

## SPECIAL REGULATIONS FOR WIND ENERGY CONVERSION SYSTEMS

### 154.505 INTENT.

This subchapter creates the framework for the siting of wind energy conversion systems, which convert the power of the wind into the generation of electricity. It is the intent of this subchapter to:

(A) Facilitate the comprehensive provision of wind energy conversion systems (“WECS”) to the residents and businesses of St. Joseph County;

(B) Minimize the height, obtrusiveness, and the visual impacts of WECS, and all associated equipment and buildings;

(C) Encourage WECS to be located in such a manner as to minimize their impact to residential uses; public parks, open space, and greenways; and streams, creeks and rivers;

(D) Ensure that the height of WECS have the least visual impact, and are no greater than required to achieve their designated service;

(E) Protect views of, and vistas from, architecturally or historically significant structures and historically significant landscapes so that these architectural or historical resources are not impaired or diminished by the placement of WECS; and

(F) Avoid potential damage to adjacent properties from the failure of a WECS, through structural design standards and setback requirements.

(Ord. 69-09, § 17, passed 8-11-2009)

### 154.506 WIND ENERGY CONVERSION SYSTEMS; GENERAL.

(A) *Classification.* WECS shall be classified as either:

(1) A Small Wind Energy Conversion System (“SWECS”), designed and installed exclusively for the on-site use of any associated electric power generation, or;

(2) a Wind Energy Facility (“WEF”), designed and installed exclusively for off-site use of any associated electric power generation.

(B) *Districts permitted.* A SWECS is permitted in all zoning districts as an accessory use; a WEF is permitted as a Special Use in designated zoning districts.

(C) *Building permit.* A building permit is required for the installation of all WECS.

(1) Building permit applications for a SWECS shall be accompanied, at a minimum, by:

(a) Standard manufacturer's drawings of the engineering specifications for the installation requirements of the wind turbine structure, including the tower, base, and footings. This analysis is frequently supplied by the manufacturer;

(b) A statement that the system shall comply with all applicable rules and regulations of the electric service provider for the property, and the Indiana Utility Regulatory Commission;

(c) A plot plan showing the location of the SWECS relative to all property lines, on-site structures, off-site structures within 1.5 times the height of the SWECS, utility locations (such as but not limited to overhead utilities, transformers, and junction boxes), and measured distances from all streams, creeks, rivers, public parks, public open space and greenways, and historic preservation districts;

(d) Certification that the installer of the SWECS is certified by the manufacturer of the SWECS, and has received the necessary training to properly and safely install the SWECS. Owner-installed SWECS will require an affidavit certifying that the installation will comply with the manufacture's specifications, and the requirements of the electric service provider of the property; and

(e) A drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code. This information is frequently supplied by the manufacturer.

(2) Building permit applications for a WEF shall be accompanied by a certification of the approval of the Special Use by the County Council.

(D) *Compliance with other laws and ordinances.* All WECS shall comply with all Federal, State and local laws and ordinances not in conflict with this Division, including but not limited to placement in floodplains and historic preservation districts.

(E) *Compliance with Federal Aviation Agency (FAA) regulations.* WECS must comply with any applicable FAA regulations, including any necessary approvals for installations close to airports.

(F) *Electric utility notification.* No WECS shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected, customer-owned WECS. Off-grid systems shall be exempt from this requirement.

(G) *Signs.* No WECS turbine, tower or associated building or structure may be used to advertise or promote any product or service. No word or graphic representation that may be construed as advertising, other than appropriate warning signs and the manufacturers technical information, shall be placed on a wind turbine, tower or other associated building or structure.

(H) *Signal disturbance.* Generators and alternators should be constructed so as to prevent the emission of radio and television signals. Upon a complaint of any signal disturbance, the operation of the WECS shall cease. The owner/operator shall correct any signal disturbance problem that is identified before the operation of the system can resume.

(I) *Appearance, color and finish.* The exterior surface of any visible components must be a non-reflective, neutral color, and blend into the surrounding environment as practical as possible. White or light grey is the color of preference unless the manufacturers color preference is proven to better blend into the environment. Rotors (blades) or vanes may be painted black to better assist in the prevention of ice build-up. Decorative items, such as flags, streamers and holiday and commemorative decorations are prohibited.

(J). *Lighting.* No WECS shall be artificially lighted, unless required by the FAA or appropriate authority.

(K) *Support tower.* The tower component of any WECS shall be one that is recommended and certified by the manufacturer:

(1) A building-mounted SWECS must be firmly anchored to the building (roof or wall) according to the manufacturers recommendations. Additional support brackets or cables must be anchored to the structure on which the SWECS is located and

(2) A WECS mounted on a self-supporting tower shall be on a tower that is of monopole design, and does not require the use of guy wires or any other means of lateral support.

