

5.20 WIND ENERGY CONVERSION SYSTEM (WECS) OVERLAY DISTRICT

WECS, Wind Energy Conversion System Overlay District: This district establishes special land use and development requirements for Wind Energy Conversion Systems. Specifically, it creates a supplemental zone that lies on top of an existing zoning district and is intended to add additional design standards and restrictions beyond those of the underlying zoning district in which it is created. The purpose of this district is to protect the special public interests incident to industrial wind farming and may cover parts of several zones or only a portion of a single zone. The WECS overlay district is limited to the following zoning districts: Agricultural (AG), Agricultural Production (AGP), Industrial Park Manufacturing (IPM) and Intensive Use (IN).

WECS-01 Permitting and application requirements are as follows:

- A) An application for re-zoning to a WECS Overlay District must be submitted to the Plan Commission and may be a combined application provided all property owners where the WECS facilities are to be located are Co-Applicants. The application shall include the following items:
 1. A WECS Project Summary, including:
 - a. A general description of the project including its approximate name plate generating capacity, the potential equipment manufacturer, the type of WECS, the number of WECS Towers, the name plate generating capacity of each WECS Tower, the maximum height of the WECS Towers, the maximum diameter of the WECS rotors and the general location of the project.
 - b. A description of the applicant, owner, and operator, including their respective business structures.
 - c. A description of substations, maintenance structures, storage yards, permanent meteorological towers and equipment, and other buildings that are a direct functional part of the WECS. These structures, within the proposed overlay district, shall be considered accessory uses.
 2. The names, addresses and phone numbers of the applicants, owners and operators, and a list of all co-applicants. Additional co-applicants may be added at a later date.
 3. A topographic map of the project site and the surrounding area which shall encompass an area at least a quarter mile radius from the proposed project site with contours of not more than two (2) foot intervals.
- B) Following the creation of a WECS Overlay District, a Development Plan together with a petition for Development Plan Review, as specified in Chapter 7 of the Zoning Ordinance, must be submitted to the Plan Commission.
 1. The petition for Primary Development Plan Approval shall include:

- a. A site plan at an appropriate scale showing the proposed location of the Wind Energy Conversion System Facility (including locations of each WECS Tower, guy lines and anchor bases (if any); WECS access roads; substations; maintenance structures; storage yards; permanent Meteorological Towers; electrical cabling; ancillary equipment; and any other structures that are a direct functional part of the WECS). Each tower and/or structure should be assigned a unique identification number on the site plan. In addition, the site plan shall show: primary structures within one quarter mile of any WECS; property lines, including identification of adjoining properties; setback lines; public roads; County regulated drains, open ditches, or tiles; location of all above-ground utility lines within a distance of two (2) times the WECS Tower Height of any WECS Tower; location of all existing underground utility lines associated with the WECS site; recognized historic or heritage sites as noted by the Indiana Department of Natural Resources; floodplains; and any wetlands based upon a delineation prepared in accordance with the applicable U.S. Army Corps of Engineer requirements and guidelines. This site plan must also be distributed to the Emergency Management Agency, any Fire Departments serving any part of the site, and to the County Sheriff.
- b. A Transportation Plan (as defined) recommended by the WECS Transportation Committee (as defined) and approved by the Whitley County Commissioners.
- c. A Drainage Plan approved by the Whitley County Drainage Board. The Transportation Plan and/or the Drainage Plan shall establish that the newly constructed WECS access roads shall not impede the flow of water and will comply with the county drainage ordinance or standards and policies of the Engineer/Surveyors Office and Drainage Board, as applicable.
- d. A Projected Sound Emissions Study (as defined) for the proposed WECS.
- e. A decommissioning plan approved by the Board of Commissioners providing for the method and payment of the anticipated cost of removing a WECS at the end of its serviceable life or upon it's becoming a discontinued or abandoned use to ensure that the WECS is properly decommissioned.

1. Content

A decommissioning plan shall include, at a minimum, the following:

- a. Assurance
Written assurance that the WECS will be properly decommissioned upon the expiration of its serviceable life or in the event of its discontinuance or abandonment.
- b. Cost estimates
For all WECS except Micro WECS, an estimate of the costs of decommissioning and removing the WECS upon the expiration of its useful life, or in the event of its discontinuance or abandonment. The cost estimates shall be made by a professional engineer, contractor,

or other person with expertise or experience in decommissioning and removal of WECS, and shall be updated every five (5) years for approval by the Board of Commissioners.

c. Financial assurance

The cost of removal and site restoration is the full responsibility of the applicant and/or owner/operator. In order to provide the greatest possible financial assurance that there will be sufficient funds to remove the wind energy system and to restore the site, the following steps shall be followed:

- 1). For each wind energy system, the applicant/owner/operator shall determine an amount of money equal to the estimated removal and restoration cost.
- 2). The Planning Commission shall require independent verification of the adequacy of this amount.
- 3). This money shall be deposited in an escrow account specified by Whitley County, which may be an interest-bearing account. There shall be no alternative to such an account. A surety bond, letter of credit, or other financial promise shall not be accepted.

d. Abandonment

Verification under penalties for perjury, that all easements and/or leases for the WECS contain terms that provide financial assurances to the property owners to ensure that the WECS are properly decommissioned within one (1) year of the expiration of its serviceable life or in the event of its discontinuance or abandonment.

2. Discontinuation and abandonment

a. Discontinuation

All WECS shall be considered abandoned and a discontinued use after six (6) months without energy production, unless a plan is developed by the owner/applicant and approved by the Building Inspector outlining the steps and schedule for returning the WECS to service.

b. Removal

An applicant's obligations shall include removal of all physical material pertaining to the project improvements to no less than a depth of four (4) feet below ground level within three hundred sixty-five (365) days of the discontinuation or abandonment of the WECS or WECS project, and restoration of the project area to as near as practicable the condition of the site immediately before construction of such improvements.

c. Written notices

Prior to implementing procedures to resolve any alleged failure to comply with the Decommissioning Plan, the appropriate County body shall first provide written notice to the owner and/or operator, setting forth the alleged default(s). Such written

notice shall provide the owner and/or operator a reasonable time period, not to exceed sixty (60) days, to resolve the alleged default(s).

d. Costs incurred by the County

If the County removes a WECS Tower and appurtenant facilities, it may sell the salvage to defray the costs of removal. Each permittee, by virtue of the issuance of its construction permit or Inspection Certificate grants a license to Whitley County to enter the property and to remove all WECS Towers and appurtenant facilities pursuant to the terms of its approved decommissioning plan.

