at 56-57; Co. Ex. 11 at 8-9; Tr. at 2824-2825.)

The Board finds that, upon review of the record, it is apparent that no party disputes that operational noise is anticipated with the proposed project. There is dispute, however, as to whether the anticipated noise levels as modeled by Champaign are accurate and appropriate, and, if appropriate, whether any adverse effects contrary to the public interest are likely to occur as a result of the facility's operational noise. The Board must first determine if Champaign's background noise evaluation is reliable. If Champaign's studies are deemed to be reliable, we must next consider whether Champaign's design goal of 44 dBA is aligned with the public interest and consider whether there is evidence to support a lower threshold or greater setback requirements than what is proposed.

In beginning our analysis, we first look to the preconstruction background noise study conducted by Champaign. UNU alleges that Champaign's noise study contains serious flaws leading to biased modeling figures, however, we believe the record affirms that Champaign's preconstruction background noise study is reliable. While UNU may be correct in that the project footprint covers an area where farming machinery and grain dryers could potentially influence background noise levels, Champaign witness Hessler explains that he was not aware of any such activity occurring during the time of his study. In addition, the photographs contained within Champaign's application support Champaign witness Hessler's assertion that harvesting was mostly complete at the time of his study and there were no outlying readings to indicate potential influence of farm machinery. Further, to the extent some of Champaign's stations may have been located near trees or grasses, we note that it is inevitable that some stations may occasionally include outdoor noise from surrounding vegetation. It is disingenuous for UNU to point this out as a flaw when both Champaign witness Hessler and UNU witness James indicated at hearing that there was some degree of noise being observed as a result of nearby vegetation and wildlife. Accordingly, we see no undue influence or bias in Champaign's preconstruction background noise study. (Co. Ex. 1, Ex. O at 9-10; Tr. at 769-770, 775, 1168-1169.)

Turning to Champaign's noise modeling, UNU and Champaign dispute whether Champaign's use of the Leq metric was inappropriate in establishing background noise figures. Although the evidence in the record indicates that the L90 noise metric is a higher threshold by measuring the quietest 10 percent of a time interval, there is no credible evidence that the use of the Leq to establish the background sound level is in anyway unreasonable or inappropriate. Rather, the evidence presented focuses on the fact that

because the L90 metric is a higher noise threshold it should be adopted. However, we believe that the reliability of the Leq is still appropriate, as it represents an average background sound level over a ten minute picture and, while we note that Champaign witness Hessler concedes that he normally utilizes the L90 standard, the evidence presented in this case supports our finding that the Leq is a reasonable standard. We appreciate UNU's effort to promote the higher L90 methodology, but, ultimately, the record is devoid of any evidence that supports a finding that the Leq is unreasonable or that it is necessary for the Board to depart in our conclusion in this case from recent Board precedent. We point out that the governing statute is devoid of any mandate that applicants have to utilize a metric higher than the Leq, and we find that the Leq metric is reasonable and protects the public interest. (UNU Ex. 19 at 12-16; Tr. at 794, 795-797.)

Next, the Board will determine the appropriate design goal for the proposed project. Initially, we note that UNU, Staff, and Champaign all agree that the appropriate starting point is to utilize a threshold of 5 dBA over the average ambient nighttime noise level. Champaign and UNU propose ambient noise levels of 39 plus 5 dBA and 30 plus 5 dBA, respectively. Therefore, taking into consideration a 5 dBA threshold, UNU proposes a goal of 35 dBA, while Champaign's application proposes a goal of 44 dBA. Much of UNU's rationale in support of the 35 dBA limit relies on its arguments that turbine noise above 35 dBA causes unacceptable levels of annoyance and sleep disturbance, which, in turn, causes negative health consequences. Despite UNU's attempts to persuade the Board through the use of emotional rhetoric and the parade of negative scenarios that could occur upon approval of the proposed project, we find that UNU's evidence in support of alleged health consequences lacks credibility. (Staff Report at 32-33; UNU Ex. 19 at 10; Co. Ex. 11 at 4-5.)

As Champaign witness Mundt points out, UNU's reliance on UNU witness Punch's treatise is misguided, as the article not only failed to undergo proper peer review or scientific analysis, but also relied exclusively on self-reported complaints or symptoms of health effects, which casts doubt over the treatise's findings. Likewise, UNU's reliance on Dr. Michael Nissenbaum's study in requesting a 4,594 foot setback from property boundaries relies on self-reported health effects, and failed to meet epidemiological standards to prove an actual causal connection between turbine noise and health effects. The Board cannot in good conscience find that health disorders are caused by wind turbine noise based on UNU's reliance on studies that were not properly peer reviewed and were formed on the basis of self-reporting. Accordingly, the Board finds that UNU's requests for a minimum turbine setback of 4,594 feet and the imposition of noise limits at property lines be denied, as there is no record support for UNU's claims of adverse health effects. As discussed below, we believe the inclusion of Staff's recommended condition for a noise complaint resolution process provides continued protection of the public interest by providing a procedure that will ensure nonparticipating property owners' use and enjoyment of their property will not be compromised by the operation of the proposed

facility. The Board emphasizes that the worst-case scenario noise limits will be strictly enforced and nonparticipating landowners will have a remedial process in the event noise levels exceed what is approved herein. (Co. Reply Br. at 4; Co. Ex. 29 at 30.)

Turning back to UNU's request for a design goal of 35 dBA, UNU argues that, in the absence of a reasonable noise limit, the proposed project will cause extreme annoyance to neighboring landowners in the proposed project's footprint. We understand UNU's assertion that any new project may possibly cause incidents of annoyance, but we find UNU's proposed limit of 35 dBA to be too extreme. As both UNU and Champaign acknowledge, WHO determined that a nighttime sound level of 40 dBA is the threshold at which sound goes from being relatively unnoticed to intrusive and annoying. Therefore, based on the record, we find UNU's proposed design goal of 35 dBA is unreasonably restrictive. The only other figure recommended in the record is the 44 dBA, which Champaign proposes and Staff recommends. Based on the determination of the average ambient nighttime noise level of 39 dBA, and upon the addition of 5 dBA to the nighttime average, we believe a design goal of 44 dBA is a reasonable and appropriate level that is supported by the record in this case. The basis of this figure is consistent with both UNU and Champaign's agreement that a threshold of 5 dBA over the nighttime average is appropriate, and is consistent with public policy, as approximately 98 percent of the population would take no issue of a project sound level between 40 and 45 dBA. We realize that this figure also means that the rate of complaints at sound levels of 40 to 45 dBA is 2 percent. However, we believe that Staff's recommended condition, which calls for Champaign to establish a complaint resolution process, will protect the public interest by ensuring that nonparticipating residents will have an avenue by which their concerns about unacceptable levels of noise for the proposed project can be resolved. (UNU Ex. 19 at 10; Co. Ex. 11 at 7; Tr. at 738.)

We find that Staff's proposed complaint resolution process adequately addresses UNU's concerns by protecting the population in the footprint in the event there are short-term deviations above the 44 dBA nighttime design goal and the overall 50 dBA design. Furthermore, Staff's recommended condition also addresses UNU's concerns that Champaign's model does not represent a worst-case scenario noise mode, as this condition mandates that Champaign cannot operate any turbine, regardless of which of the five is ultimately selected, at levels exceeding 44 dBA at night. However, we agree with UNU that Staff's condition should include an Leq averaging system to define what a short-term deviation is and, accordingly, we believe the condition should be amended to protect any nonparticipating residents from an average Leq of 44 dBA over a 60-minute time period.

Regarding UNU's allegations that Champaign's application fails to adequately address LFN, we first turn to the rule before us. Rule 4906-17-08(A)(2)(b), O.A.C., provides that the applicant shall evaluate and describe the cumulative operation noise levels for the wind facility when modeling the operational noise levels and, among other

things, should consider LFN levels. Upon our review of the application, we believe Champaign adequately considers and addresses LFN. In its application, Champaign's model input sound power level considers LFN emissions from the noisiest turbine model (Nordex 100) and calculates frequency dependent propagation losses, including ground and air absorption. Not only does Champaign include LFN in its modeling, but it addresses the argument that turbines produce high levels of LFN by explaining that wind-induced microphone error can cause false-signal indicators of LFN, even when a wind turbine is not present in noise calculations. Accordingly, as Champaign's modeling adequately addresses the presence of LFN for the proposed project, we find an LFN limit is unnecessary. Even if the record contained credible evidence indicating the presence of LFN being emitted from wind turbines, the record confirms that there are no proven links between turbine noise and adverse health effects. (Co. Ex. 1, Ex. O at 30-33, 39-41.)

h. Construction Noise

Champaign indicates that construction activities associated with the proposed project will be temporary in nature and, at most, sound levels ranging from 56 to 63 dBA could occur over several weeks at homes nearest to the turbine sites. Champaign notes that the application includes a proposal to mitigate noise by utilizing mufflers and limiting construction hours to normal working hours. (Co. Ex. 1 at 70-72, 79.)