(Ord. 69-09, § 17, passed 8-11-2009) Penalty, see § 154.999

**154.507 SMALL WIND ENERGY CONVERSION SYSTEMS;  
DEVELOPMENT STANDARDS.**

(A) *Accessory use.* A SWEC may be installed as an accessory use to a primary use. No SWEC shall be installed on any property without the existence of a primary use.

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(B) *Minimum lot size, number, maximum height.* The minimum lot size, the maximum number of SWECS on a lot or parcel, and the maximum height of a SWEC shall be as specified in TABLE 154-9, below:

<i>Table 154-9: Minimum Lot Size; Number; Maximum Height</i>			
<i>District</i>	<i>Minimum Lot /Parcel Size</i>	<i>Maximum Number of SWECS</i>	<i>Maximum Height</i>
A: Agriculture	1 acre	1	60'
	5 acres	2	80'
	10 acres	3	80'
R: Residential	1 acre	1	60'
	10 acres	2	60'
R-2: Residential	1 acre	1	60'
	10 acres	2	60'
O/B: Office/Buffer	1 acre	1	60'
O: Office	1 acre	1	60'
B: Business	1 acre	1	60'
C: Commercial	1 acre	1	60'
	5 acres	2	80'
L: Light Industrial & M: Manufacturing	1 acre	1	80'
	2 acres	2	80'
	5 acres	3	80'
U: University District	5 acres	1	80'
	10 acres	2	80'
	One (1) SWEC for every additional 40 acres		80'

(Ord. 43-12, § 17, passed 5-15-2012)

(C) *Height.* The height of a SWECS shall be measured from one foot above ground level to the highest extension of the blade, rotor, or vane. The minimum distance

between the ground and the blade, rotor, or vanes shall be ten feet, as measured at the lowest point of the arc of the blade, rotor, or vane.

(D) *Noise.* SWECS shall not exceed 60 decibels (dB), as measured at the closest property line. However, the 60 dB standard may be exceeded during short-term events such as utility outages and/or severe windstorms.

(E) *Survival speed.* SWECS shall be rated by the manufacturer as having a minimum survival wind speed of 100 miles per hour.

(F) *Setback.* The minimum setback of a SWEC shall meet all of the following, measured from the edge of the support tower:

(1) Two hundred feet from public parks, public open space, public greenways, historic preservation districts, streams, and rivers, measured from the nearest property lines, district lines, and/or the top of any stream or river bank;

(2) One-half the height of the to the nearest occupied off-site structure;  
and

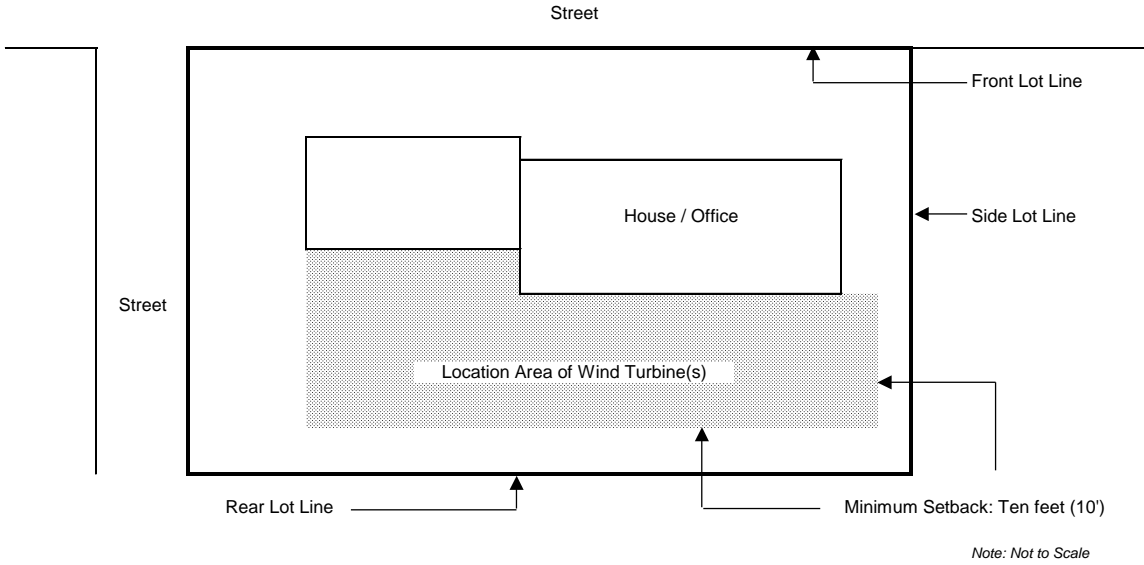
(3) Ten feet from any side and rear property line. Any property line adjacent to a street shall be deemed a front yard, and meet the location requirements in the following illustrations.