3. Declaration of public nuisance

Any WECS, structure or portion thereof declared to be unsafe by the Whitley

County Building Inspector by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage or abandonment is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal in accordance with the approved Decommissioning Plan.

f. A detailed shadow flicker assessment model and plan prepared by a registered professional regularly engaged in this type of work with not less than three years experience, which contains the following information and meets the following requirements:

1. The study area will examine areas where shadow flicker will occur within a one mile radius of each wind turbine.
2. The study will include:
 - a. The location of each turbine.
 - b. The location of each receptor (dwelling or occupied structure, structure permitted for construction or intersections between any of the following road types: Interstate, Principal Arterial, Minor Arterial, Major Collector or Minor Collector) where the WECS may cause shadow flicker to occur.
 - c. Existing topography (elevation contours and vegetation)
 - d. Rotor diameter and hub height
 - e. Joint wind speed and direction distribution (wind rose table)
 - f. Hours of sunshine (long term monthly references)
3. The study may be prepared by use of current aerial photography, GIS, and topographical maps. A site visit by the preparer is required to identify receptors and verify the existing conditions.
4. The study shall calculate the locations and durations of shadow flicker caused by the proposed WECS within the study area, and model shall clearly indicate the duration of shadow flicker at each receptor and

across the entire study area showing the total number of hours per year anticipated.

5. Wind Turbines shall be sited such that shadow flicker will not fall on a receptor, unless the owner of such dwelling or intersection as described in Section WECS 01 B.1.f.2.b. has agreed to in writing the allowance of shadow flicker. A waiver by an affected participating landowner or non-participating landowner or owner of a public building or intersection is an encumbrance on the real property, runs with the land until the wind energy system is decommissioned, and shall be recorded in the office of the Whitley County Recorder. Said waiver shall include the legal description of the property with a cross reference to the current deed's document number, and shall include verbiage to bind the grantees, their heirs, assigns, and successors in interest to the terms of the waiver.
 6. Problem zones where shadow flicker will interfere with existing and future receptors shall be identified, and measures to mitigate problems shall be described, including but not limited to siting changes, operational procedures, grading or landscaping.
 - g. A communications study verifying that the WECS Project will not interfere with any public or public serving utility microwave transmissions, and including any actions which may be required to mitigate interference with electromagnetic communications, such as radio, telephone, microwaves, or television signals caused by any WECS Project.
1. The petition for Secondary Development Plan Approval shall include:
 - a. A revised site plan as described in Section WECS-01(B)(1)(a).
 - b. A Security and Safety Plan which must include adequate provisions for site security and safety. If the plan includes using county services, then it should include signatures indicating those parties are aware of their role and capable of performing it.
 - c. Adequate Assurance of the Completion and Continued Operation of the WECS Project from the date of the commencement of construction through the tenth (10th) year of operation of the WECS. The owner/applicant/operator shall demonstrate such Adequate Assurance of Completion and Continued Operation of the WECS Project by providing evidence of: (1) adequate funding of one hundred percent (100%) of the estimated cost of construction of the WECS; (2) performance and payment bonds or other sureties from the Owner Applicant/Operator and/or major equipment suppliers and contractors; (3) the existence of written warranties from contractors and/or manufacturers which have demonstrated financial ability to repair and/or replace defective work, materials, and equipment; and (4) adequate casualty, builders risk, business interruption, and liability insurance for the replacement of the WECS and the individual components thereof, and the funding of on an ongoing basis, and the payment of all liabilities occurring

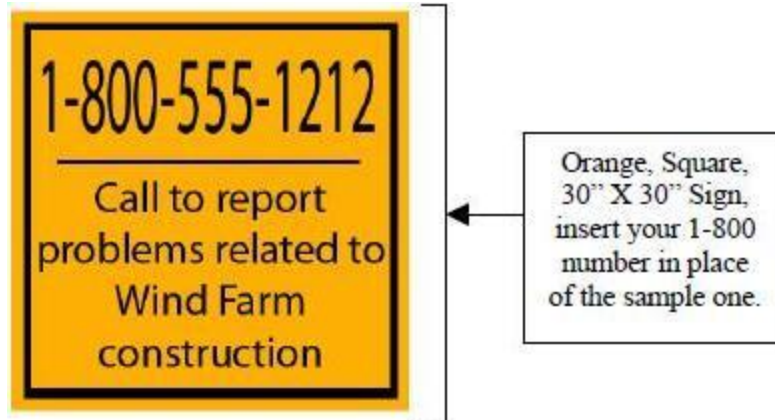
during, arising from, or related to a casualty loss. The applicant/owner/operator shall upon request provide such cost estimates, bids, contracts, warranties, feasibility studies, engineering studies and reports, insurance certificates, loan and other financing commitments to provide the requested information to provide adequate assurance of completion and continued operation.

- d. An Economic Development Agreement (as defined) approved by the Whitley County Board of Commissioners. This agreement must be developed in conjunction with the Whitley County Economic Development Corporation and Whitley County Council.

C) After Secondary Development Plan approval is obtained, but before any construction commences or Improvement Location Permits may be acquired, all applicable state and federal permits, approvals and licenses must be obtained and all state and federal statutes and regulations must be complied with and the following requirements satisfied:

1. The owner or operator of the WECS shall maintain liability policies covering (1) bodily injury and property damage and (2) environmental contamination arising from construction, operation, maintenance, and decommissioning of the WECS, with nationally recognized, well-capitalized insurance companies initially approved by the County Board of Commissioners and annually thereafter by the executive director of the Plan Commission and name Whitley County as an additional insured. Limits on the bodily injury and property damage policy shall be of at least \$2 million per occurrence and \$5 million in the aggregate with a deductible of no more than \$20,000 and on the environmental contamination policy shall be of at least \$1 million per occurrence and \$2 million in the aggregate with a deductible of no more than \$50,000.
2. The applicant/owner/operator shall establish a 24-hour toll-free phone number for the registering of complaints and concerns. This number shall be posted at every road intersection identified on the Transportation Plan throughout the project area before Improvement Location Permits are issued and before any construction or earth moving can commence. If legitimate complaints are not remedied within 48 hours the county may address these complaints with any expenses incurred to be reimbursed by the WECS Applicant according to the fee rate established as described in Section WECS-02(A)(7).