Staff notes that any adverse impacts of construction noise will be minimal as the construction activities are temporary and intermittent in nature, and occur away from most residential structures. Staff recommends that, in order to ensure impacts are limited to daytime hours, construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. On brief, Staff recommends the addition of a provision that would allow night construction, as long as it does not increase noise levels at sensitive receptors. (Staff Report at 32, 57; Staff Br. at 40.)

Champaign requests a modification to Staff's recommended condition to permit construction that is safer during lower wind time frames that often occur in the evening hours past 7:00 p.m. In support of its request, Champaign explains that the Board previously approved a similar condition in *In the Matter of the Application of Black Fork Wind Energy, LLC*, Case No. 10-2865-EL-BGN, Opinion and Order (January 23, 2012) (*Black Fork*). (Co Ex. 5 at 24; Tr. at 391-393.)

UNU believes that Staff's proposal to allow night construction if it does not increase noise levels to be a reasonable compromise and recommends the Board adopt the condition (UNU Reply Br. at 19).

The Board concludes that, based on the record, Champaign has appropriately considered potential construction noise impacts associated with construction of the

proposed project. While Champaign proposes to amend Staff's condition to allow for nighttime construction of certain aspects of the proposed project, we agree with UNU that Staff's proposal is an appropriate compromise. Staff's proposal not only allows for construction, as long as it does not increase noise levels, but it protects neighboring property owners from any nighttime noise disturbances. Accordingly, the Board finds that the issue of construction noise, with the inclusion of Staff's recommended Condition (35), as amended on brief, is not contrary to the public interest.

i. Conclusion

Based on our review of the record, the statutory requirements set forth in Chapter 4906, Revised Code, and the arguments raised by the parties in regard to setbacks in general, as well as setbacks in relation to blade shear, ice throw, fire, aesthetics, shadow flicker, property values, and noise, the Board concludes, for the reasons more specifically set forth above, that the setbacks for the proposed facility set forth in the application, as modified herein, are appropriate and support a finding that the proposed project is in the public interest, convenience, and necessity.

3. Communications Systems Interference

In its application, Champaign states that it hired a contractor, Comsearch, to conduct analyses of off-air television reception, AM/FM broadcast station operations, licensed microwave paths, and mobile phone carrier services in the vicinity of the project area. (Co. Ex. 1 at 153.)

Off-air television stations transmit broadcast signals from terrestrially located facilities that can be received directly by a television receiver or house-mounted antenna. According to the application, the results of the off-air television analysis indicated that there are 127 off-air television stations within 150 kilometers of the project area. However, stations most likely to produce off-air coverage to Champaign County are those located at a distance of 40.4 miles or less. Within this area, there are 24 licensed and operating stations. Thirteen of these stations include low-power digital stations or translators, which typically have limited range and limited programming. The application states that the turbines are located beyond the coverage area of all 13 low-power stations and translators; thus, where will be no impact to these stations. (Co. Ex. 1 at 153-154.)

Champaign also notes that it can be expected that the 11 full-power stations may suffer some degradation of off-air television signal reception once the proposed facility is constructed, as a result of television signal attenuation or reflection caused by one or more of the turbines. The application notes that this affect is due to the relative location of the off-air television antenna, turbines, and the point of reception. The application further notes that, based on the low number of channels available and, because the closest full

power station is 29 miles away, it is unlikely that off-air television stations are the primary mode of television service for the local communities. Nevertheless, Champaign asserts that, if the proposed facility results in impacts to existing off-air television coverage, Applicant will address and resolve each problem individually by offering cable television hookups or direct broadcast reception systems. (Co. Ex. 1 at 154.)

Regarding the AM/FM analysis, Comsearch identifies one AM station within 18.6 miles of the project, and notes that problems with AM broadcast coverage can occur when stations with directive antennas are located within 2 miles of turbines or when stations with nondirective antennas are located within 0.5 mile. Consequently, Champaign notes that, as the closest AM station is 18.6 miles from the project, no degradation of AM broadcast coverage is anticipated. Comsearch also determined that two FM stations are located within 18.6 miles of the project, and notes that a separation distance of 2.5 miles is recommended for FM stations. Champaign asserts that one FM station is located 2.47 miles from the nearest proposed turbine site, which may cause a slight reduction in the range obstructed by the turbine; however, the area impacted consists of approximately 14.8 acres of active farm fields, so there will be no loss of coverage at any structure or roadway. (Co. Ex. 1 at 154-155.)

Microwave telecommunications systems are wireless point-to-point links that communicate between two antennas and require clear line-of-sight conditions between each antenna. The application provides that Comsearch found 14 microwave paths in the vicinity of the proposed facility. Champaign states that, to assure an uninterrupted line of communications, a microwave link should be clear, not only along the axis between the center point of each antenna, but also within a mathematical distance around the center axis known as the Fresnel Zone. The application indicates that Comsearch calculated a worst-case Fresnel Zone for each of the microwave paths identified and determined that none of the turbines conflict with microwave paths and no degradation of microwave telecommunications is anticipated. (Co. Ex. 1 at 155.)

Comsearch investigated the potential impact of wind turbines on mobile phone operations in and around the proposed project. Comsearch found 18 mobile phone services across three frequency bands and noted that phone signals are typically not affected by physical structures because the widths of the signal are very wide and wrap around objects. Further, Comsearch found that the mobile phone network consists of multiple base stations designed to shift adjacent base stations to make a connection. Comsearch concludes that the presence of turbines would not require a special setback for signal obstruction consideration and that electromagnetic interference will not affect mobile telephone service in the vicinity of the proposed facility. (Co. Ex. 1 at 155-156, Ex. T.)

The Staff Report indicates that wind turbines can potentially interfere with civilian and military radar in some scenarios. Staff notes that a notification letter was sent to National Telecommunication and Information Administration (NTIA) on October 11, 2012, and that NTIA provided plans for the proposed facility to the federal agencies represented in the Interdepartment Radio Advisory Committee, which did not identify any concerns regarding blockage of communications systems. Therefore, Staff asserts that no impacts to radar systems are expected, but asserts that Applicant should be required to mitigate any such impacts if they are observed during operation of the facility, as outlined in the recommended conditions in the Staff Report. (Staff Report at 36; Co. Ex. 1 at 156.)

Urbana asserts that, in addition to television, radio, microwave paths, and mobile phone operations, Champaign should also have included public safety communications in its report. Urbana asserts that it will be implementing a Multi-Agency Radio Communications System for voice communications in the near future, citing the testimony of Urbana witness Mindy North, and contends that, although Comsearch reported that the turbines will not affect mobile telephone service, any additional interference could delay an emergency response. Additionally, Urbana asserts that technological innovations could pose new problems to public safety and contends that, consequently, the Board should require a condition that Champaign perform an updated analysis of communications impacts every two years and mitigate any impacts. In its brief, the County/Townships join this argument, stating that the Board should require a condition to prevent interference to the countywide 9-1-1 system due to concerns about potential interference with wireless phone signals. (Urbana Br. at 9-11; Urbana Reply Br., Appendix A at 5; County/Townships Br. at 16; City Ex. 11 at 2; Tr. at 1296, 1884.)

Champaign replies to the arguments made by Urbana and the County/Townships by noting that Staff's recommended conditions to the certificate require Champaign to complete a study and mitigate any interference it might discover. Champaign asserts that these conditions are appropriate given that little to no interference was discovered as set forth in the application, and that a reevaluation every two years of the area would be burdensome and unnecessary. (Co. Reply Br. at 47; Staff Report at 35-36.)

The Board notes that Staff's recommended Condition (50) requires Applicant to mitigate all observed impacts to microwave paths and systems identified in the communications studies. The Board also notes that Urbana witness North testified on cross-examination that she had not reviewed the Staff Report prior to being on the stand and was not aware that Staff and Applicant had concluded the turbines were not expected to affect mobile telephone service. Considering Staff's recommended condition and that the communications study included with the application indicated that phone signals are typically not affected by physical structures; that mobile phone networks can shift adjacent base stations to make a connection; and that electromagnetic interference will not affect mobile telephone service near the proposed facility, the Board finds that Urbana's and the

County/Townships' requested modification is unnecessary. (Staff Report at 36; Co. Ex. 1 at 153-156, Ex. T; Tr. at 2184, 2192.)

