BEFORE

THE OHIO POWER SITING BOARD

In the Matter of the Ohio Power Siting Board's Review of Chapters 4906-1, 4906-5, 4906-7, 4906-9, 4906-11, 4906-13, 4906-15, and 4906-17 of the Ohio Administrative Code.	))))))	Case No. 12-1981-GE-BRO

SECOND FINDING AND ORDER

The Ohio Power Siting Board, in considering the comments and reply comments filed in response to the November 24, 2014 Entry, adopts Ohio Adm.Code 4906-4-08, as attached to this Second Finding and Order, and directs Staff to meet with all interested stakeholders in the near future to begin to develop potential solutions to the remaining concerns raised in the comments. Accordingly, the Board finds:

Background and history

(1) Pursuant to R.C. 106.03 and R.C. 111.15 all state agencies are required to conduct a review, every five years, of their rules and to determine whether to continue their rules without change, amend their rules, or rescind their rules.

(2) In summary, R.C. 106.03(A) requires that the Board determine whether the rules: should be continued without amendment, be amended, or be rescinded; need amendment or rescission to give more flexibility at the local level or to eliminate unnecessary paperwork; incorporate a text or other material by reference; duplicate, overlap, or conflict with other rules; have an adverse impact on businesses; and contain words or phrases having meanings that, in contemporary usage, are understood as being derogatory or offensive.

(3) In addition, on January 10, 2011, the governor of the state of Ohio issued Executive Order 2011-01K, entitled "Establishing the Common Sense Initiative," which sets forth several factors to be considered in the promulgation of rules and the review of existing rules. Among other things, the Commission must: review its rules to determine the impact that a rule has on small businesses; attempt to balance the critical objectives of regulation and the cost of compliance by the regulated parties; and amend or rescind rules that are unnecessary, ineffective,

contradictory, redundant, inefficient, or needlessly burdensome, or that have had negative, unintended consequences, or unnecessarily impede business growth.

(4) On July 5, 2012, the Ohio Power Siting Board (Board) initiated its five-year review of the rules contained in Ohio Adm.Code Chapters 4906-1, 4906-5, 4906-7, 4906-9, 4906-11, 4906-13, 4906-15, and 4906-17 in this docket.

(5) On February 18, 2014, the Board issued a Finding and Order (First Order) in which we adopted a number of revisions to our current administrative rules, including a reorganization of the rules in order to provide a better structure for the rules and to make it easier to follow the process and requirements for different types of cases. In the First Order, the Board concluded that Ohio Adm.Code Chapters 4906-1, 4906-5, 4906-7, 4906-9, 4906-11, 4906-13, 4906-15, and 4906-17 should be rescinded and replaced by new Ohio Adm.Code Chapters 4906-1 through 4906-7, subject to the provisions of R.C. 111.15.

(6) By Entry on Rehearing issued May 15, 2014, the Board granted, in part, and denied, in part, the applications for rehearing filed by two commenters.

(7) On September 15, 2014, House Bill 483 (HB 483) became effective, thus, amending R.C. 4906.20 and 4906.201, regarding the setback requirements for applications to construct wind-powered electric generation facilities that come before the Board.

(8) While the Board moved forward, in accordance with the provisions of R.C. 111.15, and filed the vast majority of the rules with the Joint Committee on Agency Rule Review (JCARR), in light of the new law contained in R.C. 4906.20 and 4906.201, the Board did not file new Ohio Adm.Code 4906-4-08, which contains a consolidation of the current rules found in Ohio Adm.Code 4906-13-04, 4906-13-07, 4906-17-05, and 4906-17-08. In addition, Ohio Adm.Code 4906-13-04, 4906-13-07, 4906-17-05, and 4906-17-08 were not filed with JCARR. The rules not filed with JCARR address the health and safety, land use, and ecological information required in applications filed before the Board, including the provision regarding the

statutory setback requirements for wind-powered electric generation facilities.

(9) By Entry issued November 24, 2014, the Board requested comments on Staff's proposed revisions to Ohio Adm.Code 4906-4-08, which were intended to reflect the setback requirements for applications to construct wind-powered electric generation facilities in light of the amendments to R.C. 4906.20 and 4906.201. Comments and reply comments were due by January 16, 2015, and February 13, 2015, respectively. In the November 24, 2014 Entry, the Board noted that, until such time as Ohio Adm.Code 4906-4-08 has been reviewed by JCARR and becomes effective, Ohio Adm.Code 4906-13-04, 4906-13-07, 4906-17-05, and 4906-17-08 shall remain in effect.

(10) In response to the November 24, 2014 Entry, comments were timely filed by: Kathy Brake; Molly Buettner; Union Neighbors United (UNU) joined by Robert and Diane McConnell and Julia Johnson in individual capacities (jointly referred to as UNU); Greenwich Neighbors United (GNU); and EverPower Wind Holdings Inc. (EverPower). Reply comments were timely filed by UNU, American Wind Energy Association (AWEA), and Greenwich Windpark LLC (Greenwich).