Required toll-free number sign example:



3. The applicant/owner/operator must attend a Pre-Construction Meeting between the Plan Commission Executive Director, Plan Commission President, Whitley County Building Inspector, and any other public officer or official whose input is deemed appropriate and WECS Applicant to verify that all requirements in the Zoning Ordinance have been met. This meeting shall take place as the final step before construction and all other requirements should already have been met. Once reviewed, if all requirements have been met, the WECS Applicant may then obtain Improvement Location Permits. If any requirements have not been met then further pre-construction meetings will be held until it can be verified that the identified issues have been resolved.
 4. All Improvement Location Permit fees must be paid for the entire WECS project before any Improvement Location Permits will be issued.
- D) The Rezoning Application, Development Plan (including but not limited to Decommission Plan and each update thereof and the assurance of completion and continued operations), and Improvement Location Permit applications shall be reviewed by Plan Commission staff, counsel, an independent professional engineer, and any other professionals deemed necessary as selected or approved by the Plan Commission. Within 30 days of submission, the owner/applicant/operator shall reimburse the Plan Commission for all costs and expenses associated with the initial or any subsequent review of the Development Plan including but not limited to the employment of a professional engineer, financial consultant, or other professional advisors consulted by the Plan Commission. A Professional Engineer shall also certify, as part of the Improvement Location Permit application that the foundation and tower design of the WECS is within accepted professional standards, given local soil and climate conditions.

WECS-02 Construction and Standards:

- A) Prior to and during construction the applicant, owner and operator shall be responsible for:
1. Implementing reasonable dust control measures during construction as approved by an authorized county official.

2. Complying with existing septic and well regulation as required by the Whitley County Health Department and the Indiana Department of Public Health.
3. Repairing all damages to non-participating landowner or county regulated waterways, drainage ditches, field tiles, or any other infrastructures caused by the construction, maintenance, or decommissioning of the WECS. Damages must be completely repaired to original or better condition, and so as not to impede the flow of water. All repairs must be completed in a timely manner and the WECS owner, operator, and/or applicant shall be responsible for loss or damage proximately resulting from its impairment of such drainage structures. All repairs to county regulated drainage structures must be completed within ten days of notification by the Surveyor/Engineer or his agent.
4. Unless otherwise approved with the drainage plan, all subsurface power transmission lines shall be located four (4) feet below tile drains and six (6) feet below open ditches. Additionally, unopened bags of premixed concrete shall be laid on top of the transmission lines to cover six inches on both sides of the line and eight feet to each side of the County regulated drain the line is crossing. Open drain and transmission line intersections where the line is below the invert of the open drain shall be armored using the same technique. Red warning tape (printed with “warning electrical line below” or similar language) shall be buried no closer than 12 inches above the actual power line at all crossing locations. The Surveyor/Engineer or his agent shall inspect every such crossing before backfilling. Concrete armoring techniques will not be required in cases where directional boring is used, but the depth requirements listed shall be met.
5. Installing permanent, visible markers where directional boring is used. Markers shall be placed within the line of sight indicating directional changes and borings.
6. Submitting a daily plan of work submitted at a time of day specified by the Plan Commission detailing where construction and transportation activities will occur to the Plan Commission Executive Director, County Highway Supervisor, County Sheriff, County Engineer, Soil & Water Conservation District, the Superintendent(s) of the School District(s) and County Board of Commissioners in which construction is occurring and to the emergency services with jurisdiction over the areas in which construction is occurring. This shall include notification of any oversize or overweight loads entering or exiting the project each day as well as any work on roads, drainage, or access roads.
7. Adhering to the approved Transportation Plan. The Whitley County Highway Supervisor shall conduct a pre-construction baseline survey to determine existing road conditions for assessing potential future damage. The Whitley County Highway Supervisor may choose to require remediation of road damage during or upon completion of the project and is authorized to collect fees for oversized load permits. If the applicant does not make repairs in a timely manner, the Supervisor is authorized to make repairs and charge the

applicant a fee to cover the costs of repair. Such fees shall be established at the start date of construction and may be revised at three-month intervals. Further, a corporate surety bond shall be required by the Whitley County Highway Supervisor to insure the county that future repairs are completed to the satisfaction of the county. The cost of bonding is to be paid by the applicant. A \$1,000 fine shall be assessed for each occurrence where WECS oversize or overweight construction and maintenance equipment utilizes any route(s) in violation of the approved Transportation Plan. If the applicant/owner /operator or its contractors require material changes from the approved Transportation Plan or if post completion repairs, improvements, or expansions require oversize and overweight loads or involve new routes, an Amended Transportation Plan must be approved in the same manner as the initial plan. When all road repairs are completed to his satisfaction the Whitley County Highway Supervisor will issue a County Highway Remediation Release Form.

8. Adhering to the approved Development Plan. Any non-material proposed changes, modifications, or amendments to the Development Plan must be approved by the Executive Director of the Plan Commission. All material changes to the Plan must be approved by the Plan Commission. The Executive Director shall have the authority and discretion, considering all relevant factors, to determine whether the proposed Development Plan change is material.

B) Design and installation shall be as follows:

1. WECS Towers shall conform to applicable industry standards. Applicant shall submit certificates of design compliance that wind turbine manufacturers have obtained from Underwriters Laboratories, Det Norske Veritas, Germanishcher Lloyd Wind Energie, or an equivalent third party.
2. All WECS Towers shall be installed with a tubular, monopole type tower. Meteorological towers may be guyed. All structures shall be uniform in design and appearance.
3. All WECS Towers shall be equipped with a redundant braking system. This includes both aerodynamic over-speed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Mechanical brakes shall be operated in a fail-safe mode. Stall regulation shall not be considered a sufficient braking system for over-speed protection.
4. All electrical components and Collectors (as defined) of the WECS shall conform to applicable local, state, and national codes, and relevant national and international standards. All WECS Collectors between WECS towers shall be located underground.
5. Towers and blades shall be painted with non-reflective white or gray color. The Applicant shall comply with all applicable Federal Aviation Administration color requirements. No advertising or signage shall be allowed on a WECS Tower, except for manufacturers name on the nacelle.

6. A visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.
7. All WECS Tower designs must include features to deter climbing or be protected by anti-climbing devices such as: 1) fences with locking portals at least 8 feet high, 2) anti-climbing devices 15 feet vertically from the base of the WECS Tower, and/or 3) locked WECS Tower doors.
8. Red strobe lights are preferred during the night to reduce impacts on migrating birds and red pulsating incandescent lights shall be avoided. White strobe lights at night are not allowed. If technology is available, lighting shall be "On Demand" utilizing the Obstacle Collision Avoidance System (OCAS) or equivalent. All lighting shall also be in compliance with applicable Federal Aviation Administration regulations. All lighting shall be shielded so that no direct light extends substantially beyond the boundaries of the wind farm facilities.