4. Traffic and Transportation

According to the application, state and local roads in the vicinity of the proposed project will experience increased traffic during construction due to delivery of materials and equipment. As part of the application, Champaign caused a Route Evaluation Study to be performed. The study concludes that, while sufficient infrastructure exists via primary and secondary roads to transport the turbine components, a number of intersection and sharp curve radii improvements will be required. Additionally, the study concludes that a transportation provider experienced with oversized loads will be engaged in the final route study, which will be performed in conjunction with special hauling permit processes for ODOT. (Co. Ex. 1, Ex. E at 1-2, 15.)

5. Landowner Leases

The Staff Report indicates that the construction of the facility involves lease of private land from approximately 100 landowners, collectively comprising approximately 13,500 acres. Additionally, Staff notes that the standardized lease for this project includes a 25-year term with an option to extend for two additional 10-year terms. Staff further indicates that the lease payments will be provided to local landowners participating in the project and that Applicant expects such payments to enhance the ability of those in the agricultural industry to continue farming. Finally, a consultant engaged by Applicant has estimated total lease payments to be $975,000 per year. (Staff Report at 47; Co. Ex. 1 at 4, 141, Ex. G at 14.)

6. Roads and Bridges

Champaign engaged Hull & Associates to conduct the preliminary Route Evaluation Study. Champaign indicates that Interstate 70 and U.S. Route 33 will be the primary roads used to access the project area. In addition, the roads used to transport materials and equipment will be documented by video prior to construction commencement and returned to preconstruction condition after completion of construction. (Co. Ex. 1 at 78, 156-159.)

The Staff Report notes that the delivery of materials and equipment will impact local roads and that township and county roads could be damaged by construction and material delivery equipment. Further, Staff indicates that some modifications to local roads would be needed, including expansion of intersections, subsurface drilling and test borings, temporary turnouts, and gravel access roads. Staff notes further that, once deliveries are completed, temporary roads and gravel roads would be removed and disturbed areas would be restored to previous conditions, unless requested otherwise by

the property owner or county engineer. Staff recommends that conditions be included that require Applicant to make all necessary improvements to roads used for the project, repair all damage to roads, and enter into a road use agreement with the county engineer. (Staff Report at 29.)

The County/Townships acknowledge Staff's proposed road use agreement, but contend that testimony from County/Township witness Wendel, County Engineer for Van Wert County, Ohio, demonstrates that negotiations for a road use agreement can be lengthy and a "headache" for the parties to the agreement, as that was the witness's experience in Van Wert County. Further, the County/Townships contend that the boards of township trustees are responsible for township roads and they should be included in negotiations of road use agreements. Consequently, the County/Townships contend that the Board should establish a condition mandating Applicant to "meet the requirements" of the relevant township, the county engineer, and the director of ODOT regarding the use of roads and bridges, and to execute such agreement in writing. The County/Townships did not submit complete wording for its proposed condition nor did they define the phrase "meet the requirements." (County/Townships Br. at 8-11; County Townships Reply Br. at 6-7; Tr. at 2319, 2335-2339.)

Urbana acknowledges that the preliminary route plan in the application shows that turbine components will not be transported through Urbana, but contends that Staff's proposed conditions regarding roads and bridges should be modified to include the Urbana city engineer, claiming that it is likely subcontractors will haul construction materials for the project through Urbana (Urbana Br. at 6-7; Urbana Reply Br., Appendix A at 2).

Champaign responds to the arguments of the County/Townships by contending that the terminology used by the County/Township seems to be intended to automatically hold Applicant to the requirements of the parties without any ability to negotiate the terms of the agreement. Champaign submits that Staff's proposed conditions are appropriate to address any repair concerns. Further, Champaign points out that Staff's conditions require Applicant to enter into a road use agreement with the "County Engineer(s) or other appropriate public authority[,]" which could include the relevant township. Additionally, Champaign argues that Urbana's recommendation that these conditions include the Urbana city engineer is unnecessary because the preliminary route study in the application shows that turbine components will not be transported through Urbana. Further, Champaign points out that, although Urbana has raised concerns as to subcontractors, those subcontractors would be subject to Urbana's existing road restrictions and the city has acknowledged that it can enter into road use maintenance agreements with any subcontractors hired. (Co. Reply Br. at 46-47.)

The Board finds that Staff's proposed conditions requiring Applicant to repair damage to government-maintained roads and bridges caused by construction activity and to enter into a road use agreement with the county engineer(s) or other appropriate public authority is reasonable and appropriate. The Board is mindful of the County/Townships' argument that negotiating a road use agreement could be lengthy or bothersome for parties; however, the Board is unclear how requiring Applicant to "meet the requirements" of various entities would alleviate these concerns and cultivate fair negotiations. Additionally, the testimony of the County/Townships' witness Shokouhi, the Champaign County Engineer, reflected that he had not actually read Staff's proposed conditions regarding the road use agreement prior to filing his testimony. Further, the Board notes that Urbana could enter into road use maintenance agreements with any subcontractors hired by Applicant. Upon consideration of all of the evidence of record, the Board finds that Staff's proposed condition is the best practical option available to ensure that the project serves the public interest, convenience, and necessity. (Co. Ex. 1 at 78, 156-159; Staff Report at 29; Tr. at 1858-1859.)

7. Decommissioning

In its application, Champaign notes that commercial grade wind turbines have a typical life expectancy of 20 to 25 years and the current trend in the wind industry is to replace older wind energy projects by upgrading old equipment with more efficient turbines. Where the turbines are nonoperational for an extended period of time, however, Champaign explains that they will be decommissioned. Champaign contends that decommissioning includes two components: removal of facility improvements and financial assurance. According to Champaign, removal of the facility improvements involves the dismantling and removal of the facilities and other above-ground property owned or installed by Champaign. Below-ground property, such as foundations and buried lines, will be removed to a minimum depth of 36 inches. This portion of the decommissioning process also includes regrading disturbed areas and restoration of slopes and contours to their original grade. Champaign goes on to discuss financial assurance and explains that Champaign will post and maintain financial assurance in the amount of $5,000 per turbine prior to construction of each turbine until the facility has been operational for one year. Thereafter, an independent and registered engineer will estimate the total cost of decommissioning and the net decommissioning costs (less the salvage value of the equipment). Champaign asserts that this per-turbine estimate will be submitted for Staff review and approval after one year of operation and every third year thereafter. After Staff approval, Champaign will post and maintain financial assurance in an amount equal to the net decommissioning costs. (Co. Ex. 1 at 159-160.)

Staff states that it is only appropriate to offset the total decommissioning costs with the salvage value when no other person or entity holds a lien against the property. Further, Staff asserts that it is unclear whether the $5,000 proposed by Applicant would be

sufficient financial assurance for the first year of the project. Consequently, Staff recommends several conditions to ensure availability of sufficient funds for decommissioning, including Applicant's: provision of a final decommissioning plan to Staff and the county engineer(s) at least 30 days prior to the preconstruction conference; filing of a revised decommissioning plan with Staff and the county engineer(s) every five years from the commencement of construction; complete decommissioning of the facility or individual wind turbines within 12 months after the end of the useful life; and removal of turbines off site, removal of associated facilities, and removal of physical material, and repair of damaged field tile systems. Further, Staff recommends a condition requiring Applicant to retain an independent, registered professional engineer to estimate the total cost of decommissioning in current dollars, without regard to salvage value of equipment, converted to a per-turbine basis and conducted every five years. Staff further recommends that Applicant post and maintain for decommissioning an amount equal to the per-turbine decommissioning cost multiplied by the sum of the number of turbines constructed and under construction. (Staff Br. at 45-46; Staff Report at 36, 60-62.)

In its brief, Champaign asserts its position that no decommissioning funds are necessary in the beginning of turbine operation, citing the testimony of Champaign witness Speerschneider that the possibility a newly built project would be decommissioned is practically zero, because newly installed technology is still useful and highly valuable. Consequently, Champaign argues that Staff should revise its proposed condition regarding financial assurance. (Co. Br. at 29-30; Tr. at 128, 133-134.)

The County/Townships support Staff's proposed conditions regarding decommissioning; however, they believe that the financial assurance posted should be equal to the aggregate cost of decommissioning every planned turbine, not solely the cost of decommissioning for each turbine actually constructed or under construction. Further, the County/Townships advocate that Applicant be required to file a revised decommissioning plan with Staff and the county engineer(s) every three years instead of every five years, citing the testimony of County/Townships witness Knauth. (County/Townships Br. at 11-13; County/Townships Reply Br. at 7-8; Tr. at 1377, 1384, 1386-1387, 1390.)

