

ORDINANCE 2016-02
AN ORDINANCE AMENDING THE
CASS COUNTY ZONING ORDINANCE
WIND ENERGY CONVERSION SYSTEM REGULATIONS

WHEREAS, the General Assembly of the State of Indiana granted powers to the counties to adopt zoning ordinances for their jurisdiction according to IC 36-7-4-600 series; and

WHEREAS, the County of Cass County, Indiana adopted the Cass County Zoning Ordinance which became effective on October 3, 1986, and has had subsequent amendments as listed on the title page of the Cass County Zoning Ordinance; and

WHEREAS, The General Assembly of the State of Indiana granted powers to counties to amend the text of an adopted zoning ordinance according to IC 36-7-4-602 (b), and Section 906 of the Cass County Zoning Ordinance allows for the amendment of said Ordinance; and

WHEREAS, the Cass County Plan Commission held a public hearing on Tuesday May 3, 2016, on the proposed textual amendments to the Cass County Zoning Ordinance regarding the Wind Energy Conversion System Regulations in Article 5, Development Standards and all related sections;

WHEREAS, The Cass County Plan Commission did send a favorable recommendation for the text amendments to the Cass County Board of Commissioners; and

WHEREAS, the Cass County Board of Commissioners believes there is merit in amending the Ordinance, in order to promote the public health, safety, comfort, morals, convenience and general welfare of the community; now therefore, be it

ORDAINED by the Cass County Board of Commissioners of Cass County, Indiana, as follows:

SECTION 1: That the Cass County Zoning Ordinance be amended according to the amendments, as follows:

Zoning Ordinance:
523 Wind Energy Conversion Systems

Proposed Language Change:

Section 201 Definitions:

Meteorological Tower: Towers which are erected primarily to measure wind speed and direction plus other data, excluding towers and equipment used by airports, the Indiana Department of Transportation, or other similar applications to monitor weather conditions.

Meteorological Tower, Operational Support - Towers which are erected primarily to measure wind speed and direction plus other data in support of an operating WECS, excluding towers and equipment used by airports, the Indiana Department of Transportation, or other similar applications to monitor weather conditions.

Non-participating Landowner – a person(s) or entity who has NOT entered into any final contractual agreement with a WECS company, entity or person(s)(i) for the purpose of developing a WECS Project on or near such person(s) or entity’s land and/or (ii) to receive certain economic benefits to accrue from the operation of the WECS Project.

Participating Landowner- A person(s) or entity who owns land and has entered into a fully executed contractual agreement with a WECS company, entity or person(s) (i) for the purpose of developing a WECS Project on or near such person(s) or entity’s land and/or (ii) to receive certain economic benefits to accrue from the operation of the WECS Project.

Substation (WECS) – A structure containing apparatus that connects the below-ground or above-ground electrical collection lines of the WECS to the electric utility grid, with or without increasing voltage.

WECS Project – a collection of multiple WECS (as defined) as specified in the application for an Improvement Location Permit is within the Developer Guidebook.

WECS Tower – The support structure to which the nacelle and rotor are attached, free standing or guyed structure that supports a wind turbine generator.

“WECS” Wind Energy Conversion System – All necessary devices 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, Substation, meteorological towers, communications facilities and other required facilities and equipment, as related to the WECS Project.

Commercial WECS – A Wind Energy Conversion System constructed on the property of another by a company or corporation or other entity, whose general intent is to capture wind energy and place it on the electrical grid for resale to a public utility. Any WECS designed to generate 40KW in total name plate generating capacity regardless of tower height.

Micro WECS – a very small Wind Energy Conversion System designed to provide electric power to a home or other local site for use by the owner.

Non-commercial WECS – A Wind Energy Conversion System that is generally smaller than a Commercial WECS and the primary purpose is to collect wind energy for the purpose of supplying energy to the owners, such as a business, school or factory.

~~**Wind Energy Conversion System (WECS).** The equipment that converts and then stores or transfers energy from the wind into usable forms of energy and includes any base, blade, foundation, generator, nacelle, rotor, wind tower, transformer, turbine, vane, wind farm collection system, wire, or other component used in the system.~~

~~**Large Wind System (LWS).** A WECS that has a nameplate capacity (manufacturer’s rating) of more than 100 kilowatts per wind tower, or a total height of more than 140’, or a swept area of more than 40’. Any more than one (1) LWS shall be considered a Wind Farm.~~

~~**Micro Wind System (MWS).** A building mounted WECS that has a nameplate capacity (manufacturer’s rating) of 10 kilowatts or less, and projects no more than 15’ above the highest point of the roof.~~

~~**Small Wind System (SWS).** A WECS that has a nameplate capacity (manufacturer’s rating) less than or equal to 100 kilowatts per wind tower, and a total height of 140’ or less, and a swept area of 40’ or less.~~

Swept area. The diameter of the least circle encompassing all blades for a *WECS*.

Total height. Means the distance from the rotor blade at its highest point to the top surface of the *WECS* foundation.

Table A

	AG	RR	RI	B1	B4	AB	I1	I2	Buffer	Parking
<u>17. Commercial</u> C <u>WECS</u>	S	X	X	X	X	X	X	X	X	B
<u>18. Non-Commercial</u> <u>WECS</u>	S	X	X	X	X	S	S	S	B	C
<u>19. Micro</u> <u>WECS</u>	P	P	P	P	P	P	P	P	A	C
20. Temporary C Meteorological Towers	P	S	S	S	S	S	P	P	P	A

Development Standards:

~~523. WIND ENERGY CONVERSION SYSTEM FARM STANDARDS~~

~~523.01 DESIGN AND INSTALLATION (General)~~

~~A. Design Safety Certification~~

- ~~1. Wind Energy Conversion System (WECSs) shall conform to applicable industry standards. Applicant shall submit certificate(s) of design compliance that wind turbine manufacturers have obtained from Underwriters Laboratories, Det Norske Veritas, Germanischer Lloyd Wind Energie, or an equivalent third party.~~
- ~~2. Following the granting of siting approval under this Ordinance, 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, given local soil and climate conditions.~~
- ~~3. All WECS must be installed in compliance to the manufacture's installation manual or by a professional.~~

