

BEFORE

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THE OHIO POWER SITING BOARD

PUCO

In the Matter of the Power Siting Board's)
 Adoption of Chapter 4906-17 of the Ohio)
 Administrative Code and the Amendment)
 of Certain Rules in Chapters 4906-1, 4906-5) Case No. 08-1024-EL-ORD
 and Rule 4906-7-17 of the Ohio)
 Administrative Code to Implement)
 Certification Requirements for Electric)
 Generating Wind Facilities.)

OPINION AND ORDER

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The Ohio Power Siting Board finds:

OPINION:

A. Background

- (1) On June 24, 2008, the governor of the state of Ohio signed Amended Substitute House Bill No. 562 (HB 562). That legislation, among many things, directed the Ohio Power Siting Board (Board) to adopt certification rules for the construction, operation and maintenance of electric generation wind facilities.
- (2) On September 15, 2008, the Board issued for comments and reply comments its Staff's proposal to adopt rules to implement certification requirements for electric generation wind facilities in Chapter 4906-17, Ohio Administrative Code (O.A.C.), and, in order to accommodate the adoption of Chapter 4906-17, O.A.C., to amend certain rules in Chapters 4906-1 and 4906-5 and Rule 4906-7-17, O.A.C. Comments were due by September 29, 2008 and reply comments were due by October 7, 2008.¹
- (3) Comments and/or reply comments to the proposed rules were filed by JW Great Lakes Wind LLC (JWLG); Great Lakes Energy Development Task Force (Great Lakes); American Wind Energy Association (AWEA); Invenergy Wind North America LLC (Invenergy); Buckeye Wind, LLC (Buckeye); Ohio Farm Bureau Federation (Farm Bureau); Ohio Archaeological Council (Council); Ohio Township Association (OTA); FPL Energy, LLC (FPL Energy); Union Neighbors United (UNU); American Municipal Power-Ohio, Inc. (AMP-Ohio); Urbana Country Club; U. S. Department of the Interior, Fish and Wildlife Service (FWS); E-Coustic Solutions (E-Coustic); Audubon Ohio; Babcock & Brown (B&B); BQ Energy LLC (BQ); Duke Energy Ohio, Inc. (Duke); Joe Hughes; Senator Bill Seitz (Seitz); and Save Western Ohio (Tom Stacy).
- (4) On October 8, 2008, AWEA filed a motion to file its reply comments one day out of time. AWEA asserts that its reply comments were timely delivered to a courier service for filing on October 7, 2008 but due to a clerical error on the part of the courier service, the reply comments were not delivered to the

¹ Hereinafter, the rules in the Ohio Administrative Code will be referenced by number only without any indication that they are part of the O.A.C. In other words, Rule 4906-17-01, O.A.C., will be referred to simply as Rule 4906-17-01.

Board on October 7, 2008 as directed. AWEA respectfully asks the Board accept and consider AWEA's reply comments. The Board finds that in light of the fact that these are new certification requirements for the review of proposed wind-energy facilities that the Board will consider all comments and reply comments filed regardless of AWEA's failure to timely file their reply comments. Accordingly, the Board finds AWEA's motion to file its reply comments one day out of time to be reasonable and, the request is therefore granted.²

- (5) In addition, numerous comments were filed by interested individuals, primarily residents of Logan and Champaign counties. In some cases, the correspondence included comments regarding the proposed wind certification process, as well as numerous questions. To the extent that the questions raised are within the Board's jurisdiction and authority, the Board has attempted to provide a response within the context of this Order and the attached rules. The individual stakeholders also ask questions in association with the proposed wind rules, such as the effect on property values, enforcement of individual property owner rights, and compensation for aesthetics and asserted loss of enjoyment, that are beyond the Board's review or authority and, accordingly, the Board will not attempt to address such issues.
- (6) Further, the Board believes that a brief summary of the Board's certificate application and siting process may be beneficial. Many of the issues raised by individual stakeholders relate to the Board's application review process, the scope and intent of the rules and the penalties, if any, for an applicant's failure to comply with certificate conditions.

First, the Board is an agency created by statute and, in accordance therewith, vested only with the authority granted to it by the legislature. The Board is vested with the authority to grant, to grant pursuant to terms or conditions, or modifications, or to deny applications to construct, operate or maintain energy facilities in Ohio. In accordance with such authority, the Board adopts siting application requirements and reviews applications. See Section 4906.10, Revised Code.

Prior to filing an application with the Board, an applicant may request a pre-application conference with the Board Staff for

² The Board notes that comments were not timely filed by JW Great Lakes Wind.

clarification of the filing requirements. *See* Rule 4906-5-01. The pre-application conference with Staff is optional and a potential applicant is not limited to one pre-application conference. Prior to filing the application, the applicant must also hold at least one public informational meeting in the community where the applicant proposes to construct the facility. *See* Rule 4906-05-08.

After the application is filed, the Board has 60 days to determine whether the application is complete. *See* Rule 4906-5-06. For the application to be found complete, the application must include the necessary information for the Board Staff to initiate its investigation. The applicant is notified whether the application has been found complete or not and, if complete, the applicant is directed to serve copies of the complete application in accordance with Rule 4906-5-07. Shortly after the application is found to be complete, the Board will schedule hearings in the case.

After Board Staff has completed its review of the application, and its investigation and visits to the proposed project site, the Board Staff will prepare its report of investigation and file it in the case docket. As a part of the Staff report, if the Staff recommends that the applicant be permitted to construct the proposed facility, the Staff will recommend that the Board approve the application to construct, operate, and maintain the facility in compliance with certain conditions. The Staff may also recommend certain modifications to the proposed facility. After the Staff report is filed, at least two hearings are held on each proposed project: a local public hearing and an adjudicatory hearing. The local public hearing is held in the community where the project is proposed to be constructed. At this hearing, the Board will take testimony from members of the public regarding the proposed project. After the local public hearing, an adjudicatory hearing is held at the Board's offices where the applicant, Board Staff and interveners, if any, may present witnesses in support of their respective positions regarding the siting of the proposed facility.

After thoroughly considering the application, testimony offered at the hearings, and the other evidence of record in each case, the Board will issue its decision on the application.

In accordance with and limited by that statutory authority, the Board must determine that the proposed electric generation

facility is in compliance with the requirements of Section 4906.10, Revised Code. Also, Section 4906.10, Revised Code, directs the Board to evaluate the following criteria for each proposed electric generation facility: its probable environmental impact; that the facility represents the minimum adverse environmental impact considering available technology, and the cost of such technology; that it is consistent with regional plans for expansion of the electric power grid and serves electric system economy and reliability; that it serves the public interest, convenience and necessity; that it incorporates water conservation practices; compliance with air, water, and solid waste requirements; and its effect on agricultural district land and agricultural land. All documents filed in a case, the application, staff report, motions filed by interveners, correspondence from the community, proofs of the applicant's publication of notices, entries issued by the Board, and the Board's order in the case, are listed in the case docket.³

B. Preliminary issues

- (7) Audubon Ohio is concerned that the proposed rules in Chapter 4906-17 will not apply to off-shore wind-powered generation facilities (Audubon Ohio Comments at 3).
- (8) The Board clarifies that the proposed wind siting application requirements set forth in Chapter 4906-17 will apply to both on-shore and off-shore wind-powered electric generation facilities. To the extent that the Board finds that a siting application presents unique circumstances, the Board will, if the application is granted, modify the facility proposal and/or grant the application pursuant to certain conditions to ensure the certificate meets the requirements set forth in Section 4906.10, Revised Code.
- (9) AWEA argues that the legislature did not intend for the Board to site wind farms in accordance with the same statutory treatment accorded major utility facilities (AWEA Initial Comments at 2-5). As AWEA reasons, the Ohio General Assembly defined "wind farm" in Section 4906.13, Revised Code, and codified the certification process for wind farms at Section 4906.20, Revised Code. Accordingly, AWEA asserts that the other statutory requirements set forth in the remainder

³ The case docket on any Board case may be viewed through the Board's website at <http://www.opsb.ohio.gov/> and entering the case number in the search box.

of Chapter 4906. of the Revised Code, do not apply to wind farms.

- (10) Senator Seitz, principal drafter of the language in Amended Substitute House Bill No. 562 (HB 562), filed a reply to the arguments of AWEA. Senator Seitz strenuously urges the Board to reject AWEA's approach. Senator Seitz states that it was indeed the intent of the General Assembly to make wind farms subject to the requirements applicable to major utility facilities, which are defined as capable of generating 50 megawatts or more. Senator Seitz states that, in addition to the requirements applicable to major utility facilities, economically significant wind farms shall have the additional requirements of compliance with the Board requirements adopted to address the specific issues listed in Section 4906.20(B)(2), Revised Code (Seitz Reply Comments at 1-2).
- (11) The Board notes that Section 4906.20(B) states:

The Board shall adopt rules governing the certificating of economically significant wind farms under this section The rules shall provide for an application process for certificating economically significant wind farms that is identical to the extent practicable to the process applicable to certificating major utility facilities under sections 4906.06, 4906.07, 4906.08, 4906.09, 4906.11 and 4906.12 of the Revised Code.

Based on the principal of statutory construction and the plain language of this statute, the Board has incorporated the wind farm certification process into the Board's existing procedures and proposed, to the extent appropriate, application requirements for wind-powered electric generation facilities in Chapter 4906-17.

C. Discussion of Staff Proposal and Comments by Rule

- (12) After reviewing the Staff's proposal, the initial comments, reply comments and correspondence, the Board hereby issues its new rules to implement electric generating wind facilities at Chapter 4906-17 and amendments to certain rules in Chapters 4906-1 and 4906-5, and Rule 4906-7-17, O.A.C. We will directly address only the more salient initial or reply comments/correspondence. In some respects, we agree with certain comments and have incorporated them into the rules

without specifically addressing such changes in detail in this Order. To the extent that a comment was raised and is not addressed in this Order nor incorporated into our adopted rules, it has been rejected. Otherwise, the substantive comments in each chapter, by rule, are discussed below.

Chapter 4906-1, General provisions for filings and proceedings

Rule 4906-1-01, Definitions

- (13) AMP-Ohio suggests that the definition of a wind farm be revised to more clearly state what is considered an "economically significant" wind farm (AMP-Ohio Initial Comments at 2). AWEA notes that the definition of "wind farm" in Rule 4906-1-01 is virtually identical to the definition in Section 4906.13, Revised Code.
- (14) As AWEA notes, the definition in Rule 4906-1-01 is virtually identical to the definition set forth in Section 4906.13, Revised Code, and, therefore, the Board finds no reason to revise the definition. An applicant may presume that the Board considers that any wind farm designed for or capable of generating at least five megawatts of electricity is economically significant (AWEA Initial Comments at 5).
- (15) FPL Energy notes that, under Rule 4906-1-01, there are definitions for "major utility facility" and "wind farm," but no definitions for "wind generation facility," which is used in Rule 4906-17-02(D), and "electric power generating wind facility," which is used in Rule 4906-17-03(A). FPL Energy proposes that the Board provide consistent terms and definitions across the various rules and chapters (FPL Comments at 1).
- (16) The Board agrees that terms in our rules should be used consistently, across the rules, and that definitions should be provided, where appropriate. The Board notes, however, that definitions in one chapter need not be repeated in other chapters. Further, discussion of Board revisions to Rule 4906-17-01 will appear under that rule below.
- (17) FPL Energy also recommends that the Board define the term "participating landowner" to mean a landowner who has a contractual agreement to allow one or more wind turbines, roads, electrical collection lines, or any other ancillary facilities be placed on the subject property in return for some form of compensation (FPL Initial Comments at 1 and 5). FPL Energy

then requests that the evaluation criteria set forth in Rule 4906-17-08 only apply to non-participating landowners.

- (18) The Board disagrees. If the Board were to revise the proposed rules in Chapter 4906-17, as suggested by FPL Energy, to only apply to non-participating landowners, then the Board would not be carrying out its siting duties with respect to the participating landowners, as required by Section 4906.20, Revised Code. Accordingly, the Board finds this proposal to be inappropriate.

Chapter 4906-5, Procedural requirements for applications for major utility facilities and wind farms before the Ohio Power Siting Board

Rule 4906-5-01, Pre-application conference

- (19) As proposed, applicants for all wind-powered electric generation projects would be able to request a pre-application conference with the Board Staff. The Farm Bureau suggests that the conference include the affected municipal, county and/or township, and all federal, state, and local government entities and agencies impacted by the project (Farm Bureau Initial Comments at 4-5).
- (20) The Board finds that the Farm Bureau misunderstands the purpose of this conference. The pre-application conference allows the applicant and Staff an opportunity to discuss the application filing requirements and, in general, the procedural process. For this reason, we find the Farm Bureau's suggestion to be inappropriate. We note, however, that, under Rule 4906-5-08, all certificate applicants are required to hold a public informational meeting prior to filing the application and that, as a part of the Board's most recent review of Rule 4906-5-08, the applicant will be required to publish notice of the public informational meeting.⁴ Accordingly, this proposal is denied.

Rule 4906-5-05, Completeness of certification applications and staff investigations and reports, and Rule 4906-5-06, Service and public distribution of accepted, complete certificate applications

- (21) OTA recognizes that the Board's notice and service of complete certificate applications, including wind certificate applications,

⁴ See Case No. 08-581-GE-ORD, *In the Matter of the Power Siting Board's Review of Chapters 4906-1, 4906-5, 4906-7, 4906-09, 4906-11, 4906-13, and 4906-15 of the Ohio Administrative Code* (Opinion and Order, September 15, 2008).

comply with the statutory requirements set forth in Section 4906.06, Revised Code. However, OTA asks that the Board amend Rule 4906-5-05 to require that notice and service of the completed application be provided to townships in which the proposed wind facility and other major utility facilities are proposed. OTA reasons that wind farms will likely be sited in townships, not municipalities, and, as a separate governing body, the trustees of the affected townships need to be aware of the proposed wind-energy projects (OTA Initial Comments at 1-2).

- (22) The Board agrees that affected townships should be notified of proposed utility facilities and has revised Rule 4906-5-06, rather than the rule which OTA proposed to amend, to account for such notice. Thus, Rule 4906-5-06 shall be adopted as proposed by Staff, as modified by the Board and attached to this Order.

Rule 4906-5-08, Public notice of accepted, completed certification applications

- (23) UNU recommends that the Board consider amplifications to Rule 4906-5-08(A), which addresses pre-application public informational meetings. UNU contends that the June 10, 2008 informational meeting conducted by Buckeye Wind, LLC was wholly inadequate and asserts that the meeting did not comply with the current rule requirements in that the project map provided at the informational meeting listed only 78 turbines when Buckeye stated the project would consist of 120-130 wind turbines; no information was provided on project site alternatives or site selection criteria; and no project-specific schedule was provided (UNU Initial Comments at 2-3).
- (24) The Board notes that Rule 4906-5-08 addresses applications for major utilities and wind-powered electric generation facilities. Therefore, the Board finds that it is inappropriate to add wind-energy-specific criteria to this rule. The Board, however, finds it necessary to emphasize that, in accordance with this rule, we expect developers to provide a meaningful public informational meeting. Providing a description of the proposed site(s), along with other detailed information, will improve the quality of the public informational meeting. Next, the basis for conducting an informational meeting is so that a developer may hear concerns about its proposed project, and will have an opportunity to make changes to its application that might decrease the likelihood of public opposition to that

project. Further, when the developer seeks public input at an informational meeting, the developer has the opportunity to gain local knowledge regarding environmental and cultural resources that can be factored into its final decision-making process, before submitting an application to the Board. Last, the Board notes that this docket is not the appropriate place to address concerns regarding a specific public information meeting. Comments regarding the June 10, 2008 public information meeting may be filed under the appropriate docket, either Case No. 08-665-EL-BGN or 08-666-EL-BGN.

Chapter 4906-7, Rules of proceedings before the Ohio Power Siting Board

Rule 4906-7-17, Decision by the Board

- (25) The Farm Bureau and OTA request that Rule 4906-7-17(A)(1)(b) be amended to require the Board's decision to be served on "local governments," thus including both municipalities and townships (Farm Bureau Initial Comments at 5; OTA Initial Comments at 2).
- (26) In light of the Board's amendment of Rule 4906-5-06, as discussed above, the Board finds this proposed amendment of Rule 4906-7-17 to be unnecessary. If any local governmental body is sufficiently interested in a particular Board application, that entity can notify the Board's docketing division and request to be listed as an interested party in the case or, if appropriate, file a motion to intervene in the proceeding. Thus, Rule 4906-7-17 shall be adopted as proposed by Staff.

Chapter 4906-17, Instructions for the Preparation of Certificate Applications for Wind-Powered Electric Generation Facilities

Rule 4906-17-01, Applicability and definitions.

- (27) Section 4906.13, Revised Code, establishes the Board's jurisdiction over wind farms designed or capable of operation at an aggregate capacity of five to 50 megawatts. E-Coustic encourages the Board to base the rules on the wind facility's capacity value rather than the nameplate capacity (E-Coustic Initial Comments at 1).
- (28) The Board finds this proposal infeasible for at least two reasons. The rules as proposed comply with the capacity stated in the statute and to amend the rule as proposed by the

commenter would make the Board's jurisdictional limits much more speculative. Accordingly, this proposal is denied.