(11) The Board has carefully reviewed the changes to Ohio Adm.Code 4906-4-08(C)(2)(b) proposed by Staff, and the comments and reply comments filed in response to the November 24, 2014 Entry. The following sets forth the Board's decision concerning the setback language contained in Ohio Adm.Code 4906-4-08(C)(2)(b), the general comments regarding the statutory setback requirement, and the other comments.

Ohio Adm.Code 4906-4-08(C)(2)(b) - Setback to property line

(12) New Ohio Adm.Code 4906-4-08 sets forth the required information an applicant requesting a certificate to construct a wind-powered electric generation facility must file with the Board as part of its application. Initially, we emphasize that our consideration of the rules, at this stage, focuses solely on Ohio Adm.Code 4906-4-08(C)(2)(b) and the revisions needed to this rule to bring it into alignment with the requirements in R.C. 4906.20(B)(2)(a), which was revised by HB 483. In accordance with HB 483 and revised R.C. 4906.20(B)(2)(a), the

setback distance contained in new Ohio Adm.Code 4906-4-08(C)(2)(b) must be changed from 1,125 feet in horizontal distance from the tip of the turbine's nearest blade at 90 degrees to the exterior of the nearest, habitable, residential structure located on adjacent property, to 1,125 feet in horizontal distance from the tip of the turbine's nearest blade at 90 degrees to the property line of the nearest adjacent property.

(13) A thorough review of the comments and reply comments filed in response to the Board's November 24, 2014 Entry reveals that no one commented on the proposed revisions to Ohio Adm.Code 4906-4-08(C)(2)(b). Therefore, the Board finds that the revisions to Ohio Adm.Code 4906-4-08(C)(2)(b), as proposed by Staff, are appropriate and should be adopted.

General Assembly's HB 483 setback requirements

(14) Kathy Brake comments that the wind industry offers little value both financially and environmentally. Though Ms. Brake acknowledges that the setback established by HB 483 was a positive first step, she notes that a setback of one mile would be more reasonable. Molly Buettner agrees that the 1,125 foot setback established by the statute remains an unsafe alternative. In addition, Ms. Buettner suggests that wind power will negatively impact the taxpayer through higher taxes, higher electrical bills, and diminished property value. Ms. Buettner asserts that wind power is not sustainable, citing perceived failures throughout Europe.

(15) **Ohio Adm.Code 4906-4-08(A)(7) and (A)(8)** require an applicant to evaluate and describe the potential impact from blade shear and ice throw at the nearest property boundary and public road, including its plans to minimize potential impacts and instruct workers on potential hazards. UNU proposes that a setback equivalent of 150 percent of the sum of turbine hub height and rotor diameter apply to all roadways and not merely "heavily traveled roadways," as that term is ambiguous. UNU also proposes a setback of 1,640 feet from all nonparticipating property lines, since blade fragments can be thrown at least that far.

(16) These comments summarized in Findings (14) and (15) appear to be concerned about wind-powered facilities in general and

the specific minimum setback requirements established by the General Assembly in HB 483. While the Board understands the issues raised by these commenters, the Board is required by statute to consider applications, including those for the construction of wind-powered electric generation facilities in Ohio, in accordance with the provisions set forth in the statute, including the minimum setback requirement. Therefore, the Board finds that the comments submitted by UNU, Ms. Blake, and Ms. Buettner, which appear to be concentrated on the minimum setback requirement established by the General Assembly in the statute, are beyond the scope of our purview and should be denied.

Comments regarding provisions other than Ohio Adm.Code 4906-4-08(C)(2)(b)

(17) In order to ensure that the most current statutory setback requirement is implemented as soon as possible, the Board finds that the revisions to Ohio Adm.Code 4906-4-08(C)(2)(b), as adopted in Finding (13) above, should be filed with JCARR, the Legislative Service Commission (LSC), and the Secretary of State in accordance with R.C. 111.15.

With regard to the remainder of the comments and the concerns raised by stakeholders, as further summarized below, the Board agrees that these issues warrant additional consideration by the Board. However, upon thorough review of the record in this case, we find that there is not sufficient information within the context of this docket and the comments that have been filed by interested stakeholders for the Board to make the necessary revisions to Ohio Adm.Code 4906-4-08. Therefore, the Board concludes further discussion on these issues, as they relate to wind-powered electric generation facilities, should be initiated. To that end, we find that Staff must commence discussions with all interested stakeholders in January 2016 in an effort to obtain more information on the stakeholders' proposals and to develop potential solutions to the concerns raised by these stakeholders. Upon the conclusion of those discussions, but no later than June 1, 2016, the Board will initiate a rulemaking docket for the purpose of issuing for formal comments the Staff's proposed revisions to Ohio Adm.Code 4906-4-08 resulting from the stakeholder deliberations. It is the Board's expectation that Staff will strive

to resolve the technical issues with the stakeholders and include the agreed-upon proposals in the revisions to be put out for comment.

(18) Specifically, the discussions to be included in the stakeholder collaborations should include the following issues that have been raised by the commenters in their January 16, 2015 and February 13, 2015 comments and reply comments, respectively, filed in this matter:

(a) UNU states that reasonable regulations should be outlined in the rules regarding topics such as wildlife regulation, ice throw, reconstruction, and enlargement.

(b) UNU asks that applicants be required to express parcel information, inclusive of modeling inputs, in a manner that can be easily interpreted by members of the public.

