

STAFF REPORT FOR A SPECIAL USE

McLean County Department of Building and Zoning

CASE NUMBER SU-17-11

1. REFERENCE:

- a. Hearing date: January 2, 2018
- b. Applicant's name and address: McLean County Wind Energy, LLC, One South Wacker Drive, Suite, 1800, Chicago, IL
- c. Land owners' names and addresses: Multiple land owners (see application file)

2. LOCATION AND CURRENT/PROPOSED ZONING AND LAND USE:

- a. Property location: Sections 16, 17, 19-23, 26-32, 34 and 35 of Chenoa Township, Sections 13-15, 23, 24, 26, 27 and 34-36 of Gridley Township, Sections 1, 8, 17-20, 24, 26, 28, 29, 31, 32, 33 and 36 of Lawndale Township, Sections 2, 4, 6, 10, 11, 13-15, 22-27, 31 and 33 in Lexington Township, and Sections 1-3 and 12 in Money Creek Township. The Project is generally located east of County Highway 29, south of U.S. Highway 24, west of County Roads 3570E and 3600E, and north of State Highway 165
- b. Townships: Chenoa, Gridley, Lawndale, and Money Creek Townships
- c. Parcel numbers: Multiple parcel numbers (see application file)
- d. Existing zoning: A-Agriculture District
- e. Applicant request: A special use to allow a Wind Energy Conversion System (WECS) consisting of up to 117 wind turbine generators that are up to 500 feet in height, as well as access roads, transformers, power lines, communications lines, interconnection lines, substation, construction lay-down yards, and other ancillary facilities or structures, on approximately 12,830 acres in the Agriculture District. The application also requests that the time period to apply for building permits for the Wind Energy Conversion System be extended to three years, rather than two years as provided by the McLean County Zoning Ordinance in the Agriculture District;
- f. Existing land use: Primarily crop production and pasture

3. DIMENSIONS:

- a. Acreage: 12,830 acres of participating parcels
- b. Road Frontage: Multiple locations along County Highways and Township Roads.

4. EXISTING LAND FEATURES:

- a. Topography: Relatively flat to sloping in some areas
- b. Drainage: Multiple drainage patterns
- c. Vegetation: Primarily crop production with some grass, crops, and trees

5. SURROUNDING ZONING: A-Agriculture District

6. SURROUNDING LAND USE: Primarily crop production with some pasture

7. STAFF ANALYSIS:

The analysis of the seven standards listed in Article VII Section 350-56 (Standards for Special Use Permits) of the Zoning Ordinance as they apply to this zoning request is as follows:

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1. **The proposed special use will not be detrimental to or endanger the health, safety, morals, comfort, or welfare of the public.** This standard can be met. The applicant is proposing to build a Wind Energy Conversion System (WECS) consisting of up to 117 wind turbine generators that are up to 500 feet in height. The project will likely end up with 100 turbines, with a total power output of up to 250 megawatts (MW), and will power approximately 69,000 homes according to the application. A noise analysis was submitted with the application. Three different types of General Electric turbines will be used; General Electric (GE) 2.5 MW-116 turbines with standard blades, GE 2.5 MW-127 turbines with low-noise trailing edge (LNTE) blades, and GE 2.3 MW-116 turbines with LNTE blades. The dominant component of wind turbine noise is caused by the blade passing through the air. The trailing edge of an LNTE blade is shaped to make the airflow off the blade less turbulent, which reduces emitted noise. The figures in the application specify the type and location of each turbine to comply with noise regulations. If the applicant changes the project layout or turbine type, chooses alternative turbine sites, and/or employs a mix of standard and LNTE blades different than modeled in the application, the noise analysis will need to be updated accordingly and compliance again demonstrated.

The proposed Wind Energy Conversion System meets the setback requirements of the Zoning Ordinance. The turbines will be set back 1.1 times the height of the turbine from all side and rear property lines of non-participating property owners, from the edge of any public road right-of-way, third party transmission lines and communication towers as measured from the tip of the blade. The turbines will be set back 1,500 feet from occupied residences.