- (29) Invenergy proposes that the Board add a number of definitions to clarify the siting process, including definitions for site, affected project area, construction impact area, permanent footprint area, residence, and off-site residence, and a modified definition of wind power facility (Invenergy Initial Comments at 1-2). Buckeye proposes that the definition of wind power facility or facility be amended to include permanent anemometers (Buckeye Initial Comments at 2). UNU disagrees, as UNU presumes that the basis of Buckeye's proposal is to bring the anemometers within the exclusive jurisdiction of the Board, thus precluding coverage by local zoning requirements. UNU asserts that anemometers are not directly essential to the operation of wind turbines, the generation of electricity, or the transmission of electricity from individual wind turbines or from the overall facility. Further, UNU asserts that if anemometers are deemed to be part of the facility itself, an applicant would need to obtain a certificate before constructing the anemometers. Last, since anemometer data is needed to assess the viability of the project from the outset, UNU contends that such an approach does not make sense (UNU Reply Comments at 5-6).
- (30) The Board notes that anemometers, or meteorological towers, are used to measure wind speed. The Board understands that anemometers are installed on a potential wind farm site to gather data prior to filing any application with the Board. The Board finds that anemometers installed for wind data collection under that circumstance would fall outside of the Board's jurisdiction. In addition, anemometers installed for ongoing wind data collection, as a permanent part of a wind farm, would be considered part of the associated equipment within the definition of "wind-powered electric generation facility." Accordingly, Buckeye's proposal is denied.

Paragraph (A)

- (31) Buckeye recommends that two revisions be made to Rule 4906-17-01 to avoid redundancy and confusion. First, Buckeye suggests revising Paragraph (A) to state as follows: "This chapter details the application filing requirements for all electric power generating wind facilities." Next, Buckeye

suggests that the balance of paragraph (A) be merged with a revised paragraph (B)(2) to state as follows:

Electric power generating wind facility, or wind power facility, or facility means all the turbines, collection lines, any associated substations and all other associated equipment utilizing associated rights of way and easements with a single interconnection to the electric grid and designed for, or capable of, operation at an aggregate capacity of five megawatts or more.

(Buckeye Initial Comments at 1-2.)

- (32) The Board finds that the language as proposed by Staff for paragraph (A) of Rule 4906-17-01 is necessary to define the purpose of this chapter. Accordingly, Buckeye's proposal to merge the paragraphs is denied. The Board has, however, incorporated the term "wind-powered electric generation facility" into paragraph (A) and Chapter 4906-17, as proposed by Buckeye. Accordingly, Staff's proposed language for paragraph (A) of Rule 4906-17-01, as modified by the Board, shall be adopted as attached herein.

Paragraph (B)

- (33) As proposed, this paragraph notes that, as the term "project area" is used in Chapter 4906-17, it means the total wind power facility and the buffer area(s), including associated setbacks. AWEA notes that "buffer area(s)" is not defined and claims that, because such term is rife with many and inconsistent interpretations, it should either be specifically defined or deleted (AWEA Initial Comments at 7). B&B also recommends that the reference to buffer areas be deleted (B&B Initial Comments at 4).
- (34) The Board agrees and, accordingly, the reference to buffer area(s) has been deleted.
- (35) The Farm Bureau notes its understanding that a "wind farm" will encompass "all turbines, collection lines, associated substations and all other associated equipment." The Farm Bureau also notes its understanding that there are separate rules to address transmission lines, which carry generation from the "facility to an interconnection point with the transmission power grid." The Farm Bureau asks that the rules

provide more detail to distinguish what facilities will be considered part of the wind farm application and which facilities, if any, will encompass the associated transmission line application (Farm Bureau Initial Comments at 2). Next, the Farm Bureau supports the separate certification procedures for a wind-powered electric generation facility and a transmission line from the collection point to interconnection with the transmission grid, and requests that both certification procedures run concurrently (Farm Bureau Reply Comments at 3-4).

- (36) First, with respect to the Farm Bureau's proposal that the rules provide more detail concerning which facilities will be considered part of the wind farm application and which facilities, if any, will encompass the associated transmission line application, the Board finds that an applicant may request a pre-application meeting with Board Staff to address any questions regarding either type of application. Next, regarding the Farm Board's proposal that the separate applications for a wind-powered electric generation facility and the related transmission facilities run concurrently, the Board finds that due to the different nature of the facilities, the Board cannot require that the certifications run concurrently. The Board notes, however, that both applications may be filed at the same time. Therefore, the Farm Bureau's proposals are denied.
- (37) FPL Energy notes the inconsistency or lack of definitions for the terms "wind generation facility" or for "electric generating facility" as used in the rules proposed by the Board Staff (FPL Comments at 1).
- (38) The Board finds that it is appropriate to add the terms "wind-powered electric generation facility" and "wind-energy facility" to the definition in Rule 4906-17-01(B)(2). Further, the Board notes that the rules in this chapter have been amended to reflect consistent use of these terms. Accordingly, Staff's proposed and amended language for paragraph (B) of Rule 4906-17-01 shall be adopted as attached herein.

Rule 4906-17-02, Project summary and general instructions.

Paragraph (A)

- (39) As proposed by Staff, paragraph (A) directs the applicant to provide a project summary and overview of the proposed project that must include a statement of the general purpose of

the facility, a description of the proposed facility and project area selection process, a discussion of the principal environmental and socioeconomic considerations for the preferred and alternate project area sites, if any, and an explanation of the project schedule. Buckeye recommends that the Board take into consideration the potential impacts of the proposed facility relative to the benefit to the community as a whole, including, but not limited to, economic benefits, energy security for Ohio and the country, and emission reductions (Buckeye Initial Comments at 3). UNU disagrees with Buckeye's assertion that the Board should consider the project's total benefits to the community as a whole. UNU contends that this is an invitation for the Board to approve projects without ensuring that host communities are adequately protected, because Buckeye Wind's use of this phrase would include "energy security for Ohio and the country and emission reductions." UNU asserts that the Board should not allow benefits - particularly economic benefits - to override public protection, which is why UNU has proposed that the wind siting rule package should include objective minimum siting criteria to ensure adequate public protection from project impacts such as noise and shadow flicker (UNU Reply Comments at 6-7).

- (40) The Board finds that it is inappropriate to amend Rule 4906-17-02 to require an applicant to include such information in its application as proposed by Buckeye. Further, the Board emphasizes that an applicant's assertion that there is a particular economic benefit to the community regarding a proposed wind-energy facility will not be an offset to the public protection. However, we recognize that an applicant may nonetheless include such information in the application and it will be noted in the Board's consideration of the project's overall impact on the public interest, convenience, and necessity in accordance with Section 4906.10(A)(6), Revised Code.

Paragraph (C)

- (41) As proposed, Rule 4906-17-02(C) states:

If the applicant has prepared the required hard copy maps using digital, geographically-referenced data, an electronic copy of all such data, excluding data obtained by the applicant under a licensing

agreement which prohibits distribution, shall be provided to the board staff on computer disk concurrent with submission of the application.

B&B asserts that this provision should be revised to encourage electronic submittal (B&B Initial Comments at 1). On the other hand, Audubon Ohio believes that hard copy maps must be a requirement, not an option, to accurately assess the project's footprint and the project's impact on the community, the environment and wildlife (Audubon Ohio Initial Comments at 2).

- (42) The Board has recently considered the electronic submittal of certification applications and, in conjunction, reducing the number of copies to be filed by an applicant. The Board has concluded that the required full color maps are initially difficult to read when submitted as black and white electronic documents, and, after the documents are electronically scanned documents into our docketing system, the documents are virtually illegible. Further, the number of copies requested is necessary for the efficient distribution of the application to Board Staff assigned to review the application and for distribution to Board agencies that must participate in the review process. Thus, the Board concluded that electronic submittal of certification applications is not feasible at this time. Further, the Board clarifies that the requirement to provide the Board Staff with digital map data on disk is not a substitute for hard copies of the maps, but a supplement to the map requirement.

Paragraph (D)

- (43) Paragraph (D) of Rule 4906-17-02 states that, if an applicant asserts that a particular requirement is not applicable, the applicant must provide an explanation of why this requirement is not applicable. The last sentence of this paragraph, as proposed, directs the applicant to provide a list of relevant technological, financial, environmental, social, and ecological information that is generally known in the industry to be of potential concern for the particular type of wind facility proposed. B&B asserts that the last sentence should be deleted as such is not usually seen in energy extraction permitting (B&B Initial Comments at 1). FPL Energy asserts that the last sentence is vague and should be deleted (FPL Energy Initial Comments at 2). JWGL argues that the last

sentence of this provision provides unnecessary fodder for industry opponents to file appeals or other litigation and is unnecessary to the application (JWGL Initial Comments at 5). However, BQ recommends that the sentence be amended to direct the applicant to list issues known to the applicant to be of potential concern for the facility proposed (BQ Initial Comments at 2). Duke agrees with other commenters that the proposed language is a bit vague and reasons that what is of potential concern is specific to each geographic location (Duke Reply Comments at 4). However, as an alternative, Duke proposes, as a refinement to BQ's proposal, that the last sentence of this rule require the applicant to provide all relevant technological, financial, environmental, social and ecological information recognized by the applicant to be applicable to the specific proposed facility.

- (44) The Board finds that it is necessary for the applicant to provide the information required by these rules in order to fully evaluate the proposed wind-powered electric generation project. This rule provides the opportunity for the applicant to provide information concerning why it believes a particular provision is not applicable. The Board recognizes that an off-shore wind-energy facility will have different factors to consider as compared to a land-based wind-energy facility. The Board also notes that a similar provision has been recently adopted by the Board at Rule 4906-13-01(D). Accordingly, the proposals are denied and paragraph (D) of Rule 4906-17-02 shall be adopted as attached to this Order.

Rule 4906-17-03, Project description in detail and project schedule in detail.

Paragraph (A)

- (45) FPL Energy suggests that paragraph (A)(1) be rewritten to require the applicant to submit the listed information for "the proposed project site and any alternative site(s)." FPL Energy supports its suggestion by noting that the process to evaluate wind-energy project sites may¹ cover thousands of acres, and that the primary criteria for proposing a particular site are the sustained wind speed and the availability of land for the turbine (FPL Energy Initial Comments at 2). Many of the wind-energy project developers filing comments in this proceeding raised similar concerns regarding alternative site information (AWEA Initial Comments at 7-8; Invenenergy Initial Comments

at 5). Further, FPL Energy argues that, in its experience, it has not evaluated two alternative sites to the level of detail requested in the proposed rules. Thus, FPL reasons that the proposed requirements for an alternate site analysis are unnecessary, costly and of little benefit. Many other commenters also raised the issue of alternate sites and have interpreted various provisions of the proposed rules to require the applicant to provide information on at least two wind-energy facility project sites.

- (46) The Board notes that, as proposed, the rules were not intended to require that each application for a wind-energy facility include information on at least two sites. The filing of information on an alternate project site is optional. Accordingly, Rule 4906-17-03 and other rules in Chapter 4906-17, O.A.C., have been amended to reflect this clarification.
- (47) As proposed by Staff, Rule 4906-17-03(A)(1)(a) requests that the applicant provide the estimated annual capacity factor and estimated hours of annual generation. Duke states that an applicant may not have gathered a full year of site wind data before beginning the certificate application process and suggests that the rule be amended to permit an applicant to submit the wind data which the applicant has collected and which forms the basis of the applicant's decision to proceed with the project (Duke Reply Comments at 5).
- (48) The Board notes that any applicant who does not have a full year's worth of wind data may provide Staff with an estimate of the missing required information based on an extrapolation of the data that the applicant has collected. Accordingly, the provision shall be adopted as modified by the Board and attached herein.
- (49) Duke asserts that equipment purchase decisions do not normally occur early in the wind farm project planning process. Invenergy also suggests, and Duke agrees, that paragraph (A)(2) of Rule 4906-17-03 be revised to require the applicant to submit a description of the major equipment, including but not limited to, the **expected** major dimensions of the proposed wind-energy turbine's maximum height and the dimensions and **expected** configuration of the expected wind-energy turbine foundations. (Emphasis in original; Duke Reply Comments at 6, citing Invenergy Comments at 5).

- (50) The Board finds that the information requested in paragraph (A)(2) of Rule 4906-17-03, regarding the proposed wind turbines, is essential to the Board's investigation of the proposed wind-energy project. The Board notes that this rule has been revised to clarify the specific information required. Accordingly, paragraph (A)(2) of Rule 4906-17-03 shall be adopted as amended by the Board and attached herein.
- (51) As proposed by Staff, under Rule 4906-17-03(A)(3), the applicant must submit, as a part of the application, a description of the need for new transmission line(s) associated with the proposed facility. JWGL would eliminate the reference to need and merely require the applicant to describe any new transmission lines required for the proposed project, if any (JWGL Initial Comments at 6-7). Invenenergy would delete paragraph (A)(3) (Invenenergy Initial Comments at 5).
- (52) The Board has revised the language in Rule 4906-17-03(A)(3) to clarify the certification application requirements for a wind-powered electric generation facility project. As part of the certificate application for such a wind-energy project, the applicant should indicate if any new transmission lines will be necessary. With respect to construction of any new transmission lines greater than or equal to 125 kilovolts, the applicant will be required to file a separate certification application for approval to construct the transmission lines and, as a part of the transmission line application, may be required to demonstrate need consistent with Section 4906.10(A)(1), Revised Code.

Paragraph (B)

- (53) Audubon Ohio contends that Rule 4906-17-03(B)(1)(b) should require the wildlife surveys or studies to include the requirements outlined in the On-Shore Bird and Bat Pre- and Post-Construction Monitoring Protocols for Commercial Wind Energy Facilities in Ohio as drafted by the Ohio Department of Natural Resources (ODNR). The commenter asserts that this amendment is critical to assure consistency in addressing the wildlife and habitat impacts throughout the state, using the same scientific method and timeline for evaluation for every wind facility (Audubon Ohio Initial Comments at 2).
- (54) ODNR is a Board agency and ODNR Staff reviews Board applications. Therefore, ODNR, as a Board agency, will

certainly have an opportunity to review the wildlife surveys filed in association with any wind facility application. The Board suggests that potential applicants meet with ODNR staff early in the process to at least discuss wildlife issues. Therefore, Audubon Ohio's proposal is denied and paragraph (B) of Rule 4906-17-03 shall be adopted as proposed by Staff.

Rule 4906-17-04, Project area analyses.

- (55) As proposed, Rule 4906-17-04 asks for detailed information regarding the applicant's evaluation process for determining the particular project area site as suitable. Buckeye reasons that proposed Rule 4906-17-04 requires an applicant to provide an alternative site analysis. According to Buckeye, and most of the other wind developer commenters, commercial scale wind power projects can only be located in certain locations within the state that are conducive to wind energy production. Buckeye states that the selection of a project site is constrained by several factors that are required to allow a given project to operate in a technically and economically viable manner, including an adequate wind resource, adequate access to the bulk power transmission system, contiguous areas of land resource, and willing land lease participants. Further, Buckeye states that, given the fact that each individual potential project area is dependent on a number of site specific factors, including habitat use, multiple landowners, technical requirements, and other factors which can take considerable time to assess and are not transferable to alternative sites, a site alternative analysis typically only occurs at a very high level. Wind-energy developers typically consider a number of potential project locations and select all that are potentially suitable for a wind facility, not just the best one. Buckeye proposes that Rule 4906-17-04 consider elements involved in assessing site suitability rather than site alternatives (Buckeye Initial Comments at 4-5). AMP-Ohio likewise contends that wind-energy project developers must monitor actual winds at a specific site for approximately 1-2 years to accurately predict the viability of any project (AMP-Ohio Initial Comments at 2-3). Invenergy states that only a brief description of the site selection process need be submitted with the application and proposes that paragraphs (A)(1)(a) through (A)(2) be deleted (Invenergy Initial Comments at 5-6). Duke questions the Board's rationale for requesting the information at Rule 4906-17-04(A)(1)(c), (A)(1)(d), and (A)(1)(e), as Duke asserts that the information does not appear to be of great value to the Board

in determining whether to approve an application (Duke Reply Comments at 6).

- (56) The Board clarifies that an applicant for a wind-powered electric generation facility certificate is not required to file the information listed in Rules 4906-17-04 through 4906-17-08 for both a preferred and an alternate site; only one proposed site is necessary, as with other types of proposed electric generation facilities. Information on an alternate project site is optional at the applicant's discretion. However, the Board finds that the information requested in Rule 4906-17-04, regarding the applicant's evaluation of potential project areas and determination that the project area proposed is suitable, is essential to the Board's investigation of the wind-powered electric generation project. The Board recognizes that the site selection study will be limited to locations where the developer believes there are potentially viable wind resources. In similar situations, the Board has granted an applicant's waiver request to forgo the filing of an extensive site selection study. *See Case No. 04-1254-EL-BGN, In the Matter of the Application of Sun Coke Company, a Division of Sunoco, for a Certificate of Environmental Compatibility and Public Need to Build the Haverhill Cogeneration Station (Entry, January 21, 2005); Case No. 07-703-EL-BGN, In the Matter of the Application of FDS Coke Plant, LLC for a Certificate of Environmental Compatibility and Public Need to Build a Cogeneration Facility (Entry, December 18, 2007); and Case No. 08-281-EL-BGN, In the Matter of the Application of Middletown Coke Company, a Subsidiary of SunCoke Energy, for a Certificate of Environmental Compatibility and Public Need to Build a Cogeneration Station in Butler County (Entry, May 28, 2008).*
- (57) AMP-Ohio notes that wind data assessments are generally considered highly proprietary and should not be made available through a public process to other developers or any other party. Further, AMP-Ohio recognizes that the Board contemplates protected treatment for confidential and proprietary information in other proceedings. AMP-Ohio requests that similar treatment be provided for confidential and proprietary information that comes to the Board through the wind siting process (AMP-Ohio Initial Comments at 6).
- (58) The Board will use the same process for consideration of confidential and proprietary information in the siting of wind facilities as in other siting cases and notes that our rules

currently contain provisions for the filing of information under seal at Rule 4906-7-07(H).