~~B. Controls and Brakes~~

~~All WECS 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.~~

~~C. Electrical Components~~

~~1. All electrical components of the WECS shall conform to applicable local, state, and national codes, and relevant national and international standards.~~

~~2. Electrical Collection Cables~~

~~All WECS electrical collection cables between each WECS shall be located underground unless they are located on public or utility rights of way or with prior County approval. All transmission lines that are buried should be at a depth consistent with or greater than local utility and telecommunication underground lines standards or as negotiated with the land owner or the land owner's designate until the same reach the property line or a substation adjacent to the property line.~~

~~3. All damages to waterways, drainage ditches, field tiles, or any other infrastructures caused by the construction or maintenance of the WECS must be completely repaired to near original condition, so as not to impede the natural flow of water. All trenches must be 5 1/2 ft deep and must remain open until all inspections have been approved.~~

~~D. Color~~

~~1. Towers and blades shall be painted white or gray or another non-reflective, unobtrusive color.~~

~~2. The Applicant for the WECS shall comply with all applicable FAA requirements.~~

~~E. Warnings~~

~~1. A reasonably visible warning sign concerning voltage must be placed at the base of all pad mounted transformers and Substations.~~

~~2. Visible, reflective, colored objects, such as flags, reflectors, or tape shall be placed 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.~~

~~F. Climb Prevention~~

~~All WECS Tower designs must include features to deter climbing or be protected by anti-climbing devices such as:~~

~~1. Anti-climbing devices 15 feet vertically from the base of the WECS Tower~~

~~2. Locked WECS Tower Door~~

~~3. if climbing apparatus is located on the exterior of tower a 6' fence or other anti-climbing devices must be erected unless climbing apparatus is located at least 12' above the ground level.~~

~~H. Utility Interconnection~~

~~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 generator.~~

~~The WECS, if interconnected to a utility system, shall meet the requirements for interconnection and operate as set forth in the electrical utility's then current service regulations applicable to WECS.~~

~~I. Waste Management~~

~~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 consistent with industry standards. 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.~~

~~J. Lighting~~

~~1. Except with respect to lighting required by the FAA all lighting shall be shielded so that no glare extends substantially beyond the boundaries of the Wind farm Facilities.~~

~~2. Any WECS thereof declared to be unsafe by the Zoning Administrator by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, 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 procedures set forth in the County Ordinances governing the removal of Nuisances.~~

~~K. Compliance with Additional Regulations:~~

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

~~L. Interference~~

~~If, after construction of the WECS, the Owner or Operator receives a written complaint related to interference with local broadcast residential television, telecommunication, communication or microwave transmissions, the Owner or Operator shall take reasonable steps to respond to minimize the complaint.~~

~~M. Signs~~

~~All signs, other than the manufacturer's or installer's identification, appropriate warning signs, or owner identification on a wind generator, tower, building, or other structure associated with a WECS shall be prohibited.~~

~~N. Temporary Meteorological Towers (Met Towers)~~

~~1. The minimum separation distance between a Met Tower and all surrounding property lines, overhead utility or transmission lines, other electrical substations, neighboring meteorological towers, public right of ways and primary communications towers shall be no less than the total height of the Met Tower. This is measured from the base of each Met Tower.~~

~~523.02 LARGE WIND SYSTEM (LWS) and WIND FARM (WF)~~

~~A. Noise and Vibration~~

~~With the approval of the LWS or WF project the Board of Zoning Appeals will approve the proposed decibel level for the LWS. The decimals may not exceed 75 dBA at 200 ft.~~

~~B. Blade Clearance~~

~~The minimum distance between the ground and any protruding blade(s) utilized on a LWS shall be thirty (30) 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.~~

~~C. Setbacks:~~

~~1. LWS or WF shall not be constructed in any setback, dedicated public easement or dedicated public right of way without prior written authorization from the controlling authority.~~

~~2. Installation may not be nearer than three hundred fifty (350) feet or 1.1 times the height of the LWS, whichever is greatest, 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 LWS. New structures built adjacent to LWS shall maintain these same minimum setback requirements if located on a neighboring property. Participating landowners within the area comprising the LWS or WF may waive property line setbacks with written approval from all landowners sharing such property line.~~

~~3. Except as provided herein the setback distance for LWS shall be setback 1,000 feet or more from any existing or occupied dwellings, except for dwellings located on property(s) that have been leased for LWS provided there is written consent of the owner. LWS must also be~~

~~located 1000 ft or more from the boundary(s) which as of the date of approval is in a platted subdivision. Distance shall be measured at the time of application for building permit from the center of the foundation at the base of the LWS. A LWS with a capacity of 1.0 MW or less may be placed as near as 600 feet from an occupied residence with the prior written approval of the owner. The setback distance will be followed except in specific instances allowed by the Board of Zoning Appeals.~~

~~4. The setback distance for the LWS will be 1500 feet from any platted community under the zoning jurisdiction of a municipality. Distance shall be measured from the center of the foundation at the base of the LWS to the closest Corporate Limit boundary line.~~

~~D. Use of Roads and Services~~

~~An Applicant, Owner, or Operator proposing to use any county road(s), for the purpose of transporting LWS or Substation parts and/or equipment for construction, operation, or maintenance of the LWS, WF(s) or Substation(s), shall prior to construction:~~

~~1. Identify all such public roads and services;~~

~~a. Roads~~

~~1. Any proposed routes that will be used for construction and maintenance purposes shall be identified. If the route includes a public road, it must be approved by the Cass County Highway Superintendent. The Superintendent shall conduct a pre-construction baseline survey to determine existing road conditions for assessing potential future damage.~~

~~2. All roads used for LWS or WF construction must be maintained at a minimum standard, which will be determined by the Cass County Highway Superintendent.~~

~~3. Any road damage caused by the construction of the LWS or WF project equipment, the installation of same, or the removal of same, must be repaired to the satisfaction of the Cass County Highway Superintendent. The Superintendent may choose to require either remediation of road repair upon completion of the project or are authorized to collect fees for oversized load permits. Further, a corporate performance bond or letter of credit in an amount to be fixed by a Professional Engineer may be required by the Superintendent to insure the county that future repairs are completed to the satisfaction of the unit of local government. The cost of bonding and professional engineer determination is to be paid by the applicant. If at some point after construction roads are being used to bring in equipment for repairs any~~