(c) **Ohio Adm.Code 4906-4-08(A)(1)(c)** requires an applicant to provide the generation equipment manufacturer's safety standards, including a complete copy of the manufacturers' safety manual or similar document and any recommended setbacks. UNU proposes this rule be expanded to include not only manufacturer-recommended setbacks, but also other manufacturer recommendations regarding safety, health, or turbine siting.

(d) **Ohio Adm.Code 4906-4-08(A)(3)(b)(i)** requires an applicant to describe the operational noise levels expected at the nearest property boundary and cumulative operational noise levels at the property boundary for each nonparticipating property adjacent to or within the project area under both day and nighttime operations. UNU proposes that the noise level of wind-powered facilities not exceed five decibels (dB) above the background sound level at nonparticipating properties and measurements should be taken at nonparticipating properties, and such

measurements would be based on the L90 statistical standard. In addition, UNU advocates that nonparticipating residents and landowners should not experience noise levels greater than 35 dBA and 50 dBC, and these standards should apply at property lines of nonparticipating residents and not merely neighboring residents. UNU asserts that, to properly assess the cumulative impact of multiple facilities, the impact from both existing and potentially existing wind-powered facilities should be considered. According to UNU, this suggestion should apply to noise impacts, visual impacts, shadow flicker, and other related consequences.

(e) **Ohio Adm.Code 4906-4-08(B)(1)(c)** requires an applicant to provide results of a literature survey of plant and animal life within at least one-fourth mile of the project area boundary, including results of aquatic and terrestrial plant and animal species that are of commercial or recreational value, or species that are designated as endangered or threatened. UNU argues that this would be inadequate for mobile endangered species inclusive of the Indiana bat that may move in and out of the area; therefore, a broader range for a literature survey should be adopted.

(f) **Ohio Adm.Code 4906-4-08(B)(1)(d)** requires an applicant to provide results of field surveys of plant and animal species identified in the literature survey. UNU proposes that these field studies be required for all endangered species identified in the survey or when the applicant has knowledge of an endangered species within a specified distance of the project area.

(g) **Ohio Adm.Code 4906-4-08(B)(1)(e)** requires an applicant to provide a summary of any additional studies that have been made by or for the applicant addressing the ecological impact of the proposed facility. UNU proposes the applicant be required to submit copies of all studies that the

developer has knowledge of and access to even if they were not completed specifically for the developer.

(h) Ohio Adm.Code 4906-4-08(B)(2)(b)(vii) requires an applicant to provide avoidance measures for major species and their habitat. UNU proposes that the term "major species" be defined in the rules to, at a minimum, include species of commercial or recreational value or an endangered or threatened species.

(i) Ohio Adm.Code 4906-4-08(B)(3)(c) requires an applicant to describe any plans for post-construction monitoring of wildlife impacts. UNU proposes an applicant be required to specify measures for mitigation and construction avoidance regarding these species. In addition, UNU proposes that mitigation be mandatory and all monitoring be done by state employees or third-party contractors working on behalf of the Board with the costs to be paid by the certificate holder.

(j) Ohio Adm.Code 4906-4-08(C)(1)(a) requires an applicant to provide a map of at least 1:24,000 scale showing land use, structures, and incorporated areas and population centers within one-mile of the project area boundary. UNU notes that the new rule requires submission of a map with information inclusive of prevailing land use; however, the existing rule requires a five-mile mapping area. UNU requests that the existing rule be retained.

(k) Ohio Adm.Code 4906-4-08(C)(1)(b)(i) requires an applicant to provide, for the types of structures identified on the map in paragraph (C)(1)(a) of this rule, a table showing all structures within 1,000 feet of the generation equipment or wind turbine, the distance between the structure and the equipment or nearest wind turbine. UNU asserts the distance to nearby structures is no

longer relevant; rather, the rule should require specific distances from turbines to adjacent properties and the nearest public road.

(l) **Ohio Adm.Code 4906-4-08(C)(2)** requires an applicant to provide a map of at least 1:24,000 scale showing the proposed facility, habitable residences, and parcel boundaries of all parcels within a half-mile of the project area. The map is to indicate, for each parcel, whether the parcel is being leased by the applicant for the proposed facility. In addition, it is to include the setbacks for wind turbines in relation to property lines, habitable residential structures, electric transmission lines, gas pipelines, and state and federal highways. UNU supports the proposal to require applicants to map all parcels leased by the applicant for the facility. In addition, UNU requests that the applicant indicate all land that it has leased for wind development given that wind projects develop in stages and having knowledge of all leased properties for wind development would assist in assessing any potential impact. EverPower states that, because the location of many low pressure distribution systems are generally not available from utilities and mapping these pipelines would be extremely difficult, the gas pipeline setback should be modified. At a minimum, EverPower states the rule should be amended so that "gas pipelines" is changed to "high pressure gas transmission pipelines," due to the difficulty in mapping the gas systems.