- (59) Audubon Ohio suggests that paragraphs (A)(1)(d) and (A)(1)(e) of Rule 4906-17-04 be amended to include wildlife impact analysis in all proposed and alternative sites evaluations and further suggests that the analysis be the Ohio Department of Natural Resources (ODNR) protocols to assure consistency in wind facility siting throughout the state (Audubon Ohio Initial Comments at 3).
- (60) As noted above in regard to the similar request made by Audubon Ohio as to Rule 4906-17-03(B), ODNR is a Board agency and ODNR Staff reviews Board applications and ODNR, as a Board agency, will certainly have an opportunity to review the wildlife surveys filed in association with any wind facility application. Thus, Rule 4906-17-04(A)(1) shall be adopted as attached herein.
- (61) JWGL would restate proposed Rule 4906-17-04(A)(2) to require the applicant to provide one copy of any constraint map showing setbacks from residences, property lines, and public rights of way (JWGL Initial Comments at 7).
- (62) The Board finds that the proposed amendment of JWGL to Rule 4906-17-04(A)(2) is reasonable and has amended the rule accordingly.

Paragraphs (B) and (C)

- (63) As proposed, paragraph (B) directs the applicant to provide a table summarizing the sites considered and the factors utilized to compare sites. Paragraph (C) allows the applicant to provide the site selection study rather than responses to proposed paragraphs (A) and (B). JWGL argues that wind industry developers do not perform formal site alternative analyses as multiple sites may be initially investigated but are rejected as inferior as circumstances dictate. Thus, JWGL would delete paragraphs (B) and (C) of Rule 4906-17-04 (JWGL Initial Comments at 7).
- (64) The Board finds that the information requested in paragraphs (B) and (C) of Rule 4906-17-04, regarding the applicant's evaluation of potential project area sites or the alternative project area site selection study, is essential to the Board's investigation of the wind-powered electric generation facility

project. Accordingly, paragraphs (B) and (C) of Rule 4906-17-04 shall be adopted as modified by the Board and attached herein.

Rule 4906-17-05, Technical data.

Paragraph (A)

- (65) As proposed by Staff, an applicant for a wind-powered electric generation facility project is required to provide information on the location and major features of the project area site and any proposed alternative project area sites. The proposed rule recognizes that the information may be acquired from reference materials, and so noted in the application. Paragraph (A)(1) requires the applicant to provide a map or maps of the geography and topography within a five-mile radius of the proposed facility. JWGL proposes that applicants be permitted to file preliminary geologic, grading and/or hydrologic information for the project site and to supplement with specific information prior to the issuance of a certificate (JWGL Initial Comments at 7).
- (66) To the extent that the preliminary geologic, grading and/or hydrologic information is insufficient to allow Board Staff to conduct its investigation in a timely fashion, the application would not be considered complete until such information was provided. If, however, the geologic, grading and/or hydrologic information provided with the application is of sufficient detail to allow the Board Staff to conduct its baseline analysis, then, in accordance with the certificate conditions, the final engineering designs of an approved project are usually not due to the Board Staff, until a reasonable time prior to the start of construction.
- (67) B&B asserts that wind farms compete in the market place with coal energy, as well as oil and natural gas energy. B&B asserts that the proposed rules can be improved, in general, by taking into account the unique characteristics of wind farms and tailoring the rules to address the unique attributes and effects of wind farms. B&B contends that the proposed rules will subject wind farms to some requirements that are more stringent than fossil fuel extraction industries. Thus, B&B recommends that the rules be revised to reflect consistency with other Ohio extraction practices to equalize the level of protection to natural resources required of all of Ohio's energy

producing facilities. B&B asserts that most surface coal mines have a surface disturbance footprint that is as large as or larger than utility scale wind farms. B&B notes that the mapping requirements for Ohio Coal Mine applications do not extend beyond one-thousand feet from the permit area, while the proposed the mapping for wind facilities greatly exceeds 1,000 feet, to one-mile and five-mile radiuses. (B&B provided, in support of its argument, the permit requirements for Ohio coal mining and oil and gas, as Attachment 1 to its comments.) B&B reasons that the mapping for wind farms should be modified to 1,000 feet to be consistent with Ohio coal mine permitting requirements. (B&B Comments at 1-2, and Attachment 1). FPL Energy similarly proposes that a one-mile radius is sufficient to identify the features of the area surrounding the project site and notes that multiple maps may be necessary (FPL Comments at 2-3).

- (68) The Board fails to see the similarities, as asserted by B&B, that the wind-powered electric generation facility project is more like coal, oil and gas well permitting than it is like permitting of other generation facilities. The wind-energy facilities will be primarily comprised of above-ground structures. Further, the construction and operation of the turbines and other associated equipment and structures will have an impact on and potentially affect a much greater area of the surrounding community than would an oil or gas well. The Board believes that a five-mile radius to review the proposed project area allows the Board and Board Staff to consider the social and ecological effects of the project on the surrounding community. Accordingly, the Board rejects the proposed revisions to this rule. For this reason, the Board finds it appropriate to retain the radius of review as proposed by the Staff and the rule shall be adopted as modified by the Board and attached herein.
- (69) Paragraph (A)(1) requires the applicant provide a map of 1:24,000 scale. Buckeye asserts that, due to turbine setback considerations, spacing requirements and the relatively large area of land required to accommodate a viable wind facility, the mapping requirement of 1:24,000 scale for a five-mile radius may be impracticable (Buckeye Initial Comments at 5). AMP-Ohio contends that in this rule, as well as in other rules in Chapter 4906-17, the rule specifies a particular map scale. AMP-Ohio asserts that, in some instances, it may be easier, more cost-effective, and faster for the applicant to supply a larger scale map from an existing source and, therefore, the

commenter proposes that the rules allow for greater flexibility in meeting the map requirements (AMP-Ohio Initial Comments at 4). FPL Energy comments that a map of scale 1:4,800 scale is too detailed, given the significant size of typical wind-energy facility projects, and offers that a map of scale 1:24,000 is more appropriate (FPL Energy Initial Comments at 2). Buckeye proposes that such map requirements be revised to require the applicant to provide a map of suitable scale to show the proposed wind-energy facility in relation to the features enumerated in the proposed rule (Buckeye Initial Comments at 5-6).

- (70) We note that, in consideration of the numerous comments made regarding the map scale in Rule 4906-17-05, as well as the other rules in this chapter, the Board has increased the map scale to 1:12,000 for any proposed provision that listed a map scale of less than 1:12,000, in an effort to reduce the costs associated with generating and copying the maps. We further note that in accordance with the requirements of proposed Rule 4906-5-03(C), an applicant may reduce the number of full scale maps filed as a part of the certification application.
- (71) With respect to paragraph (A)(1)(f), UNU asserts that the term "major institutions" is vague. Next, UNU asserts that the reference to recreational areas should include both public and private recreational areas to ensure that institutions such as private golf courses and fishing and hunting clubs are given due consideration in the siting process (UNU Initial Comments at 7).
- (72) The Board clarifies that the term major institutions is intended to include but not be limited to, schools, nursing homes, hospitals, and religious institutions, as used in Rule 4906-17-05(A)(1)(f). We also emphasize that the reference to recreational areas includes both public and private recreation areas.
- (73) Rule 4906-17-05(A)(1)(h) requires the wind-energy facility project applicant to designate existing and proposed air transportation facilities within a five-mile radius of the proposed project area. FPL Energy asserts that an applicant may not know the location of proposed air transportation facilities. Accordingly, the commenter suggests either deleting the reference to proposed air transportation facilities or only

requiring the applicant to provide such information if known (FPL Energy Initial Comments at 2).

- (74) This information is critical to the Board's analysis of whether or not the wind-energy facility will comply with all rules and standards adopted pursuant to Section 4561.32, Revised Code, as the Board is required to determine in accordance with Section 4906.10(A)(5), Revised Code.
- (75) Rule 4906-17-05(A)(4), as proposed, directs, among other things, the applicant to provide a map of suitable scale and a corresponding cross-sectional view showing the geological features of the proposed facility site and the location of test borings. FPL Energy asserts that, because typical wind-energy projects can be thousands of acres, detailed geologic information is customarily limited to those specific areas that are to be disturbed by construction and, therefore, cross-sectional views of the entire project site are not appropriate. For that reason, FPL Energy requests that this provision be deleted. Further, the commenter asks that only proposed test borings be shown on the map as actual borings are typically not conducted until further along in the project timeline and most likely would not be available at the time the application is filed (FPL Energy Initial Comments at 3).
- (76) The Board recognizes that the proposed wind-energy facility may stretch across many acres and it would be more efficient to only provide geologic information where the applicant anticipates disturbing the land for construction. However, by providing the Board information regarding only those areas, the Board is foreclosed from considering reorientation of the facilities, should it become necessary. The Board reminds applicants that they may contact ODNr's Division of Geological Survey for information and assistance. Thus, the Board believes that it is more efficient to provide such information for the entire wind-energy facility site. We have, as FPL Energy points out, clarified that the applicant need only designate the location of proposed test borings. Accordingly, paragraph (A)(4) shall be adopted as modified by the Board.
- (77) Rule 4906-17-05(A)(5), specifically addresses the hydrology and wind of the proposed project site. With respect to paragraph (A)(5)(a), B&B and BQ assert that wind farms do not use water and, therefore, reason that this provision of the certification requirements appears to have little usefulness and recommend

that the provision be deleted (B&B Comments at 2; BQ Initial Comments at 2). FPL Energy asserts that such requirements are applicable to fossil-fuel fired generation facilities and not to wind-powered electric generation facilities. FPL Energy admits that the water needs of wind-energy facilities are generally limited to that needed for a small operation and maintenance facility, for potable and sanitary needs (FPL Energy Initial Comments at 3).

- (78) While the wind farm may not use significant amounts of water, this section of the certification requirements assures the Board and Board Staff that the applicant has considered the effects of constructing and operating the proposed project at the project area site. Furthermore, the Board is required to evaluate whether the proposed generation project complies with the water conservation practices specified in Section 4906.10(A)(8), Revised Code.
- (79) Rule 4906-17-05(A)(5)(b) directs the applicant to provide an analysis of the prospect of floods and high winds for the area, including the probability of occurrences and likely consequences of various flood stages and wind velocities, and to describe plans to mitigate any likely adverse consequences. B&B asserts that wind farms are sited where winds are highest and that the purpose of this analysis is not apparent and should, therefore, be deleted (B&B Initial Comments at 2). FPL Energy notes that wind-energy facilities are typically sited on elevated land, not flood plains, and are located in areas with high but not extreme wind conditions. Thus, FPL proposes that the hydrology and wind provisions be eliminated from the proposed rules. (FPL Energy Initial Comments at 3). UNU disagrees with FPL Energy's proposal to delete the required information concerning high wind potential. UNU argues that high wind data are directly applicable to the potential for tower collapse and blade throw. UNU asserts that Champaign County is prone to high winds, as evidenced not only by the severe windstorm experienced in September 2008, but also by storms on June 13 (60 mph), June 21 (55 mph), and June 26, 2008 (50 mph). UNU also asserts that high winds are one factor contributing to the risk of physical injury and property damage from blade failure. (See Knight and Carver Blade Division, *Economic Benefits of Scheduled Rotor Maintenance* § 2.3.3 [June 7, 2006].) (UNU Reply Comments at 10, and Appendix 1.)

- (80) The Board recognizes that wind-energy facilities are constructed where winds resources are available. However, the Board also must review the applicant's plans to prepare for extremely high winds and floods and their respective effects on the proposed facilities to ensure the integrity of the facilities and the safety of the surrounding community. We have, in light of the comments, however, requested that the applicant identify any portion of the wind-energy facility project area that is to be located on a 100-year flood plain.

Paragraph (B)

- (81) Rule 4906-17-05(B)(1)(f) directs the applicant to describe the project area site preparation and reclamation process, including post-construction reclamation. The Farm Bureau recommends that post-construction reclamation be made in accordance with the most recent edition of the Ohio Federation of Soil and Water Conservation Districts - Pipeline and Utility Construction Repair and Remediation Standards (Farm Bureau Initial Comments at 3).
- (82) The Board notes that, as a Board agency, the Ohio Environmental Protection Agency and its Staff are active in the review and investigation of generation facility applications. As such, the Board finds that it is unnecessary to incorporate the suggested standards into the rules.
- (83) Proposed Rule 4906-17-05(B)(3) requires the applicant to describe, in detail, the proposed structures, including estimated overall dimensions, construction materials, color and texture of facing surfaces, unusual features, and a photographic interpretation or artist's pictorial sketches of the proposed wind-energy facility from the public vantage points. FPL Energy suggests that the need for photographic interpretations or artist's sketches be optional depending on whether there are any local concerns regarding visual observations due to the nature and location of the project (FPL Energy Initial Comments at 3). Buckeye asserts that the term "public vantage points" is not defined and could be interpreted very broadly. Thus, Buckeye recommends that the applicant provide the photographic interpretation or pictorial sketches from representative landmarks, as defined in Rule 4906-17-08(D)(3), that are within five miles of the project area (Buckeye Initial Comments at 6).

- (84) We have adopted Buckeye's recommendation to limit the photographic interpretation or pictorial sketches to public vantage points within five miles of the facility. The applicant can select the public vantage points from which the sketches or photographs are taken. Board Staff may request additional sketches or photographs if Staff believes it is appropriate.
- (85) UNU recommended that the rules require a more rigorous aesthetic impact study that includes computer simulations of the visual impact of every turbine in the project, from reference points of specified distance to the north, south, east, and west of each turbine. By the same letter, UNU also recommended that the aesthetic impact study include simulated views from each park, historic site, outdoor recreation facility, and similar areas of recreational or cultural significance from which the wind farm is visible. (UNU Initial Comments at 7, and Ex. B, at 5.) UNU asserts that, given the size of modern turbines, the number of such turbines planned for areas like Champaign and Logan counties, and the geographical breadth of wind power projects, commercial wind farms will have a greater aesthetic impact than any electrical generating facility the Board has reviewed to date. UNU states its belief that, without appropriate consideration of aesthetic impacts, these facilities have the potential to dominate the landscapes of their host communities. Further, UNU asserts that the existing decision-making criteria in Section 4906.10, Revised Code, and the new requirements of HB 562 (Section 4906.20(B)(2), Revised Code) both call upon the Board to conduct a thorough review of the aesthetic impacts in the context of certification proceedings. UNU respectfully urges the Board to reconsider its approach and to require a more rigorous aesthetic impact analysis, as it has proposed (UNU Initial Comments at 8-9).
- (86) The Board finds UNU's proposal to require the applicant to include a photographic interpretation or pictorial sketch of the proposed wind-energy facility from every park, historic site, outdoor recreation facility, and similar areas of recreational or cultural significance to be overly burdensome. Further, as discussed above, we have amended paragraph Rule 17-05(B)(3)(d), to include public vantage points within five miles of the proposed wind-energy facility. We find this requirement to be reasonable. Accordingly, paragraph (B)(3) of Rule 4906-17-05 shall be adopted as amended by the Board and attached herein.

- (87) Proposed Rule 4906-17-05(B)(5) addresses the applicant's future plans for the project and directs the applicant to describe any plans for future additions of the wind-powered electric generation units and the anticipated maximum electric power to be generated on the site. AMP-Ohio contends that the extent of a wind-powered electric generation project may or may not be known at the time the initial application is filed and, further, the extent of the project could change based on additional wind data, project financials, market fluctuations, and property availability (AMP-Ohio Initial Comments at 4).
- (88) The Board recognizes that circumstances change. However, that is not a reason to revise this provision. The applicant need only describe its plans as of the filing of the application.
- (89) UNU raises two concerns regarding Rule 4906-17-05(B)(5) as to the future plans for a wind-powered electric generation project. UNU states first, that under the proposed rule, a developer may obtain a certificate for a relatively small project and then expand it incrementally after the certificate is issued, thereby circumventing the Board's review process. To address this concern, UNU urges the Board to make clear in the rules that additions or modifications to, or repowering or replacement of, wind facilities must first be approved through a new or modified certificate of necessity. Second, repowering or retrofitting is also a concern if a developer is issued a certificate for turbines of a given height and generating capacity, but later replaces those turbines with taller ones having a greater generating capacity. UNU asserts that both of these examples would be contrary to the certification requirements of Section 4906.04, Revised Code (UNU Initial Comments at 9).
- (90) Pursuant to Section 4906.04, Revised Code, the Board is vested with the authority to determine whether the replacement of existing facilities is a replacement of "like kind" equipment or an improvement and the associated additional environmental, social, and ecological impacts, if any. In regard to UNU's incremental expansion example, the Board emphasizes that it has been a long-standing policy to direct applicants to file an application for the project's ultimate design capability, as that is a more efficient use of the Board Staff's resources and time. Further, if the owner of a wind facility elects to expand an existing facility, previously determined to be less than the Board's jurisdictional threshold, where the facility, in the aggregate will be at or over five megawatts after expansion,

the owner of the facility will be required to file a certification application with the Board. See Case No. 00-924-EL-BGN, *In the Matter of the Application of PG&E Dispersed Generating Company, LLC for a Certificate of Environmental Compatibility and Public Need for a Merchant Power Plant in Bowling Green, Ohio* (Entry, August 18, 2000; Order, February 12, 2001). Such will continue to be the Board's policy as to all wind-powered electric generation facilities. However, to clarify the Board's policy, we have amended Rule 4906-1-01(T), Substantial addition, to specifically include a reference to wind farms and an example.