In its reply brief, Champaign responds to the County/Townships' arguments, contending that the County/Townships have failed to support their request that the decommissioning plan be revised every three years and that this request is economically unnecessary. Further, Champaign contends that the County/Townships' and Staff's recommendations that the financial assurance posted should be equal to the total decommissioning costs rather than on a per-turbine basis would require Champaign to post money for turbines that may not yet be in existence. (Co. Reply Br. at 48.)

In its reply brief, Staff points out that its proposed condition matches financial assurances to the actual turbines that must be decommissioned, both constructed or under construction, which differs from the County/Townships' argument that Champaign should post financial assurance for sums to decommission all turbines planned regardless of the number constructed or under construction. Staff asserts that the County/Townships' approach requires excessive assurances and costs, as it would require financial assurance for turbines that may never be built. Further, Staff submits that the County/Townships' request that a revised decommissioning plan be filed every three years, instead of five, is too short of a period, and that a five-year period is consistent with the Board's most recent decision in *Black Fork*, Opinion and Order (January 23, 2012) at 24-25, 47-49. (Staff Reply Br. at 3; Staff Report at 60, 62.)

The Board stresses that decommissioning and the accompanying financial assurance is an important issue in this case. Having reviewed the proposals set forth by Staff, Champaign, and the County/Townships, the Board finds that Staff's recommended condition regarding decommissioning should be adopted without the changes recommended by Champaign or the County/Townships. Regarding Champaign's arguments, the Board agrees with Staff that it is unclear whether the $5,000 proposed by Applicant would be sufficient financial assurance in the first year of the project and that it would be inappropriate to consider salvage value where another person or entity might hold a lien against the property. Further, regarding the County/Townships' argument, the Board agrees with Staff that the County/Townships' proposed condition would require Champaign to post financial assurance without consideration of the number of turbines actually constructed or under construction, and would require a revised decommissioning plan every three years, which is too short to be practicable and does not align with the Board's most recent decisions regarding decommissioning. The Board finds that, with Staff's proposed Condition (52) regarding decommissioning and financial assurance, the public interest will be protected. (Staff Report at 36, 60-62.)

8. Conclusion - Public Interest, Convenience, and Necessity

The Board emphasizes that, in considering whether the proposed project is in the public interest, convenience, and necessity, we have taken into account that the renewable energy generation by the proposed facility will benefit the environment and consumers. Additionally, the Board notes that the proposed project will assist Ohio's electric utilities in meeting their renewable energy benchmarks required under statute. Further, in light of the Board's review of the record, the Board finds that this project has been designed to have minimal aesthetic impact on the local community. Further, the Board finds that, with respect to health and safety concerns, such as setbacks (including blade shear, ice throw, shadow flicker, and noise), these concerns have been thoroughly considered and appropriately addressed in the conditions contained in the Conclusions and Conditions section of this Opinion, Order, and Certificate. Based upon our conclusions set forth

herein, the Board finds the nature of the probable environmental impact has been determined for the proposed project, consistent with Section 4906.10(A)(2), Revised Code, and we find the application complies with all terms and conditions set forth within the statute. In addition, we believe the facility, as modified by the Board and subject to Staff's proposed conditions adopted herein, represents the minimum adverse environmental impact consistent with Section 4906.10(A)(3), Revised Code.

Further, in light of the Board's review of the record, the Board finds that, with respect to communications, traffic, and transportation, the proposed project has been designed to avoid any alteration of the resources available to the community. Further, with respect to traffic, road and bridge repair, and decommissioning, the Board finds that potential impacts have been ascertained, and the conditions contained in the Conclusions and Conditions section of this Opinion, Order, and Certificate require the appropriate financial assurances to ensure the community is not harmed by those aspects of the proposed project. Based on our consideration of all of these issues discussed in the above section, the Board finds that the proposed project serves the public interest, convenience, and necessity, in accordance with Section 4906.10(A)(6), Revised Code, provided Applicant adheres to the conditions set forth in the Conclusions and Conditions section of this Opinion, Order, and Certificate.

G. Agricultural Districts - Section 4906.10(A)(7), Revised Code

Staff explains that, pursuant to Section 4906.10(A)(7), Revised Code, the Board must determine the facility's impact on the agricultural viability of any land in an existing agricultural district within the project area of the proposed facility. Staff further explains that agricultural district land can be classified such through an application and approval process administered through local county auditors' offices. Staff notes that, within the area of the proposed project, a total of 15.46 acres of permanent impacts would occur to agricultural district land, but that these impacts would not affect the agricultural district designation of any of the properties within the project area. (Staff Report at 49.)

Staff further notes that construction-related activities such as vehicle traffic and materials storage could lead to temporary reductions in farm productivity caused by crop damage, soil compaction, broken drainage tiles, and reduction of planting space. However, Staff reports that Champaign has discussed and approved the siting of facility components with landowners in order to minimize these impacts and also intends to take steps to reduce impacts to farmland including: repairing any drainage tiles damaged during construction, removing construction debris, compensating farmers for lost crops, and restoring temporarily impacted land to its original use. Additionally, Staff notes that, after construction, only the agricultural land associated with turbines and access roads would be removed from farm production. Staff concludes that the impact of the proposed facility on the viability of existing agricultural land in an agricultural district has been

determined and, therefore, complies with the requirements specified in Section 4906.10(A)(7), Revised Code, provided that any certificate issued by the Board for the proposed facility includes the conditions specified in the Staff Report. (Staff Report at 49.)

Initially, the Board notes that no intervenor raised any concerns regarding Section 4906.10(A)(7), Revised Code. The Board concludes that, in accordance with this section, the impact of the proposed facility on the viability of existing farmland and agricultural districts has been determined and the impact will be minimal. Therefore, the Board finds that the proposed project complies with Section 4906.10(A)(7), Revised Code, provided Applicant adheres to the conditions set forth in the Conclusions and Conditions section of this Opinion, Order, and Certificate.

H. Water Conservation Practice - Section 4906.10(A)(8), Revised Code

In its report, Staff notes that, pursuant to Section 4906.10(A)(8), Revised Code, a proposed facility must incorporate maximum feasible water conservation practices, considering available technology and the nature and economics of the various alternatives. Staff indicates, however, that wind-powered electric generating facilities do not utilize water in the process of electricity production; therefore, water consumption associated with the proposed project does not warrant specific conservation efforts. Staff further notes that a potable water supply would be provided to the operations and maintenance building for project and personal needs of employees, but that the amount of water would be minimal. Consequently, Staff recommends that the Board find that the requirements of Section 4906.10(A)(8), Revised Code, are not applicable to this project. (Staff Report at 50.)

The Board, initially, notes that no intervenor raised concerns with this criterion. Accordingly, upon consideration of Staff's recommendation, the Board concludes that Section 4906.10(A)(8), Revised Code, does not apply to the proposed project.

I. Other Issues

1. Emergency Services

Urbana raises concerns pertaining to the ability of local emergency services to respond to emergency incidents at the site of the proposed project and asserts that a condition should be included requiring each turbine to display a 24-hour toll-free telephone number to report emergencies. Further, Urbana contends that a condition should be included that requires each fire department to be provided with a copy of the manufacturer's turbine safety manual. Finally, Urbana asserts that its local fire and rescue first responders will need to be able to respond to emergencies that may occur at turbines. Consequently, Urbana contends that Champaign should provide annual training and equipment to first responders at its own expense, as well as overtime compensation for

first responders for time spent in training. (Urbana Br. at 5, 7-8; Urbana Reply Br. at 3-4; Tr. at 2218, 2224.)

Champaign responds that it should not be required to display a telephone number on each turbine for emergencies because the area surrounding each turbine will be restricted, making an emergency number superfluous. Further, Champaign contends that it should not be required to provide turbine safety manuals to local first responders because such manuals could be confidential and Champaign might not be allowed to distribute them to first responders. Champaign also points out that it will be required to house a copy of the most current safety manual in the facility's operations and maintenance (O&M) building, which it argues renders the city's request unnecessary. Finally, Champaign points out, as reflected in the record, Champaign holds annual training for first responders and will provide training for first responders in Champaign County. In addition, Champaign notes that Staff's conditions require Applicant to submit a fire protection and medical emergency plan to be developed in consultation with first responders. Champaign asserts that, rather than mandate the purchase of equipment, the better practice is to allow Champaign and the first responders to develop a plan to determine what equipment, if any, is necessary and appropriate. (Co. Reply Br. at 48-49; Tr. at 42-43.)