~~additional damages to the road(s) will be repaired to the satisfaction of the Cass County Highway Superintendent~~

~~4. Newly constructed WECS access roads may not impede the flow of water.~~

~~b. Dust Control~~

~~Reasonable dust control measures will be required by the County during construction of the LWS or WF.~~

~~c. Sewer and Water~~

~~Any facility shall comply with existing septic and well regulation as required by the Cass County Health Department and the State of Indiana Department of Public Health.~~

~~d. Drainage Repair~~

~~All damages to waterways, drainage ditches, field tiles, or any other infrastructures caused by the construction or maintenance of the LWS or WF, must be completely repaired to near original condition, and so as not to impede the natural flow of water.~~

~~All repairs must be completed within a reasonable amount of time.~~

~~E. Operation~~

~~1. Maintenance / Inspection~~

~~a. The Owner or Operator of the LWS or WF must submit, on an annual basis, a summary of the operation and maintenance reports to the County Commissioners. In addition to the above annual summary, the Owner or Operator must furnish such operation and maintenance reports as the County Commissioners reasonably requests.~~

~~b. Any physical modification to the LWS 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 Zoning Administrator to determine whether the physical modification requires re-certification.~~

~~c. The Zoning Administrator, along with licensed 3rd party professionals retained by the County for the specific purpose of conducting inspections of the LWS(s) 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 LWS has been~~

constructed, to inspect all parts of said LWS installation and to require that repairs or alterations be made. The owner or operator of a LWS or WF may retain a licensed 3rd party professional engineer familiar with LWS(s) to prepare and submit to the Zoning Administrator a written report which addresses the repairs or alterations requested, and which suggests alternate methods for addressing the concerns or provides evidence that said repairs or alterations are unnecessary, within thirty (30) days after receiving notice from the Zoning Administrator that repairs or alterations are requested, or within a longer period of time mutually acceptable to both parties. The Zoning Administrator 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 Zoning Administrator 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 Zoning Administrator shall be final.

d. Inspections, at a fee to be determined from time to time by the County Commissioners and paid by the applicant, may be made by a qualified inspector for equipment of this type selected by the Cass County Planning Department, no more than once annually to certify the safety and maintenance of the LWS(s) and accessory structures.

2. Coordination with Local Fire Department

a. The Applicant, Owner or Operator shall submit to the local fire department a copy of the site plan.

b. 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.

c. Nothing in this section shall alleviate the need to comply with all other applicable fire laws and regulations.

3. Materials Handling, Storage and Disposal

a. All solid wastes related to the construction, operation and maintenance of the LWS or WF shall be removed from the site promptly and disposed of in accordance with all federal, state and local laws.

b. All hazardous materials or waste related to the construction, operation and maintenance of the LWS or WF shall be handled, stored, transported and disposed of in accordance with all applicable local, state and federal laws.

~~F. Liability Insurance~~

~~The Owner or Operator of the LWS or WF shall maintain a current general liability policy covering bodily injury and property damage and name Cass County as an additional insured with limits of at least \$2 million per occurrence and \$5 million in the aggregate with a deductible of no more than \$5 thousand.~~

~~G. Decommissioning Plan~~

~~Prior to receiving siting approval under this Ordinance, the County and the Applicant, Owner, and/or Operator must formulate a Decommissioning Plan to ensure that the LWS or WF Project is properly decommissioned. The Decommissioning Plan shall include:~~

~~1. Assurance that the facilities are properly decommissioned upon the end of the project life or facility abandonment. Applicant's obligations with respect to decommissioning shall include removal of all physical material pertaining to the project improvements to a depth of 48" beneath the soil surface, and restoration of the area occupied by the project improvements to as near as practicable to the same condition that existed immediately before construction of such improvements. Prior to issuance of a building permit, the Applicant shall provide a contractor cost estimate for demolition and removal of the LWS(s) and will provide financial assurance in an amount at least equal to said demolition and removal contractor cost estimate, through the use of a bond, letter of credit or other security acceptable to the County Commissioners, for the cost of decommissioning each LWS to be constructed under that building permit, which security shall be released when such LWS is properly decommissioned as determined by the Zoning Administrator. In the event of abandonment by the owner or operator, the Applicant will provide an affidavit to the Zoning Administrator representing that all easements for wind turbines shall contain terms that provide financial assurance, including access to the salvage value of the equipment, for the property owners to ensure that facilities are properly decommissioned within twelve (12) months of expiration or earlier termination of the project.~~

~~2. The Applicant's, Owner's, or Operator's failure to materially comply with any of the above provisions shall constitute a default under this Ordinance.~~

~~3. Prior to implementation of the existing County procedures for the resolution of such default(s), the appropriate County body shall first provide written notice to the Owner and Operator, setting forth the alleged default(s). Such written notice shall provide the Owner and Operator a reasonable time period, not to exceed 60 days, for good faith negotiations to resolve the alleged default(s).~~

~~4. If the County determines in its discretion, that the parties cannot resolve the alleged default(s) within the good faith negotiation period, the existing County ordinance provisions addressing the resolution of such default(s) shall govern.~~

~~523.03 Small (SWS) or Micro (MWS) Wind System~~

~~_____~~ A. Noise and Vibration

~~_____~~ SWS and MWS shall not exceed 60 dBA, as measured at the closest
~~_____~~ neighboring dwelling.
~~_____~~

~~_____~~ B. Blade Clearance

~~_____~~ The minimum distance between the ground and any protruding blade(s) utilized
~~_____~~ on a SWS shall be fifteen (15) 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.

~~_____~~ C. Tower Height

~~_____~~ 1. SWS that are 65ft or less are permitted in all zoning district. Tower
~~_____~~ heights 65ft to 140ft must received special exception if located within a
~~_____~~ RR, R1, B1, or B4 district.

~~_____~~ 2. For property sizes between 1/2 and 1 acre the SMW height shall be
~~_____~~ limited to 80ft. For property sizes of 1 acre or more, towers should be
~~_____~~ 140ft or less, except as imposed by FAA regulations.

