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**ORDINANCE NO. 06-10**

**AN ORDINANCE OF THE NAVAJO COUNTY BOARD OF SUPERVISORS, AMENDING ARTICLE 20 OF THE NAVAJO COUNTY ZONING ORDINANCE BY ADDING SECTION 2008**

**WHEREAS**, Article 20 of the Navajo County Zoning Ordinance, Ordinance No. Z90-1, authorizes the issuance of Special Use Permits for "Electric power generating plants and facilities, including but not limited to those operated by nuclear or fossil fuel or solar, wind or geothermal energy"; and,

**WHEREAS**, the Public Works Department staff and the Planning and Zoning Commission have recommended that Article 20 be amended to include a new Section 2008, entitled Wind Energy Generation Facilities; and,

**WHEREAS**, following published notice as required by law and a duly noticed public hearing held this date, the Board of Supervisors finds that the recommended amendment to Article 20 is in the public interest and should be approved,

**NOW, THEREFORE, BE IT ORDAINED** by the Board of Supervisors that Article 20 of the Zoning Ordinance is hereby amended by inserting the following new Section 2008:

**Section 2008: Wind Energy Generation Facilities**

**1. Introduction and purpose**

The purpose of this section is to:

- Specify Special Use Permit application requirements for the development of utility-scale wind energy projects with actual or planned generating capacity of at least one megawatt.
- Establish standards for the permitting, construction, operation, maintenance, and decommissioning of utility-scale wind energy generation facilities.

This section does not apply to personal or institutional wind energy generation equipment that is intended to generate electricity or heat water for use primarily on the property on which the equipment is located, or to facilities with an actual or planned generating capacity of less than one megawatt.

**2. Definitions**

The following terms are defined as follows for purposes of this section. Other definitions may be found in Article 30.

SUP: A Special Use Permit approved by the Board of Supervisors pursuant to this section and the other applicable provisions of this ordinance.

Project boundary: The boundary of a Wind Energy Generation project as set forth in the project site plan and incorporated into the SUP.

Setback distance: The distance from the center of the wind turbine electrical generator tower foundation to the nearest property line, edge of a public road right-of-way or railroad right-of-way,

third-party transmission line, above-ground pipeline, communication tower, other structure or other boundary established by Navajo County.

Wind Energy Generation facility: An energy generation facility using wind technology and consisting of one or more wind turbines and accessory structures and buildings, including substations, anemometers and associated electrical infrastructure, with an actual or planned generating capacity of at least one megawatt. The term does not include stand-alone wind electricity generating systems primarily for on-site residential, institutional, commercial or agricultural use which may feed residual power into the electrical grid as defined by the Arizona Corporation Commission.

Wind turbines (or towers): A wind energy system that uses the wind to turn a set of aerodynamic blades or devices attached to an electric generator or turbine. The term does not include small wind turbines used primarily to generate electricity for on-site residential, institutional, commercial or agricultural use.

### **3. Zoning Districts in which allowed / SUP required**

Wind Energy Generation facilities are allowed only in the A-General, Rural and Industrial Zoning Districts, subject to securing an SUP and to the applicable site development standards set forth herein. The SUP application shall comply with the submittal application requirements of Navajo County for the particular project.