Paragraph (C)

- (91) Paragraph (C) of Rule 4906-17-05, and the associated subparagraphs, relate to the equipment to be used as a part of a proposed wind-energy project. FPL Energy notes that paragraph (C)(2)(c) of this provision requires the applicant to describe the turbine manufacturer's safety standards, including a complete copy of the manufacturer's safety manual or similar document. FPL Energy and Invenenergy assert that the manufacturer's safety manual or similar document is confidential and, therefore, this provision should be deleted. Further, FPL Energy asserts that, at the time of the application, generating equipment is not likely to have been chosen, due to commercial issues and equipment availability (FPL Energy Initial Comments at 3). UNU disagrees with the commenters who asserted that the information in a turbine manufacturer's safety manual or similar document is confidential. UNU contends that this information does not meet the definition of "trade secret" under Section 1333.61(D)(1), Revised Code. UNU asserts that relevant publications of GE Energy, Vesta and Nordex are available via the internet. With respect to FPL Energy's suggestion that this information will not likely be known at the time of application because "generating equipment is not chosen until the last minute," UNU asserts that manufacturer safety specifications cannot be determined without information on the turbine types to be used for the project. (UNU Reply Comments at 11.)
- (92) As the Board has previously noted in regard to information the applicant believes to be confidential or proprietary, the applicant may file a motion for protective treatment with the Board in accordance with the requirements of Rule 4906-7-07(H). If the applicant has not finalized the turbine to be

utilized for a particular project, the applicant must submit the required information for each of the types of turbines under consideration. Accordingly, Rule 4906-17-05(C) shall be adopted as modified by the Board an attached herein.

Paragraph (D)

- (93) As proposed, Rule 4906-17-05(D) focuses on the proposed wind-powered electric generation facility's connection to the regional electric power system. The Farm Bureau supports this provision of the proposed rules as it believes that it will help to decrease the speculative nature of establishing wind-energy projects in Ohio and limit the Board's time and effort to reviewing those wind-energy projects that are more thoroughly planned and detailed.
- (94) As proposed, Rule 4906-17-05(D)(2) requires the applicant to provide system impact studies on its generation interconnection request. FPL Energy asserts that, due to the timing of the application, the generation interconnection request may or may not be available for filing with the application, but could be provided upon receipt. Nonetheless, FPL Energy recommends that the rule be amended to direct the applicant to provide the generation interconnection information, if available (FPL Energy Initial Comments at 4). JWGL argues that requiring the applicant to submit system impact studies involves significant lead time and, accordingly, will be a fatal bottle-neck for the industry in Ohio (JWGL Initial Comments at 8, Appendix at 3-8). Buckeye and JWGL note that both regional transmission organizations in Ohio are experiencing lengthy delays in the completion of the system reliability and impact study portions of the interconnect process. Therefore, they suggest, the ability to initiate the Board certification process while the study is ongoing is important, in order to keep developed timelines reasonable. JWGL recommends that the Board require the applicant to have made an application to the independent transmission system queue prior to submitting an application (JWGL Initial Comments at 8). Buckeye suggests that Rule 4906-17-05(D)(2) be revised to read, "In as much detail as possible, the applicant shall provide information regarding the status of interconnect studies, including feasibility studies and system impact studies if available" (Buckeye Initial Comments at 7).

- (95) The Board recognizes that an applicant may experience delays in its receipt of the information necessary to file a certificate application. However, because the Board makes every effort to review certificate applications in a timely manner, to complete its investigation, it is imperative that the Staff is provided the necessary information. To that end, the Chairman of the Board can not certify a certificate application as complete until all the necessary information has been provided to the Board and Board Staff. The Board is aware that currently the regional transmission system operators are backlogged with requests for system impact studies. Where the applicant has made the necessary request for the studies, is in the queue, and expects to provide the study to the Board within a reasonable period of time after the application is filed, it is appropriate for the applicant to file a request for waiver of this provision, asking to allow the study to be filed later. As such, this requirement will not significantly delay the application process. However, it is imperative that the Board have the electric system impact studies in order to determine whether the proposed wind-powered electric generation project is consistent with plans for the expansion of the electric power grid of the state electric system and interconnected utility systems, as required by Section 4906.10(A)(4), Revised Code. Accordingly, the Board notes that we have revised paragraph (D)(2) of Rule 4906-17-05.
- (96) BQ recommends that this provision be deleted for two reasons. First, it argues that the process for interconnections that are not under the jurisdiction of the Federal Energy Regulatory Commission (FERC) is different from the process under FERC. BQ also asserts that some interconnection processes may require the Board certificate to be issued before proceeding further with the studies (BQ Initial Comments at 2).
- (97) The Board notes that the wind-powered electric generation facility certification application requirements are set forth such that the process is generally applicable to a broad range of circumstances. However, pursuant to Section 4906.10(A)(4), Revised Code, the Board must evaluate the proposed wind-energy project's impact on the regional power grid and interconnected utility systems. Therefore, the provision will not be deleted.

Rule 4906-17-06, Financial data.Paragraph (A)

- (98) BQ argues that, with the exception of paragraph A, the directives in Rule 4906-17-06 are not applicable to independent power producers (BQ Initial Comments at 3). Similarly, FPL Energy asserts that disclosure of confidential financial data should not be required as a part of the application process. The commenter reasons that project costs and associated risk are borne by the project developer and any concern by the Board that unreasonable costs could be borne by Ohio consumers is unwarranted. Further, FPL Energy states that the wind-powered electric generation business is highly competitive and disclosure of the information could be detrimental to the developer and is not necessary. Thus, FPL Energy strongly urges the Board to delete this requirement (FPL Energy Initial Comments at 4). Great Lakes notes that the financial information is considered a trade secret in Ohio and is not applicable to off-shore wind-energy projects (Great Lakes Initial Comments at 11).
- (99) While the commenters assert that the financial information requested may be more appropriate for integrated utilities, we can not assume that only independent power producers or integrated utility companies will be filing for certification of wind-powered electric generation projects. Accordingly, it is incumbent upon the applicant to request a waiver for this provision or to request protective treatment for such information. Therefore, it is inappropriate to delete this provision of the rule and paragraph (A) shall be adopted as modified by the Board and attached herein.

Paragraph (B)

- (100) Paragraph (B) of Rule 4906-17-06 designates that certain capital and intangible costs be provided by the applicant. AMP-Ohio argues that financial information on individual wind-energy projects is highly site and time specific (AMP-Ohio Initial Comments at 4-5). Proposed paragraphs (B)(2) and (C)(2) of Rule 4906-17-06 require the applicant to compare the costs per kilowatt and the operation and maintenance cost per kilowatt with the applicant's similar facilities and explain any substantial differences. AMP-Ohio and AWEA reason that such information is considered proprietary and has the

potential to put some developers at a competitive advantage or disadvantage. They also assert that it will likely yield little information of use to the Board (AMP-Ohio Initial Comments at 5; AWEA Initial Comments at 10-11). Invenergy recommends that paragraph (B)(1) of Rule 4906-17-06 be significantly reduced to merely require the applicant to submit the developer's estimated capital cost for the project and to delete, in their entirety, paragraphs (B)(2) and (B)(3) (Invenergy Initial Comments at 10-12). JWGL would also delete paragraphs (B)(2) and (B)(3) (JWGL Initial Comments at 8, Appendix at 8-9).

- (101) As previously discussed, where the applicant asserts that requested information is confidential or proprietary, the applicant may file a motion for protective treatment. However, the Board uses such information for internal evaluation purposes and, therefore, will not delete the proposed provisions of Paragraph (B) as the commenters requested.
- (102) AWEA and Great Lakes propose that a new provision be added at paragraphs (B)(4) and (C)(4) to accommodate a request for protective treatment. The new provisions would read: "An applicant who claims the information required in this subpart is a trade secret may provide an affidavit showing that the information meets the criteria set forth in Section 1333.61(D), Revised Code, and if trade secret status can be shown, the information may be filed under seal with the Board" (AWEA Initial Comments at 10-11; Great Lakes Initial Comments at 11).
- (103) The Board finds that an amendment of the proposed rules to specifically include, within Rule 4906-17-06, a section to address trade secret information is unnecessary. Like other Board proceedings, applicants for a certificate for wind facilities should follow the procedures set forth at Rule 4906-7-07(H) to request protective treatment of the financial information filed. Accordingly, paragraphs (B) and (C) of Rule 4906-17-06 shall be adopted as proposed by the Staff with minor modifications by the Board and attached herein.

Rule 4906-17-07, Environmental data.

Paragraph (A)

- (104) Great Lakes argues that portions of the information requested in proposed Rules 4906-17-07 and 4906-17-08, is not applicable

to off-shore wind-energy projects and recommends that paragraph (A) be amended to recognize that much of the data requested in this rule is not applicable for wind facilities located off-shore and to direct applicants for off-shore wind-energy facilities to state such in their application (Great Lakes Initial Comments at 12).

- (105) An applicant may state that any particular provision of the rules in Chapter 4906-17 is not applicable and provide an explanation as to why, in accordance with the directives of Rule 4906-17-02(D). Thus, the Board finds this proposed amendment to Rules 4906-17-07 and 4906-17-08 to be unnecessary.

Paragraphs (B), (C) and (D)

- (106) Proposed paragraphs (B), (C), and (D) of Rule 4906-17-07 request information regarding air emissions, water, and solid waste concerning both the preconstruction and construction phases. AMP-Ohio and, to some extent Invenergy, argue that all references to the operation of the proposed wind facility should be deleted, as these issues are not applicable to the operation of a facility that has no air emissions, uses no water, and creates no solid waste (AMP-Ohio Initial Comments at 5; Invenergy Initial Comments at 12-15). Similarly, B&B, BQ, FPL Energy and the Farm Bureau also argue that, other than during construction, a provision for air quality seems to be superfluous for a wind (B&B Initial Comments at 2, 14-15; BQ Initial Comments at 4; FPL Energy Initial Comments at 4; Farm Bureau Initial Comments at 3). Invenergy proposes that all the requirements under paragraph (B) of Rule 4906-17-07 be deleted (Invenergy Initial Comments at 12-15).
- (107) The commenters are reminded, as B&B acknowledges, that these provisions relate to the construction of the wind-powered electric generation facility as well as the initial operation of the facility. Accordingly, it is necessary that certification requirements address air, water, and solid waste issues even if the applicant expects such to be minimal. The Board further notes that these requirements must be addressed as part of the Board's determination of the proposed project's impact on the environment, in accordance with Sections 4906.10(A)(3), (4) and (5), Revised Code.

Paragraph (C)

- (108) Audubon Ohio suggests that Rule 4906-17-07(C)(3)(a), which requires the applicant to describe the schedule for receipt of the National Pollution Discharge Elimination System (NPDES) permit, should be amended to include a reference to the U.S. Army Corp of Engineers 401/402 permit (Audubon Initial Comments at 3).
- (109) The Board clarifies that Rule 4906-17-07(C)(1)(a) requires the applicant to provide a list of all permits required to install and operate the proposed wind-energy facility. As such, the Board expects such list to include the U. S. Army Corp of Engineers 401/402 permit, if appropriate.
- (110) FPL Energy argues that paragraph (C), regarding a wind-energy facility's effect on water, is largely inapplicable given that a wind-powered electric generation facility does not involve large withdrawals or discharges of water like fossil-fuel fired facilities. FPL Energy is also of the opinion that any water quality or erosion control concerns will be addressed in accordance with the NPDES permit and, therefore, recommends that Rule 4906-17-07(C)(3)(a) be reduced to a statement requiring a list of any and all water permits that are necessary and, if known, the schedule for obtaining such permits (FPL Energy Initial Comments at 4). BQ proposes that paragraphs (C)(1)(b), (C)(2)(a) and (C)(3)(a), (C)(3)(b), and (C)(3)(c) be deleted as, in BQ's opinion, these paragraphs are applicable to projects that use or process water, not wind-energy facilities (BQ Initial Comments at 4-5). Invenergy proposes that paragraphs (C)(1)(b), (C)(2)(a)-(c), and (C)(3)(b)-(c) be deleted (Invenergy Initial Comments at 13-14). B&B contends that the applicant should not be required to conduct an analysis of the effects of the operation of the wind-energy facility on water and water-borne waste or to describe how the facility will incorporate water conservation practices, as proposed in paragraphs (C)(3)(b) and (C)(3)(c) (B&B Initial Comments at 15-16).
- (111) Despite the industry commenters' assertion that the information requested as a part of Rule 4906-17-07(C) is not applicable to wind-powered electric generation projects, the Board notes, as previously stated, that these requirements must be addressed as part of the Board's determination of the proposed wind-energy facility's impact on the environment, in

accordance with Sections 4906.10(A)(3), (A)(5), and (A)(8), Revised Code. Therefore, the requirements will not be deleted.

Rule 4906-17-08, Social and ecological data.

Paragraph (A)

- (112) As proposed by Staff, Rule 4906-17-08(A)(1), requires the applicant to provide demographic information as to existing and ten-year projected population estimates for communities within five miles of the proposed project area site. FPL Energy argues that it is unclear why the demographic information is necessary. FPL Energy reasons that, unlike fossil-fired generating facilities, there is not a need to understand that there is a nearby population that, under catastrophic circumstances, may be exposed to hazardous materials (FPL Energy Initial Comments at 4). JWGL adds that such information, if available, is highly subjective and subject to significant change (JWGL Initial Comments at 9). Further, FPL Energy posits that wind-powered electric generation facilities do not use or store large quantities of hazardous materials and, therefore, that public safety is not an issue. Thus, FPL Energy and JWGL believe that this provision should be deleted (FPL Energy Initial Comments at 4; JWGL Initial Comments at 9, Appendix at 12). UNU strongly disagrees with FPL Energy's suggestions regarding this provision. UNU asserts that FPL Energy's comments completely overlook the relevance of such data in evaluating wind farm impacts such as noise, shadow flicker, and aesthetics (UNU Reply Comments at 13).
- (113) The Board and Board Staff use the information required in proposed Rule 4906-17-08(A)(1) to evaluate the proposed facility's impact on the surrounding community, in the same manner that the Board evaluates other types of proposed generation facilities. We do not agree with the commenters' assertions, that wind-powered electric generation facilities do not poses the same type of risk to the community, to be sufficient reason to delete the requirement in Rule 4906-17-08(A).
- (114) As proposed, paragraph (A)(2)(a) of Rule 4906-17-08 directs the applicant to describe the noise level of construction activities at the nearest property boundary. JWGL asserts that the impact of construction noise is not the same for wind farms as for large fossil fuel or nuclear generating facilities and that the

construction activities are temporary and do not generate extraordinary noise levels. Further, JWGL states that other regulatory programs, such as Occupational Safety and Health Administration (OSHA) regulations, local noise ordinances, and nuisance concepts, are sufficient to monitor and regulate noise levels during construction (JWGL Initial Comments at 2).

- (115) While the Board recognizes that construction activities are temporary, the construction noise levels and the impact of construction on the surrounding community are part of the Board's evaluation of the nature of probable environmental impact and public interest convenience and necessity, in accordance with Sections 4906.10(A)(2) and (A)(6), Revised Code.
- (116) E-Coustic proposes that the Board implement specific objective criteria for noise that reflect land-use compatibility, protect the public health, and encourage wind-energy facility developers to locate in locations that do not expose the public to unnecessary annoyance, potential health risks, and loss of economic value of affected properties. For these reasons, E-Coustic recommends the current best practice guidelines for siting wind-energy facilities in rural or wilderness areas, issued by International Organization for Standardization (IOS), the International Electrotechnical Commission (IEC), and the American National Standards Institute (ANSI) Acoustical Standards.⁵ Further, E-Coustic recommends that the rules include a provision prohibiting noise pollution. More specifically, E-Coustic recommends that the Board include a provision that prohibits the emission of sound that unreasonably interferes with the enjoyment of life or with any lawful business or activity or exposes the host community or its citizens to potential health risks (E-Coustic Initial Comments at 1-2). In its reply comments, Buckeye argues that the proposal of E-Coustic for wind turbine noise restrictions, if implemented, would significantly restrict the development of wind turbines in most if not all counties in Ohio. Buckeye bases its reply arguments on a letter from David Hessler, P.E. of Hessler Associates, which includes a discussion of the methodologies proposed by E-Coustic. Buckeye asserts that codification of specific quantitative standards would be of

⁵ See George W. Kamperman and Richard R. James, *Simple Guidelines for Siting Wind Turbines to Prevent Health Risks*, written for the Institute of Noise Control Engineers (2008). We note that Mr. James is a principal in E-Coustic Solutions and the author of the comments filed on behalf of E-Coustic.

questionable utility and could serve to unduly restrict wind turbine development (Buckeye Reply Comments at 2). UNU asserts that mitigating the impacts of wind turbine noise on adjacent nonparticipating landowners is an issue of utmost importance, both for the successful implementation of wind power facilities in Ohio and for the protection of surrounding residences, businesses, and property values. UNU further asserts that there must be clear, objective, protective, and enforceable noise standards to guide the siting of wind turbines and to govern their subsequent operation (UNU Initial Comments at 11). UNU opines that it appears that the Staff's and Board's intent is to make *ad hoc* determinations regarding permissible noise levels and necessary mitigation in the context of each wind power certification proceeding, without the support of regulatory noise standards. UNU argues that such an approach is not in the public interest for two reasons. First, basing decision making solely on manufacturers' specifications will impermissibly delegate the Board's statutory duties to the wind industry. Second, without noise standards, the Board will have no basis to include operational noise limits in wind power certificates or to enforce such limits post-construction. UNU asserts that each wind facility certificate should include enforceable restrictions on wind turbine noise during facility operation. UNU opines that such operational conditions are well within the Board's authority under Section 4906.04, Revised Code. But, in UNU's opinion, the Board may be constrained in its ability to impose those operational conditions without regulatory standards in place, particularly in cases where manufacturer specifications and similar guidelines do not sufficiently address operational noise levels. UNU urges the Board to include noise standards and measurement protocols in its rules (UNU Initial Comments at 11-13, and Exs. A, B at 6-9, and C).