~~_____~~ D. Setbacks

~~_____~~ 1. The minimum separation distance between a SMS and all surrounding
~~_____~~ property lines, overhead utility or transmission lines, other electrical
~~_____~~ substations, neighboring WECS or neighboring meteorological towers,
~~_____~~ public right of ways and primary communications towers shall be no less
~~_____~~ than the total height of the SWS. This is measured from the base of each
~~_____~~ SWS.

~~_____~~ E. System Condition

~~_____~~ The applicant shall maintain the SWS or MWS in good condition.
~~_____~~ Maintenance shall include, but not be limited to, painting, structural repairs, and
~~_____~~ security measures.

~~_____~~ F. Decommissioning Plan

~~_____~~ Any SWS or MWS which has reached the end of its useful life or has been
~~_____~~ abandoned shall be removed. A SWS or MWS shall be considered abandoned
~~_____~~ when it fails to operate for one year. Upon a Notice of Abandonment issued by
~~_____~~ the Zoning Administrator, the SWS or MWS owner will have 30 days to provide
~~_____~~ sufficient evidence that the system has not been abandoned. If the SWS or MWS
~~_____~~ tower is considered abandoned or in disrepair the petitioner must remove the
~~_____~~ SWS or MWS within 12 month or the county shall have the authority to enter the
~~_____~~ owner's property and remove the system at the owner's expense.

523 PURPOSE AND INTENT

The purposes of this Section is to assure that any development and production of wind-generated electricity in Cass County is safe and effective, facilitate economic opportunities for local residents, and promote the supply of wind energy in support of Indiana's alternative energy sources potential and other such economic development tools. It is the intent of the Wind Energy Conversion Systems (WECS) siting regulations to provide a regulatory scheme for the construction and operation of WECS in the county; subject to reasonable restrictions these regulations are intended to preserve the health and safety of the public.

523.01 APPLICABILITY

The provisions of this Section are applicable to those districts which allow wind energy conversion systems (WECS), govern the siting of WECS and substations that generate electricity to be sold to wholesale or retail markets, or that generate electricity for private use. A reasonable attempt shall be made to notify all property owners within the defined area of the WECS project prior to making application for a WECS permit. Notification may be done by media, separate mailings, or through the public notice requirements prescribed by IC 5-3-1 as amended from time to time. Said notice shall inform land owners of the intent to build any WECS and/or WECS Project.

523.02 PROHIBITION

No applicant shall construct, operate, or locate a wind energy conversion system (WECS) within Cass County without having fully complied with the provisions of this Section.

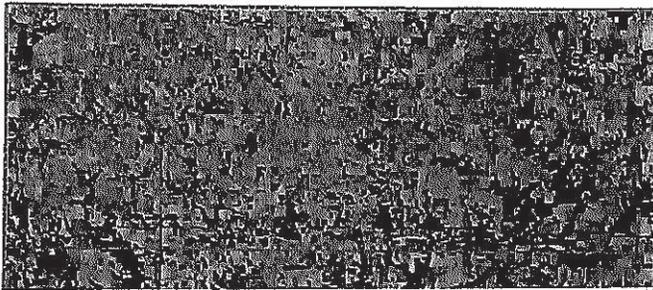
523.03 CONFLICT WITH OTHER REGULATIONS

Nothing in this Section is intended to preempt other applicable state and federal laws or regulations, including compliance with all Federal Aviation Administration rules and regulations and shall comply with the notification requirements of the Federal Aviation Administration. Nor are they intended to interfere with, repeal, or annul any other ordinance, rule, or regulation, statute or other provision of law. In the event that any provision of these regulations imposes restrictions different from any other ordinance, rule, regulation, statute, or provision of law, the provisions that are more restrictive or that imposes higher standards shall govern.

523.04 REGULATIONS

A. Location

Commercial, Non-commercial, and Micro WECS will be permitted, or not permitted, in various districts as stated in Table A: District Use Standards, with the exception of the following Map that allows Commercial WECS as a permitted use from the Northern County line to County Road 200 N that extends to the Western and Eastern County lines.



B. Height

1. Non-Commercial WECS or Meteorological Towers: Any Non-commercial WECS Towers or Meteorological Towers greater than two hundred (200) feet in height shall

require a variance approval.

2. Commercial WECS or Operational Support Meteorological Towers: For Commercial WECS Towers and Operational Support Meteorological Towers there are no limitations on height, except those height limitations imposed by Federal Aviation Administration rules and regulations.
3. Micro WECS No Micro WECS Tower shall exceed sixty (60) feet in height.

C. Setback Requirements

1. Minimum setback distances for COMMERCIAL WECS TOWERS

<u>Distance from a...</u>	<u>Minimum Setback Distance</u>
<u>Property line, measured from the center of the WECS Tower to the property line</u>	<u>The length of one blade of the WECS Tower being placed on such property. (i) The setback requirement is waived if the affected adjoining landowners sharing the common property line are Participating Landowners. (ii) A WECS Tower may be placed up to the property line, if a fully executed and recorded written waiver agreement is secured from the affected adjoining Non-Participating</u>
<u>Residential dwellings, measured from the center of the WECS Tower to the nearest corner of the structure</u>	<u>One thousand (1,000) feet.¹</u>
<u>Public road right-of-way, measured from the center of the WECS Tower to the edge of the right-of-way</u>	<u>1.1 times the total height of the WECS Tower (where the blade tip is at its highest point), provided that the distance is no less than three hundred and fifty (350) feet²</u>
<u>Other rights-of-way, such as railroads and public utility easements, measured from the center of the WECS Tower to the edge of the right-of-way</u>	<u>1.1 times the total height of the WECS Tower (where the blade tip is at its highest point), provided that the distance is no less than three hundred and fifty (350) feet</u>
<u>Public conservation lands, measured from the center of the WECS Tower to the nearest point of the public conservation land in question</u>	<u>Seven hundred and fifty (750) feet</u>
<u>Wetlands, as defined by the U.S. Army Corps of Engineers, measured from the center of the WECS Tower to the nearest point of the wetland in question</u>	<u>As determined by a permit obtained from the Army Corps of Engineers</u>
<u>Wabash or Eel River measured from the center of the WECS Tower to the shoreline</u>	<u>One-half (1/2) mile</u>
<u>Incorporated limits of a municipality, measured from the center of the WECS Tower to the corporate limits</u>	<u>Fifteen hundred (1,500) feet</u>
<u>Above-ground electric transmission line, measured from the center of the WECS Tower</u>	<u>1.1 times the total height (where the blade tip is at its highest point)</u>

1 The setback for residential dwellings shall be reciprocal in that no residential dwelling shall be constructed within one thousand (1,000) feet of a COMMERCIAL WECS Tower, measured from the center of the WECS Tower to the nearest corner of the structure.