### **4. General development standards for Wind Energy Generation facilities**

- a. A minimum of on-site roadways shall be constructed. Temporary access roads and excess roadway widths for initial equipment/facility installation shall be re-vegetated, using native species plants and seeds, to a pre-project condition (to the extent reasonably possible) after completion of installation as a condition of the SUP. The applicant shall submit a plan of all proposed roads, temporary and permanent, for review and approval by the Public Works Department prior to the issuance of any grading or building permits.
- b. Electrical collector lines, which connect electricity generation devices to any substations, shall be placed underground except where (a) they cross sensitive biological or archaeological resources, such as canyons, wetlands or sites eligible for the national register, or rugged terrain that would prevent the use of underground trenching technology, (b) project terrain is found to be unsuitable, as determined by the applicant and confirmed by the County Engineer, or (c) burying the lines would violate applicable laws or regulations. In these cases, collector lines will be allowed above ground subject to approval by the Public Works Department. Utility lines serving the electricity or phone requirements of buildings shall be placed in accordance with the utility's easement requirements.
- c. Wind Energy Generation projects shall include fire control and prevention measures as outlined in the Uniform Fire Code and as required by the local Fire District or State Fire Marshall.
- d. Wind Energy Generation projects shall comply with applicable Federal Aviation Administration (FAA) lighting, navigation and other requirements. Lighting shall be the minimum required by FAA regulations or other public safety considerations. The use of low-intensity, red pulsating/blinking lighting is preferred so long as consistent with FAA regulations. The use of strobes and strobe-type lighting for nighttime use is prohibited unless specifically required by the FAA. All lighting shall be in compliance with the Navajo County Lighting Ordinance.
- e. Wind Energy Generation projects shall comply with applicable Federal Communication Commission (FCC) requirements, including those applicable to microwave communication links in the vicinity. Wind Energy Generation facilities shall minimize and mitigate telecommunication

interference (electromagnetic fields and communications interference generated by the project). No interference with public communication systems shall be allowed.

- f. Towers, generator housings, hubs and blades shall be painted a non-reflective, unobtrusive color which shall complement the surrounding landscape, including but not limited to white, off-white, beige or tan. The design of other buildings and other structures shall, to the extent reasonably feasible and consistent with public safety, use materials, colors, textures, screening and landscaping that will blend the facility into the existing environment
- g. The applicant shall avoid locating turbines in mountain passes or draws or on cliff edges in order to minimize avian and/or bat collisions when wildlife studies show that the project would pose a significant risk to avian and/or bat populations. Towers and nacelles shall be designed so as not to attract nesting birds or serve as perches for raptors. The SUP holder shall refer to the Arizona Game and Fish Department's and the U.S. Fish and Wildlife Services' wind guidelines that have been developed to aid the project proponents in reducing impacts to wildlife.
- h. A letter from the Arizona Game and Fish Department will be required prior to scheduling of the SUP application for a hearing before the Planning and Zoning Commission, detailing the agency's comments and/or recommendations for the project. Pre-construction and post-construction wildlife studies shall be developed and performed with consideration given to the Arizona Game and Fish Department and U.S. Fish and Wildlife Service guidelines. Any wildlife impacts discovered during formal post-construction surveys shall be identified in the formal annual report submitted to the Arizona Game and Fish Department and U.S. Fish and Wildlife Service, with a copy to the Public Works Department. The formal annual report shall include avian and bat deaths due to the project.
- i. All wind towers must be designed and constructed, to the greatest extent feasible, so as to prevent interior/exterior access by the public and shall have interior ladders and locking doors.
- j. Experimental or prototype wind towers are prohibited. All wind towers must be standard production models commercially available from the manufacturer.
- k. Wind turbine designs with blades downwind of the tower are prohibited.
- l. For construction and permit purposes, all wind towers shall conform to the regulations for the applicable seismic zone of the building code.
- m. Documentation confirming an interconnection agreement and a power purchase agreement (or equivalent agreements) shall be required prior to issuance of any building or construction permits.
- n. All necessary building, grading and other permits shall be obtained from the Public Works Department prior to any site preparation or construction. All facilities must be designed and constructed in compliance with all applicable federal, state and local development and building and safety codes.
- o. No building or structure may be constructed or occupied prior to full compliance with all applicable Public Works Department requirements, including but not limited to requirements concerning grading and drainage plans, flood control requirements, and the issuance of building and other permits for the proposed structures.
- p. Floodplain Use Permits (where required) for any development in a floodplain shall be obtained through the Flood Control District prior to any such development.
- q. All wind towers and other structures shall comply with all applicable county, state and federal laws, ordinances and regulations.