The Board finds that the conditions proposed by Urbana regarding toll-free telephone numbers and provision of turbine safety manuals are reasonable and serve the interest of public safety. Consequently, the Board has incorporated the requirements into Conditions (70) and (71). Regarding the confidentiality of turbine safety manuals, the Board notes that the public version of the application in the record contains safety manuals for GE, Nordex, and REpower. Should a more recent safety manual for the manufacturer of the turbine selected, or the Gamesa safety manual, if the Gamesa turbine model is selected, contain confidential information, Applicant should enter into an appropriate protective agreement with first responders. Regarding Urbana's proposal that Champaign provide mandated equipment to first responders, the Board agrees with Applicant that Staff's proposed condition requiring creation of an emergency plan in consultation with first responders is the more appropriate mechanism to permit Champaign and the first responders to determine what equipment is necessary.

2. Surveillance Cameras

UNU contends that some wind farms install surveillance cameras on their turbines that are sometimes used to watch neighboring properties, citing the testimony of UNU witness James. UNU argues that this would violate the privacy of nearby neighbors. Although UNU acknowledges that Champaign witness Speerschneider denied any intent to install surveillance cameras on the turbines in the proposed project, UNU contends that the certificate should contain a condition prohibiting surveillance cameras in order to

prevent Champaign from spying on its neighbors. (UNU Br. at 60-61; UNU Ex. 19 at 32; Tr. at 199-200.)

Champaign notes that Applicant has no plans to install surveillance cameras on the turbines and that it does not object to a condition prohibiting installation of surveillance cameras for surveillance of neighboring properties. However, Champaign contends that it is uncomfortable with a blanket ban on cameras because it may be helpful to install cameras at some point for safety purposes. Champaign asserts that, if safety reasons arise, it will work to ensure neighbors' privacy is not invaded. (Co. Reply Br. at 49; Tr. at 199-201.)

The Board agrees that Champaign should not be permitted to install surveillance cameras for any reason other than operational needs, such as safety or security. Should a justifiable operational reason arise and Champaign believes it is necessary to install surveillance cameras on any of the turbines, Champaign must notify Staff prior to such installation and take measures to ensure no invasion into the privacy of neighboring properties. The Board has created Condition (69) to advance this objective.

3. Changes in conditions after certificate issuance

UNU contends that Staff's recommended conditions would allow Champaign to relocate Turbines 87 and 91 without a hearing, as long as they were distanced a minimum of 150 percent of the sum of the hub height and rotor diameter from occupied structures, and that Champaign has also requested to relocate Turbines 79 and 95 in a similar manner. UNU states that allowing Champaign to relocate these turbines after issuance of the certificate and without a hearing would violate due process rights of affected landowners. (UNU Reply Br. at 39-40.)

As the Board previously stated in the sections regarding blade shear and ice throw, Staff found in its report that proposed Turbines 79, 87, 91, and 95 do not comply with the setbacks Staff has recommended for the proposed project, due to proximity to nonparticipating residences and/or arterial roads. Despite Staff's and Champaign's recommended conditions permitting relocation and/or resizing of these turbines, the Board made a finding in Section VI(F)(2), Setbacks, that proposed Turbines 79, 87, 91, and 95 shall not be constructed. Additionally, the Board notes that, consistent with the Board's procedure as summarized in Section III, Procedural Process, should Champaign wish, in the future, to relocate any of the turbines approved in this order or to use a turbine model not considered in this order, Champaign must file an amendment application pursuant to Section 4906.06, Revised Code.

CONCLUSION AND CONDITIONS:

The Board has considered the record in this proceeding, and the interests and arguments of each party. Based upon the record, the Board finds that all of the criteria established in accordance with Chapter 4906, Revised Code, are satisfied for the construction, operation, and maintenance of the facility as described in the application filed with the Board, subject to certain conditions proposed by Staff and other parties, and modified herein. In addition, upon review of the record and certain issues raised in this case, the Board finds that certain requirements delineated in this order are appropriate. To the extent that a request to amend a particular condition or to supplement the conditions is not discussed or adopted in the conditions set forth below, it is hereby denied. Accordingly, the Board approves the application and hereby issues a certificate to Champaign for the construction, operation, and maintenance of the proposed facility, subject to the conditions set forth below:

(1) The facility shall be installed as presented in the application, and as modified and/or clarified by Applicant's supplemental filings and the recommendations in the Staff Report, as modified and adopted in this Order.

(2) Applicant must utilize the equipment and construction practices as described in the application and as modified and/or clarified in supplemental filings, replies to data requests, and recommendations in the Staff Report, as modified and adopted in this Order.

(3) Applicant must implement the 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, as modified and adopted in this Order.

(4) Applicant must conduct a preconstruction conference prior to the start of any construction activities. Staff, Applicant, and representatives of the prime contractor and all subcontractors for the project must attend the preconstruction conference. The conference must 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 must provide a proposed conference agenda for Staff review. Applicant may

stage separate preconstruction meetings for grading versus clearing work.

(5) At least 30 days prior to the preconstruction conference, Applicant must have in place a complaint resolution procedure to address potential public grievances resulting from project construction and operation. The resolution procedure must provide that Applicant will work to mitigate or resolve any issues with those who submit either a formal or informal complaint and that Applicant will immediately forward all complaints to Staff. Applicant must provide the complaint resolution procedure to Staff, for review and confirmation that it complies with this condition, prior to the preconstruction conference.

(6) At least 30 days before the preconstruction conference, Applicant must submit to Staff, for review and acceptance, one set of detailed engineering drawings of the final project design, including the wind turbines, collection lines, substation, 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 must be provided in hard copy and as geographically referenced electronic data. The final design must 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.

(7) If any changes are made to the project layout after the submission of final engineering drawings, all changes must be provided to Staff in hard copy and as geographically referenced electronic data. All changes outside the environmental survey areas and any changes within environmentally sensitive areas will be subject to Staff review and acceptance, to ensure compliance with all conditions of the certificate, prior to construction in those areas.

(8) Within 60 days after the commencement of commercial operation, Applicant must 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 must use reasonable efforts to provide as-built drawings in both hard copy and as geographically referenced electronic data.

(9) Any wind turbine site approved by the Board as part of this Opinion, Order, and Certificate, but not built as part of this project, may be available for Board review in a future case.

(10) If construction has commenced at a turbine location and it is determined that the location is not a viable turbine site, that site must be restored to its original condition within 30 days from such determination. If Applicant believes it is prevented from completing the site restoration within 30 days, it must file a motion for extension of time for completing such site restoration.

(11) At least 60 days before the preconstruction conference, Applicant must file a letter with the Board that identifies which of the turbine models listed in the application has been selected. If Applicant selects the GE103 turbine model, Applicant must submit a complete copy of the manufacturer's safety manual or similar document to Staff.

(12) 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.

(13) As the information becomes known, Applicant must 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.

(14) Applicant shall not commence any construction of the facility until it has a signed interconnection service agreement 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. Applicant must provide either a letter stating that the agreement has been signed or a copy of the signed interconnection service agreement to Staff.

(15) Prior to commencement of any construction, Applicant must prepare a Phase I cultural resources survey program for archaeological work within the construction disturbance area, in consultation with Staff and

the OHPO. If the resulting survey work discloses a find of cultural or archaeological significance, or a site that could be eligible for inclusion in the NRHP, then Applicant must submit a mitigation plan to the Board.

(16) Prior to commencement of any construction, Applicant must develop a cultural resource avoidance plan in consultation with Staff and the OHPO, detailing procedures for flagging and avoiding all potentially NRHP-eligible archaeological sites in the project area, which shall be reviewed by Staff for confirmation that it complies with this condition. The avoidance plan must also contain measures to be taken should previously unidentified archaeological deposits or artifacts be discovered during construction of the project.

(17) Prior to commencement of construction, Applicant must develop a historic preservation mitigation plan in consultation with Staff and the OHPO, detailing procedures for promoting the continued meaningfulness of the survey area's rural history, which shall be reviewed by Staff for confirmation that it complies with this condition.

(18) No commercial signage or advertisements may be located on any turbine, tower, or related infrastructure. If vandalism occurs, Applicant must remove or abate the damage within 30 days of discovery to preserve the aesthetics of the project. If Applicant does not believe the removal or abatement can be completed within 30 days of discovery, Applicant must request an extension of time for the removal or abatement of damage. Any abatement other than the restoration to prevandalism condition is subject to review by Staff to ensure compliance with this condition.