(m) **Ohio Adm.Code 4906-4-08(C)(2)(c)** requires an applicant to include on a map the setbacks for wind turbines. The setbacks shall be no less than 1.1 times the turbine height to electric transmission lines, gas pipelines, hazardous liquid pipelines, or state or federal highways. EverPower asserts that mandatory setbacks for gas pipelines and hazardous liquid pipelines are not necessary due to the extremely low likelihood

that a turbine collapse could rupture a line. If this is not removed, EverPower suggests that "gas pipeline" at least be changed to "gas transmission pipelines." UNU counters EverPower's assertion that the General Assembly has not granted the Board "express authority" to establish regulatory setbacks from pipelines, transmission lines, and roadways, stating R.C. 4906.20(B)(2) clearly allows the Board to enact reasonable rules regarding wind turbines.

(n) **Ohio Adm.Code 4906-4-08(C)(2)(d)** provides that minimum setbacks from property lines and residences may be waived in the event that all owners of property adjacent to the turbine agree to such waiver. GNU believes the proposed rules, which assert a wind farm developer can avoid the setback requirement by securing a waiver from property owners adjacent to the turbine, is not in alignment with the both the letter and spirit of Ohio law. According to GNU, the rules do not satisfy HB 483 and R.C. 4906.20(B)(2)(c), which require the Board establish the procedure by which a proper waiver may be secured. AWEA and Greenwich counter the notion that HB 483 modified the setback waiver provision of R.C. 4906.20(B)(2)(c). They assert this rulemaking is limited to revisions made to Ohio Adm.Code 4906-4-08 and that there was no proposed revision to the setback waiver rule of Ohio Adm.Code 4906-4-08(C)(2)(d). AWEA and Greenwich also contend that GNU does not look at R.C. 4906.20(B)(2)(c) as a "harmonious whole" and that GNU's interpretation would only be possible if the statute was read in a vacuum. AWEA and Greenwich believe the proper interpretation is "minimum setbacks from property lines and residences may be waived in the event that all owners of property adjacent to the particular turbine agree to such waiver." In addition, they assert the term wind farm property refers to a particular property and not the entire wind farm footprint. AWEA and Greenwich

believe the Board's interpretation of the waiver provision is reasonable, given it protects rights of both landowners who want turbines and adjacent landowners who may not.

(o) **Ohio Adm.Code 4906-4-08(D)(4)** requires an applicant to evaluate the visual impact of the proposed facility within at least a five-mile radius from the project area. UNU notes that the rule does not provide recommendations for the number of vantage points for visual simulations. Thus, UNU proposes that north/south/east/west views be required for at least one location per square mile within one mile of the proposed project area.

(p) **Ohio Adm.Code 4906-4-08(E)(2)(c)(ii)** requires an applicant to provide a description of mitigation procedures to be utilized by the applicant during construction, operation, and maintenance to reduce impacts to agricultural land, structures, and practices that will achieve timely repair of damaged field tile systems to at least original conditions, at the applicant's expense. This rule mandates repair of damaged field tile systems at the "applicant's expense" and EverPower acknowledges that the applicant should have this responsibility. However, due to a variety of potential landowner and lease arrangements that may result in the landowner agreeing to do the repair, EverPower proposes that "applicant's expense" be changed to "in a manner agreeable to the landowner." UNU disagrees with EverPower's recommendation, stating that there is no guarantee that a repair agreement between a wind development and landowner would protect those interests of neighboring landowners whose land may be negatively impacted by wind power.

As stated previously, the Board finds that Staff should convene the stakeholder group to discuss the issues set forth above in January 2016.

It is, therefore,

ORDERED, That, in accordance with Finding (13), Ohio Adm.Code 4906-4-08, as set forth in the appendix to this Second Finding and Order, is adopted. It is, further,

ORDERED, That, in accordance with Finding (16), the comments summarized in Findings (14) and (15) are denied. It is, further,

ORDERED, That copies of Ohio Adm.Code 4906-4-08, as set forth in the attachment to this Second Finding and Order, be filed with JCARR, LSC, and the Secretary of State in accordance with divisions (D) and (E) of R.C. 111.15. It is, further,

ORDERED, That, in accordance with Findings (17) and (18), Staff commence meetings with all interested stakeholders in January 2016 to develop potential solutions to the concerns raised by stakeholders in preparation for proposed changes to the rules to be given by Staff to the Board for consideration and resolution. It is, further,

ORDERED, That a copy of this Second Finding and Order be sent to the electric-energy and gas-pipeline industry service lists. It is, further,

ORDERED, That a hard copy of this Second Finding and Order and the attachment be served upon all commenters and all interested persons of record of record in this matter. It is, further,

ORDERED, That a copy of this Second Finding and Order be served upon all commenters and all interested persons of record.

THE OHIO POWER SITING BOARD

Andre T. Porter, Chairman
Public Utilities Commission of Ohio

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

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

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

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

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

Jeffrey J. Lechak, Board Member
and Public Member

CMTP/CSO/vrm

Entered in the Journal

NOV 12 2015

Barcy F. McNeal
Secretary

DRAFT - NOT FOR FILING

4906-4-08 Health and safety, land use and ecological information.

(A) The applicant shall provide information on health and safety.

(1) The applicant shall provide information on the safety and reliability of all equipment.

(a) Describe all proposed major public safety equipment.

(b) Describe the reliability of the equipment.