2 The setback shall be measured from future public rights-of-way width if a planned public road improvement or expansion is known at the time of application.

a. Commercial WECS Power Collection and Transmission System

1. WECS Substation: for all Substations, setbacks from property lines are waived if the affected adjoining landowners sharing the common property line are all Participating Landowners.

2. Poles: for all poles carrying overhead wiring connecting Commercial WECS Towers to a Substation for connection to a utility's electric transmission line, there are no setback requirements from property lines as long as the poles are located within a recorded easement for such purpose.

2. Minimum setback distances for NON-COMMERCIAL and MICRO WECS TOWERS

<u>Distance from a...</u>	<u>Minimum Setback Distance</u>
<u>Property line, measured from the center of the WECS Tower to the property line</u>	<u>1.1 times the total height of the WECS Tower (where the blade tip is at its highest point), provided that the distance is no less than the required yard setback prescribed for that district</u>
<u>Residential dwellings, measured from the center of the WECS Tower to the nearest corner of the structure</u>	<u>1.1 times the total height of the WECS Tower (where the blade tip is at its highest point)</u>
<u>Public road right-of-way, measured from the center of the WECS Tower to the edge of the right-of-way</u>	<u>1.1 times the total height of the WECS Tower (where the blade tip is at its highest point), provided that the distance is no less the required yard setback prescribed for that district³</u>
<u>Other rights-of-way, such as railroads and public utility easements, measured from the center of the WECS Tower to the edge of the right-of-way</u>	<u>1.1 times the total height of the WECS Tower (where the blade tip is at its highest point), provided that the distance is no less than the required yard setback prescribed for that district</u>
<u>Public conservation lands, measured from the center of the WECS Tower to the nearest point of the public conservation land in question</u>	<u>Seven hundred and fifty (750) feet</u>
<u>Wetlands, as defined by the U.S. Army Corps of Engineers, measured from the center of the WECS Tower to the nearest point of the wetland in question</u>	<u>As determined by a permit obtained from the Army Corps of Engineers</u>
<u>Wabash or Eel River measured from the center of the WECS Tower to the shoreline</u>	<u>One half (1/2) of a mile</u>
<u>Above-ground electric transmission lines, measured from the center of the WECS Tower</u>	<u>1.1 times the total height of the WECS Tower (where the blade tip is at its highest point)</u>

3 The setback shall be measured from future public rights-of-way width if a planned public road improvement or expansion is known at the time of application.

- a. Horizontal extension for Non-commercial and Micro WECS
The furthest horizontal extension (including guy wires) shall not extend into a required setback by the zoning district or be closer than twelve (12) feet to any primary structure, or public right-of-way easement for any above-ground telephone, electric transmission or distribution lines.

3. Minimum setback distances for all Meteorological Towers

<u>Distance from a...</u>	<u>Minimum Setback Distance</u>
<u>Property line, measured from the center of the Meteorological Tower to the property line</u>	<u>1.1 times the total height of the Meteorological Tower, provided that the distance is no less than the required yard setback</u> <u>(i) The setback requirement is waived if the affected adjoining landowners sharing a common property line are Participating Landowners</u>
<u>Residential dwellings, measured from the center of the Meteorological Tower to the nearest corner of the structure</u>	<u>1.1 times the total height of the Meteorological Tower</u>
<u>Public road right-of-way, measured from the center of the Meteorological Tower to the edge of the right-of-way</u>	<u>1.1 times the total height of the Meteorological Tower, provided that the distance is no less than the required yard setback⁴</u>
<u>Other rights-of-way, such as railroads and public utility easements, measured from the center of the Meteorological Tower to the edge of the right-of-way</u>	<u>1.1 times the total height of the Meteorological Tower, provided that the distance is no less than the required yard setback</u>

⁴ The setback shall be measured from future public rights-of-way width if a planned public road improvement or expansion is known at the time of application.

- a. Horizontal extension for all Meteorological Towers
~~The furthest horizontal extension (including guy wires) shall not extend into a required setback by the zoning district or be closer than twelve (12) feet to any primary structure, or public right-of-way easement for any above-ground telephone, electric transmission or distribution lines.~~

523.05 SAFETY DESIGN AND INSTALLATION STANDARDS

A. Equipment type

1. Turbines: all turbines shall be constructed of commercially available equipment.
2. Meteorological Towers: all Meteorological Towers may be guyed.
3. Experimental, or proto-type equipment: experimental or proto-type equipment still in testing which does not fully comply with industry standards, may be approved by the Board of Zoning Appeals per the variance process established by this Ordinance.

B. Industry standards and other regulations

All WECS shall conform to applicable industry standards, as well as all local, state and federal regulations. An applicant shall submit certificate(s) of design compliance that wind turbine manufacturers have obtained from Underwriters Laboratories, Det Norske Veritas, Germanischer Lloyd Wind Energie, or an equivalent third party.

C. Controls and brakes

1. Braking system: 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. Stall regulation shall not be considered a sufficient braking system for over speed protection.
2. Operation mode: all mechanical brakes shall be operated in a fail-safe mode.

D. Electrical components

1. Standards: all electrical components of all WECS shall conform to applicable local, state and national codes, and any relevant national and international standards.
2. Collection cables: all electrical collection cables between each WECS Tower shall be located underground wherever possible.
3. Transmission lines: all transmission lines that are buried should be at a depth consistent with or greater than local utility and telecommunication underground lines standards or as negotiated with the land owner or the land owner's designee until the same reach the property line or a substation adjacent to the property line.

E. Color and finish

In addition to all applicable Federal Aviation Administration requirements, the following shall also apply:

1. Wind turbines and towers: all wind turbines and towers that are part of a WECS shall be white, grey, or another non-obtrusive color.
2. Blades: all blades shall be white, grey, or another non-obtrusive color. Blades may be black in order to facilitate deicing.
3. Finishes: finishes shall be matte or non-reflective.
4. Exceptions: exception may be made for all Meteorological Towers, where concerns exist relative to aerial spray applicators.