- r. Signs associated with the project are limited to one project identification, information, interpretive and address sign of not more than 24 square feet located on the project site at each point of ingress and egress. No other signs shall be installed except for required warning and directional signs. Limited logos and/or manufacturer names shall be permitted on the generator housing or hub. No other advertisements, prominent logos, or other prominent messages are allowed on any tower, blade, generator housing, hub or any other part of any structure. Signage shall not be used for advertising. Prior to installation of any signs, the SUP holder shall obtain sign permits from the Public Works Department for all signs for which permits are required.
- s. Project fencing, if applicable, shall include minimum 18 inch by 18 inch signs warning of the presence of high voltage. Such signs shall be located a maximum of 300 feet apart and at all points of site ingress and egress. Projects without fencing shall place such warning signs on each transformer building and all points of ingress and egress. Project fencing, if applicable, shall be a minimum of six feet and maximum of eight feet in height (excluding barbed wire or cyclone wire fencing, which is permissible).
- t. Navajo County reserves the right to contract with a qualified third-party consultant for the review and evaluation of the proposed project and any of the application materials, particularly the sound study. The selection of a consultant shall be made in consultation with the applicant, with a mutually agreed-upon "not to exceed" contract amount prior to final selection of the consultant. The cost for any such review shall be reimbursed to Navajo County by the applicant before any building permit is issued. Additionally, and if deemed necessary, the reasonable cost for any third-party review(s) of any long-term monitoring or response to complaints or operational changes shall be reimbursed to Navajo County by the SUP holder within 30 days after written demand by the County. In such cases Navajo County shall provide written notice of the use of a third-party consultant to the applicant prior to such use.
- u. A decommissioning plan shall be required and shall address the removal of the facilities and the restoration of the site upon a revocation of the SUP pursuant to paragraph 6 of this Section 2008 or the expiration of the SUP. Removal of the facilities and restoration of the site shall mean that all safety hazards created by the installation and operation of the Wind Energy Generation facility shall be removed and the site shall be restored to its pre-project condition to the extent reasonably possible, including the removal of foundations and footings to 36" below grade and the re-vegetation of any roads created or other areas graded or disturbed during the project. The SUP holder shall maintain a decommissioning bond in the amount of the full decommissioning cost at the end of the anticipated life of the project, net of salvage value, as estimated by a Professional Engineer registered in the State of Arizona. Said bond shall be reviewed and approved as to form, substance and amount by the Public Works Department. The engineer's estimate of decommissioning cost shall be renewed no less than every five years by a Professional Engineer registered in the State of Arizona, and a copy of each renewed estimate shall be provided to the Public Works Department for review and approval. The decommissioning bond shall be adjusted in accordance with the renewed cost estimate within 30 days after approval by the Public Works Department. The SUP holder shall provide proof that the bond is in place no later than the date of the commencement of construction. Bond(s) shall be provided for the benefit of Navajo County and all private lessors on whose land any portion of the project will be located. This requirement shall be a condition of approval of the SUP. The Board of Supervisors, upon the recommendation of the County Attorney and the Director of Public Works, may approve variations from the requirements of this paragraph if warranted by the particular circumstances of a project.
- v. Noise requirements and mitigation measures:
  - (1) Audible sound limits:

- A. Audible noise due to project operations shall not exceed the greater of: (a) 45 dBA  $L_{Aeq,10i}$ ; or, (b) the measured background,  $L_{A90,10}$  plus 5 dB, as measured at the exterior at any legal residence, school, library or hospital in existence at the time of approval of the SUP.
  - B. If sound levels resulting from a proposed facility exceed the criteria specified above, a waiver may be granted by the Board of Supervisors after review and recommendation by the Planning and Zoning Commission, provided that the following has been accomplished:
    - i. An irrevocable written consent (or sound waiver easement) has been obtained from each affected property owner, stating that the owner is aware of the proposed facility and the sound limitations imposed by this section, that consent is granted to allow sound levels to exceed the maximum limits specified herein, and that such consent will be memorialized in a notice recorded with the Navajo County Recorder to notify future owners of the affected property that sound levels may exceed the sound levels specified herein. The consent shall include a legal description of the affected property. A copy of each such consent on which the SUP holder relies shall be submitted prior to approval of the SUP.
- (2) All wind turbine operations shall meet the operational low-frequency noise requirements applicable to wind turbines as specified in Noise Requirement Guidelines adopted, published and amended from time to time by the Board of Supervisors.
- (3) Background and compliance testing:

The requirements of subparagraph (1) above require that background (pre-development) sound levels be properly assessed, that sound levels be forecast in advance of SUP approval, and that, once a project commences operation, sound levels again be assessed as part of compliance-period assessment. Before an SUP is issued, the applicant's independent consultant shall complete a sound evaluation by determining existing (pre-project) background sound levels and forecasting ambient sound levels anticipated upon completion of the facility. The evaluation shall address facility aging and planned or probable modifications. If the project is permitted and constructed, when it is in operation the SUP holder's independent consultant shall complete a compliance-period sound evaluation. Background and post-construction compliance sound measurements shall comply with Noise Requirement Guidelines adopted, published and amended from time to time by the Board of Supervisors. If there is any conflict between the requirements of this ordinance and the requirements of such guidelines, the more stringent requirement(s) shall control.

For phased / staged development, background sound levels shall be determined before the initial phase of the project. For a situation in which multiple developments by the same or multiple developers are expected in an area, the same applies.

- (4) During the first three months of facility operation and more specifically during a period of normal full production operations, the SUP holder shall verify compliance with subparagraph (1) above utilizing an independent consultant. If operational sound is found to exceed the limits specified in subparagraph (1) above, the SUP holder shall institute remedies to achieve compliance with the applicable limits, or submit a consent from each owner of an affected property in accordance with subparagraph v.(1).B above. During the remedy period the SUP holder shall identify and remove from service the equipment responsible for the excessive sound until the problem can be cured or mitigated. Navajo County staff may require additional compliance testing when deemed appropriate.

- (5) Plans for determining background sound levels and for modeling/simulation shall be submitted by the applicant for the Public Works Department's review and approval in advance of the work.
- w. Setbacks. The minimum safety setback distance, location and spacing requirements for Wind Energy Generation facilities shall be as follows. As used herein, "total tower height" means the height from grade to the top of the structure, including the uppermost extension of any blade (i.e., "straight up").
- (1) Wind towers shall be placed in accordance with the greater of the applicable setback and location requirements set forth in paragraphs A, B and C below:
- A. Such that the sound standards established in subparagraph 4.v of this Section 2008 will not be exceeded.
- B. Setbacks related to areas outside the project boundary:
- i. Setback to existing residence: Individual wind towers shall be placed within the project boundary at least ½-mile (2,640 feet) from an existing residence that is located outside of the project boundary.
- ii. Setback to adjacent privately-owned land that is not zoned Industrial (I-1 or I-2):
- a. Parcels greater than 2.5 acres in size: Individual wind towers shall be placed within the project boundary at least ¼-mile (1,320 feet) or 150% of the total tower height (whichever is greater) from the common property line with such parcels.
- b. Parcels 2.5 acres or smaller in size: Individual wind towers shall be placed within the project boundary at least ½-mile (2,640 feet) or 150% of the total tower height (whichever is greater) from the common property line with such parcels.
- Adjacent parcel sizes as set forth in subparagraphs a and b above shall be determined as of the effective date of this Section 2008.
- iii. All other adjacent land not included in one of the foregoing categories: Individual wind towers shall be placed at least 1.1 times (110%) the total tower height from the project boundary.
- C. Setbacks related to areas within or outside the project boundary:
- i. Roadway (public or publicly-maintained): Individual wind towers shall be set back from any public or publicly-maintained roadway (as measured to the nearest edge of the right-of-way) at least ¼-mile (1,320 feet).
- ii. Railways, utility lines, interior phase lines and structures: Individual wind towers shall be set back from any railway (as measured to the nearest edge of the right-of-way), or from any utility line (above or below ground - as measured to the nearest edge of the utility easement), or from any interior phase line or structure (regardless of use), at least 1.5 times (150%) the total tower height.
- (2) The minimum setbacks from the project boundary for all non-tower uses and structures (such as administrative buildings, meteorological or anemometer towers, maintenance buildings, operations buildings, transformers, etc.) shall conform to the setback requirements for the Zoning District in which the use or structure is located.