(19) Applicant must 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 must be familiar with water quality protection issues and potential threatened or endangered species of plants and animals that may be encountered during project construction.

(20) Applicant must contact Staff, ODNR, and the U.S. Fish and Wildlife Service (USFWS) within 24 hours if state or federal threatened or endangered species are encountered during construction activities.

Construction activities that could adversely impact the identified plants or animals must 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 threatened or endangered species from exercising their legal authority over the facility consistent with law.

(21) Applicant must adhere to seasonal tree cutting dates of November 1st through March 31st for removal of trees, if avoidance measures cannot be achieved.

(22) Applicant must implement all conservation measures and conditions outlined in the final HCP and USFWS' ITP. Applicant must also implement all conservation measures and conditions outlined in the USFWS' draft environment impact statement (EIS), EIS No. 20120211, which is subject to inclusion as an environmental commitment in the USFWS' Record of Decision. Following USFWS and/or ODNR approval of any modifications to the Avian and Bat Protection Plan, Applicant must implement the draft conditions in the Avian and Bat Protection Plan, as amended.

(23) Applicant shall not work in the types of streams listed below during fish spawning restricted periods (April 15th to June 30th), unless a waiver is sought from and issued by ODNR and approved by Staff releasing Applicant from a portion of or the entire restriction period.

(a) Class 3 primary headwater streams (watershed < one mi2)

(b) Exceptional Warmwater Habitat

(c) Coldwater Habitat

(d) Warmwater Habitat

(e) Streams supporting threatened or endangered species

(24) Sixty days prior to the first turbine becoming operational, Applicant shall submit a post-construction avian and bat monitoring plan for ODNR-DOW and Staff review and confirmation that it complies with this condition. Applicant's plan must 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.* This includes having a sample of turbines that are searched daily. The post-construction monitoring must begin within two weeks of operation of the first turbine and be conducted for a minimum of two seasons (April 1st to November 15th), which may be split between calendar years. If monitoring is initiated after April 1st and before November 15th, then portions of the first season of monitoring must extend into the second calendar year (e.g., start monitoring on July 1, 2013, and continue to November 15, 2013; resume monitoring April 1, 2014, and continue to June 30, 2014). Applicant may request a waiver of the second monitoring season. The monitoring start date and reporting deadlines will be provided in the ODNR-DOW approval letter and the Board's concurrence letter. If it is determined that significant mortality, as defined in ODNR's approved, standardized protocols, has occurred to birds and/or bats, or a state-listed species is killed, then ODNR-DOW and Staff will require Applicant to develop and implement a mitigation plan. If required, Applicant shall submit a mitigation plan to the ODNR-DOW and Staff for review and confirmation that it complies with this condition within 30 days from the date reflected on ODNR's letterhead, in coordination with Staff, in which ODNR-DOW is requiring Applicant to mitigate for significant mortality to birds and/or bats. Mitigation initiation timeframes shall be outlined in the ODNR-DOW approval letter and Staff's concurrence letter.

(25) Applicant must conduct a presence/absence survey for the presence of the Eastern massasauga rattlesnake at the 20-acre wetland. The survey must be conducted by an USFWS- and ODNR-approved herpetologist. If Eastern massasauga rattlesnakes are not detected, then no further avoidance and minimization measures are required. If Eastern massasaugas are detected, or if a survey is not conducted, then presence of this species will be assumed and Applicant must implement USFWS- and ODNR-approved avoidance and minimization measures for protection of this species.

(26) Applicant must restrict public access to the facility with appropriately placed warning signs or other necessary measures.

(27) Applicant must ensure all transportation permits are obtained prior to transport. Applicant must 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 must include, but not be limited to, the county engineer, ODOT, local law enforcement, and health and safety officials. This coordination must 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.

(28) Applicant must provide the final Champaign County delivery route plan and the results of any traffic studies to Staff and the county engineer(s) 30 days prior to the preconstruction conference. Applicant must 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 must 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 must 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 that 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 must be removed and the area restored to its preconstruction condition, unless otherwise specified by the county engineer(s).

(29) Applicant must repair damage to government-maintained (public) roads and bridges caused by construction activity. Any damaged public roads and bridges must be repaired promptly to their preconstruction state by Applicant under the guidance of the appropriate public authority. Any temporary improvements must be removed, unless the county engineer(s) request that they remain. Applicant must provide financial assurance to the Board of Commissioners of Champaign County that it will restore the public county and township roads in Champaign County it uses to their preconstruction condition. Applicant must also enter into a road use agreement with the county engineer(s) or other appropriate public authority prior to construction and subject to Staff review and confirmation that it complies with this condition. The road use agreement must 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 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.

(30) The facility owner and/or operator must repair damage to government-maintained (public) roads and bridges caused by decommissioning activity. Any damaged public roads and bridges must be repaired promptly to their predecommissioning state by the facility owner and/or operator under the guidance of the appropriate public

authority. Applicant must provide financial assurance to the Board of County Commissioners of Champaign County that it will restore the public roads and bridges it uses in Champaign County to their predecommissioning condition. These terms must be defined in a road use agreement between Applicant and the county engineer(s) or other applicable public authority prior to construction. The road use agreement is subject to Staff review and confirmation that it complies with this condition, and must 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.

(31) General construction activities must 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 operations and blasting if required, must 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. Applicant must notify property owners or affected tenants within the meaning of Rule 4906-5-08(C)(3), O.A.C, of upcoming construction activities including potential for nighttime construction activities.

(32) Applicant must 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 farm. The geotechnical exploration and evaluation must 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 must provide copies of all geotechnical boring logs to Staff and to the ODNR Division of Geological Survey prior to construction.

(33) Should site-specific conditions warrant blasting, Applicant must submit a blasting plan, at least 60 days prior to blasting, to Staff for review and confirmation that it complies with this condition. Applicant must 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 must address blasting times, blasting signs, warnings, access control, control of adverse effects, and blast records.

(c) A plan for liability protection and complaint resolution.

(34) Prior to the use of explosives, Applicant or the explosive contractor must obtain all required local, state, and federal licenses/permits. Applicant must submit a copy of the license or permit to Staff within seven days of obtaining it from the local authority.

(35) The blasting contractor must utilize two blasting seismographs that measure ground vibration and air blast for each blast. One seismograph must be placed at the nearest dwelling and the other placed at the discretion of the blasting contractor.

(36) At least 30 days prior to the initiation of blasting operations, Applicant must notify, in writing, the local fire departments and all residents or owners of dwellings or other structures within 1,000 feet of the blasting site. Applicant or the explosive contractor must offer and conduct a pre-blast 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 ten days before blasting begins.

(37) Applicant must comply with the turbine manufacturer's most current safety manual and must maintain a copy of that safety manual in the O&M building of the facility.

(38) At least 30 days before the preconstruction conference, Applicant must 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.

(39) Before the first turbine is operational, Applicant must 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 must be developed in consultation with the first responders having jurisdiction over the area.

(40) Applicant must establish a postal address compatible with the local 9-1-1 system at each turbine site, which must be clearly labeled with that address in case of fire or other emergencies prior to commercial operation. These addresses must be provided to the 9-1-1 Dispatch Center Director located at 1512 South U.S. Route 68, Urbana, Ohio, prior to commercial operation.

(41) Applicant must instruct workers on the potential hazards of ice conditions on wind turbines.

(42) Applicant must install and utilize an ice warning system that may include an ice detector installed on the roof of the nacelle, ice detection software, warranted by the manufacturer to detect

ice, for the wind turbine controller, or an ice sensor alarm that triggers an automatic shutdown.

(43) Applicant shall not construct Turbines 87 and 91 in accordance with Section VI(F)(2)(c) of this Opinion, Order, and Certificate.

(44) Applicant must 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 natural gas pipeline in the ground at the time of commencement of construction.

(45) Within six months of commencement of operation of the facility, Applicant must register the as-built locations of all underground collection lines with the Ohio Utilities Protection Service. Applicant must also register with the Ohio Oil and Gas Producers Underground Protection Service, if it operates in the project area. Confirmation of registration(s) must be provided to Staff.

(46) The facility shall be operated so that the facility noise contribution does not result in noise levels at the exterior of any currently existing nonparticipating sensitive receptor that exceed the project area ambient nighttime Leq of 39 dBA, plus five dBA. During daytime operation only, 7:00 a.m. to 10:00 p.m., the facility may operate at the greater of: (a) the project area ambient nighttime Leq, 39 dBA, plus five dBA; or, (b) the validly measured ambient Leq, plus five dBA, at the location of the sensitive receptor. After commencement of commercial operation, Applicant shall conduct further review of the impact and possible mitigation of all project-related noise complaints through its complaint resolution process. The complaint resolution process must include an Leq averaging system over a 60-minute interval.