(c) Provide the generation equipment manufacturer's safety standards. Include a complete copy of the manufacturer's safety manual or similar document and any recommended setbacks from the manufacturer.

(d) Describe any measures that will be taken to restrict public access to the facility.

(e) Describe the fire protection, safety, and medical emergency plan(s) to be used during construction and operation of the facility, and how such plan(s) will be developed in consultation with local emergency responders.

(2) Except for wind farms, the applicant shall describe in conceptual terms the probable impact to the population due to failures of air pollution control equipment.

(3) The applicant shall provide information on noise from the construction and operation of the facility.

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

(i) Blasting activities.

(ii) Operation of earth moving equipment.

(iii) Driving of piles, rock breaking or hammering, and horizontal directional drilling.

DRAFT - NOT FOR FILING

(iv) Erection of structures.

(v) Truck traffic.

(vi) Installation of equipment.

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

(i) Operational noise from generation equipment. In addition, for a wind facility, cumulative operational noise levels at the property boundary for each non-participating property adjacent to or within 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.

(ii) Processing equipment.

(iii) Associated road traffic.

(c) Indicate the location of any noise-sensitive areas within one mile of the proposed facility, and the operational noise level at each habitable residence, school, church, and other noise-sensitive receptors, under both day and nighttime operations.

(d) Describe equipment and procedures to mitigate the effects of noise emissions from the proposed facility during construction and operation, including limits on the time of day at which construction activities may occur.

(e) Submit a preconstruction background noise study of the project area that includes measurements taken under both day and nighttime conditions.

(4) The applicant shall provide information regarding water impacts.

DRAFT - NOT FOR FILING

(a) Provide an evaluation of the impact to public and private water supplies due to construction and operation of the proposed facility.

(b) Provide an evaluation of the impact to public and private water supplies due to pollution control equipment failures.

(c) Provide existing maps of aquifers, water wells, and drinking water source protection areas that may be directly affected by the proposed facility.

(d) Describe how construction and operation of the facility will comply with any drinking water source protection plans near the project area.

(e) Provide an analysis of the prospects of floods for the area, including the probability of occurrences and likely consequences of various flood stages, and describe plans to mitigate any likely adverse consequences.

(5) The applicant shall provide a map of suitable scale showing the proposed facility, geological features of the proposed facility site, topographic contours, existing gas and oil wells, and injection wells. 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 and restore the soils during post-construction reclamation.

(c) Describe plans for the test borings, including closure plans for such borings. Plans for the test borings shall contain a timeline for providing the test boring logs and the following information to the board:

(i) Subsurface soil properties.

(ii) Static water level.

DRAFT - NOT FOR FILING

(iii) Rock quality description.

(iv) Percent recovery.

(v) Depth and description of bedrock contact.

(6) The applicant shall provide an analysis of the prospects of high winds for the area, including the probability of occurrences and likely consequences of various wind velocities, and describe plans to mitigate any likely adverse consequences.

(7) The applicant shall evaluate and describe the potential impact from blade shear at the nearest property boundary and public road, including its plans to minimize potential impacts and instruct workers of potential hazards.

(8) The applicant shall evaluate and describe the potential impact from ice throw at the nearest property boundary and public road, including its plans to minimize potential impacts and instruct workers of potential hazards.

(9) The applicant shall evaluate and describe the potential impact from shadow flicker at habitable residences within at least one-half mile of a turbine, including its plans to minimize potential impacts.

(10) The applicant shall evaluate and describe the potential for the facility to interfere with radio and TV reception and describe measures that will be taken to minimize interference.

(11) The applicant shall evaluate and describe the potential for the facility to interfere with military and civilian radar systems and describe measures that will be taken to minimize interference.

(12) The applicant shall evaluate and describe the potential for the facility to interfere with microwave communication paths and systems and describe measures that will be taken to minimize interference. Include all licensed systems and those used by electric service providers and emergency personnel that operate in the project area.

(B) The applicant shall provide information on ecological resources.

DRAFT - NOT FOR FILING

(1) The applicant shall provide information regarding ecological resources in the project area.

(a) Provide a map of at least 1:24,000 scale containing a one half-mile radius from the project area, showing the following:

(i) The proposed facility and project area boundary.

(ii) Undeveloped or abandoned land such as wood lots or vacant fields.

(iii) Wildlife areas, nature preserves, and other conservation areas.

(iv) Surface bodies of water, including wetlands, ditches, streams, lakes, reservoirs, and ponds.

(v) Highly-erodible soils and slopes of twelve percent or greater.

(b) Provide the results of a field survey of the vegetation and surface waters within one-hundred feet of the potential construction impact area of the facility. The survey should include a description of the vegetative communities, and delineations of wetlands and streams. Provide a map of at least 1:12,000 scale showing all delineated resources.

(c) Provide the results of a literature survey of the plant and animal life within at least one-fourth mile of the project area boundary. The literature survey shall include aquatic and terrestrial plant and animal species that are of commercial or recreational value, or species designated as endangered or threatened.

(d) Provide the results of field surveys of the plant and animal species identified in the literature survey.

(e) Provide a summary of any additional studies which have been made by or for the applicant addressing the ecological impact of the proposed facility.