- (117) The Board and Board Staff shall evaluate the noise levels in association with each application on a case-by-case basis in light of the composition of the area surrounding the proposed facility and will impose conditions on the noise emissions during construction and operation of the wind-energy facility as the Board determines to be appropriate. Such conditions are enforceable pursuant to Section 4906.98, Revised Code. Accordingly, we find it unnecessary to impose noise standards as proposed by E-Coustic or to adopt operational noise standards and measurement protocols as proposed by UNU.

- (118) Invenergy proposes that noise levels and potential shadows be evaluated at the most sensitive receptors, such as off-site residences. In Invenergy's opinion, the residences located on the site are by definition owned by individuals willingly participating in the project and, therefore, the noise regulations should focus on off-site residences (Invenergy Initial Comments at 15).
- (119) The Board acknowledges that landowners participating in the project may, by contract, waive certain requirements associated with the siting of wind-powered electric generation facilities; it remains, however, the Board's obligation, as the statutory agency designated such siting authority by the legislature, to require such information as part of the siting application process. Accordingly, the Board will not simply ignore participating landowners in the wind-energy facility siting process.
- (120) Paragraph (A)(2)(b) requires the applicant to evaluate and describe the operational noise levels expected at the nearest property boundary, both day and night and, under paragraph (A)(2)(d), to describe the equipment and procedures to mitigate the effects of noise from the proposed facility during construction and operation. Buckeye argues that placing restrictions on turbine siting based on noise levels at property boundaries can have a significant impact on the feasibility of the facility. Further, the commenter contends that evaluating noise levels at property boundaries does not give a meaningful description of the potential noise impacts in the community as wind turbines generate low levels of noise and potential impact should be evaluated relative to the likely presence of people. Thus, Buckeye asserts that noise levels be evaluated at any adjacent residential structure (Buckeye Initial Comments at 9-10).
- (121) The Board disagrees. It is imperative that the noise level be evaluated at the boundary of the project site.
- (122) Rule 4906-17-08(A)(2)(b) directs the applicant to use generally-accepted computer modeling software or similar methodology, including consideration of broadband, tonal, and low-frequency noise levels, to evaluate operation noise levels. Buckeye asserts that generally accepted methodology does not consider tonal noise other than in qualitative terms, nor do these generally accepted methodologies consider low

frequency noise levels because low frequency noise levels from wind turbines are too low to result in adverse impacts and may be no higher than pre-existing background levels. Accordingly, Buckeye proposes that proposed Rule 4906-17-08(A)(2)(b) be modified to require an applicant to evaluate and describe the operational noise levels expected at the adjacent residential structures. The applicant, according to Buckeye, should use generally-accepted computer modeling software or similar methodology (Buckeye Initial Comments at 9-10).

- (123) The Board finds that it is necessary for the applicant to provide the information required by Rule 4906-17-08(A)(2)(b) in order to fully evaluate the proposed project. This rule has been clarified with respect to the data to be provided concerning the operational noise levels of the proposed wind-energy facility. Further, the Board understands that there are various computer software programs that may be used to evaluate ambient noise levels. Paragraph (A)(2)(b) of this rule has been revised to indicate that applicants shall use noise modeling software specifically developed to estimate the noise levels for wind-powered electricity-generating turbines, in order to properly evaluate the operational noise levels.
- (124) UNU first asserts that evaluation of operational noise levels should not be limited to the nearest property boundary, but should be addressed at every surrounding property where noise levels may exceed noise standards, which UNU requests that the Board adopt. UNU also asserts that the cumulative noise of multiple turbines may result in higher noise levels at a more distant property, while a property located nearer to a single turbine may have lower noise levels. Further, UNU asserts that the term "nearest property boundary" is vague because it does not indicate a reference point for comparison, such as nearest to a turbine, nearest to the project boundary, or nearest to the facility boundary (UNU Initial Comments at 13).
- (125) The Board notes that noise concerns are addressed through Rule 4906-17-08(A)(2)(b), which directs the applicant to use computer modeling software developed for wind turbine noise measurement or similar wind turbine noise methodology, including consideration of broadband, tonal, and low-frequency noise levels to evaluate operation noise levels. This data will then be provided to the Board Staff, so that Staff may fully evaluate the proposed wind-energy facility. Also, this rule has been clarified with respect to the data to be provided

concerning the operational noise levels of the proposed wind-energy facility, under both day- and night-time operations. Accordingly, the Board finds that Rule 4906-17-08(A)(2)(b) shall be adopted as modified by the Board and attached herein.

- (126) Rule 4906-17-08(A)(2)(c), as proposed, provides that the applicant must indicate the location of any noise-sensitive areas within one mile of the proposed wind-energy facility. FWS and Buckeye note that the term "noise-sensitive areas" is not defined. AMP-Ohio asks the Board to clarify what is meant by the term "noise-sensitive area" in paragraph (A)(2)(c) (AMP-Ohio Initial Comments at 5). FWS asks whether noise-sensitive areas include natural areas such as parks or wildlife preserves (FWS Initial Comments at 1). Buckeye proposes that the term noise-sensitive area is not defined and could be interpreted very broadly. Accordingly, Buckeye recommends that the rule be revised to require the applicant to indicate the location of any occupied building within one mile of the proposed facility and to define "occupied building," as a residence, school, hospital, church, public library, or other building used for public gathering that is occupied or in use when the certification application is submitted (Buckeye Initial Comments at 10).
- (127) The Board clarifies that it considers noise-sensitive areas to include, but not be limited to, areas such as residential structures, schools, hospitals, nursing homes or assisted-living and health-care facilities, religious institutions, and public libraries; but does not find it necessary to revise paragraph (A)(2)(c) of this rule. Accordingly, the Board finds that Rule 4906-17-08(A)(2)(c) shall be adopted as proposed by Staff and attached herein.
- (128) Rule 4906-17-08(A)(2)(d), (A)(4), (A)(5), and (A)(6) direct the applicant to describe its equipment and procedures to mitigate noise emissions, and to evaluate and describe the potential impact of ice throw, blade shear, and shadow flicker. Buckeye proposes that the above-noted sections be revised to allow the Board to consider the impact of these issues, if any, on the affected property owner relative to the project's benefit to the community as a whole, including, but not limited to, economic benefits and emission reductions (Buckeye Initial Comments at 9).

- (129) Buckeye's proposed revisions, in essence, would have the Board consider the effects on adjacent property owners to be mitigated by the overall benefits to the community. Because that criterion is not part of the statutory certificate analysis under Section 4906.10, Revised Code, the Board will not adopt such provision. We note, however, that the proposed project's benefit to the community will be considered as an aspect of the Board's determination of whether the wind-energy facility serves the public interest, in accordance with Section 4906.10(A)(6), Revised Code. The Board recognizes that ice throw and shadow flicker are temporary possibilities, depending on the time of year, and that blade shear is an infrequent occurrence.
- (130) As proposed by Staff, Rule 4906-17-08(A)(4) reads: "Ice Throw. The applicant shall evaluate and describe the potential impact from ice throw at the nearest property boundary, including its plans to minimize potential impacts if warranted." FPL Energy asserts that wind-energy projects are linear in nature and typically cross numerous property lines. Thus, FPL Energy requests that this provision be amended to state: "The applicant shall evaluate and describe the potential impact from ice throw at the nearest property boundary of a non-participating landowner, including its plans to minimize potential impacts, if warranted." Further, FPL Energy proposes a similar revision in association with blade shear at Rule 4906-17-08(A)(5) (FPL Energy Initial Comments at 5).
- (131) As the Board previously explained with respect to participating landowners, landowners participating in the project may, by contract, waive certain requirements associated with the siting of wind-powered electric generation facilities; it remains, however, the Board's obligation to require such information as part of the siting application process. Accordingly, the Board will not amend Rule 4906-17-08 as proposed by FPL Energy to avoid evaluation of the required information on the property of participating landowners.
- (132) Staff proposes at Rule 4906-17-08(A)(6) that an applicant shall evaluate and describe the potential impact from shadow flicker at the adjacent residential structures and primary roads, including the applicant's plans to minimize potential impacts if warranted. FPL Energy contends that any potential impacts of shadow flicker are temporary in nature, and that while the impacts to residents in their primary residence should be

evaluated, the term "adjacent residential structures" is too broad. The commenter asserts that as proposed such term could be virtually any structure irrespective of habitability or occupation. Thus, FPL Energy proposes that this provision be amended to require the applicant to evaluate and describe shadow flicker at the nearest structure that is occupied and serves as the primary residence, and that the Board omit any reference to primary roads (FPL Energy Initial Comments at 5).

- (133) The Board finds it inappropriate to distinguish between primary residences and secondary or vacation homes. Further, shadow flicker on primary roads, among other things, is part of the Board's consideration of the proposed wind-energy facility's effect on the traffic and of its social impacts on the surrounding community. Thus, the Board will not revise the rule as proposed by FPL Energy.

Paragraph (B)

- (134) As proposed, Rule 4906-17-08(B)(1)(a)(i), requires the applicant to show, on a map or maps of 1:24,000 scale, the facility boundary, in addition to other information. The Farm Bureau suggests that the Board revise this subsection to clarify that "facility" means the entire wind farm and not each individual turbine or structure. The Farm Bureau also notes that the location of each turbine is required pursuant to proposed Rule 4906-17-08(C)(1)(c)(i)-(iii) (Farm Bureau Initial Comments at 4).
- (135) The Farm Bureau is correct in its interpretation of proposed Rule 4906-17-08 at paragraphs (B) and (C). The Board, in an attempt to clarify the terms "facility," "project area" and "site" throughout Chapter 4906-17, has revised these terms to make their use more consistent with the Board's intent.
- (136) Rule 4906-17-08(B)(1)(b) and (B)(1)(c), direct the applicant to provide the results of a survey of the vegetation and animal life within the site boundaries and within a quarter mile of the site perimeter. B&B and Buckeye request that the scope of the surveys be reduced or better defined (B&B Initial Comments at 19; Buckeye Reply Comments at 8). FPL Energy reasons that such information may already be available from reliable sources and, therefore, urges the Board to broaden the scope to allow applicants to provide information concerning the vegetation and animal life rather than to require the applicant to conduct a survey (FPL Energy Initial Comments at 5).

Further, JWGL reasons that the information requested should be limited to threatened or endangered species of plants or animals, pursuant to Ohio or Federal law, and should be limited to a 1,000-foot zone, as with other generation facilities (JWGL Initial Comments at 9-10).

- (137) The Board notes that a quarter of a mile is approximately 1,320 feet, which is approximately one-third further than the distance proposed by JWGL. Nonetheless, the Board believes the survey perimeter proposed by Staff to be reasonable. Further, if as FPL Energy asserts, the results of a recent survey on vegetation and animal life in the area is available from reliable sources, the applicant may apply for a waiver of the requirement to conduct a survey. Accordingly, Rule 4906-17-08(B)(1)(b) and (B)(1)(c), shall be adopted as modified by the Board and attached herein.
- (138) FWS suggests that paragraph (B)(2)(c) of Rule 4906-17-08 be reworded to focus on not only minimizing and mitigating ecological impacts but also avoiding such impacts, particularly to federally-listed threatened and endangered species (FWS Initial Comments at 1).
- (139) The Board agrees with FWS's suggestion and Rule 4906-17-08(B)(2)(c), has been amended accordingly.

Paragraph (C)

- (140) UNU asserts that the map to be provided pursuant to proposed Rule 4906-17-08(C)(1)(a) should include lands covered under the USDA Conservation Reserve Program (CRP), Conservation Reserve Enhancement Program (CREP), and Wetland Reserve Program (WRP), and that the rule should also specify the inclusion of both private and public recreation areas (UNU Initial Comments at 15).
- (141) The Board notes that the map(s) to be provided in accordance with Rule 4906-17-08(B)(1)(a)(iii) will indicate the location of wildlife areas, nature preserves and other conservation areas. Accordingly, the Board finds no further amendment to Rule 4906-17-08(C)(1)(a), as proposed by UNU, is appropriate.
- (142) As proposed, Rule 4906-17-08(C)(1)(b) directs the applicant to provide the number of residential structures within 1,000 feet of the boundary of the proposed facility and to identify all residential structures for which the nearest edge of the

structure is within 100 feet of the boundary of the proposed facility. FPL Energy suggests that this rule be revised to require the number of occupied residential structures that are located on a non-participating landowner's property. The commenter further notes that, "facility" has not been defined, and opines that, if "facility" is intended to have the same meaning as "project boundary," such information is addressed in the previous provision. Further, FPL Energy reasons that, if the term "facility" is in reference to any individual wind turbine, the answer would be zero based on the setback restrictions proposed in Rule 4906-17-08(C)(1)(c)(ii) (FPL Energy Initial Comments at 5-6). With respect to this provision, UNU does not understand the rationale for identifying all residential structures within 100 feet of the proposed facility, since those locations would be closer than even the minimum setbacks prescribed in Section 4906.20, Revised Code (UNU Initial Comments at 15).

- (143) The Board notes that "facility" is defined at Rule 4906-17-02(B)(2) and that the term includes not only the turbines, but collection lines, associated substations and all other associated equipment. Under this definition, a residential structure can be in compliance with the minimum setback from the turbine and yet be within much closer proximity to collection lines, an access road or other associated facility equipment. For that reason, the Board finds it inappropriate to revise Rule 4906-17-08(C)(1)(b) as proposed by the commenters.
- (144) UNU asserts that it cannot envision any circumstances under which these minimum statutory setbacks will adequately protect public health and welfare. UNU further asserts the importance of establishing conservative and adequately-protective standards in the rules to mitigate the effects of noise and shadow flicker and the potential risks of blade shear and ice throw. UNU also asserts that these standards should be listed as additional siting criteria for purposes of this rule. Next, UNU asserts that the siting criteria for this provision should be no less stringent than any specifications, recommendations, and practices of the applicable turbine manufacturer, project developer, and turnkey installer (if any) relating to the mitigation of potential health, safety, and nuisance effects, or other impacts of wind turbines (UNU Initial Comments at 15-16). Further, with respect to setbacks, UNU asserts that it is critical that any setbacks, for the purpose of mitigating wind facility impacts, be established with

reference to the boundaries of the property to be affected, not with reference to any residence located on such property. UNU opines that, to allow otherwise, would permit the devaluation of vast areas of surrounding property whose best uses may be impaired by the effects of the wind turbine project. UNU urges the Board to require mitigation of all project impacts at the facility boundary, not at the site of the existing residential receptors (UNU Initial Comments at 16).

- (145) The Board finds that Rule 4906-17-08(C)(1)(c), is consistent with the statutory language regarding minimum setbacks set forth in Section 4906.20(B)(2), Revised Code. Further, the Board and Board Staff will evaluate setbacks in association with each application on a case-by-case basis, in light of the specific wind-powered electric generation equipment selected for the proposed facility and impose conditions for setbacks as the Board determines to be appropriate. Accordingly, the Board finds this proposal to be inappropriate.
- (146) In regards to Rule 4906-17-08(C)(1)(c)(i), Buckeye proposes revising this provision to state: the distance from the 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 the tower's base (excluding the subsurface foundation) to the tip of its highest blade. Buckeye asserts that this change will ensure consistency on this measurement, as well as to be consistent with proposed Rule 4906-17-03(A)(2) (Buckeye Initial Comments at 10-11).
- (147) The Board finds this amendment to be appropriate for the reasons stated by Buckeye and with our adoption of the language in Rule 4906-17-03(A)(2). Therefore, the Board has amended the language of Rule 4906-17-08(C)(1)(c)(i) to be consistent.
- (148) Much of the correspondence from property owners particularly those property owners, in Logan and Champaign counties, addressed the issue of setbacks. Many of the interested stakeholders filing correspondence request that the setback be measured from the property line rather than the nearest habitable residential structure, as proposed at Rule 4906-17-08(C)(1)(c)(ii). Many individual stakeholders that filed correspondence in this case argue that measuring the setback from the nearest habitable residential structure will have the effect of limiting the use of their property. Buckeye replies that

the residential setback for economically significant wind farms (5-50 megawatts) is dictated by statute and any other interpretation is in violation of the statute (Buckeye Reply Comments at 5.6).

- (149) Urbana Country Club asserts that all setbacks must be determined from property lines and not on the basis of distance from residential structures, as there may not be a residential structure from which to measure. Urbana Country Club is concerned about the potential for economic injury to its business, interference with the game of golf, or the wind turbines creating a hazardous situation. Urbana Country Club also asserts that it has requested a "buffer" surrounding its property, but feels that its concerns have been disregarded, because adjoining property owners have been contacted concerning land lease arrangements for wind turbines. Urbana Country Club further asserts that developers must be required, through the administrative rules, to acknowledge recreational facilities as legitimate constraints on development (Urbana Country Club Initial Comments at 1-2).
- (150) As discussed above, the Board and Board Staff will evaluate setbacks in association with each application on a case-by-case basis, in light of the specific wind-powered electric generation equipment selected for the proposed facility and impose conditions for setbacks as the Board determines to be appropriate. Accordingly, the Board adopts the language as proposed by Staff, with modifications, for paragraphs (C)(1)(c)(ii) and (C)(1)(c)(iii) of Rule 4906-17-08.
- (151) Pursuant to proposed Rule 4906-17-08(C)(1)(e), applicants must identify structures that will be removed or relocated. FPL Energy posits that the term "structures" is not defined and is sufficiently vague as to not be understandable. Thus, the commenter asks that the provision be clarified (FPL Energy Initial Comments at 6).
- (152) The Board interprets the term "structure" to include, but is not limited to, residences, barns, dog houses, garages, and tool sheds.
- (153) As proposed, Rule 4906-17-08(C)(4) addresses the impact of the proposed facility on regional development, including housing, transportation, and commercial and industrial development in the project site community. FPL Energy asserts that such

information is excessive and outside the usual information requested for a wind-energy project, as the impact to housing, transportation and other concerns is very minimal. Further, FPL Energy asserts that once the wind-energy project is completed, it will generally employ approximately five people from the community. For these reasons, the commenter suggests that paragraph (C)(4) be omitted (FPL Energy Initial Comments at 6).