(G) *Location on property.* The location of a SWECS on a property shall be in accordance with division (F), above, and with the following illustrations.

**Location Restrictions for Small Wind Energy Conversion System**

**Illustration 1**

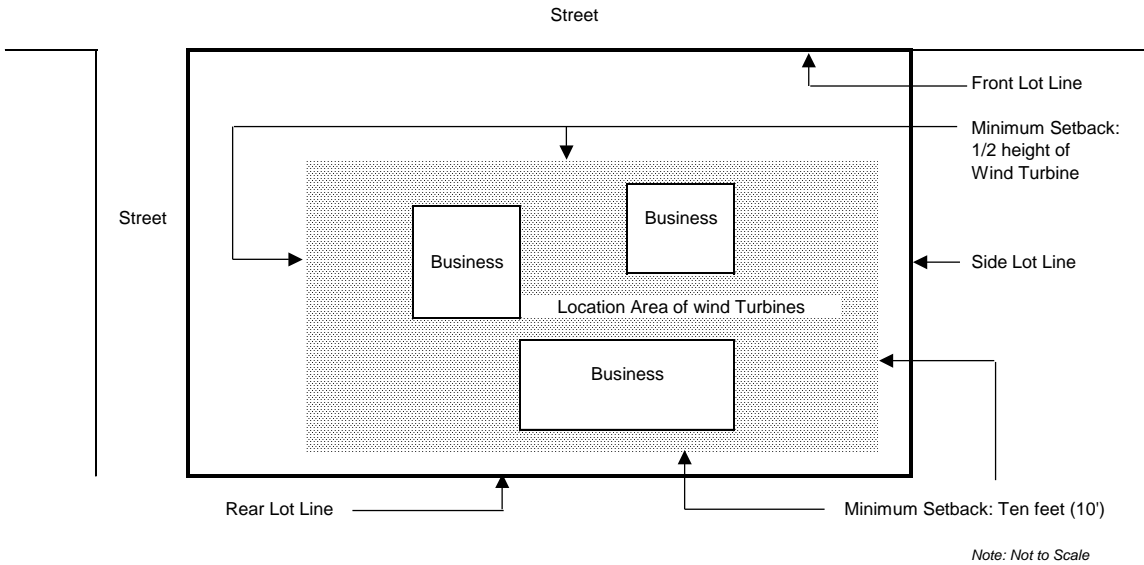
*Zoning Districts: R: Residential; O/B: Office Buffer; O: Office; A: Agriculture*



**Location Restrictions for Small Wind Energy Conversion System**

**Illustration 2**

*Zoning Districts: C: Commercial; L: Light Industrial; M: Manufacturing; U: University*



(Ord. 43-12, § 17, passed 5-15-2012)

H. *Abandonment.* A SWEC that is out of service for a continuous 24-month period will be deemed to have been abandoned, and shall be removed. Maintenance events which require extended periods of time beyond a 24-month period shall be brought to the attention of the Building Department.

(Ord. 69-09, § 17, passed 8-11-2009) Penalty, see § 154.999

**154.508 WIND ENERGY FACILITY; GENERALLY.**

(A) *Special exception use required.* A wind energy facility (WEF) is allowed in designated districts only as a special use, and after a public hearing by the Area Board of Zoning Appeals and approval by the County Council.

(B) *Preliminary site development project meeting required.* A WEF is a unique facility having to meet specific location and technical requirements. A preliminary site development project meeting is required with the local agencies, and where at a minimum, the following information is to be provided:

- (1) The location of the WEF identified on an aerial photograph, and the property tax ID numbers of the properties involved;
- (2) The number and specifications of the wind turbines;
- (3) The method and route of transportation of all equipment;
- (4) The construction timeline, and the production life of the WEF;
- (5) A site plan showing the location of floodplains; wetlands; forested areas; on-site structures; structures within 500 feet of the development site; streams and legal ditches; utility lines, cables and pipelines; and
- (6) Developers determination of public infrastructure needs.

(Ord. 69-09, § 17, passed 8-11-2009) Penalty, see § 154.999

**154.509 WIND ENERGY FACILITY; APPROVAL.**

(A) In addition to the requirements of division (B) below, the developer of the WEF shall provide all applicable information under § 154.506 and any additional information requested from the preliminary site development project meeting.

(B) Applications for a WEF as a special use shall be accompanied by the items outlined under § 154.563(C)(3) in addition to the following:

- (1) A site plan showing, at a minimum:
  - (a) North arrow, written and graphic scale, general location map;
  - (b) Legal description;

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- (c) The location and height (including the top of the arc of the blade) of the wind turbines;
- (d) The location of all other supporting structures such as but not limited to sheds, offices, operation and maintenance facilities, drives, and parking areas;
- (e) Location of all structures on adjacent properties, within 300 feet of all property lines;
- (f) Topography lines at two-foot intervals;
- (g) Location of all natural features such as streams, ditches, floodplain, wetlands, and tree canopy;
- (h) Drainage and soil erosion control, including location of all drainage tiles; and
- (i) Location of all utilities and utility corridors, such as but not limited to electric transmission lines, natural gas pipe lines, petroleum pipe lines, fiber optic lines, sewer and water lines.