(47) The facility must be operated so that the facility shadow flicker contribution does not result in shadow flicker levels that exceed 30 hours per year for any nonparticipating sensitive receptor. Applicant must complete a shadow flicker analysis for all inhabited nonparticipating sensitive receptors that have already been modeled to be in excess of 30 hours per year of shadow flicker. The analysis must show how modeled shadow flicker impacts have been reduced to 30 or fewer hours per year

for each such receptor. The analysis must 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 for 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 project-related shadow flicker complaints through its complaint resolution process.

(48) Applicant must develop a complaint resolution process that shall include procedures for responding to complaints about excessive noise during construction, and excessive noise and excessive shadow flicker caused by operation of the facility. The complaint resolution process must 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, must consist of either reducing the impact so that the project 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.

(49) At least 30 days prior to construction, Applicant must perform a study of the potential impacts of the project to any known microwave path or system. Applicant must contact all electric service providers that operate within the project area for a description of specific microwave paths to be included in the study. A copy of this study must be provided to the electric service providers for review, and to Staff for review and confirmation that it complies with this condition. The assessment must conform to the following requirements:

(a) An independent and registered surveyor, licensed to survey within the state of Ohio, shall determine the exact locations 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, using the same survey equipment.

(b) Provide the distance (feet) between the surveyed center point of each turbine identified within section (a) above and the surveyed worst-case Fresnel Zone of each microwave system path.

(c) Separately provide the distance (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.

(d) Provide a map of the surveyed microwave paths and turbines at a legible scale.

(e) Describe the specific, expected impacts of the project on all microwave paths and systems considered in the study.

(50) Applicant must mitigate all observed impacts to: (a) microwave paths and systems identified in the communication studies performed for this project or required by the Board; (b) new microwave paths or systems identified by an electric service provider after the communication studies are performed but prior to the date Applicant advises such electric service provider of the final turbine layout, provided construction has commenced on such new paths or system prior to the date Applicant advises such electric service provider of the final turbine layout; or (c) new microwave paths or systems identified by an electric service provider following the date Applicant advises such electric service provider of the final turbine layout, but only if Applicant subsequently modifies the final turbine layout and such microwave paths or systems were modified or introduced in reliance upon the original final layout, provided construction has commenced on such new paths or systems prior to the date Applicant advises such electric service provider of the modified final turbine layout. Avoidance and mitigation must consist of measures acceptable

to Staff, Applicant, and the affected path owner, operator, or licensee(s).

(51) If any turbine is determined to cause Next-Generation Radar interference, Applicant must propose a technical or administrative work plan, protecting proprietary interests in wind speed data, which provides for the release of real-time meteorological data to the National Weather Service office in Wilmington, Ohio. If an uncontrollable event should render this data temporarily unavailable, Applicant must exert reasonable effort to restore connectivity in a timely manner.

(52) Applicant, facility owner, and/or facility operator must comply with the following conditions regarding decommissioning:

(a) Provide the final decommissioning plan to Staff and the county engineer(s) for review and confirmation of compliance with this condition, at least 30 days prior to the preconstruction conference. The plan must:

(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) Provide a revised decommissioning plan to Staff and the county engineer(s) every five years from the commencement of construction. The revised plan must 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) Complete, at its expense, 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, or if the Board deems the facility or turbine to be in a state of disrepair warranting decommissioning, the wind energy facility or individual wind turbines will be presumed to have reached the end of their 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. The Board may also require decommissioning of individual wind turbines due to health, safety, wildlife impact, or other concerns that prevent the turbine from operating within the terms of the certificate.

(d) Decommissioning will include: the removal and transportation of the wind turbines off site; and the removal of buildings, cabling, electrical components, access roads, and any other associated facilities, unless otherwise mutually agreed upon by the facility owner and/or facility operator and the landowner. All physical material pertaining to the facility and associated equipment must be removed to a depth of at least 36 inches beneath the soil surface and transported off site. The disturbed area must be restored to the same physical condition that existed before

erection of the facility. Damaged field tile systems must be repaired to the satisfaction of the property owner.

(e) During decommissioning, all recyclable materials, salvaged and nonsalvaged, must be recycled to the furthest extent practicable. All other nonrecyclable waste materials must 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, will be retained to estimate the total cost of decommissioning in current dollars, without regard to salvage value of the equipment. Said estimate must include: (1) 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; (2) the cost to perform each of the activities; (3) 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 must be

conducted every five years by the facility owner and/or facility operator.

(h) Applicant, facility owner and/or facility operator must 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, as 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 must be a financial instrument mutually agreed upon by the Board and Applicant, the facility owner, and/or the facility operator. The financial assurance must 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 must provide an estimated timeline for the posting of decommissioning funds based on the construction schedule for each turbine. Prior to commencement of construction, Applicant, the facility owner, and/or the facility operator must provide a statement from the holder of the financial assurance demonstrating that adequate funds have been posted for the scheduled construction. Once the financial assurance is provided, Applicant, facility owner and/or facility operator must maintain such funds or assurance throughout the remainder of the applicable term and must 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 the 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.

(53) Prior to the commencement of construction activities that require permits or authorizations by federal or state laws and regulations, Applicant must obtain and comply with such permits or authorizations. Applicant must provide copies of permits and authorizations, including all supporting documentation, to Staff within seven days of issuance or receipt by Applicant. Applicant must provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference.

(54) At least seven days before the preconstruction conference, Applicant must submit to Staff, for review and confirmation of compliance with this condition, a copy of all NPDES permits including its approved SWPPP, approved SPCC procedures, and its erosion and sediment control plan. Any soil issues must be addressed through proper design and adherence to the Ohio EPA BMPs related to erosion and sedimentation control.

(55) Applicant must employ the following erosion and sedimentation control measures, construction methods, and BMPs when working near environmentally sensitive areas and/or when in close proximity to any watercourses, in accordance with the Ohio NPDES permit(s) and SWPPP obtained for the project:

(a) During construction of the facility, seed all disturbed soil, except within actively cultivated agricultural fields, within seven days of final grading with a seed mixture acceptable to the appropriate county cooperative extension service.

Denuded areas, including spoils piles, must be seeded and stabilized within seven days, if they will be undisturbed for more than 21 days. Reseeding must be done within seven days of emergence of seedlings as necessary until sufficient vegetation in all areas has been established.

(b) Inspect and repair all erosion control measures after each rainfall event of one-half of an inch or greater over a 24-hour period, and maintain controls until permanent vegetative cover has been established on disturbed areas.

(c) Delineate all watercourses, including wetlands, by fencing, flagging, or other prominent means.

(d) Avoid entry of construction equipment into watercourses, including wetlands, except at specific locations where construction has been approved.

(e) Prohibit storage, stockpiling, and/or disposal of equipment and materials in these sensitive areas.

(f) Locate structures outside of identified watercourses, including wetlands, except at specific locations where construction has been approved.

(g) Divert all storm water runoff away from fill slopes and other exposed surfaces to the greatest extent possible, and direct instead to appropriate catchment structures, sediment ponds, etc., using diversion berms, temporary ditches, check dams, or similar measures.

(56) Applicant must 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 must be restored to preconstruction conditions in compliance

with the NPDES permit(s) obtained for the project and the approved SWPPP created for this project.

(57) 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 must be promptly removed and properly disposed of in accordance with Ohio EPA regulations.

(58) Applicant shall comply with fugitive dust rules by the use of water spray or other appropriate dust suppressant measures whenever necessary.

(59) Applicant shall 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.

(60) Applicant shall provide a copy of any floodplain permit required for construction of this project, or a copy of correspondence with the floodplain administrator showing that no permit is required, to Staff within seven days of issuance or receipt by Applicant.

(61) Thirty days prior to commencement of construction, Applicant must notify, in writing, any owner of an airport located within 20 miles of the project boundary, whether public or private, whose operations, operating thresholds/minimums, landing/approach procedures and/or vectors are expected to be altered by the siting, operation, maintenance, or decommissioning of the facility.

(62) Applicant must 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 199 feet at ground level for ODOT-OA and FAA review prior to construction, and the nonpenetration of any FAA *Part 77* surfaces.

(63) All applicable structures, including construction equipment, must 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. During construction, Applicant shall ensure that all structures that reach 200 feet in height, at ground level, are temporarily marked and lit until permanent lighting is installed.