DRAFT - NOT FOR FILING

(2) The applicant shall provide information regarding potential impacts to ecological resources during construction.

(a) Provide an evaluation of the impact of construction on the resources surveyed in response to paragraph (B)(1) of this rule. Include the linear feet and acreage impacted, and the proposed crossing methodology of each stream and wetland that would be crossed by or within the footprint of any part of the facility or construction equipment. Specify the extent of vegetation clearing, and describe how such clearing work will be done so as to minimize removal of woody vegetation. Describe potential impacts to wildlife and their habitat.

(b) Describe the mitigation procedures to be utilized to minimize both the short-term and long-term impacts due to construction, including the following:

(i) Plans for post-construction site restoration and stabilization of disturbed soils, especially in riparian areas and near wetlands. Restoration plans should include details on the removal and disposal of materials used for temporary access roads and construction staging areas, including gravel.

(ii) A detailed frac out contingency plan for stream and wetland crossings that are expected to be completed via horizontal directional drilling.

(iii) Methods to demarcate surface waters and wetlands and to protect them from entry of construction equipment and material storage or disposal.

(iv) Procedures for inspection and repair of erosion control measures, especially after rainfall events.

(v) Measures to divert storm water runoff away from fill slopes and other exposed surfaces.

DRAFT - NOT FOR FILING

(vi) Methods to protect vegetation in proximity to any project facilities from damage, particularly mature trees, wetland vegetation, and woody vegetation in riparian areas.

(vii) Options for disposing of downed trees, brush, and other vegetation during initial clearing for the project, and clearing methods that minimize the movement of heavy equipment and other vehicles within the project area that would otherwise be required for removing all trees and other woody debris off site.

(viii) Avoidance measures for major species and their habitat.

(3) The applicant shall provide information regarding potential impacts to ecological resources during operation and maintenance of the facility.

(a) Provide an evaluation of the impact of operation and maintenance on the undeveloped areas shown in response to paragraph (B)(1) of this rule.

(b) Describe the procedures to be utilized to avoid, minimize, and mitigate both the short- and long-term impacts of operation and maintenance. Describe methods for protecting streams, wetlands, and vegetation, particularly mature trees, wetland vegetation, and woody vegetation in riparian areas. Include a description of any expected use of herbicides for maintenance.

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

(C) The applicant shall provide information on land use and community development.

(1) The applicant shall provide information regarding land use in the region and potential impacts of the facility.

(a) Provide a map of at least 1:24,000 scale showing the following within one-mile of the project area boundary:

(i) The proposed facility.

DRAFT - NOT FOR FILING

(ii) Land use, depicted as areas on the map. Land use, for the purposes of paragraph (C) of this rule, refers to the current economic use of each parcel. Categories should include residential, commercial, industrial, institutional, recreational, agricultural, and vacant, or as classified by the local land use authority.

(iii) Structures, depicted as points on the map. Identified structures should include residences, commercial centers or buildings, industrial buildings and installations, schools, hospitals, churches, civic buildings, and other occupied places.

(iv) Incorporated areas and population centers.

(b) Provide, for the types of structures identified on the map in paragraph (C)(1)(a) of this rule, a table showing the following:

(i) For all structures within 1,000 feet of the generation equipment or wind turbine, the distance between the structure and the equipment or nearest wind turbine.

(ii) For all structures within 250 feet of a collection line, access road, or other associated facility, the distance between the structure and the associated facility.

(iii) For each structure in the table, whether the structure is on a property that is being leased by the applicant for the proposed facility.

(c) Provide an evaluation of the impact of the proposed facility on the above land uses identified on the map in paragraph (C)(1)(a) of this rule. Include, for each land use type, the construction impact area and the permanent impact area in acres, in total and for each project component (e.g., turbines, collection lines, access roads), and the explanation of how such estimate was calculated.

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

DRAFT - NOT FOR FILING

(2) For wind farms only, the applicant shall provide a map(s) of at least 1:24,000 scale showing the proposed facility, habitable residences, and parcel boundaries of all parcels within a half-mile of the project area. Indicate on the map, for each parcel, whether the parcel is being leased by the applicant for the proposed facility, as of no more than 30 days prior to the submission of the application. Include on the map the setbacks for wind turbine structures in relation to property lines, habitable residential structures, electric transmission lines, gas pipelines, and state and federal highways, consistent with no less than the following minimum requirements:

(a) 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 a blade at its highest point.

(b) The wind turbine shall be at least one thousand, one hundred, twenty-five feet in horizontal distance from the tip of the turbine's nearest blade at ninety degrees to the property line of the nearest adjacent property at the time of the certification application.

(c) The distance from a wind turbine base to any electric transmission line, gas pipeline, hazardous liquid pipeline, or state or federal highway 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 a blade at its highest point.

(d) Minimum setbacks from property lines and residences may be waived in the event that all owners of property adjacent to the turbine agree to such waiver.

(3) The applicant shall provide information regarding land use plans.

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

(b) Describe the applicant's plans for concurrent or secondary uses of the site.

DRAFT - NOT FOR FILING

(c) Describe the impact of the proposed facility on regional development, including housing, commercial and industrial development, schools, transportation system development, and other public services and facilities.