(2) *Site development report.* A site development report including but not limited to the following items:

- (a) The schedule and phasing of construction; the transportation route for the delivery of, and the maintenance of all equipment; provisions for the repair of any public infrastructure such as roads, ditches, and culverts;
- (b) A statement describing the service area and the primary customers of the WEF;
- (c) Statements indicating that all utilities have been contacted relative to the location and construction of the WEF along with their responses and requirements;
- (d) Technical details of the facility and individual wind turbines, including but not limited to height of all wind turbines; power generation capacity; long term maintenance and replacement requirements; survival wind speed, and any other information deemed appropriate by the developer, and the professional staff of St. Joseph County;
- (e) An analysis of how the WEF will effect the operations of other facilities such as radio and television transmissions, cell phone transmissions, and radar transmissions;
- (f) A statement outlining the security arrangements that will be placed on the site;
- (g) An analysis of the maximum decibel levels to be anticipated at all property lines, and at all inhabitable structures within 300 feet of all property lines;
- (h) The maintenance plan that has been established for the WEF; and
- (i) A decommissioning plan outlining the method, timing and cost of the removal of one or more of the wind turbines upon the termination, abandonment, discontinuation, decommissioning or cessation of one or more of the wind turbines, or complete cessation of the operations of the WEF.



(3) *Other information.*

(a) A list of all adjacent property owners within 300 feet of the project boundary lines, along with stamped and addressed envelopes;

(b) Reports from the following agencies, and responses to any concerns raised by the respective agencies:

1. Indiana Department of Environmental Management;
2. Indiana Department of Natural Resources;
3. St. Joseph County Parks;
4. Historic Preservation Commission of St. Joseph

County;

5. St. Joseph County Engineer;
6. St. Joseph County Surveyor;
7. St. Joseph County Health Department; and
8. The appropriate emergency response provider.

(c) Any project-specific agreements, such as public infrastructure improvements or a payment-in-lieu-of-taxes agreement, must be approved prior to final project approval; and

(d) Liability Insurance covering bodily injury and property damage (naming St. Joseph County as an additional insurer) with limits of at least \$2,000,000 per occurrence, and \$5,000,000 in the aggregate, with a deductible of no more than \$5,000.

(e) The requirement for liability insurance under § 154.509 (B)(3)(d) shall not apply to a municipal corporation or a school corporation, as defined in IC 36-1-2-10 and 17 respectively, where any WECS within the WEF project site, is located at least one and one-half (1.5) times the height of the WECS from the nearest occupied structure.

(Ord. 43-12, § 17, passed 5-15-2012) Penalty, see § 154.999

**154.510 WIND ENERGY FACILITY - ABANDONMENT, DISCONTINUATION OR DECOMMISSIONING OF WIND TURBINES AND REMOVAL OF WIND ENERGY FACILITIES.**

(a) *Abandonment and/or decommissioning.* Wind turbines, wind energy facilities, and all associated equipment and buildings which have not been used for a continuous 24 - month from the last day of any known transmission of energy, shall be deemed abandoned and shall be removed from the site per the decommissioning plan. Maintenance events which require extended periods of time beyond a 24 - month period, shall be brought to the attention of the Building Department.

(b) *Security fund.* The wind energy facility owner shall establish a cash security fund, bond or irrevocable letter of credit to secure the payment of removing any abandoned wind energy facility, including the wind turbines and associated equipment and buildings that have been determined to be abandoned, or found to be in non-

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compliance with this chapter, and to provide St. Joseph County a fund from which to deduct fines and penalties for non-compliance with this Chapter or other applicable laws in the amount of 125% of the cost of demolition and removal of the wind energy facility based upon a licensed engineers estimate of the cost of demolition and removal. Any reduction in the security fund provided, because of deductions of fines, penalties, or removal costs, shall be replenished to the total of the required amount within 30 days after notice from St. Joseph County of the amount deducted and the deficiency created hereby. Within a reasonable period of time, not to exceed three months after the wind turbine facility is removed, any remaining funds on deposit with St. Joseph County pursuant to this Chapter, after application and above all expenses provided for herein, shall be refunded to the appropriate owner or provider who created the security fund.

(c) The requirement for a security fund under § 154.510 (b) shall not apply to a municipal corporation or a school corporation, as defined in IC 36-1-2-10 and 17 respectively.

(Ord. 43-12, § 17, passed 5-15-2012) Penalty, see § 154.999