C) NOISE: At any non-participating landowner residentially used structure, public school, or public library, for a period of more than 10% out of every hour, the audible A-weighted sound pressure levels as a result of the sound emitted by the WECS shall not exceed 45 decibels at Critical Wind Speeds. At any non-participating landowner property line for a period of more than 10% out of every hour, the audible A-weighted sound pressure levels as a result of the sound emitted by the WECS shall not exceed 51 decibels at Critical Wind Speeds. All methods for measuring and reporting acoustic emissions shall be equal to or exceed the minimum standards for precision described in the International Electrotechnical Commission IEC 61400-11 Standard: Wind turbine generator systems – Part 11: acoustic noise measurement techniques. Noise and vibration levels shall also be in compliance with all other applicable county, state and federal regulations.

D) The minimum distance between the ground and any protruding blade(s) utilized on a WECS shall be fifty (50) feet, as measured at the lowest point of the arc of the blades. The minimum distance shall be increased as necessary to provide for vehicle clearance in locations where over-sized vehicles might travel.

E) Setbacks shall be as follows:

1. No WECS shall be constructed in any setback, dedicated public easement or dedicated public right-of-way without prior written authorization from the county.
2. Except as provided herein, installation of any WECS may not be nearer than 1.1 times the height of the WECS including the blade at its highest point, to any dedicated roadway, railroad right-of-way or overhead electrical transmission or distribution lines. A minimum setback of not less than 6.5 times the height of the WECS including the blade at its highest point, or 2,640 feet, whichever is greater, is required from a participating landowner residence. Also, the minimum setback distance for all turbines, substations, maintenance structures, storage yards, permanent Meteorological Towers, and other buildings that are a direct functional part of the WECS shall be not

less than 2,640 feet or 6.5 times the height of the WECS including the blades at the highest point, whichever is greater, from any non-participating landowner property line, public building, or Municipal Jurisdictional Boundary. Distance shall be measured at the time of application for Improvement Location Permit from the center of the foundation at the base of the tower.

3. A non-participating landowner or participating landowner may waive the applicable wind turbine setback distance from their respective property line or residence, however, the WECS shall maintain a minimum setback distance of 1.1 times the height of the WECS including the blade at its highest point. A waiver by an affected participating landowner or non-participating landowner or owner of a public building is an encumbrance on the real property, runs with the land until the wind energy system is decommissioned, and shall be recorded in the office of the Whitley County Recorder. Said waiver shall include the legal description of the property with a cross reference to the current deed's document number, and shall include verbiage to bind the grantees, their heirs, assigns, and successors in interest to the terms of the waiver.
4. The WECS Tower shall not be nearer than 1.1 times the height of the WECS Tower including the blade at its highest point from any other WECS Tower.

WECS-03 Post-construction and continued maintenance requirements are as follows:

- A) All solid waste whether generated from supplies, equipment, parts, packaging, or operation or maintenance of the facility, including old parts and equipment, shall be removed from the site in a timely manner. All hazardous waste generated by the operation and maintenance of the facility, including but not limited to lubricating materials, shall, be handled in a manner consistent with all local, state and federal rules and regulations.
- B) The following operation, maintenance and inspection standards shall be met:
 1. Any physical modification to the WECS that alters the mechanical load, mechanical load path, or major electrical components shall require re-certification. Like-kind replacements shall not require re-certification. Prior to making any physical modification (other than a like-kind replacement), the Owner or Operator shall confer with the Building Inspector to determine whether the physical modification requires re-certification.
 2. The Whitley County Building Inspector, approved designees, along with licensed 3rd party engineers/professionals retained by the County for the specific purpose of conducting inspections of the WECS shall have the right, at any reasonable time and with sufficient prior notice, to accompany the owner or operator, or his agent, on the premises where a WECS has been constructed, to inspect all parts of said WECS installation and to require that repairs or alterations be made. The owner or operator of a WECS may retain a licensed 3rd party professional engineer familiar with WECS systems to prepare and submit to the Whitley County Building Inspector a written report which addresses the repairs or alterations requested, and which suggest

alternate methods for addressing the concerns or provides evidence that said repairs or alterations are unnecessary, within fifteen (15) days after receiving notice from the Whitley County Building Inspector that repairs or alterations are requested, or within a longer period of time mutually acceptable to both parties. The Whitley County Building Inspector will consider any such written report and determine whether the repairs or alterations should be made as originally requested or as suggested in the written report. In the event of a dispute between the Whitley County Building Inspector and the owner or operator, or a 3rd party professional engineer retained by them, as to the repairs or alterations which are required, the decision of the Building Inspector shall be final.

3. INTERFERENCE

Applicant, owner and/or operator shall take such actions as may be required to mitigate interference with electromagnetic communications, such as radio, telephone, microwaves, or television signals caused by any WECS. In addition, the applicant, owner and/or operator shall comply with the following:

- a. If a WECS Inspection Certificate has been issued, the owner or operator receives a written complaint related to interference with the broadcast of residential television, telecommunication, communication or microwave transmissions, the owner or operator shall take reasonable steps to mitigate said interference. Interference with private telecommunications systems such as GPS shall be between the company and the complainant.
 - b. Failure to remedy a complaint. If the Building Inspector determines that an owner or operator has unreasonably failed to remedy verified interference with the broadcast of residential television, telecommunication, communication or microwave transmissions within ninety (90) days after owner or operator received a written complaint related thereto, the Building Inspector may take appropriate action to rescind the owner's or operator's WECS Inspection Certificate. This does not apply to interference with private telecommunications systems.
4. The WECS applicant, owner or operator shall submit to all providers of emergency services serving the WECS Project area a copy of the as-built site map in digital format, if requested. Upon request by the local fire department, the owner or operator shall cooperate with the local fire department to develop the fire department's emergency response plan. Nothing in this section shall alleviate the need to comply with all other applicable fire laws and regulations.
5. On completion of construction the WECS applicant, owner or operator shall submit to the County Engineer/Surveyor a site map in digital format, preferably GIS detailing all ground disturbed through construction activity, surface/subsurface structure/infrastructure and all routes over which trucks and equipment traveled. The scale and format of the submitted map shall conform to the County Engineer's specifications.