A professional engineer shall certify, as part of the building permit application, that the foundation and tower design of the WECS is within accepted professional standards. After construction is complete, a professional engineer will verify that they are built according to the approved plans.

The applicant has submitted an air space study with correspondence with the Federal Aviation Administration (FAA), a microwave study, a communications tower study, an AM and FM radio report, a land mobile and emergency services report, a mobile phone carrier report, an off-air TV analysis, a sample land owner agreement, and an economic impact study. The applicant will resolve any complaints of television reception interference and return them to at least the level of service that occurred before the turbines were installed. If problems occur with emergency services transmissions, the applicant states that their meteorological towers or turbines can serve as platforms for base stations or repeaters.

The application includes a decommissioning Plan and Decommissioning Obligation Cost Evaluation. The cost estimate per turbine is \$40,562. The applicant will need to post adequate financial assurance with the County and has indicated that if the project is decommissioned, they will remove all facilities as required under the Agricultural Impact Mitigation Agreement (AIMA) including the turbine foundations to a depth of 5 feet below grade. This is greater than 40 inches below grade as required by the Zoning Ordinance.

The applicant has submitted a review of ecological resources and mapped the wetlands in the project area. The applicant has submitted a cultural inventory review and noted areas to

be avoided by turbines; but there has been no communication from the Illinois Historical Preservation Agency (IHPA). The applicant has submitted a bat acoustic survey including a field study. The applicant has submitted an eagle and other raptor nest survey including a field study. The applicant has submitted a large bird study including a field study. The applicant has submitted a small bird use survey including a field study. However, the County has not yet received a pre-siting study, addressing all relevant species, submitted to the Illinois Department of Natural Resources (IDNR) and implementation of the IDNR recommendations based on pre-siting study results as required in the Zoning Ordinance for wildlife.

The McLean County Regional Comprehensive Plan approved on November 17, 2009, proposes that the project area remain in agricultural land use and states that wind energy developments are an opportunity for preserving local farmland and agricultural heritage. The Plan goes on to state in reference to the two windfarms that had already been approved at the time, "Besides adding significant tax dollars, both projects will assist local farmers as some take advantage of annual turbine rental fees for allowing the energy firms to erect turbines on private property".

2. **The proposed special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for purposes already permitted or substantially diminish property values in the immediate area.** This standard can be met. The surrounding property that is currently used for crop production will continue to be desirable for such use. Land surrounding the wind turbines will continue to be farmed. The proposed wind farm is compatible with agricultural operations in the project area, and these agricultural operations will not likely be negatively impacted.

The application meets the setback requirements of the Zoning Ordinance. Compliance with these setback requirements ensure that project improvements are located at safe distances from other uses. The application demonstrates that the project will comply with noise standards of the Illinois Pollution Control Board. The noise analysis and the turbine setback requirements from occupied residences show that the project will not injure nearby residents.

The applicant is requesting to be allowed to apply for a building permit up to three years after County Board approval rather than two years as allowed. This is a reasonable request and has been approved for other wind farms in the County. Site approval for each wind turbine within the project area needs to be approved by the Federal Aviation Administration (FAA) before construction can begin. Lighting on turbines shall meet the FAA lighting requirements. The application states that no more intensive lighting will be installed than is required to meet minimum FAA lighting requirements.

The applicant is proposing to build several turbines within 1½ miles of the municipal boundaries of Chenoa, Gridley and Lexington, and has indicated that they are seeking appropriate authorization from each municipality.

McLean County has not yet received a pre-siting study, addressing all relevant species, submitted to the Illinois Department of Natural Resources (IDNR) and implementation of the IDNR recommendations based on pre-siting study results as required in the Zoning Ordinance for wildlife.

3. **The proposed special use will not impede the orderly development of the surrounding property for uses permitted in the district.** This standard is met. The

Agriculture District is very restrictive for establishing non-agricultural uses. Nearby land that is suitable for crop production will continue to be suitable for such use. In the limited areas where residences are located, turbines will be set back 1,500 feet from occupied residences. The application includes a decommissioning Plan and Decommissioning Obligation Cost Evaluation. The cost estimate per turbine is \$40,562. The applicant will post adequate security with the County.