- (154) While FPL Energy believes that a wind-energy project's impact on regional development will be minimal, the Board must request such information of each applicant for consideration as part of the Board's evaluation of the impact of the proposed wind-energy facility on the public interest, convenience and necessity pursuant to Section 4906.10(A)(6), Revised Code.

Paragraph (D)

- (155) Staff proposes that applicants for wind-powered electric generation facility certificates provide certain information regarding the cultural impacts of the proposed project. Among the information requested is a map (or maps) of 1:24,000 scale depicting registered landmarks of historic, religious, archaeological, scenic, natural, or other cultural significance within five miles of the facility and an explanation of the estimated impact of the project on the preservation of such landmarks. JWGL contends that Section 4906.20, Revised Code, does not reference cultural impacts and, therefore, JWGL questions the Board's authority to require such information. Nonetheless, JWGL also contends that provisions (D)(2) and (D)(6), regarding the impact of the proposed facility on landmarks, are so subjective as to be meaningless. JWGL asserts that such information is adequately addressed in other parts of the rules (JWGL Initial Comments at 10).
- (156) The Council recommends that certain amendments be made to Rule 4906-17-08 at paragraphs (D)(1) through (D)(3). First, the Council recommends that the term "preservation and continued meaningfulness" in paragraphs (D)(2) be clarified. The Council also proposes that paragraphs (D)(1) and (D)(3) be amended to also include landmarks that are inventoried, in addition to registered or identified, and to include the National Register of Historic Places, the State Registry of Archaeological or Historic Landmarks, and local government (Council Initial Comments at 1-2).

- (157) The Board has a long-standing working relationship with the State Historic Preservation Office as it pertains to cultural resources. We further note that the Ohio Historical Society's historic preservation office maintains the Ohio Archaeological Inventory from which information can be drawn for evaluation of siting applications. Therefore, the Board finds that the Council's concerns are addressed without making the proposed modifications to the rules.
- (158) FPL Energy asserts that the location of such cultural resources is not for public distribution and is regarded as confidential to protect the resources; therefore, paragraphs (D)(1), (D)(2), and (D)(3) should be deleted (FPL Energy Initial Comments at 6).
- (159) The Board finds that it is inappropriate to delete proposed paragraphs (D)(1), (D)(2), and (D)(3) as requested by FPL Energy. The Board will impose, as a condition of approval of the certificate to construct the proposed facility, conditions to protect and preserve culturally significant lands, items, and structures, as necessary. If advised by authorities such as the Ohio Historical Society and/or the State Historic Preservation Office that it is necessary to protect such resources by preventing the disclosure of the location of such resources, the Board, Board Staff, and the applicant will act accordingly. However, the Board finds such information essential to the application process. The applicant can file a motion for protective treatment of such information.

Paragraph (E)

- (160) As proposed, Rule 4906-17-08(E)(2) would require an applicant to describe any insurance or other corporate programs for liability compensation for damages to the public resulting from the construction or operation of the proposed wind-powered electric generation facility. JWGL states that this should be limited to proposed insurance coverage programs only or the applicant should have the discretion to devise public corporate programs or philosophy (JWGL Initial Comments at 10). FPL Energy argues that the insurance and/or liability programs are part of normal corporate business operations and, therefore, should not be disclosed as each entity performing work will carry sufficient insurance to cover any potential liability (FPL Energy Initial Comments at 7).

- (161) Despite FPL Energy's assertions that each developer and/or installer will have sufficient insurance to cover any potential liability, it is the Board's obligation to confirm that the applicant is viable and has sufficient insurance coverage. The Board finds this duty to be a part of its consideration of whether the wind-energy facility will serve the public interest, convenience, and necessity in accordance with Section 4906.10(A)(6), Revised Code. Therefore, the proposed modification will not be made.

Paragraph (F)

- (162) Rule 4906-17-08(F) requests that the applicant identify and provide certain information as to agricultural district and agricultural land impacts. FPL Energy asserts that the information required by proposed Rule 4906-17-08(F)(3) is adequately addressed in Rule 4906-17-08(F)(2)(A), so paragraph (F)(3) should be deleted (FPL Energy Initial Comments at 7). On the other hand, JWGL argues that the information requested as a part of Rule 4906-17-08(F) is unreasonably burdensome and that detailed property protection issues should be left to the applicant and involved land owners (JWGL Initial Comments at 10).
- (163) The Board finds that all the proposed provisions of Rule 4906-17-08(F) are appropriate and necessary to the Board's evaluation of the proposed wind-powered electric generation facility's impact on agricultural and agricultural district land, as required by Section 4906.10(A)(8), Revised Code. We note that the applicant is directed to evaluate a broader spectrum of associated impacts in proposed Rule 4906-17-08(F)(3) than is required in proposed Rule 4906-17-08(F)(2). For these reasons, the Board finds it inappropriate to delete any portion of proposed paragraph (F) of Rule 4906-17-08. Paragraph (F) of Rule 4906-17-08 shall be adopted as modified by the Board and attached herein.

Other concerns

- (164) UNU raises the concern that some commercial wind farms are now being operated from remote locations, far from the site of the wind farms themselves. UNU asserts that understanding the extent to which the facility operator will be physically present at the wind farm will help the Board to assess the potential for adverse environmental impacts and issues

relating to public interest and convenience. Therefore, UNU recommends that, in an appropriate provision of the proposed rules, the Board consider requiring the applicant to specify where the facility operation center will be located (UNU Initial Comments at 10).

- (165) The Board recognizes that property owners who have a turbine on their property and the applicant or operator of the wind facility must be able to address operational and maintenance issues in a timely manner. The Board and Board Staff will consider whether there is adequate employee presence at a proposed wind facility as one of the issues to be addressed by Board and Board Staff, as a condition of approval to construct, operate, and maintain a wind facility.
- (166) UNU recommends that, in order to assist the Board in evaluating whether the project will serve the public, interest, convenience and necessity, the wind turbine siting rules should require the applicant to submit sufficient information to demonstrate the viability of the proposed facility. UNU asserts that the rules should specify that this data should include actual measurements of wind resources at the location of the proposed facility. UNU further recommends that the Board establish sufficient criteria for such measurements (such as elevations and duration of measurements) to ensure their reliability and probative value (UNU Initial Comments at 17).
- (167) The Board notes that, pursuant to Section 4906.10(A)(1), Revised Code, the basis of need for an electric generation facility, including a wind-powered electric generation facility, is presumed. Further, the Board evaluates the financial viability of the applicant and, indirectly, the proposed facility based on the information requested in accordance with Chapter 4906-17 and data requests served on the applicant by Board Staff. We do not interpret any aspect of HB 562 and the associated amendments to the Revised Code to require the Board to further evaluate the need for or viability of a proposed wind facility. Thus, the Board denies UNU's request to further revise Chapter 4906-17.
- (168) UNU asserts that central Ohio is an active area for lightning strikes. UNU further asserts that lightning striking a wind turbine can cause cracking or other damage to blades, which may cause catastrophic failure. Therefore, UNU recommends that the Board require the applicant to include information in

the application concerning the potential for lightning strikes and proposed measures for mitigation of lightning risks (UNU Initial Comments at 17, and Ex. E).

- (169) The Board recognizes UNU's concerns regarding the damage that lightning might cause to a wind-energy facility. The Board notes that, when Staff evaluates a proposed application for a siting certificate, Staff prepares a Staff report which includes conditions specific to the work proposed for the project. In an area that would be prone to lightning, Staff could address lightning-related concerns with the applicant through appropriate conditions on the construction and operation of that facility, which could include mitigation activities. Accordingly, this proposal regarding the application is denied.

ORDER:

It is, therefore,

ORDERED, That the attached rules in Chapter 4906-17, O.A.C., be adopted as attached herein. It is, further,

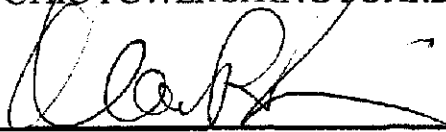
ORDERED, That the attached amendments to the rules contained in Chapters 4906-1, 4906-5, and 4906-7, O.A.C., be adopted. It is, further,

ORDERED, That copies of Chapter 4906-17, O.A.C., and the amended rules in Chapters 4906-1, 4906-5 and 4906-7, O.A.C., be filed with the Joint Committee on Agency Rule Review, the Legislative Services Commission, and the Secretary of State, in accordance with divisions (D) and (E) of Section 111.15, Revised Code. It is, further,

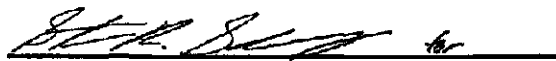
ORDERED, That the five-year review date for Chapter 4906-17, be established as September 30, 2013. It is, further,

ORDERED, That a copy of this order, without the attached rules, be served upon all commenters and all interested persons of record. The rules adopted or amended herein shall be posted on the Board's web site.

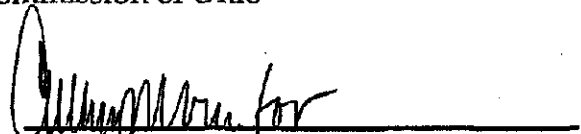
THE OHIO POWER SITING BOARD



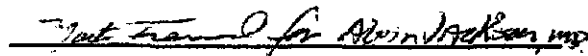
Alan R. Schriber, Chairman of the
Public Utilities Commission of Ohio



Lee Fisher, Board Member
and Director of the Ohio Department
of Development



Sean Logan, Board Member
and Director of the Ohio Department
of Natural Resources



Alvin Jackson M.D., Board Member
and Director of the Ohio Department
of Health



Christopher Kofleski, Board Member and
Director of the Ohio
Environmental Protection Agency

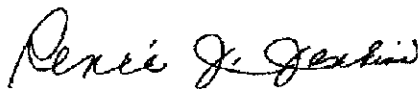


Robert Boggs, Board Member and
Director of the Ohio Department
of Agriculture

GNS/JKS/vrm

Entered in the Journal

OCT 28 2008



Renee J. Jenkins
Secretary

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4906-1-01 Definitions.

As used in Chapters 4906-1 to ~~4906-15~~ 4906-17 of the Administrative Code:

General - applicable to both gas and electric

- (A) "Accepted, complete application" means an application which the chairman or individual designated by the chairman declares in writing to be accepted and in compliance with the content requirements of section 4906.06 of the Revised Code, pursuant to section 4906.07 of the Revised Code and paragraph (C) of rule 4906-5-05 of the Administrative Code.
- (B) "Administrative law judge" means the attorney examiner of the public utilities commission or other representative of the board assigned to a case by the chairman.
- (C) "Agricultural district" means any agricultural district established pursuant to Chapter 929. of the Revised Code.
- (D) "Applicant" means any person filing an application for approval of a major utility facility under Chapter 4906. of the Revised Code.
- (E) "Application" means an application filed with the board under the requirements of ~~rules 4906-11-01, 4906-11-02, 4906-13-01 to 4906-13-07 and 4906-15-01 to 4906-15-07~~ Chapters 4906-11 to 4906-17 of the Administrative Code.
- (F) "Board" means the Ohio power siting board, as established by division (A) of section 4906.02 of the Revised Code.
- (G) "Certificate" means a certificate of environmental compatibility and public need, issued by the board.
- (H) "Chairman" means the chairman of the board as established by division (A) of section 4906.02 of the Revised Code.
- (I) "Commence to construct" has the meaning set forth in division (C) of section 4906.01 of the Revised Code.
- (J) "Construction notice" means a document filed with the board under the requirements of rule 4906-11-02 of the Administrative Code.

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(K) "Letter of notification" means a document filed with the board under the requirements of rule 4906-11-01 of the Administrative Code.

(L) "Major utility facility" means:

(1) An electric power generating plant and associated facilities designed for, or capable of operating at a net capacity of fifty megawatts or more. (Net capacity in this context means the estimated net demonstrated capability of the generating plant and associated facilities. Generally, the generated output at the switchyard busbar after reductions for generated power used and needed for plant operation is equivalent to the net demonstrated capability).

(2) An electric power transmission line and associated facilities.

(3) A gas or natural gas transmission line and associated facilities.

A major utility facility does not include electric power, gas, or natural gas distributing lines and gas or natural gas gathering lines and associated facilities, nor gas or natural gas transmission lines over which an agency of the United States has exclusive jurisdiction.

(M) "Person" means an individual, corporation, business trust, association, estate, trust, or partnership, or any officer, board, commission, department, division, or bureau of the state or a political subdivision of the state, or any other entity.

(N) "Replacement of an existing facility with a like facility" means replacing an existing major utility facility with a major utility facility of equivalent rating and operating characteristics.

(O) "Substantial addition," in the case of an electric power or gas or natural gas transmission line facility already in operation and not operating under a certificate, is any addition or modification of that facility which is listed in the "Application Requirement Matrix" contained in appendix A and appendix B to this rule. Construction necessary to restore service of a transmission line damaged by reason of natural disaster or human-caused accident does not constitute a substantial addition and therefore does not require the filing of a certificate application, letter of notification, or construction notice.

Gas - applicable to gas only

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- (P) "Associated facility" or "associated facilities," where used in Chapters 4906-1 to 4906-15 of the Administrative Code in conjunction with a gas or natural gas transmission line, includes rights-of-way, land, structures, mains, valves, meters, compressors, regulators, tanks and other transmission items, and equipment used for the transmission of gas or natural gas from and to a gas or natural gas transmission line.
- (Q) "Gas or natural gas transmission line" is defined as a gas or natural gas transmission line which is more than nine inches in outside diameter and is designed for, or capable of, transporting gas or natural gas at pressures in excess of one hundred twenty-five pounds per square inch. A gas or natural gas transmission line does not include land, structures, or equipment used to maintain a site or facility for the storage of gas or natural gas, but may include a gas or natural gas transmission line used for purposes of transporting gas or natural gas to or from such a site or facility.

Electric - applicable to electric only

- (R) "Associated facility" or "associated facilities", where used in Chapters 4906-1 to ~~4906-15~~ 4906-17 of the Administrative Code in conjunction with an electric power transmission line, means any line and associated facility of a design capacity of one hundred twenty-five kilovolts or more.
- (1) Where poles or towers support both transmission and distribution conductors, the poles, towers, anchors, guys and rights-of-way shall be classified as transmission while the conductors, crossarms, braces, grounds, tiewires, insulators, etc., shall be classified as transmission or distribution according to the purposes for which they are used.
 - (2) Transmission voltage switching stations and stations which change electricity from one transmission voltage to another transmission voltage shall be classified as transmission stations. Those stations which change electricity from transmission voltage to distribution voltage shall be classified as distribution stations.
 - (3) Rights-of-way, land, structures, breakers, switches, transformers, and other transmission items and equipment used for the transmission of electricity at voltages of one hundred and twenty-five kilovolts or greater shall be classified as transmission related.
- (S) "Electric power transmission line" is defined as an electric power line which has a design capacity of one hundred twenty-five kilovolts or more.

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- (T) "Substantial addition," in the case of an electric power generating plant, is any modification of a utility facility not operating under a certificate, which modification in itself constitutes a major utility facility or wind farm. In general, the following examples apply to this definition:
- (1) Addition of an electric power generating unit of fifty megawatts or greater to an existing plant.
 - (2) Addition of a fifty megawatts or greater electric power generating unit which is designed to operate in conjunction with an existing unit to establish a combined-cycle unit.
 - (3) Addition of an electric power generating unit to an existing plant which is not a major utility facility, with the result that the combined capacity of the new facility is fifty megawatts or greater.
 - (4) Addition of a wind-powered electric generation turbine to an existing wind energy facility, with the result that the combined capacity of the new facility is five megawatts or greater.
- (U) "Wind farm" means an economically significant wind-powered electric generation facility, including wind turbines and associated facilities, with a single interconnection to the electrical grid that is designed for, or capable of, operation at an aggregate capacity of five megawatts or more but less than fifty megawatts. Wind farm does not include any such wind-powered electric generation facility in operation as of June 24, 2008.

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4906-1-03 Waiver of rules.

Where good cause appears, the board or the administrative law judge may permit departure from Chapters 4906-1 to ~~4906-15~~ 4906-17 of the Administrative Code, except where precluded by statute.

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4906-1-05 Extensions or waiver of time limits.

For good cause shown, the board or the administrative law judge may extend or waive any time limit prescribed or allowed by Chapters 4906-1 to ~~4906-15~~ 4906-17 of the Administrative Code, except where precluded by statute. Any request for the extension or waiver of a time limit shall be made by motion.

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4906-1-07 Date of filing, except for applications.

All orders, decisions, findings of fact, correspondence, motions, petitions and any other documents governed by Chapters 4906-1 to ~~4906-15~~ 4906-17 of the Administrative Code, except applications for certificates, shall be deemed to have been filed or received on the date on which they are issued or received by the board at its principal office.

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4906-1-11 Number of copies.

- (A) Except as may otherwise be required by Chapters 4906-1 to ~~4906-15~~ 4906-17 of the Administrative Code or expressly requested by the board, at the time motions, petitions, documents or other papers are filed with the board, there shall be furnished to the board an original of such papers and ten copies.
- (B) When an application for a certificate is submitted to the board, there shall be furnished to the board an original of such application and twenty-five copies.

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4906-1-14 Site visits.

Persons proposing, owning or operating major utility facilities or wind farms should make all reasonable efforts to ensure that, upon prior notification, the board, its representatives, or staff may make visits to proposed or alternative sites or routes of a major utility facility or wind farm or a substantial addition in order to carry out board responsibilities pursuant to Chapter 4906. of the Revised Code.

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4906-5-01 ~~Preapplication~~ Pre-application conference.