6. For a period of five (5) years following the completion of construction the WECS applicant, owner or operator shall be liable to the county for all costs of repair, as determined by the County Surveyor/Engineer, to county drain tiles, regulated drains and ditches and other county regulated surface and subsurface structures and private tiles located in the public right of way within fifty (50) feet of the routes and disturbed ground as described in Section WECS-03(B)(5).

C) Any post-construction proposed non-material modifications, alterations, expansions, or changes of any type or size to the Development Plan must be approved by the Executive Director of the Plan Commission and all material post construction proposed changes must apply in the same way as a new WECS following the process in WECS 01. The Executive Director shall have the authority and discretion, considering all relevant factors, to determine whether the proposed post-construction change is material.

D) POST-CONSTRUCTION SOUND MEASUREMENTS

1. Within twelve (12) months after issuance of a WECS Inspection Certificate, and annually thereafter, the applicant, owner or operator of all WECS except private WECS shall submit a post-construction noise profile study prepared by a Qualified Independent Acoustical Consultant which includes sufficient information, including sound modeling and actual measurements, for the Building Inspector to verify, after consultation with a Qualified Independent Acoustical Consultant retained by the County, that the WECS continues to meet the requirements of WECS-02.C of this Chapter.
2. Post construction measurement methods will be based on good-engineering practices and industry-recognized international standards for the measurement of WTG noise emissions, (IEC 61400-11) when applicable.
3. Post-construction sound measurements shall include measurements taken 1) at each non-participating landowner's dwelling or primary structure on a direct line between such dwelling or primary structure and the nearest WECS Tower, and 2) at the point on each non-participating landowner's property line which is closest to the nearest WECS Tower.
4. Post-construction sound measurements shall be collected during meteorological conditions which result in full electrical output of the WECS.
5. If post-construction sound measurements of ambient noise (WECS noise plus all non-WECS related noise) are less than or equal to the WECS-only noise limits specified in WECS-02.C, the WECS will be in conformance with noise limitations of this Chapter. Otherwise, WECS-only noise levels may be determined using practical acoustical measurement and/or analysis techniques including but not limited to: 1) conducting measurements with all WTGs locked-out, to estimate WECS-only noise levels, 2) use of spectral analysis techniques to estimate WECS-only noise levels, 3) use of acoustical models to propagate 'close-in' WECS measurements to 'far-field' receiver locations, etc.

6. If the Building Inspector determines, after consultation with a Qualified Independent Acoustical Consultant retained by the County, that the post-construction noise profile study fails to demonstrate continued compliance with the requirements of WECS-02.C of this Chapter, the Building Inspector shall notify the owner or operator of such failure in writing, and the owner or operator shall have ninety (90) days to cure such failure and provide written documentation of compliance to the Building Inspector. If the Building Inspector determines that an owner or operator of the WECS has failed to take reasonable steps to remedy such non-compliance within ninety (90) days, the Building Inspector may order the owner or operator of the WECS to take such actions as may be required to cure such failure, including, but not limited to, curtailing operation of the WECS, or components thereof, under the specific meteorological conditions which were in existence at the time the actual measurements contained in the report were taken, until the owner or operator has demonstrated to the satisfaction of the Building Inspector that it is in compliance with the standards set out in WECS-02.C and WECS-03 regarding the issues raised in the post-construction noise profile study. Any curtailment order shall specify the 1) hub height wind speed as measured at the WTG nearest to the complainant 2) wind direction as measured at the WTG nearest to the complainant 3) specific hour of the day (ranging from 7am to 10 pm) or specific hour of the night (from 10pm to 7am) and (4) days of the year for which curtailment applies. If curtailment does not return the WECS to compliance, the Building Inspector may revoke the owner or operator's WECS Inspection Certificate upon 15 days prior written notice thereof. An owner or operator whose WECS Inspection Certificate has been revoked may apply for reinstatement of its WECS Inspection Certificate after curing any compliance issues.

E) COMPLAINT RESOLUTION

1. After a WECS Inspection Certificate has been issued, a person aggrieved by an alleged failure of the owner or operator of the WECS to comply with the Construction Design and Installation Standards set out in WECS-02 or the Operation and Maintenance Standards set out in WECS-03 (the Standards) may file a written complaint with the Building Inspector specifying the factual basis for the alleged failure.
If the Building Inspector determines that the facts alleged, if true, would constitute a violation of the Standards, or otherwise has reason to believe that a violation has occurred, the Building Inspector shall notify the owner or operator of the alleged violation in writing, and deliver a copy of the complaint, if any, to the owner or operator.

The owner or operator shall:

- a. log the complaint,
- b. log the WECS operating and meteorological conditions for the reported time of the complaint,
- c. take reasonable steps to remedy such complaint,
- d. provide a written response to the complainant, and
- e. submit a copy of the complaint, the response, the operating and

meteorological condition log, and documentation of compliance to the Building

Inspector within 10 business days after receiving a copy of the written complaint.

2. Complaint resolution shall be deemed satisfactory when the owner or operator has demonstrated to the satisfaction of the Building Inspector that it has complied with the standards set out in WECS-02 and WECS-03 with respect to the issues raised in such written complaint.
3. If the Building Inspector determines that an owner or operator of the WECS has failed to take reasonable steps to remedy a complaint as set out in Subsection 2. above within ninety (90) days after receipt thereof, the Building Inspector may order the owner or operator of the WECS to take such actions as may be required to cure such failure, including, but not limited to, curtailing operation of the WECS, or components thereof, under the specific meteorological conditions which were in existence at the reported time of the complaint until the owner or operator has demonstrated to the satisfaction of the Building Inspector that it is in compliance with the standards set out in WECS-02 and WECS-03 regarding the issues raised in such written complaint. Any curtailment order shall specify the 1) hub height wind speed as measured at the WTG nearest to the complainant 2) wind direction as measured at the WTG nearest to the complainant 3) specific hour of the day (ranging from 7am to 10pm) or specific hour of the night (from 10pm to 7am) and (4) days of the year for which curtailment applies. If curtailment does not return the WECS to compliance, the Building Inspector may revoke the owner or operator's WECS Inspection Certificate upon 15 days prior to written notice thereof; provided however the Building Inspector's decision may be appealed to the Board of County Commissioners within thirty (30) days. An owner or operator whose WECS Inspection Certificate has been revoked may apply for reinstatement of its WECS Inspection Certificate after curing any compliance issues.