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

(e) Provide current population counts or estimates and ten-year population projections for counties and populated places within five miles of the project area.

(D) The applicant shall provide information on cultural and archaeological resources.

(1) The applicant shall indicate, on a map of at least 1:24,000 scale, any formally adopted land and water recreation areas, recreational trails, scenic rivers, scenic routes or byways, and registered landmarks of historic, religious, archaeological, scenic, natural, or other cultural significance within five miles of the project area. Landmarks to be considered for purposes of paragraph (D) of this rule are those districts, sites, buildings, structures, and objects that 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.

(2) The applicant shall provide an evaluation of the impact of the proposed facility on the preservation and continued meaningfulness of these landmarks and describe plans to avoid or mitigate any adverse impact.

(3) The applicant shall describe the identified recreation areas within five miles of the project area in terms of their proximity to population centers, uniqueness, topography, vegetation, hydrology, and wildlife. Provide an evaluation of the impact of the proposed facility on identified recreational areas within five miles of the project area and describe plans to mitigate any adverse impact.

(4) The applicant shall evaluate the visual impact of the proposed facility within at least a five-mile radius from the project area. The applicant shall:

DRAFT - NOT FOR FILING

(a) Describe the visibility of the project, including a viewshed analysis and corresponding map of the study area.

(b) Describe the existing landscape and evaluate its scenic quality.

(c) Describe the alterations to the landscape caused by the facility, and evaluate the impact of those alterations to the scenic quality of the landscape.

(d) Evaluate the visual impacts to the resources identified in paragraph (D)(1) of this rule, and any such resources within ten miles of the project area that are valued specifically for their scenic quality.

(e) Provide photographic simulations or artist's pictorial sketches of the proposed facility from public vantage points that cover the range of landscapes, viewer groups, and types of scenic resources found within the study area. The applicant should explain its selection of vantage points, including any coordination with local public officials and historic preservation groups in selecting these vantage points.

(f) 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, turbine layout, visual screening, and facility coloration. In no event shall these measures conflict with relevant safety requirements.

(E) The applicant shall provide information regarding agricultural districts and potential impacts to agricultural land.

(1) The applicant shall identify on a map of at least 1:24,000 scale the proposed facility, all agricultural land, and separately all agricultural district land existing at least sixty days prior to submission of the application located within the project area boundaries. Where available, distinguish between agricultural uses such as cultivated lands, permanent pasture land, managed woodlots, orchards, nurseries, livestock and poultry confinement areas, and agriculturally related structures.

DRAFT - NOT FOR FILING

(2) The applicant shall provide, for all agricultural land, and separately for agricultural uses and agricultural districts identified under paragraph (E)(1) of this rule, the following:

(a) A quantification of the acreage impacted.

(b) An evaluation of the impact of the construction, operation, and maintenance of the proposed facility on the land and the following agricultural facilities and practices within the project area:

(i) Field operations such as plowing, planting, cultivating, spraying, harvesting.

(ii) Irrigation.

(iii) Field drainage systems.

(iv) Structures used for agricultural operations.

(v) The viability as agricultural district land of any land so identified.

(c) A description of mitigation procedures to be utilized by the applicant during construction, operation, and maintenance to reduce impacts to agricultural land, structures, and practices. The description shall illustrate how avoidance and mitigation procedures will achieve the following:

(i) Avoidance or minimization to the maximum extent practicable of any damage to field tile drainage systems and soils in agricultural areas.

(ii) Timely repair of damaged field tile systems to at least original conditions, at the applicant's expense.

(iii) Segregation of excavated topsoil, and decompaction and restoration of all topsoil to original conditions unless otherwise agreed to by the landowner.

DRAFT - NOT FOR FILING

~~**4906-13-04 Technical data.**~~

~~(A) Site. Information on the location, major features, and the topographic, geologic, and hydrologic suitability of the proposed site and any proposed alternative 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 site alternative.~~

~~(1) Geography and topography. The applicant shall provide a map 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, recreational areas.~~

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

~~(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 of 1:4,800 scale of the 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.~~

DRAFT - NOT FOR FILING

~~(f) Water and gas wells.~~

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

~~(4) Geology and seismology. The applicant shall 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. 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 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.~~

~~(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 site and any proposed alternative site(s) and the description of proposed major structures and installations located thereon.~~

~~(1) Site activities. The applicant shall describe the proposed site preparation and reclamation operations, including:~~

~~(a) Test borings.~~

DRAFT - NOT FOR FILING

~~(b) Removal of vegetation.~~

~~(c) Grading and drainage provisions.~~

~~(d) Access roads.~~

~~(e) Removal and disposal of debris.~~

~~(f) Post-construction reclamation.~~

~~(2) Layout. The applicant shall supply a map of 1:4,800 scale of the proposed electric power generating plant site, showing the following features of the proposed and existing facility and associated facilities:~~

~~(a) Electric power generating plant.~~

~~(b) Fuel, waste, and other storage facilities.~~

~~(c) Fuel and waste processing facilities, if any.~~

~~(d) Water supply and sewage lines.~~

~~(e) Transmission lines.~~

~~(f) Substations.~~

~~(g) Transportation facilities and access roads.~~

~~(h) Security facilities.~~

~~(i) Grade elevations where modified during construction.~~

~~(j) 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.~~

DRAFT - NOT FOR FILING

~~(c) Color and texture of facing surfaces.~~

~~(d) Artist's pictorial sketches of the proposed facility from public vantage points.~~