An applicant considering construction of a major utility facility or wind farm may request a ~~preapplication~~ pre-application conference with the board staff prior to submitting an application. The results of such conference(s) shall in no way constitute approval or disapproval of a particular site or route, and shall in no way predetermine the board's decision regarding subsequent certification or approval.

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4906-5-03 Form and content of certificate applications.

- (A) In addition to the requirements of Chapter 4906-1 of the Administrative Code, the following conditions apply to certificate applications:
- (1) Each page of the certificate application shall be numbered.
 - (2) Copies of the certificate application shall be submitted in hard-cover, loose-leaf binders labeled with the following information.
 - (a) Name of applicant.
 - (b) Name of the proposed facility or wind farm.
 - (c) Year of submittal of the certificate application.
 - (3) Each certificate application shall be accompanied by a cover letter containing the following information:
 - (a) Name and address of the applicant.
 - (b) Name and location of the proposed facility or wind farm.
 - (c) Name and address of the applicant's authorized representative.
 - (d) An explanation of any information that was presented by the applicant in the ~~preapplication~~ pre-application notification letter that has been revised by the applicant since the issuance of the letter.
 - (e) Notarized statement that the information contained in the certificate application is complete and correct to the best knowledge, information and belief of the applicant.
- (B) The information contained within the certificate application shall conform to the requirements of Chapter 4906-13 ~~or~~, 4906-15, or 4906-17 of the Administrative Code, whichever is applicable, except that a certificate application for a major utility facility which is related to a coal research and development project as defined in section 1555.01 of the Revised Code, or to a coal development project as defined in section 1551.30 of the Revised Code, submitted to the Ohio coal development office for review under division (B)(8) of section 1551.33 of the Revised Code, shall be the full final proposal as accepted by the Ohio coal development office.
- (C) The scale of all maps required by Chapters 4906-13 ~~and~~, 4906-15, and 4906-17 of the Administrative Code may be reduced in a scale not to exceed a factor of four times the required scale provided that the applicant supplies:

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- (1) For staff review, five full-scale copies of all maps required by Chapters 4906-13 ~~and~~ 4906-15, and 4906-17 of the Administrative Code to the board at the time of submitting the certificate application.
- (2) A full-scale copy of all maps required by Chapters 4906-13 ~~and~~ 4906-15, and 4906-17 of the Administrative Code to:
 - (a) All persons referenced in rule 4906-5-06 of the Administrative Code.
 - (b) All persons who shall thereafter become parties to the proceedings.
- (3) All copies of the application that contain reduced-size maps shall also contain information on how to request full-size maps (e.g., name, address, telephone number, e-mail address).
- (D) For purposes of Chapters 4906-13 ~~and~~ 4906-15, and 4906-17 of the Administrative Code, the costs and benefits of the direct and indirect effects of siting decisions shall be expressed in monetary and quantitative terms whenever doing so is practicable. All responses shall be supported by:
 - (1) An indication of the source of data.
 - (2) The assumptions made.
 - (3) The methods of reaching the conclusions.
 - (4) The justification for selection of alternatives.

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4906-5-04 Alternatives in certificate applications.

- (A) All certificate applications for gas and electric power transmission facilities shall include fully developed information on two sites/routes. Applicants for electric power generating facilities (other than a major utility facility which is related to a coal research and development project as defined in section 1555.01 of the Revised Code, or a coal development project as defined in section 1551.30 of the Revised Code, submitted to the Ohio coal development office for review under division (B)(8) of section 1551.33 of the Revised Code) may choose to include fully developed information on two or more sites. Each proposed site/route shall be designated as a preferred or an alternate site/route. Each proposed site/route shall be actual and a viable alternative on which the applicant could construct the proposed facility. Two routes shall be considered as alternatives if not more than twenty per cent of the routes are in common. The percentage in common shall be calculated based on the shorter of the two routes. Certificate applications may include information on additional alternatives, which may include site, route, ~~or~~ major equipment, or other alternatives.
- (B) For good cause shown, the board or the administrative law judge may waive the requirement of fully developed information on the alternative site or route designated as alternate.
- (C) The information contained within the certificate application, including information on alternatives as required by this rule, shall conform to the requirements of Chapters 4906-13 ~~and~~, 4906-15, and 4906-17 of the Administrative Code, where applicable.

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4906-5-05 Completeness of certificate applications and staff investigations and reports.

- (A) Upon receipt of a certificate application for a wind farm or major utility facility which is not related to a coal research and development project as defined in section 1551.01 of the Revised Code, or to a coal development project as defined in section 1551.30 of the Revised Code, submitted to the Ohio coal development office for review under division (B)(8) of section 1551.33 of the Revised Code, the chairman shall examine the certificate application to determine compliance with Chapters 4906-1 to ~~4906-15~~ 4906-17 of the Administrative Code. Within sixty days following receipt, the chairman shall either:
- (1) Accept the certificate application as complete and complying with the content requirements of section 4906.06 of the Revised Code and Chapters 4906-1 to ~~4906-15~~ 4906-17 of the Administrative Code.
 - (2) Reject said certificate application as incomplete, setting forth specific grounds on which the rejection is based. The chairman shall mail a copy of the completeness decision to the applicant.
- (B) Upon receipt of a certificate application for a major utility facility which is related to a coal research and development project as defined in section 1551.01 of the Revised Code, or to a coal development project as defined in section 1551.30 of the Revised Code, submitted to the Ohio coal development office for review under division (B)(8) of section 1551.33 of the Revised Code, the chairman shall promptly accept the certificate application as complete and shall notify the applicant to file the accepted, complete application in accordance with the provisions of rules 4906-5-06 and 4906-5-07 of the Administrative Code.
- (C) Upon accepting a certificate application as complete, the chairman shall promptly notify the applicant to serve and file a certificate of service for the accepted, complete application in accordance with rules 4906-5-06 and 4906-5-07 of the Administrative Code.
- (D) The chairman shall direct the staff to conduct an investigation of each accepted, complete application and to submit a written report as provided by division (C) of section 4906.07 of the Revised Code not less than fifteen days prior to the beginning of public hearings.
- (1) The staff report for a WIND FARM OR major utility facility which is not related to a coal research and development project as defined in

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section 1551.01 of the Revised Code, or to a coal development project as defined in section 1551.30 of the Revised Code, submitted to the Ohio coal development office for review under division (B)(8) of section 1551.33 of the Revised Code, shall set forth the nature of the investigation, and shall contain recommended findings with regard to division (A) of section 4906.10 of the Revised Code and all applicable rules contained in Chapters 4906-1 to ~~4906-15~~ 4906-17 of the Administrative Code.

- (2) The staff report for a major utility facility which is related to a coal research and development project as defined in section 1551.01 of the Revised Code, or to a coal development project as defined in section 1551.30 of the Revised Code, submitted to the Ohio coal development office for review under division (B)(8) of section 1551.33 of the Revised Code, shall set forth the nature of the investigation and shall contain recommended findings with regard to divisions (A)(2), (A)(3), (A)(5), and (A)(7) of section 4906.10 of the Revised Code.
- (3) The staff report shall become part of the record.
- (4) Copies of the staff report shall be served upon the board members, the administrative law judge assigned to the case, the applicant, and all persons who have or shall thereafter become parties to the proceedings. Copies shall be made available to any person upon request.
- (5) The chairman shall cause either a copy of such staff report or a notice of the availability of such staff report to be placed in the main public library of each political subdivision as referenced in division (B) of section 4906.06 of the Revised Code. If a notice is provided, that notice shall state that an electronic or paper copy of the staff report is available from the board staff (with instructions as to how to obtain an electronic or paper copy) and available for inspection at the board's main office. The staff will also maintain on the board's web site information as to how to request an electronic or paper copy of the staff report. Upon request for a paper copy of the staff report, the staff shall supply the report without cost.

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4906-5-06 Service and public distribution of accepted, complete certificate applications.

Upon receipt of notification from the chairman that the certificate application is accepted and in compliance with the content requirements of section 4906.06 of the Revised Code and Chapters 4906-1 to ~~4906-15~~ **4906-17** of the Administrative Code, the applicant shall serve a copy of the accepted, complete application on the chief executive officer of each municipal corporation, ~~and county,~~ township, and the head of each public agency charged with the duty of protecting the environment or of planning land use in the area in which any portion of such facility is to be located. As used in this rule, "any portion" includes site or route alternatives as provided in paragraph (A) of rule 4906-5-04 of the Administrative Code. The applicant shall also either place a copy of the accepted, complete application or place a notice of the availability of such application in the main public library of each political subdivision as referenced in division (B) of 4906.06 of the Revised Code. If a notice is provided, that notice shall state that an electronic or paper copy of the accepted, complete application is available from the applicant (with instructions as to how to obtain an electronic or paper copy), available for inspection at the applicant's main office, available for inspection at the board's main office, and available at any other sites at which the applicant will maintain a copy of the accepted, complete application.

The applicant will also maintain on its web site, if it has a web site, information as to how to request an electronic or paper copy of the accepted, complete application. Upon request for a paper copy of the accepted, complete application, the applicant shall supply the copy within five business days and at no more than cost.

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4906-5-07 Filing of accepted, complete certificate applications.

- (A) Upon receipt of notification from the chairman that the certificate application is accepted and in compliance with the content requirements of section 4906.06 of the revised Code and Chapters 4906-1 to ~~4906-15~~ **4906-17** of the Administrative Code, the applicant shall promptly:
- (1) Supply the board with such additional copies of the accepted, complete application as the board shall require.
 - (2) Supply the board with a certificate of its service of such accepted, complete application, which shall include the name, address, and official title of each person so served, together with the date on which service was performed and a description of the method by which service was obtained.
- (B) For purposes of Chapters 4906-1 to ~~4906-15~~ **4906-17** of the Administrative Code, the accepted, complete application shall be deemed filed in a decision of the board or administrative law judge filed after the applicant has complied with paragraph (A) of this rule.
- (C) Upon an accepted, complete application being deemed filed, the board or administrative law judge shall promptly fix the date(s) for the public hearing(s) and notify the parties.

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4906-7-17 Decision by the board

- (A) Within a reasonable time after the conclusion of the hearing, service of the report of the administrative law judge, if any, and the filing of any exceptions and replies to the exceptions, the board shall issue a final decision based only on the record, including such additional evidence as it shall order admitted.
- (1) The board may determine that the location of all or part of the proposed facility should be modified.
- (a) If it so finds, it may condition its certificate upon such modifications.
- (b) Persons and municipal corporations shall be given reasonable notice thereof, in accordance with the provisions of paragraph (A)(3) of this rule.
- (2) Specific citation in Chapters 4906-13, ~~and 4906-15~~, and 4906-17 of the Administrative Code with regard to a certificate application complying with building codes and boiler pressure piping, and elevator inspections and evaluations conducted by a statutorily empowered state agency, shall not be deemed to prohibit the board from issuing a certificate conditioned upon an applicant complying with other state or local statutes, ordinances, and regulations which are designed to protect the public health, welfare, and safety.
- (3) The decision of the board shall be entered on the board journal and into the record of the hearing. Copies of the decision or order shall be served on all attorneys of record and all unrepresented parties in the proceedings by ordinary mail.
- (B) In its deliberations, the board may order the parties to submit briefs on such issues as it addresses to the parties within such time limits as the board shall prescribe. The board may also schedule oral arguments before it.
- (C) Applications for reopening a proceeding after final submission but before a final order has been issued shall be by petition, and shall set forth specifically the grounds upon which such application is based. If such application is to reopen the proceeding for further evidence, the nature and purpose of such evidence must be briefly stated, including a statement why such evidence was not available at the time of hearing, and the evidence must not be merely cumulative.

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- (D) Any party or any affected person, firm, or corporation may file an application for rehearing, within thirty days after the issuance of a board order, in the manner and form and circumstances set forth in section 4903.10 of the Revised Code. An application for rehearing must set forth the specific ground or grounds upon which the applicant considers the board order to be unreasonable or unlawful. An application for rehearing must be accompanied by a memorandum in support, which sets forth an explanation of the basis for each ground for rehearing identified in the application for rehearing and which shall be filed no later than the application for rehearing.
- (E) Any party may file a memorandum contra within ten days after the filing of an application for rehearing.
- (F) As provided in section 4903.10 of the Revised Code, all applications for rehearing must be submitted within thirty days after an order has been journalized by the secretary of the board.
- (G) A party or any affected person, firm, or corporation may only file one application for rehearing to a board order within thirty days following the entry of the order upon the journal of the board.
- (H) An application for rehearing filed under section 4903.10 of the Revised Code, or a memorandum contra an application for rehearing filed pursuant to this rule may not be delivered via facsimile transmission.
- (I) The board, the chairman of the board, or the administrative law judge may issue an order granting rehearing for the purpose of affording the board more time to consider the issues raised in an application for rehearing.

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4906-17-01

Applicability and definitions.

(A) This chapter details the application filing requirements for all wind-powered electric generation facilities consisting of wind turbines and associated facilities with a single interconnection to the electrical grid and designed for, or capable of, operation at an aggregate capacity of five megawatts or more.

(B) As used in this chapter:

- (1) "Project area" means the total wind-powered electric generation facility, including associated setbacks.
- (2) "Wind-powered electric generation facility" or "wind-energy facility" or facility means all the turbines, collection lines, any associated substations, and all other associated equipment.

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4906-17-02

Project summary and general instructions.

- (A) An applicant for a certificate to site a wind-powered electric generation facility shall provide a project summary and overview of the proposed project. In general, the summary should be suitable as a reference for state and local governments and for the public. The summary and overview shall include the following:
- (1) A statement explaining the general purpose of the facility.
 - (2) A description of the proposed facility.
 - (3) A description of the project area selection process, including descriptions of the primary factors considered.
 - (4) A discussion of the principal environmental and socioeconomic considerations of the preferred project area and any alternate project area sites.
 - (5) An explanation of the project schedule (a bar chart is acceptable).
- (B) Information filed by the applicant in response to the requirements of this rule shall not be deemed responses to any other section of the application requirements.
- (C) If the applicant has prepared the required hard copy maps using digital, geographically referenced data, an electronic copy of all such data, excluding data obtained by the applicant under a licensing agreement which prohibits distribution, shall be provided to the board staff on computer disk concurrently with the filing of the application.
- (D) If the applicant for a wind-powered electric generation facility asserts that a particular requirement in Chapter 4906-17 of the Administrative Code is not applicable, the applicant must provide an explanation of why the requirement is not applicable. Further, the applicant shall provide in its application all relevant technological, financial, environmental, social, and ecological information that is generally known in the industry to be of potential concern for the particular type of facility proposed.

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4906-17-03

Project description in detail and project scheduled in detail.

(A) An applicant for a certificate to site a wind-powered electric generation facility under this chapter shall provide a detailed description of the proposed facility.

(1) For its proposed project area and any alternative project area(s), the applicant shall submit:

(a) Types(s) of turbines or, if a specific model of turbine has not yet been selected, the potential type(s), estimated number of turbines, estimated net demonstrated capability, annual capacity factor, hours of annual generation, and the project developer to be utilized for construction and operation of the facility, if different than the applicant.

(b) Land area requirement or, for off-shore projects, the off-shore boundaries, the construction impact area in acres and the basis of how such estimate was calculated, and the size of the permanent project area in acres.

(2) The applicant shall submit a description of the major equipment including, but not limited to, the footprint of the turbine, the height of the turbine measured from the tower's base, excluding the subsurface foundation, and the blade length.

(3) The applicant shall submit a brief description of any new transmission line(s) required for the proposed project.

(B) Detailed project schedule.

(1) Schedule. The applicant shall provide a proposed schedule in bar chart format covering all applicable major activities and milestones, including:

(a) Acquisition of land and land rights.

(b) Wildlife surveys/studies.

(c) Preparation of the application.

(d) Submittal of the application for certificate.

(e) Issuance of the certificate.

(f) Preparation of the final design.

(g) Construction of the facility.

(h) Placement of the facility in service.

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(2) Delays. The applicant shall describe the impact of critical delays on the eventual in-service date.

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4906-17-04

Project area analyses.

(A) The applicant shall conduct a project area site selection study prior to submitting an application for a wind-powered electric generation facility. The study shall be designed to evaluate all practicable project area sites for the proposed facility.

(1) The applicant shall provide the following:

(a) A description of the study area or geographic boundaries selected, including the rationale for the selection.

(b) A map of suitable scale which includes the study area and which depicts the general project areas which were evaluated.

(c) A comprehensive list and description of all qualitative and quantitative siting criteria, factors, or constraints utilized by the applicant, including any evaluation criteria or weighting values assigned to each.

(d) A description of the process by which the applicant utilized the siting criteria to determine the proposed project area and any proposed alternative project area site(s).

(e) A description of the project area sites selected for evaluation, their final ranking, and the factors and rationale used by the applicant for selecting the proposed project area site and any proposed alternative project area site(s).

(2) The applicant shall provide one copy of any constraint map showing setbacks from residences, property lines, and public rights of way utilized for the study directly to the board staff for review.

(B) The applicant shall provide a summary table comparing the project area sites, utilizing the technical, financial, environmental, socioeconomic, and other factors identified in the study. Design and equipment alternatives shall be included where the use of such alternatives influenced the siting decision.

(C) The applicant may provide a copy of any project area site selection study produced by or for the applicant for the proposed facility as an attachment to the application. The study may be submitted in response to paragraphs (A) and (B) of this rule, provided that the information contained therein is responsive to the requirements of paragraphs (A) and (B) of this rule.

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4906-17-05

Technical data.

(A) Project area site. Information on the location, major features, and the topographic, geologic, and hydrologic suitability of the proposed project area site and any proposed alternative project area site(s) shall be submitted by the applicant. If this information is derived from reference materials, it shall be derived from the best available and current reference materials. The applicant shall provide the following for each project area site alternative.