F. Warnings

1. The following notices shall be posted for all Commercial WECS:
 - a. A sign or signs shall be posted on the pad-mounted transformer and the Substation(s) warning of high voltage.
 - b. Private roads providing access to Commercial WECS shall have posted an Emergency-911 address road sign.
 - c. A sign shall be posted on the WECS tower listing an emergency telephone number.
2. For all guyed towers, one of the following warning mechanisms shall be used for each anchor point:
 - a. Visible and reflective objects, such as flags, plastic sleeves, reflectors, or tape placed on the anchor points of guy wires and along the innermost guy wires up to eight (8) feet above the ground.

- b. Visible fencing not less than four (4) feet in height installed around anchor points of guy wires.
3. The following notices shall be clearly visible on all Non-commercial WECS and Micro WECS Towers and accessory facilities:
 - a. "No Trespassing" signs shall be attached to any perimeter fence.
 - b. "Danger" signs shall be posted at the height of five (5) feet on WECS Towers and accessory structures.
 - c. A sign shall be posted on the WECS Tower showing an emergency telephone number.
 - d. The manual electrical and/or over speed shutdown disconnect switch(es) shall be clearly labeled.
4. Consideration shall be given to paint aviation warnings as required by the Federal Aviation Administration on all Meteorological Towers.

G. Climb prevention

All Commercial WECS Tower designs shall include features to deter climbing or be protected by anti-climbing devices such as:

1. Fences with locking portals at least six (6) feet in height; or
2. Anti-climbing devices fifteen (15) feet vertically from the base of the WECS Tower; or
3. Locked WECS Tower doors.

H. Blade clearance

The minimum distance between the ground and any protruding blades(s) utilized on all Commercial WECS Towers shall be twenty-five (25) feet, as measured at the lowest point of the arc of the blades. The minimum distance between the ground and any protruding blade(s) utilized on all Non-commercial or Micro WECS Towers shall be a minimum of fifteen (15) feet, as measured at the lowest point of the arc of the blades, provided the rotor blade does not exceed 20 feet in diameter. In either instance, the minimum distance shall be increased as necessary to provide for vehicle clearance in locations where over-sized vehicles might travel.

I. Lighting

1. Intensity and frequency: All lighting, including lighting intensity and frequency of strobe, shall adhere to but not exceed requirements established by Federal Aviation Administration permits and regulations.
2. Shielding: except with respect to lighting required by the Federal Aviation Administration, lighting may require shielding so that no glare extends substantially beyond any WECS Tower.

J. Materials handling, storage and disposal

1. Solid wastes: all solid wastes whether generated from supplies, equipment, parts, packaging, operation or maintenance of the WECS, including old parts and equipment related to the construction, operation and/or maintenance of the WECS shall be removed

from the site promptly and disposed of in accordance with all federal, state, and local laws.

2. Hazardous materials: all hazardous materials or waste related to the construction, operation and/or maintenance of any WECS shall be handled, stored, transported and disposed of in accordance with all applicable local, state and federal laws.

523.06 OTHER APPLICABLE STANDARDS

A. Guyed wire anchors

No guyed wire anchors shall be allowed within any required public road right-of-way setback.

B. Sewer and water

All facilities or structures that are part of the WECS Project shall comply with the existing septic and well regulations as required by the Cass County Health Department and/or the State of Indiana Department of Public Health.

C. Noise and vibration

The noise level of Non-commercial WECS shall be no greater than sixty (60) decibels measured from the nearest residence. This level may only be exceeded during short term events such as utility outages and/or severe wind storms. All other noise and vibration levels shall be in compliance with all county, state and federal regulations.

D. Utility interconnection

The WECS, if interconnected to a utility system, shall meet the requirements for interconnection and operate as prescribed by the applicable regulations of the electrical utility, as amended from time to time.

E. Signage

All signs pertaining to a WECS Project must comply with Section 505, Sign Standards, with the following exceptions.

1. Surface area
No sign shall exceed sixteen (16) square feet in surface area.
2. Height
No sign shall exceed eight (8) feet in height.
3. Manufacturer's or owner's company name and/or logo
The manufacturers or owner's company name and/or logo may be placed upon the compartment containing the electrical equipment.
4. Development signs
An identification sign relating to the WECS Project development may be located on each side of the total WECS Project area, provided that there are no more than four (4) signs located on any one WECS Project site.
5. Other signs and logos
No other advertising signs or logos shall be placed or painted on any structure or facility that is part of the WECS Project.

F. Feeder lines

Feeder lines installed as part of any WECS shall not be considered an essential service. All communications and feeder lines installed as part of any WECS shall be buried underground wherever possible.

G. Other appurtenances

No appurtenances other than those associated with the WECS construction, operations, maintenance, decommissioning/removal, and permit requirements shall be connected to any WECS Tower except with express, written permission by the Board of Zoning Appeals.

523.07 OPERATION AND MAINTENANCE

A. Physical modifications

In general, any physical modification to any 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. Therefore, prior to making any physical modification, the owner or operator shall discuss with the Planning Department and Building Commissioner to determine whether the physical modification requires re-certification.

B. Interference

Prior to construction, a communications study to minimize interference with public or public serving utility microwave transmissions, Airports, and Air Reserve Bases shall be completed. If necessary, the applicant, owner and/or operator shall 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:

1. Pre-construction: The applicant shall complete a communications study prior to construction so as to minimize interference with any public or public serving utility microwave transmissions.
2. Post-construction: If, after construction of the WECS, the owner or operator receives a written complaint related to interference with the broadcast of residential television, telecommunication, communication or microwave transmissions, Airport, or Air Reserve Base, 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.
3. Failure to remedy a complaint: If an agreement to remedy a known interference is not reached within ninety (90) days, appropriate action will be taken, which may result in requiring the WECS to become inactive. This does not apply to interference with private telecommunications systems.