The applicant indicates that there is one airstrip in the project area. The application indicates that turbines will be set back a distance of 1,000 feet from the sides and more than one mile from the ends of the 2,250-foot long grass runway of the Thacker Airstrip, a private airstrip located 2 miles southwest of Chenoa.

The application indicates that all turbines have been located to minimize adverse effects to crop dusting operations since farmers in the project area rely on aerial applications of pesticides for their crops.


4. **Adequate utilities, access roads, drainage and/or other necessary facilities have been or will be provided.** This standard is met. The applicant will protect the existing drainage near the project and repair any damage made to drain tile or any other drainage improvements. The applicant is proposing to build gravel access roads to each tower. Drainage problems have developed along and through some of these access roads in the already built Twin Groves Wind Farm. It is necessary to install vegetated strips along the upstream side of access roads that are prone to washing out, particularly where the access roads cross waterways. To minimize erosion along access roads, waterways should be improved before access roads are installed, or the crossing will not be installed in a way that minimizes erosion.
5. **Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.** This standard is met. The applicant has been working with the County and townships to obtain road use agreements to maintain the public roads and provide adequate access during the construction process. A signed road use agreement with the County for use of County roads will need to be approved before the County Board takes action on this application. A written road use agreement with the applicable township road commissioners will need to be obtained before construction permits are issued.
6. **The establishment, maintenance and operation of the special use will be in conformance with the intent of the district in which the special use is proposed to be located.** This standard is met. The intent of the Agricultural District states, "Provide for the location and govern the establishment and operation of land uses which are compatible with agriculture and are of such a nature that their location away from residential, commercial and industrial areas is most desirable."
7. **The proposed special use, in all other respects, conforms to the applicable regulations of the Agriculture District.** This standard is met.

8. **CONCLUDING OPINION:**

Staff recommends that this application meets all of the standards set forth in Article VII Section 350-56 (Standards for Special Use Permits) of the Zoning Ordinance provided the following stipulations:

1. A written road use agreement shall be obtained with the County before the County Board approves this application.
2. A written road use agreement shall be obtained with the applicable township road commissioners before construction permits are issued.
3. Development shall follow the plans and documents submitted with the application and with Zoning Regulations including Article VI Section 350-43.OO (2) (Use Standards for WECS).
4. Adequate financial assurance acceptable to the County shall be submitted with the County according to the application, the Decommissioning Plan and Decommissioning Obligation Cost Evaluation submitted with the application. Beginning 12 years after the start of commercial operation, the WECS owner shall provide financial assurance to the County for removal costs of at least \$40,562 per turbine or \$4,056,200 for total decommissioning costs.
5. If decommissioning is triggered, all facilities will be removed as required under the Agricultural Impact Mitigation Agreement (AIMA) including the turbine foundations to a depth of 5 feet below grade.
6. McLean County shall receive a pre-siting study, addressing all relevant species, submitted to the IDNR and implementation of the IDNR recommendations based on pre-siting study results as required in the Zoning Ordinance for wildlife.
7. General Electric (GE) 2.5 MW-116 turbines with standard blades, GE 2.5 MW-127 turbines with low-noise trailing edge (LNTE) blades, and GE 2.3 MW-116 turbines with LNTE blades shall be installed in this project according to the project layout submitted with the application. If the applicant changes the project layout or turbine type, chooses alternative turbine sites, and/or employs a mix of standard and LNTE blades different than modeled in the application, the noise analysis shall be updated accordingly and compliance again demonstrated.
8. The applicant shall obtain approval from the Illinois Historical Preservation Agency (IHPA) before construction can begin.
9. The applicant shall rectify any television and internet connection problems in the project area and return them to at least the level of service that occurred before the turbines were installed.
10. No lighting shall be installed that is more intensive than the minimum required by the FAA.
11. The applicant will coordinate and provide aid to local fire districts to promote safety and emergency response procedures.

Respectfully submitted,


Philip Dick, AICP, Director

Attachment: Turbine Location Map