F) Nothing in this Ordinance is intended to preempt other applicable state and federal laws and regulations.

WECS-04 All owners of new building lots and new dwellings approved in the Wind Energy Conversion System Overlay District shall submit and record a signed agreement in the office of the County Recorder. Such written agreement shall recognize that the current owner and all subsequent owners of such building site (lot) shall not remonstrate nor file suit against any Wind Energy Conversion System or Whitley County so long as it follows industry accepted wind farming operation, construction, and maintenance standards and complies with the Whitley County Zoning Ordinance. Such agreement language shall be approved by the Commission Attorney.

Non-Commercial, Private, & MET Towers:

WIND ENERGY CONVERSION SYSTEM (WECS) – NON-COMMERCIAL

A Non-Commercial Wind Energy Conversion System shall meet the following standards:

WECS-05 Permitting and application requirements are as follows:

- A) An application for Special Exception approval must be submitted to the Board of Zoning Appeals and may be a combined application provided all property owners where the WECS facilities are to be located are co-applicants. The applicant may also submit a joint application for any Variances that are needed for the project area. The application shall include the following items, in addition to the regular Special Exception Requirements:
1. A WECS project summary, including:
 - a. A general description of the project, including its approximate name plate generating capacity, the potential WECS equipment manufacturer, type of WECS, number of WECS, the name plate generating capacity of each WECS, the maximum height of the WECS Towers, the maximum diameter of the WECS rotors, and the general location of the project
 - b. A description of the applicant, owner, and operator, including their respective business structures.
 2. The names, addresses and phone numbers of the applicants, owners and operators, and all co-applicants with WECS on their properties.
 3. A map of the project area, encompassing an area at least a quarter mile radius from the project site.
- B) After Special Exception approval is obtained, but before any construction commences or Improvement Location Permits may be acquired, all applicable state and federal permits, approvals and licenses must be obtained and all state and federal statutes and regulations must be complied with and the following requirements satisfied:
1. A site plan at an appropriate scale showing the proposed location of the wind energy facility (including planned locations of each WECS Tower, guy lines and anchor bases (if any); electrical cabling; ancillary equipment; and any structures that are a direct functional part of the WECS). In addition, the site plan shall show: primary structures within one quarter of one mile of any WECS; property lines, including identification of adjoining properties; setback lines; public roads; county regulated drains, open ditches, or tiles; private septic systems, tiles, and wells; location of all above-ground utility lines within a distance of two (2) times the WECS Tower Height of any WECS Tower; location of all existing underground utility lines associated with the WECS site; floodplains; and any wetlands based upon a delineation prepared in accordance with the applicable U.S. Army Corps of Engineer requirements and guidelines.
 2. If any oversize or overweight vehicles will be utilizing public county roads for construction or maintenance activities the WECS applicant, owner, or operator must contact the County Highway Supervisor to develop a Transportation Plan.

3. Written Whitley County Drainage Board and Whitley County Health Department Approval must be submitted with the application for Development Plan Review.
4. A copy of a recorded agreement between all applicants detailing provisions for maintenance and decommissioning shall be submitted with the application for Development Plan Review.

C) Design and installation standards shall be as follows:

1. Turbines of 50 kW name plate generating capacity or greater must be installed with a tubular, monopole type tower.
2. The minimum distance between the ground and any protruding blades for turbines of 50 kW name plate generating capacity or greater is twenty-five (25) feet. The minimum distance between the ground and any protruding blades for turbines of less than 50 kW name plate generating capacity is fifteen (15) feet.
3. No WECS Turbine or Tower may be attached to any residence or dwelling structure, either as freestanding or by guy wires.
4. For all guyed towers install either (A) visible reflective colored objects such as flags, reflectors, or tape on the anchor points of guy wires and along the guy wires up to a height of not less than 15 feet from the ground or (B) a single visible fence to a height of not less than four (4) feet such that it surrounds the tower and all anchors points of the guy wires.
5. All electrical components and Collectors (as defined) of the WECS shall conform to applicable local, state, and national codes, and relevant national and international standards. All WECS Collectors between WECS Towers shall be located underground.
6. All WECS turbines shall be equipped with a redundant braking system. This includes both aerodynamic over-speed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Stall regulation shall not be considered a sufficient braking system for over-speed protection.
7. Towers and blades shall be painted with non-reflective white or gray color. The Applicant shall comply with all applicable Federal Aviation Administration color requirements. No advertising or signage shall be allowed on a WECS Tower, except for manufacturers name on the nacelle.
8. All blades shall utilize stick-free surface coatings to minimize ice buildup.
9. A visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.

10. All WECS Tower designs must include features to deter climbing or be protected by anti-climbing devices such as: 1) fences with locking portals at least 8 feet high, 2) anti-climbing devices 15 feet vertically from the base of the WECS Tower, and/or 3) locked WECS Tower doors.
11. At any non-participating landowner residentially used structure, public school, or public library, for a period of more than 10% out of every hour, the audible A-weighted sound pressure levels as a result of the sound emitted by the WECS shall not exceed 45 decibels at Critical Wind Speeds. At any non-participating landowner property line for a period of more than 10% out of every hour, the audible A-weighted sound pressure levels as a result of the sound emitted by the WECS shall not exceed 51 decibels at Critical Wind Speeds. All methods for measuring and reporting acoustic emissions shall be equal to or exceed the minimum standards for precision described in the International Electrotechnical Commission IEC 61400-11 Standard: Wind turbine generator systems – Part 11: Acoustic noise measurement techniques. Noise and vibration levels shall also be in compliance with all other applicable county, state and Federal regulations.
12. Red strobe lights are preferred during the night to reduce impacts on migrating birds and red pulsating incandescent lights shall be avoided. White strobe lights at night are not allowed. All lighting shall also be in compliance with applicable Federal Aviation Administration regulations and the lighting requirements in of the Zoning Ordinance. All lighting shall be shielded so that no glare extends substantially beyond the boundaries of the wind farm facilities.
13. Electricity generated from the WECS may not be sold to a utility. Net metering is permitted.
14. Setbacks shall be as follows:
 - a. No WECS shall be constructed in any setback, dedicated public easement or dedicated public right-of-way without prior written authorization from the county.
 - b. Except as provided herein, installation of any WECS may not be nearer than 1.1 times the height of the WECS including the blade at its highest point, to any dedicated roadway, participating landowner residences, non-participating landowner property lines, railroad right-of-way or overhead electrical transmission or distribution lines. Also, the minimum setback distance for all turbines, substations, maintenance structures, storage yards, permanent Meteorological Towers, and other buildings that are a direct functional part of the WECS shall be not less than 3.1 times the height of the WECS including the blade at its highest point from any non-participating

landowner residences, public building, or Municipal Jurisdictional Boundary.