C. Maintenance Records

At least annually, the operator of the Commercial WECS will provide to the Planning Department a letter certifying that all required and periodic maintenance has been performed during a particular calendar year and that the WECS is operating safely and efficiently. Should the Planning Department not receive such annual certification, the Planning Department will send a notice to the WECS operator requesting the certification letter within thirty (30) day. If after the thirty (30) days, the Planning Department has not received the required maintenance certification, then the Planning Department may hire, at the WECS Operator's expense, a qualified Inspector to perform an inspection of the WECS System.

D. Declaration of public nuisance

Any WECS thereof declared to be unsafe by the Cass County Building Commissioner 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.

523.08 DECOMMISSIONING PLAN

Prior to receiving an Improvement Location Permit and Building Permit under this Ordinance, the County and the applicant, owner and/or operator shall formulate a decommissioning plan outlining the anticipated means and cost of removing a WECS at the end of their serviceable life or upon becoming a discontinued or abandoned use to ensure that the WECS is properly decommissioned.

A. Content

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

1. Assurance: Written assurance that the WECS will be properly decommissioned upon the project life or in the event that the WECS Project is abandoned.
2. Cost estimates: The applicant shall provide a contractor cost estimate for demolition and removal of the WECS. The cost estimates shall be made by a competent party: such as a professional engineer, a contractor capable of decommissioning or a person with suitable expertise or experience with decommissioning WECS.
3. Financial assurance: Applicant will provide financial assurance in an amount at least equal to said demolition and removal contractor cost estimate, through the use of a bond, letter of credit or other security acceptable to the County, for the cost of decommissioning each WECS Tower and related improvements constructed under the permit. Said security will be released when each WECS Tower is properly decommissioned as determined by Cass County.
4. Abandonment by the owner or operator: In the event of abandonment by the owner or operator, the applicant will provide an affidavit to Cass County representing that all easements and/or leases for WECS Towers shall contain terms that provide financial assurances, including access to the salvage value of the equipment, for the property owners to ensure that the WECS Towers are properly decommissioned within one (1) year of expiration or earlier termination of the WECS Project.

B. Discontinuation and abandonment

All WECS shall be considered a discontinued use after one (1) year without energy production, unless a plan is developed and submitted to the Planning Department outlining the steps and schedule for returning the WECS to service.

C. 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. Removal obligations shall be completed by the owner or by Cass County at the owner's expense.

D. Written notices

Prior to implementation of the existing procedures for the resolution of such default(s), 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, for good faith negotiations to resolve the alleged default(s).

E. 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. By approval, the permittee or grantor grants a license to Cass County to enter the property to remove a WECS Tower and appurtenant facilities pursuant to the terms of an approved decommissioning plan.

523.09 LIABILITY INSURANCE

The owner or operator of any WECS shall maintain a current general liability policy covering bodily injury and property damage and may be required to name Cass County as an additional insured with dollar amount limits of at least \$2 million per occurrence and \$5 million in the aggregate and with a deductible of no more than \$5 thousand. A copy of the policy and renewals will be provided to the County.

523.10 PROCEDURES AND FEES

Procedures and fees shall be provided within the Developer Guidebook.

523.11 PRE-CONSTRUCTION REQUIREMENTS

Prior to the issuance of any Improvement Location Permit, the following shall be submitted to and reviewed by the Planning Department, who shall certify that the following are in compliance with all applicable regulations:

A. FAA permit application

A Federal Aviation Administration permit application.

B. Decommissioning plan

A decommissioning plan as prescribed in 523.08 of this Section.

C. Economic Development, Drainage, and Road Use and Maintenance Agreements

An Economic Development Agreement, a Drainage Agreement, and a Road Use and Maintenance Agreement approved by the County Commissioners. The agreements shall be developed in conjunction with the Cass County Economic Development office and copies provided to the Planning Department. These agreements must be signed before any Building Permit is issued. The Drainage Agreement must prescribe or reference provisions to address crop and field tile damages.

D. Erosion control plan

An erosion control plan developed in consultation with the Natural Resources Conservation Services (NRCS), and any storm water quality management plan adopted by the applicable jurisdiction.

E. Utility plan

A utility plan drawn to the same scale as the site layout plan illustrating the location of all underground utility lines associated with the total WECS Project.

F. Avoidance and mitigation of damages to public infrastructure

In addition to complying with the approved Road Use and Maintenance Agreement, an applicant, owner, or operator proposing to use any county road(s), for the purpose of transporting any component of a Commercial WECS Project and/or equipment for construction, operation or maintenance of a Commercial WECS Project, shall comply with the following pre-construction requirements.

1. Identification of roads and services: Identify all roads and services, to the extent that any proposed routes that will be used for construction and maintenance purposes shall be identified. If the route includes a public road, it shall be approved by the Cass County Highway Superintendent.
2. Pre-construction survey: The applicant shall conduct a pre-construction baseline survey acceptable to the Cass County Highway Superintendent to determine existing road conditions for assessing potential future damage. The survey shall include photographs, or video, or a combination thereof, and a written agreement to document the condition of the public facility.

523.12 CONSTRUCTION REQUIREMENTS

During construction, the applicant shall demonstrate that the following requirements are being met:

A. Dust control

Reasonable dust control measures shall be required by the County during construction of a Commercial WECS Project.

B. Drainage

Reasonable storm water best management practices as required by the Soil and Water Conservation Office and in some cases with the approval of a Drainage Plan/Agreement on file with the Cass County Surveyor.

523.13 POST-CONSTRUCTION REQUIREMENTS

Post-construction, the applicant shall comply with the following provisions:

A. Road Repairs

Any road damage caused by the construction of project equipment, the installation of the same, or the removal of the same, shall be repaired as per the Road Use and Maintenance Agreement approved by the County Commissioners. The Cass County Highway Superintendent may choose to require either remediation of road repairs upon completion of the project or is authorized to collect fees for oversized load permits. Further, a corporate surety bond in an amount to be fixed by a professional engineer may be required by the Cass County Highway Superintendent to insure the county that future repairs are completed to the satisfaction of the unit of local government. The cost of bonding is to be paid by the applicant.

B. As-Built Plans Requirement

Where upon completion of all development, the exact measurements of the location of utilities and structures erected during the development are necessary for public record and shall therefore be recorded. The applicant, owner, or operator shall submit a copy of the Final Construction Plans (as-built plans), as amended, to the Planning Department with the exact measurements thereon shown. The Building Commissioner, after being satisfied that the measurements are substantially the same as indicated on the originally approved final

plan(s), shall approve, date and sign said Construction Plans for the project, which the applicant, owner, or operator shall then record.