(1) Geography and topography. The applicant shall provide a map(s) of 1:24,000 scale containing a five-mile radius from the proposed facility and showing the following features:

(a) The proposed facility.

(b) Major population centers and geographic boundaries.

(c) Major transportation routes and utility corridors.

(d) Bodies of water which may be directly affected by the proposed facility.

(e) Topographic contours.

(f) Major institutions, parks, and recreational areas.

(g) Residential, commercial, and industrial buildings and installations.

(h) Air transportation facilities, existing or proposed.

(2) An aerial photograph containing a one-mile radius from the proposed facility, indicating the location of the proposed facility in relation to surface features.

(3) A map(s) of 1:12,000 scale of the project area site, showing the following existing features:

(a) Topographic contours.

(b) Existing vegetative cover.

(c) Land use and classifications.

(d) Individual structures and installations.

(e) Surface bodies of water.

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(f) Water and gas wells.

(g) Vegetative cover that may be removed during construction.

(4) Geology and seismology. The applicant shall provide a map(s) of suitable scale and a corresponding cross-sectional view, showing the geological features of the proposed project area and the location of proposed test borings. The applicant shall also:

(a) Describe the suitability of the site geology and plans to remedy any inadequacies.

(b) Describe the suitability of soil for grading, compaction, and drainage, and describe plans to remedy any inadequacies.

(5) Hydrology and wind. The applicant shall:

(a) Provide the natural and the man-affected water budgets, including the ten-year mean and critical (lowest seven-day flow in ten years) surface flows and the mean and extreme water tables during the past ten years for each body of water likely to be directly affected by the proposed facility.

(b) Provide an analysis of the prospects of floods and high winds for the project area, including the probability of occurrences and likely consequences of various flood stages and wind velocities, and describe plans to mitigate any likely adverse consequences. Identify any portion of the proposed facility to be located in a one hundred-year flood plain area.

(c) Provide existing maps of aquifers which may be directly affected by the proposed facility.

(B) Layout and construction. The applicant shall provide information on the proposed layout and preparation of the proposed project area site and any proposed alternative project area site(s) and the description of proposed major structures and installations located thereon.

(1) Project area site activities. The applicant shall describe the proposed project area site preparation and reclamation operations, including:

(a) Test borings, including closure plans for such borings.

(b) Removal of vegetation.

(c) Grading and drainage provisions.

(d) Access roads.

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(e) Removal and disposal of debris.

(f) Post-construction reclamation.

(2) Layout. The applicant shall supply a map(s) of 1:12,000 scale of the proposed wind-powered electric generation facility, showing the following features of the proposed (and existing) facility and associated facilities:

(a) Wind-powered electric generation turbines.

(b) Transformers and collection lines.

(c) Construction laydown area(s).

(d) Transmission lines.

(e) Substations.

(f) Transportation facilities and access roads.

(g) Security facilities.

(h) Grade elevations where modified during construction.

(i) Other pertinent installations.

(3) Structures. The applicant shall describe, in as much detail as is available at the time of submission of the application, all major proposed structures, including the following:

(a) Estimated overall dimensions.

(b) Construction materials.

(c) Color and texture of facing surfaces.

(d) Photographic interpretation or artist's pictorial sketches of the proposed facility from public vantage points within five miles of the proposed facility.

(e) Any unusual features.

(4) Plans for construction. The applicant shall describe the proposed construction sequence.

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- (5) Future plans. The applicant shall describe any plans for future additions of turbines to the proposed facility (including the type and timing) and the maximum electric capacity anticipated for the facility.

(C) Equipment.

- (1) Wind-powered electric generation equipment. The applicant shall describe the proposed major wind-powered electric generation equipment for the proposed project area and any proposed alternative project area(s).

- (2) Safety equipment. The applicant shall describe:

(a) All proposed major public safety equipment.

(b) The reliability of the equipment.

(c) Turbine manufacturer's safety standards. Include a complete copy of the manufacturer's safety manual or similar document.

- (3) The applicant shall describe any other major equipment not discussed in paragraphs (C)(2)(a) to (C)(2)(c) of this rule.

(D) Regional electric power system. The applicant shall provide the following information on interconnection of the facility to the regional electric power grid.

- (1) Interconnection queue(s). The applicant shall provide the following information relating to its generation interconnection request:

(a) Name of queue.

(b) Web link of queue.

(c) Queue number.

(d) Queue date.

- (2) System studies. The applicant shall provide system impact studies on its generation interconnection request. The studies shall include, but are not limited to, the following:

(a) Feasibility study.

(b) System impact study.

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4906-17-06

Financial data.

(A) The applicant shall state the current and proposed ownership status of the proposed project area, including rights of way, structures, and equipment. Such information shall include type of ownership.

(B) Capital and intangible costs. The applicant shall:

- (1) Submit estimates of applicable capital and intangible costs for the various alternatives. The data submitted shall be classified according to federal energy regulatory commission uniform system of accounts prescribed by the public utilities commission of Ohio for utility companies, unless the applicant is not an electric light company, a gas company, or a natural gas company, as defined in Chapter 4905. of the Revised Code (in which case, the applicant shall file the capital and intangible costs classified in the accounting format ordinarily used by the applicant in its normal course of business).
- (2) Compare the total costs per kilowatt with the applicant's similar facilities, and explain any substantial differences.
- (3) Tabulate the present worth and annualized cost for capital costs and any additional cost details as required to compare capital cost of alternates (using the start of construction date as reference date), and describe techniques and all factors used in calculating present worth and annualized costs.

(C) Operation and maintenance expenses. The applicant shall:

- (1) Supply applicable estimated annual operation and maintenance expenses for the first two years of commercial operation. The data submitted shall be classified according to federal energy regulatory commission uniform system of accounts prescribed by the public utilities commission of Ohio for utility companies, unless the applicant is not an electric light company, a gas company, or a natural gas company, as defined in Chapter 4905. of the Revised Code (in which case, the applicant shall file the operation and maintenance expenses classified in the accounting format ordinarily used by the applicant in its normal course of business).
- (2) Compare the total operation and maintenance cost per kilowatt with applicant's similar facilities and explain any substantial differences.
- (3) Tabulate the present worth and annualized expenditures for operation and maintenance costs as well as any additional cost breakdowns as required to compare alternatives, and describe techniques and factors used in calculating present worth and annualized costs.

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(D) Delays. The applicant shall submit an estimate of the cost for a delay prorated on a monthly basis beyond the projected in-service date.

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4906-17-07

Environmental data.

(A) General. The information requested in this rule shall be used to assess the environmental effects of the proposed facility. Where appropriate, the applicant may substitute all or portions of documents filed to meet federal, state, or local regulations. Existing data may be substituted for physical measurements.

(B) Air.

(1) Preconstruction. The applicant shall:

- (a) Submit available information concerning the ambient air quality of the proposed project area site and any proposed alternative site(s).
- (b) Describe applicable federal and/or Ohio new source performance standards, applicable air quality limitations, applicable national ambient air quality standards, and applicable prevention of significant deterioration increments.
- (c) Provide a list of all required permits to install and operate air pollution sources. If any such permit(s) has been issued more than thirty days prior to the submittal of the certificate application, the applicant shall provide a list of all special conditions or concerns attached to the permit(s).
- (d) Describe how the proposed facility will achieve compliance with the requirements identified in paragraphs (B)(1)(b) and (B)(1)(c) of this rule, if applicable.

(2) Construction. The applicant shall describe plans to control emissions during the project area site clearing and construction phase.

(C) Water.

(1) Preconstruction. The applicant shall provide a list of all permits required to install and operate the proposed facility.

(2) Construction. The applicant shall:

- (a) Describe the schedule for receipt of the national pollution discharge elimination system permit.
- (b) Estimate the quality and quantity of aquatic discharges from the project area site clearing and construction operations, including run-off and siltation from dredging, filling, and construction of shore side facilities.

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(c) Describe any plans to mitigate the above effects in accordance with current federal and Ohio regulations.

(d) Describe any changes in flow patterns and erosion due to project area site clearing and grading operations.

(3) Operation. In order to assess the effects of facility operation on water quality, the applicant shall:

(a) Provide a quantitative flow diagram or description for water and waterborne wastes resulting from run-off from soil or other surfaces at the proposed project area(s).

(b) Describe how the proposed facility incorporates maximum feasible water conservation practices considering available technology and the nature and economics of the various alternatives.

(D) Solid waste.

(1) Preconstruction. The applicant shall:

(a) Describe the nature and amount of debris and solid waste on the project area site.

(b) Describe any plans to deal with such wastes.

(2) Construction. The applicant shall:

(a) Estimate the nature and amounts of debris and other solid waste generated during construction operations.

(b) Describe the proposed method of storage and disposal of these wastes.

(3) Operation. The applicant shall:

(a) Estimate the amount, nature, and composition of solid wastes generated during the operation of the proposed facility.

(b) Describe proposed methods for storage, treatment, transport, and disposal of these wastes.

(4) Licenses and permits. The applicant shall describe its plans and activities leading toward acquisition of waste generation, storage, treatment, transportation, and/or disposal permits. If any such permit(s) has been issued more than thirty days prior to the submittal of the certificate application, the applicant shall provide a list of all special conditions or concerns attached to the permit(s).

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4906-17-08

Social and ecological data.

(A) Health and safety.

(1) Demographic. The applicant shall provide existing and ten-year projected population estimates for communities within five miles of the proposed project area site(s).

(2) Noise. The applicant shall:

(a) Describe the construction noise levels expected at the nearest property boundary. The description shall address:

(i) Dynamiting activities.

(ii) Operation of earth moving equipment.

(iii) Driving of piles.

(iv) Erection of structures.

(v) Truck traffic.

(vi) Installation of equipment.

(b) For each turbine, evaluate and describe the operational noise levels expected at the property boundary closest to that turbine, under both day and nighttime conditions. Evaluate and describe the cumulative operational noise levels for the wind facility at each property boundary for each property adjacent to the project area, under both day and nighttime operations. The applicant shall use generally accepted computer modeling software (developed for wind turbine noise measurement) or similar wind turbine noise methodology, including consideration of broadband, tonal, and low-frequency noise levels.

(c) Indicate the location of any noise-sensitive areas within one mile of the proposed facility.

(d) Describe equipment and procedures to mitigate the effects of noise emissions from the proposed facility during construction and operation.

(3) Water. The applicant shall estimate the impact to public and private water supplies due to construction and operation of the proposed facility.

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- (4) Ice throw. The applicant shall evaluate and describe the potential impact from ice throw at the nearest property boundary, including its plans to minimize potential impacts if warranted.
- (5) Blade shear. The applicant shall evaluate and describe the potential impact from blade shear at the nearest property boundary, including its plans to minimize potential impacts if warranted.
- (6) Shadow flicker. The applicant shall evaluate and describe the potential impact from shadow flicker at adjacent residential structures and primary roads, including its plans to minimize potential impacts if warranted.
- (B) Ecological impact.

 - (1) Project area site information. The applicant shall:

 - (a) Provide a map of 1:24,000 scale containing a half-mile radius from the proposed facility, showing the following:

 - (i) The proposed project area boundary.
 - (ii) Undeveloped or abandoned land such as wood lots, wetlands, or vacant fields.
 - (iii) Recreational areas, parks, wildlife areas, nature preserves, and other conservation areas.
 - (b) Provide the results of a survey of the vegetation within the facility boundary and within a quarter-mile distance from the facility boundary.
 - (c) Provide the results of a survey of the animal life within the facility boundary and within a quarter-mile distance from the facility boundary.
 - (d) Provide a summary of any studies which have been made by or for the applicant addressing the ecological impact of the proposed facility.
 - (e) Provide a list of major species from the surveys of biota. "Major species" are those which are of commercial or recreational value, or species designated as endangered or threatened in accordance with the United States and Ohio threatened and endangered species lists.
 - (2) Construction. The applicant shall:

 - (a) Estimate the impact of construction on the areas shown in response to paragraph (B)(1)(a) of this rule.

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(b) Estimate the impact of construction on the major species listed under paragraph (B)(1)(e) of this rule.

(c) Describe the procedures to be utilized to avoid, minimize, and mitigate both the short- and long-term impacts due to construction.

(3) Operation. The applicant shall:

(a) Estimate the impact of operation on the areas shown in response to paragraph (B)(1)(a) of this rule.

(b) Estimate the impact of operation on the major species listed under paragraph (B)(1)(e) of this rule.

(c) Describe the procedures to be utilized to avoid, minimize, and mitigate both the short- and long-term impacts of operation.

(d) Describe any plans for post-construction monitoring of wildlife impacts.

(C) Economics, land use and community development.

(1) Land uses. The applicant shall:

(a) Provide a map of 1:24,000 scale indicating general land uses, depicted as areas on the map, within a five-mile radius of the facility, including such uses as residential and urban, manufacturing and commercial, mining, recreational, transport, utilities, water and wetlands, forest and woodland, and pasture and cropland.

(b) Provide the number of residential structures within one thousand feet of the boundary of the proposed facility, and identify all residential structures for which the nearest edge of the structure is within one hundred feet of the boundary of the proposed facility.

(c) Describe proposed locations for wind turbine structures in relation to property lines and habitable residential structures, consistent with no less than the following minimum requirements:

(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

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the exterior of the nearest habitable residential structure, if any, located on adjacent property at the time of the certification application.

(iii) Minimum setbacks may be waived in the event that all owners of property adjacent to the turbine agree to such waiver, pursuant to rule 4906-1-03 of the Administrative Code.

(d) Estimate the impact of the proposed facility on the above land uses within a one-mile radius.

(e) Identify structures that will be removed or relocated.

(f) Describe formally adopted plans for future use of the site and surrounding lands for anything other than the proposed facility.

(g) Describe the applicant's plans for concurrent or secondary uses of the project area.

(2) Economics. The applicant shall:

(a) Estimate the annual total and present worth of construction and operation payroll.

(b) Estimate the construction and operation employment and estimate the number that will be employed from the region.

(c) Estimate the increase in county, township, city, and school district tax revenue accruing from the facility.

(d) Estimate the economic impact of the proposed facility on local commercial and industrial activities.

(3) Public services and facilities. The applicant shall describe the probable impact of the construction and operation on public services and facilities.

(4) Impact on regional development. The applicant shall:

(a) Describe the impact of the proposed facility on regional development, including housing, commercial and industrial development, and transportation system development.

(b) Assess the compatibility of the proposed facility and the anticipated resultant regional development with current regional plans.

(D) Cultural impact.

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- (1) The applicant shall indicate, on the 1:24,000 map referenced in paragraph (C)(1)(a) of this rule, any registered landmarks of historic, religious, archaeological, scenic, natural, or other cultural significance within five miles of the proposed facility.
 - (2) The applicant shall estimate the impact of the proposed facility on the preservation and continued meaningfulness of these landmarks and describe plans to mitigate any adverse impact.
 - (3) Landmarks to be considered for purposes of paragraphs (D)(1) and (D)(2) of this rule are those districts, sites, buildings, structures, and objects which are recognized by, registered with, or identified as eligible for registration by the national registry of natural landmarks, the Ohio historical society, or the Ohio department of natural resources.
 - (4) The applicant shall indicate, on the 1:24,000 map referenced in paragraph (C)(1)(a) of this rule, existing and formally adopted land and water recreation areas within five miles of the proposed facility.
 - (5) The applicant shall describe the identified recreational areas within one mile of the proposed project area in terms of their proximity to population centers, uniqueness, topography, vegetation, hydrology, and wildlife; estimate the impact of the proposed facility on the identified recreational areas; and describe plans to avoid, minimize, or mitigate any adverse impact.
 - (6) The applicant shall describe measures that will be taken to minimize any adverse visual impacts created by the facility, including, but not limited to, project area location, lighting, and facility coloration. In no event shall these measures conflict with relevant safety requirements.
- (E) Public responsibility. The applicant shall:
- (1) Describe the applicant's program for public interaction for the siting, construction, and operation of the proposed facility, i.e., public information programs.
 - (2) Describe any insurance or other corporate programs for providing liability compensation for damages to the public resulting from construction or operation of the proposed facility.
 - (3) Evaluate and describe the potential for the facility to interfere with radio and TV reception and, if warranted, describe measures that will be taken to minimize interference.

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- (4) Evaluate and describe the potential for the facility to interfere with military radar systems and, if warranted, describe measures that will be taken to minimize interference.
- (5) Evaluate and describe the anticipated impact to roads and bridges associated with construction vehicles and equipment delivery. Describe measures that will be taken to repair roads and bridges to at least the condition present prior to the project.
- (6) Describe the plan for decommissioning the proposed facility, including a discussion of any financial arrangements designed to assure the requisite financial resources.

(F) Agricultural district impact. The applicant shall:

- (1) Separately identify on a map(s) of 1:24,000 scale all agricultural land and all agricultural district land located within the proposed project area boundaries, where such land is existing at least sixty days prior to submission of the application.
- (2) Provide, for all agricultural land identified under paragraph (F)(1) of this rule, the following:
 - (a) A quantification of the acreage impacted, and an evaluation of the impact of the construction, operation, and maintenance of the proposed facility on the following agricultural practices within the proposed facility boundaries:
 - (i) Field operations (i.e., plowing, planting, cultivating, spraying, harvesting, etc.).
 - (ii) Irrigation.
 - (iii) Field drainage systems.
 - (b) A description of any mitigation procedures to be utilized by the applicant during construction, operation, and maintenance to reduce impacts to the agricultural land.
- (3) Provide, for all agricultural land identified under paragraph (F)(1) of this rule, an evaluation of the impact of the construction and maintenance of the proposed facility on the viability as agricultural land of any land so identified. The evaluation shall include impacts to cultivated lands, permanent pasture land, managed woodlots, orchards, nurseries, livestock and poultry confinement areas, and agriculturally related structures. Changes in land use and changes in methods of operation made necessary by the proposed facility shall be evaluated.