Distance shall be measured at the time of application for Improvement Location Permit from the center of the foundation at the base of the tower.

- c. A non-participating landowner may waive the applicable wind turbine setback distance from their respective residence, however, any residence or public building on a non-participating landowner property shall maintain a minimum setback distance of 1.1 times the height of the WECS including the blade at its highest point. A waiver by an affected non-participating landowner or owner of a public building is an encumbrance on the real property, runs with the land until the wind energy system is decommissioned, and shall be recorded in the office of the Whitley County Recorder. Said waiver shall include the legal description of the property with a cross reference to the current deed's document number, and shall include verbiage to bind the grantees, their heirs, assigns, and successors in interest to the terms of the waiver.
- d. The WECS Tower shall not be nearer than 1.1 times the height of the WECS Tower including the blade at its highest point from any other WECS Tower.

WECS-06 WIND ENERGY CONVERSION SYSTEM (WECS) – PRIVATE

A Private Wind Energy Conversion System shall meet the following standards:

WECS-06 Permitting and application requirements are as follows:

- A) Prior to receiving an Improvement Location Permit the applicant must provide a map of the project area, including distances of the proposed WECS Turbine from all property lines, public easements and right-of-ways, wells and septic systems, county-regulated drains, open ditches or tiles, and overhead transmission or distribution lines or dwellings.
- B) The applicant must submit turbine technical specifications with the application. At a minimum, the specifications must include; rated power generating capacity, rotor diameter, swept area, and the level of sound generated. If manufacturer's specifications are not available the Applicant may submit results from a reliable testing entity such as the National Renewable Energy Laboratory or the Small Wind Certification Council. If no specifications are available the Applicant must submit a report from a qualified engineer.
- C) The applicant must submit tower specifications with the application including type and height of tower (guyed, lattice, monopole, etc.) and combined height of the tower and turbine with vertically extended blade.

D) Design and installation standards shall be as follows:

1. The minimum distance between the ground and any protruding turbine blades is fifteen (15) feet.
2. Installation of any WECS Tower may not be nearer than 1.1 times the height of the Tower including the blade at its highest point, to any property lines, dedicated roadway, railroad right-of-way or overhead electrical transmission or distribution lines. Distance shall be measured from the center of the foundation at the base of the tower.
3. No WECS Turbine may be attached to any dwelling structure, including by guy wires.
4. For all guyed towers install either (A) visible reflective colored objects such as flags, reflectors, or tape on the anchor points of guy wires and along the guy wires up to a height of not less than 15 feet from the ground or (B) a single visible fence to a height of not less than four (4) feet such that it surrounds the tower and all anchor points of the guy wires.
5. All electrical components of the WECS shall conform to applicable local, state, and national codes, and relevant national and international standards.
6. All WECS turbines shall be equipped with a redundant braking system. This includes both aerodynamic over-speed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Stall regulation shall not be considered a sufficient braking system for over-speed protection.
7. Towers and blades shall be painted with non-reflective white or gray color. The Applicant shall comply with all applicable Federal Aviation Administration color requirements. No advertising or signage shall be allowed on a WECS, except for manufacturers name on the nacelle.
8. All blades shall utilize stick-free surface coatings to minimize ice buildup.
9. Sound pressure levels may not exceed 45 decibels at six (6) feet in height at any adjacent lot line.
10. Electricity generated from the WECS may not be sold to a utility. Net metering is permitted.
11. Minimal lighting should be used. All lighting shall be in compliance with applicable Federal Aviation Administration regulations and the lighting requirements in the Zoning Ordinance. Red strobe lights are preferred during the night to reduce impacts on migrating birds and red pulsating incandescent lights should be avoided. White strobe lights at night are not allowed. All lighting shall be shielded so that no glare extends substantially beyond the WECS Tower.

WECS-07 METEOROLOGICAL TEST TOWERS Meteorological Test Towers must comply with the following standard:

- A) The structure shall not be nearer than 1.1 times the height of the structure from the nearest property line or right-of-way.
- B) The structure shall not be installed for a period of more than two (2) years, with up to two (2) renewals by the Plan Commission Executive Director, for no more than a total of six (6) years.
- C) A financial assurance in an amount of 125% of the estimated cost of said demolition and removal shall be filed in the form of a bond, letter of credit or other security acceptable to the county prior to Improvement Location Permit issuance.
- D) The structure shall comply with all Federal Aviation Administration and other federal and state regulations and all building codes.
- E) Visible, reflective, colored objects, such as flags, reflectors, or tape shall be placed on the anchor point of guy wires and along the guy wires up to a height of not less than 15 feet from the ground.

Wind Related Definitions:

ADEQUATE ASSURANCE OF COMPLETION AND CONTINUED OPERATIONS OF THE WECS PROJECT: The term “Adequate Assurance of Completion and Continued Operations of the WECS Project” shall mean the financial commitments, insurance certificates, warranties, and all other information and data provided pursuant to Section WECS-01(B)(2)(c).

AMBIENT BASELINE SOUND PRESSURE LEVEL: The L_{90} A-weighted sound pressure emissions level (the level of sound exceeded 90% of the time) for a WECS Project area prior to construction as determined by a baseline acoustics emissions study.

APPLICANT: The term “Applicant” when used in connection with or in respect of a WECS shall mean the person(s) and/or entity(ies) which is/are the developer and/or promoter of the WECS Project which prepares and files the initial application with the Plan Commission for a WECS Project, and the term shall include all successors and assigns of the initial Applicant. The term “Applicant” shall not include any person or entity which signs the application solely in the capacity as an Owner of an interest in real property in which the WECS shall be located.

CO-APPLICANT: The term “Co-Applicant” when used in connection with or in respect of a WECS shall mean a person or entity which executes an application for a WECS solely because of an ownership interest in real property to be used in connection with the WECS.

COLLECTOR: Any power line that carries electrical power from one or more wind turbines or individual transformers associated with individual wind turbines to the point of interconnection with the electrical power grid, in the case of interconnection with the high voltage transmission systems the point of interconnection shall be the substation serving the WECS.

CRITICAL WIND SPEED: The wind speed at which WECS turbine sound pressure levels are at greatest variance with ambient background sound pressure levels.