- (3) The Board of Supervisors may approve a reduction in the setback requirements set forth above in accordance with any or a combination of the following circumstances:
- A. The project shares a common property line with another approved Wind Energy Generation facility.
  - B. An irrevocable written consent from an affected property owner has been obtained, stating that the owner is aware of the proposed facility and the setback requirements imposed by this section, that consent is granted to allow lesser setbacks than those specified herein, and that such consent will be memorialized in a notice recorded with the Navajo County Recorder to notify future owners of the subject property that setbacks are less than those specified herein.
  - C. An adjacent property owner who is also pursuing the development of a Wind Energy Generation facility or similar use has filed a letter of consent to the proposed setback reduction with the Public Works Department.
  - D. The parcel on which the project is located and an adjacent parcel are held in common ownership.
  - E. The current use of an adjacent property generates sound in excess of that permissible for the Wind Energy Generation facility under the terms of this section.
- (4) Setback areas may be used for access within the development but are otherwise to remain in their current vegetative state.

**5. Use of SUP, terms and conditions**

- a. Any Wind Energy Generation facility that is granted an SUP shall be developed in accordance with the schedule for development and stipulations set forth in the SUP.
- b. An SUP for a Wind Energy Generation facility shall be valid for the anticipated useful life of the project.
- c. An SUP for a Wind Energy Generation facility shall be granted in the name of the applicant and may be transferred or assigned to a new holder only with the written approval of the Board of Supervisors, following a public hearing. The new holder shall only be bound to agree to all existing conditions and shall provide adequate assurances to demonstrate that the new holder has the financial ability to fulfill the obligations as specified in the SUP.

**6. SUP suspension and revocation**

- a. Any SUP issued pursuant to this section may be suspended or revoked in whole or part by the Board of Supervisors for material non-compliance with the requirements of this section or the stipulations set forth in the SUP. An SUP shall be subject to suspension or revocation at a duly noticed public hearing only if the SUP holder has failed to cure the material non-compliance after no less than 30 days' written notice of such non-compliance from the Director of Public Works.
- b. If a Wind Energy Generation facility becomes unsafe or inoperable, the SUP is likewise subject to suspension or revocation by the Board of Supervisors as follows:
  - (1) An "inoperable Wind Energy Generation facility" is one that does not generate a significant amount of electricity for 180 consecutive days, unless such non-generation is due to an act of nature, declared emergency or other cause beyond the reasonable control of the SUP holder

or unless the SUP holder demonstrates that modernization, rebuilding or repairs are in progress or are planned and will be diligently completed.

- (2) An "unsafe Wind Energy Generation facility" is one that has been found by a state or federal administrative agency or a court of competent jurisdiction to have materially violated applicable health or safety laws, unless the SUP holder demonstrates that measures to cure such violations are in progress or are planned and will be diligently completed.
  - (3) Every unsafe or inoperable Wind Energy Generation facility is hereby declared to be a public nuisance per se which shall be subject to abatement by all available legal and equitable remedies.
  - (4) Upon a complaint by the Director of Public Works that a Wind Energy Generation facility is inoperable or unsafe, the Board of Supervisors shall convene a public hearing at the earliest possible date after written notice to the SUP holder. Pending a final determination that the facility is inoperable or unsafe, the Board may suspend the SUP in whole or part or impose such conditions as may be appropriate to protect the public health, safety and welfare. Upon a final determination that the facility is inoperable or unsafe, the Board may suspend or revoke the SUP in whole or part or impose such conditions as may be appropriate to protect the public health, safety and welfare.
- c. No later than 30 days after the revocation or expiration of the SUP, the decommissioning plan required by subparagraph 4.u of this Section 2008 shall be implemented and decommissioning shall proceed diligently to completion.