~~(e) Any unusual features.~~

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

~~(5) Future plans. The applicant shall describe any plans for future additions of electric power generating units for the site (including the type and timing) and the maximum electric power generating capacity anticipated for the site.~~

~~(C) Equipment.~~

~~(1) Electric power generating equipment. The applicant shall describe the proposed major electric power generating equipment for the proposed site and any proposed alternative site(s).~~

~~(2) Emission control and safety equipment. The applicant shall describe:~~

~~(a) All proposed major flue gas emission control equipment, including tabulations of expected efficiency, power consumption, and operating costs for supplies and maintenance.~~

~~(b) The reliability of the equipment and the reduction in efficiency for partial failure.~~

~~(c) The equipment proposed for control of effluents discharged into bodies of water and receiving streams.~~

~~(d) All proposed major public safety equipment.~~

~~(3) The applicant shall describe any other major equipment not discussed in paragraphs (C)(2)(a) to (C)(2)(d) 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.~~

DRAFT - NOT FOR FILING

~~(1) Interconnection queue(s). The applicant shall provide the following information relating to their 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 studies on their generation interconnection request. The studies shall include, but are not limited to, the following:~~

~~(a) Feasibility study.~~

~~(b) System impact study.~~

DRAFT - NOT FOR FILING

~~**4906-13-07 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 site.~~

~~(2) Atmospheric emissions. The applicant shall describe in conceptual terms the probable impact to the population due to failures of air pollution control equipment.~~

~~(3) 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) Describe the operational noise levels expected at the nearest property boundary. The description shall address:~~

~~(i) Generating equipment.~~

~~(ii) Processing equipment.~~

~~(iii) Associated road traffic.~~

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

DRAFT - NOT FOR FILING

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

~~(4) Water. The applicant shall estimate the impact to public and private water supplies due to:~~

~~(a) Construction and operation of the proposed facility.~~

~~(b) Pollution control equipment failures.~~

~~(B) Ecological impact.~~

~~(1) Site information. The applicant shall:~~

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

~~(i) The facility boundary.~~

~~(ii) Undeveloped or abandoned land such as wood lots, wetlands, or vacant fields.~~

~~(b) Provide the results of a survey of the vegetation within the site boundary and within a one-fourth mile distance from the site perimeter.~~

~~(c) Provide the results of a survey of the animal life within the site boundary and within a one-fourth mile distance from the site perimeter.~~

~~(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 U.S. and Ohio threatened and endangered species lists.~~

~~(2) Construction. The applicant shall:~~

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

DRAFT - NOT FOR FILING

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

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

~~(3) Operation. The applicant shall:~~

~~(a) Estimate the impact of operation on the undeveloped 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)(c) of this rule.~~

~~(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 site, including such uses as residential and urban, manufacturing and commercial, mining, recreational, transport, utilities, water and wetlands, forest and woodland, 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) Estimate the impact of the proposed facility on the above land uses within a one mile radius.~~

~~(d) Identify structures that will be removed or relocated.~~

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

~~(f) Describe the applicant's plans for concurrent or secondary uses of the site.~~

DRAFT - NOT FOR FILING

~~(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, and city 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.~~

~~(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 site.~~

~~(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~~

DRAFT - NOT FOR FILING

~~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 site.~~

~~(5) The applicant shall describe the identified recreational areas within one mile of the proposed site in terms of their proximity to population centers, uniqueness, topography, vegetation, hydrology, and wildlife. Estimate the impact of the proposed facility on identified recreational areas within one mile of the proposed site and describe plans to mitigate any adverse impact.~~

~~(6) The applicant shall describe measures that will be taken to minimize any adverse visual impacts created by the facility~~

~~(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.~~

~~(F) Agricultural district impact. The applicant shall:~~

~~(1) Identify on a map of 1:24,000 scale all agricultural land, and separately all agricultural district land existing at least sixty days prior to submission of the application located within the proposed facility site boundaries.~~

~~(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~~

DRAFT - NOT FOR FILING

~~the following agricultural practices within the proposed facility site 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.~~

DRAFT - NOT FOR FILING

~~**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.~~

DRAFT - NOT FOR FILING

~~(d) Individual structures and installations.~~

~~(e) Surface bodies of water.~~

~~(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.~~

DRAFT - NOT FOR FILING

(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.

(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:

DRAFT - NOT FOR FILING

~~(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.~~

~~(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.~~

DRAFT - NOT FOR FILING

~~(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.~~

DRAFT - NOT FOR FILING

~~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.~~

DRAFT - NOT FOR FILING

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

~~(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.~~

DRAFT - NOT FOR FILING

(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.

(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.

DRAFT - NOT FOR FILING

~~(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 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.~~

DRAFT - NOT FOR FILING

~~(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.~~

~~(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.~~

DRAFT - NOT FOR FILING

~~(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.~~

~~(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.~~

DRAFT - NOT FOR FILING

~~(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.~~