DECOMMISSIONING PLAN: The term “Decommissioning Plan” with regards to a WECS shall have the meaning and include the requirements set forth at WECS-01(B)(1)(e).

DEVELOPMENT PLAN (WECS): The term “Development Plan” with regards to a WECS shall have the meaning and content and meet the requirements set forth in WECS-01(B).

DRAINAGE PLAN: The term “Drainage Plan” with regards to a WECS shall mean the storm water management plan approved by Whitley County Drainage Board for the WECS Project as required by WECS-01(B)(1)(c).

ECONOMIC DEVELOPMENT AGREEMENT (WECS): With regards to WECS-01(B)(2)(d), an agreement between the WECS Applicant, Owner and/or Operator and the county setting forth the applicant, owner and/or operator’s financial commitment to support economic development and/or provide other financial assistance to the county, or any portion thereof.

NON-PARTICIPATING LANDOWNER: The person, firm, corporation, trust or other entity or entities with an equity interest in property contiguous to a WECS Project which is not a Participating Landowner.

OPERATOR: The term “Operator” when used in connection with or in respect of a WECS shall mean any person or entity which has the primary involvement with or responsibility for the use, operation, or maintenance of all or a portion of the WECS.

OWNER (WECS): The term “Owner” when used in connection with or in respect of a WECS shall mean any person or entity and his, her, or its assigns and successors in interest which has any ownership interest in any or all of the necessary devices to convert wind energy into electricity as herein defined as a WECS. The term “Owner” does not include any person or entity whose ownership interest in a WECS is limited to an interest in real property which is used in a WECS.

PARTICIPATING LANDOWNER: A landowner upon whose land a WECS is constructed, or who has contractually granted rights to an Owner or Developer with respect to a WECS.

PRIMARY STRUCTURE: The building or structure in which the primary or principal use of the premises is located or conducted, with respect to residential uses, the primary building or structure shall be the main dwelling.

PROJECTED SOUND EMISSIONS STUDY: A study predicting the sound pressure levels that will be produced by a WECS Project. This study shall include a brief summary of the study methodology and a sound contour map in five (5) decibel increments displayed as an overlay on an aerial photograph of the project area to a minimum of 40 decibels. The study shall be done at the maximum turbine sound level as provided by the manufacturer.

QUALIFIED INDEPENDENT ACOUSTICAL CONSULTANT: A specialist with demonstrated competence in the area of environmental acoustics obtained through academic training or work experience with full membership in the Institute of Noise Control Engineering (INCE), Acoustical Society of America (ASA), or National Council of Acoustical Consultants, or equivalent credentials.

SHADOW FLICKER: The condition which occurs when the blades of a Wind Turbine pass between the sun and an observer, casting a readily observable, moving shadow on the observer and his or her immediate environment.

SHADOW FLICKER RECEPTOR: Any occupied structure, structure permitted for construction, or roadway where the WECS may cause shadow flicker to occur.

TRANSPORTATION PLAN: Detailed route plan recommended by the WECS Transportation Committee and approved by the Whitley County Commissioners used for construction and maintenance by a WECS including plans for temporary road closures and traffic re-routing, plans for the repairs, replacement and/or reconstruction of all damage to roads, bridges, signage, vehicles, drainage structures, and other public or private improvements damaged by the WECS construction and maintenance, and the posting of repair, replacement, and maintenance bonds and such other matters as may be determined to be necessary and appropriate to protect the health and safety of motorists and to preserve and maintain the affected roads, bridges, and other public and private improvements.

SECURITY AND SAFETY PLAN: The WECS Project site security and safety plan as provided by WECS-01(B)(2)(b).

WECS INSPECTION CERTIFICATE: The Certificate issued by the Building Inspector to verify continued compliance with all requirements of this Chapter which were in effect when the original Improvement Location Permit for the WECS or WECS project was issued.

WECS NET SALVAGE VALUE: The net value of the towers, nacelles, generators, turbines, blades, wires, transformers, and all other saleable parts and commodities which make up the WECS whether sold as used parts or on a commodity/scrap basis or any combination thereof (whichever is greater) after deducting all estimated costs and expenses of dismantling, removal, and transportation and all costs and expenses of sale (including but not limited to all commissions and fees) and the amount necessary to pay and satisfy all liens, security interests, and other encumbrances attaching to the WECS. The commodity/scrap value shall be based on the prior five (5) years average scrap value of the commodity.

WECS PROJECT: The collection of WECS - Commercial (as defined) as specified in the Development Plan (alternatively “the WECS Overlay Application”) pursuant to this ordinance.

WECS TOWER: The support structure to which the nacelle and rotor are attached, freestanding or guyed structure that supports a wind turbine generator.

WECS TOWER HEIGHT: The distance from the rotor blade at its highest point to the top surface of the WECS foundation.

WECS TRANSPORTATION COMMITTEE: A committee chaired by the County Highway Supervisor and including the County Sheriff or designee, School Superintendent(s) of the district(s) the WECS will be constructed in or designee(s), Fire Chief(s) with jurisdiction over the WECS Project Area or designee(s), Whitley County Engineer or designee(s), Soil & Water Conservation District Board Representative or designee(s), and other identified individuals which will review and recommend to the County Commissioners the proposed Transportation Plan submitted by a WECS Applicant.

WIND ENERGY CONVERSION SYSTEM (WECS) – COMMERCIAL: All necessary devices referred to in Chapter 5.20, WECS that together convert wind energy into electricity and deliver that electricity to a utility’s transmission lines, including but not limited to the rotor, nacelle, generator, WECS Tower, electrical components, WECS foundation, transformer, and electrical cabling from the WECS Tower, the substations, switching stations, meteorological towers, communications facilities and other required facilities and equipment, as related to the WECS Project.

WIND ENERGY CONVERSION SYSTEM (WECS) - NON-COMMERCIAL: A WECS facility referred to in WECS-05 of one or more turbines with a total name plate generating capacity of greater than 20 Kilowatts (kW) but no more than one Megawatt (MW) for the purpose of producing electricity on one or more contiguous parcels and not for resale or distribution by interconnection with a utility.

WIND ENERGY CONVERSION SYSTEM (WECS) – PRIVATE: A WECS facility referred to in WECS-06 consisting of not more than one turbine and with a total name plate generating capacity of no more than 20 Kilowatts (kW) for the purpose of generating supplemental electricity for the parcel on which the facility is located.