(64) Applicant must provide the flight service stations within proximity with NOTAM. These notices must include the latitude and longitude coordinates for all structures, including cranes and construction equipment, that exceed 200 feet in height at ground level.

(65) Applicant must file all 7460-2 forms with the FAA at least 42 days prior to construction and with Staff for confirmation of compliance with this condition.

(66) Within 30 days of construction completion, Applicant must file the as-built transmission structure coordinates and heights (above ground level) with the ODOT-OA and the FAA.

(67) Applicant must submit to Staff, for review and confirmation that it complies with this condition, a medical needs service plan for construction, testing, and operation of this facility, in coordination with the local emergency medical helicopter, CareFlight. This plan must incorporate measures that assure immediate shut downs of any portion of the facility necessary to allow direct routes for emergency medical helicopter services within the vicinity of the facility.

(68) Applicant shall not construct Turbines 79 and 95 in accordance with Section VI(F)(2)(a) of this Opinion, Order, and Certificate.

(69) Champaign shall not locate surveillance cameras on or around the turbines for any reason other than operational needs. Should a justifiable operational need arise, Applicant must notify Staff prior to such installation and take measures to ensure no invasion of the privacy of neighboring properties.

(70) Applicant must provide all local fire and emergency service personnel with turbine layout maps, tower diagrams, schematics, turbine safety manuals, and an emergency 24-hour toll-free telephone number for Champaign.

(71) Applicant must placard each turbine tower with a 24-hour emergency telephone number for Champaign.

(72) Applicant shall be prohibited from locating a proposed turbine where: (1) the distance from the turbine to either of two towers owned by the Champaign Telephone Company located at 10955 Knoxville Road, Mechanicsburg, Ohio 43044 (LAT: 40-0-30.16 N; LONG: 83-35-14.39 W) and at 2733 Mutual Union Road, Cable, Ohio 43009 (LAT: 40-9-26.0 N; LONG: 83-37-52.0 W) is less than the total height of the turbine above ground level or (2) the turbine would be in the direct line of sight between the two towers.

Finally, the Commission notes that The Supreme Court of Ohio has recognized that the statutes governing these cases vest the Board with the authority to issue certificates upon such conditions as the Board considers appropriate; thus acknowledging that the construction of these projects necessitates a dynamic process that does not end with the issuance of a certificate. The Court has concluded that the Board has the authority to allow Staff to monitor compliance with the conditions the Board has set. *In re Application of Buckeye Wind, L.L.C. for a Certificate to Construct Wind-Powered Electric Generation Facilities in Champaign County, Ohio*, 131 Ohio St.3d 449, 2012-Ohio-878, 966 N.E.2d 869, ¶ 16-17, 30. Such monitoring includes the convening of preconstruction conferences and the submission of follow-up studies and plans by the applicant. As recognized by the Court in *Buckeye Wind*, if an applicant proposes to change any of the conditions approved in the certificate, the applicant is required to file an amendment. As discussed above in Section III, the Board would be required to hold a hearing in accordance with Section 4906.07, Revised Code, in the same manner as on an application, where an amendment application involves any material increase in any environmental impact or substantial change in the location of all or a portion of the facility. Particularly in light of these procedural safeguards, the Board reiterates its conclusion that the criteria established in accordance with Chapter 4906, Revised Code, are satisfied.

FINDINGS OF FACT AND CONCLUSIONS OF LAW:

(1) Champaign is a corporation and a person under Section 4906.01(A), Revised Code.

(2) The proposed wind-powered electric generation facility is a major utility facility under Section 4906.01(B)(1), Revised Code.

(3) On January 6, 2012, Champaign filed notice of the present case and notice that a public informational meeting would be held

on January 24, 2012, at Triad High School, 8099 Brush Lake Road, North Lewisburg, Ohio 43060.

(4) On May 15, 2012, Champaign filed its application for a certificate to site a wind-powered electric generation facility in Champaign County, Ohio.

(5) On July 13, 2012, the Board notified Champaign that its application had been found to be complete pursuant to Rule 4906-1, et seq., O.A.C.

(6) On July 20, 2012, Champaign filed a certificate of service of its accepted and complete application, in accordance with Rule 4906-5-06, O.A.C.

(7) By entry issued August 2, 2012, the ALJ granted Champaign's request for waiver of: the one-year notice period required by Section 4906.06(A)(6), Revised Code; the requirement that Applicant provide certain cross-sectional views and locations of borings, pursuant to Rule 4906-17-05(A)(4), O.A.C.; and the requirement that Applicant submit a map of the proposed electric power generating site showing the grade elevations where modified during construction pursuant to Rule 4906-17-05(B)(2)(h), O.A.C.

(8) On October 10, 2012, Staff filed its report of investigation of the proposed facility.

(9) The ALJ granted motions to intervene filed by UNU, the Farm Federation, the County/Townships, Urbana, and Pioneer.

(10) A local public hearing was held on October 25, 2012, at Triad High School, North Lewisburg, Ohio.

(11) Champaign filed its proofs of publication of the hearing notice on September 13, 2012, and November 6, 2012.

(12) On November 8, 2012, the adjudicatory hearing commenced and it concluded on November 28, 2012. Rebuttal testimony was taken on December 6, 2012.

(13) The ALJs' rulings shall be affirmed, in part, and denied, in part, as set forth in Section V of this Opinion, Order, and Certificate.

(14) Adequate data on the proposed facility has been provided to make the applicable determinations required by Chapter 4906, Revised Code, and the record evidence in this matter provides sufficient factual data to enable the Board to make an informed decision.

(15) Champaign's application filed on May 15, 2012, complies with the requirements of Chapter 4906-13, O.A.C.

(16) The record establishes that the basis of need, under Section 4906.10(A)(1), Revised Code, is not applicable.

(17) The record establishes that the nature of the probable environmental impact of the facility has been determined and it complies with the requirements in Section 4906.10(A)(2), Revised Code, subject to the conditions set forth in this Opinion, Order, and Certificate.

(18) 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 Section 4906.10(A)(3), Revised Code, subject to the conditions set forth in this Opinion, Order, and Certificate.

(19) The record establishes that the facility is consistent with regional plans for expansion of the electric power grid and will serve the interests of electrical system economy and reliability, under Section 4906.10(A)(4), Revised Code, subject to the conditions set forth in this Opinion, Order, and Certificate.

(20) The record establishes, as required by Section 4906.10(A)(5), Revised Code, that the facility will comply with Chapters 3704, 3734, and 6111, Revised Code, and Sections 1501.33 and 1501.34, Revised Code, and all rules and standards adopted pursuant thereto and under Section 4561.32, Revised Code.

(21) The record establishes that the facility will serve the public interest, convenience, and necessity, as required under Section 4906.10(A)(6), Revised Code, subject to the conditions set forth in this Opinion, Order, and Certificate.

(22) The record establishes that the facility will not adversely impact the viability of any land in an existing agricultural district, under Section 4906.10(A)(7), Revised Code.

(23) Based on the record, the Board shall issue a Certificate of Environmental Compatibility for the construction, operation, and maintenance of the proposed wind-powered electric generation facility in Champaign County, Ohio, subject to the conditions set forth in this Opinion, Order, and Certificate.

ORDER:

It is, therefore,

ORDERED, That UNU's, Urbana's, and the County/Townships' requests to reverse the rulings of the ALJs are denied, in part, and granted, in part, as set forth in Section V of this Opinion, Order, and Certificate. It is, further,

ORDERED, That UNU's motion to reopen the hearing record is denied, as set forth in Section V of this Opinion, Order, and Certificate. It is, further,

ORDERED, That the motion for protective order filed by Gamesa be granted. It is, further,

ORDERED, That the Board's docketing division maintain, under seal, the redacted copy of the Gamesa General Characteristics Manual for the G97 turbine model, which was filed under seal in this docket on November 13, 2012, for a period of 18 months, ending on November 28, 2014. It is, further,

ORDERED, That Champaign's application to construct electricity generating wind turbines and electrical substations in Champaign County, Ohio, be approved and a certificate be issued to Champaign, subject to the conditions set forth in this Opinion, Order, and Certificate. It is, further,

ORDERED, That the certificate contain the conditions set forth in the Conclusions and Conditions Section of this Opinion, Order, and Certificate. It is, further,

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

THE OHIO POWER SITING BOARD

Todd A. Snitchler, 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

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

Scott Nally, 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

MWC/JJT/sc

Entered in the Journal
MAY 28 2013

Barcy F. McNeal
Secretary