#### **7. Joint agency approvals**

- a. If the applicant is also applying to the State of Arizona, U.S. Bureau of Land Management (BLM) Forest Service (USFS) or other federal agency for a right-of-way grant, lease or any other form of authorization or approval for a wind energy project in Navajo County to be located in whole or part on land managed by the State, BLM, USFS or other federal agency, or the applicant is also applying to the Western Area Power Administration or other federal power marketing agency (PMA) for an interconnection or transmission agreement for a wind energy project in Navajo County, then the applications may be jointly considered by the Planning and Zoning Commission and Board of Supervisors and the State, BLM, USFS, other federal agency or PMA (including without limitation joint hearings and coordinated application and mitigation requirements), and any and all findings, reports, studies, statements, assessments or analyses issued, approved or adopted by the State, BLM, USFS, other federal agency or PMA, including any mitigation measures required by any of those agencies, may be considered and adopted by the Planning and Zoning Commission and the Board of Supervisors in connection with the SUP application.
- b. This Section 2008 does not purport to regulate wind energy generation projects on state or federal land except insofar as state or federal agencies may require compliance with Navajo County zoning requirements as part of their own application processes.
- c. In the event of any inconsistency between any requirement of this Section 2008 and any requirement of state or federal law, now or in the future, the state or federal requirement shall control and this section shall be interpreted and applied consistently therewith.

#### **8. Public Outreach.**

As part of the SUP review and approval process, and to ensure adequate public outreach, the applicant shall do the following:



- a. Provide the following:
- (1) A list of all property owners of record within one mile of the project boundary, with current contact information (address and telephone number).
  - (2) A list of all property owners of record within 300 feet of each access route to the project from a public roadway, as well as within 300 feet of each public roadway that requires any improvements in connection with the project, with current contact information (address and telephone number).
  - (3) Notice by first class mail to all property owners listed under subparagraphs (1) and (2) above, such notice to include a narrative description of the project, identification of transportation routes, vicinity map showing surrounding properties, and a layout of the proposed facility and accessory buildings indicating setback distances to property lines.
  - (4) Notice by first class mail to all incorporated communities within three miles of the project boundary.
- b. Schedule, publicize and conduct at least two public meetings (in collaboration with neighborhood groups and property owner associations, where available) in the project area at least 30 days before the Planning and Zoning Commission hearing. Public Works staff is available to suggest to the applicant potential meeting sites and publicity measures.

Feedback cards shall be provided to attendees and tabulated results shall be submitted to the Public Works Department within five days after each meeting.

- c. Establish a web site or ".ftp" site, linked to the Navajo County web site if possible, giving a summary of the project (site plan, context plan and summary description) and applicant contact information before holding the first public meeting as required above. Provide a mechanism on this site for the submission of public comments.
- d. Provide a contact name and telephone hotline, the details of which are printed on a prominent sign at each project entrance and maintained on record with the Public Works Department, by which citizens can leave comments and complaints 24 hours a day for the life of the project. The SUP holder shall take all reasonable efforts to review and address (including returning the call when appropriate) all non-urgent messages within 72 hours and all urgent messages within 24 hours. Provide the County with a monthly summary of complaints and the manner in which they were addressed.

**SO ORDAINED** by the Navajo County Board of Supervisors at Holbrook, Arizona, on October 26, 2010, by a vote of 5 ayes and 0 nays.

**NAVAJO COUNTY BOARD OF SUPERVISORS**

By Jesse Thompson  
Jesse Thompson  
Chairman of the Board

Attest:

Melissa W. Buckley  
Melissa Buckley, Clerk of the Board