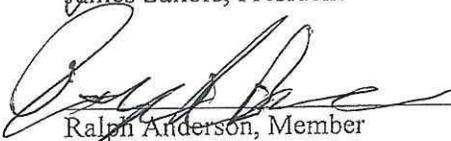
C. Change in ownership

It is the responsibility of the owner or operator listed in the application to inform the Planning Department of all changes in ownership and operation during the life of the project, including the sale or transfer of ownership or operation.

SECTION 2: That this amendment be in full force and effect upon its passage by the Cass County Board of Commissioners.

Adopted this 16 day of May 2016.


James Sailors, President

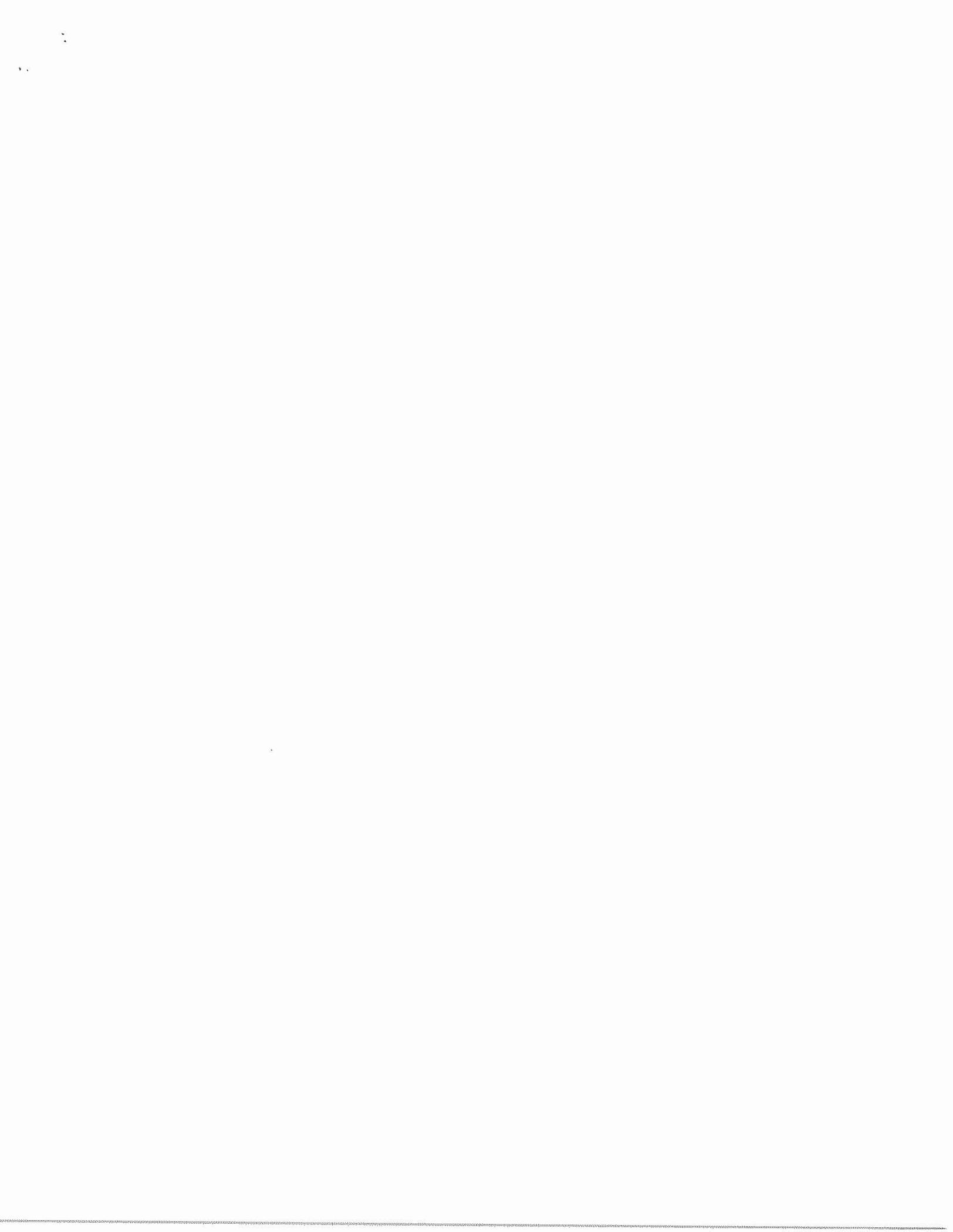

Ralph Anderson, Member


Jeff DeDonne, Member

ATTEST:


Vaneen Ide, Cass County Auditor

Ordinance #2016



RESOLUTION 16-02
A CASS COUNTY PLAN COMMISSION RESOLUTION
RECOMMENDING CERTIFICATION OF TEXTUAL AMENDMENTS TO THE
CASS COUNTY ZONING ORDINANCE
WIND ORDINANCE

WHEREAS, The General Assembly of the State of Indiana granted powers to the counties to adopt zoning ordinances for their jurisdiction according to IC 36-7-4-600 series; and

WHEREAS, Cass County adopted the Cass County Zoning Ordinance which became effective on October 3, 1986, and has had subsequent amendments as listed on the title page of the Cass County Zoning Ordinance; and

WHEREAS, the General Assembly on the State of Indiana granted powers to counties to amend the text of an adopted zoning ordinance according to IC-36-7-4-602 (b), and Section 906 of the Cass County Zoning Ordinance allows for the amendment of said Ordinance; and

WHEREAS, The Cass County Plan Commission held a public hearing on Tuesday May 3, 2016 to consider textual amendments to the Wind Energy Conversion System Regulations in, Article 5, Development Standards, and all related sections in the Cass County Zoning Ordinance ; and

NOW, THEREFORE, BE IT RESOLVED, in accordance with IC 36-7-4-605, the Cass County Plan Commission certifies with a X favorable, unfavorable, no recommendation the attached textual amendments to the Cass County Board of Commissioners, Cass County, Indiana.

Adopted this 3rd day of May 2016

CASS COUNTY PLAN COMMISSION

 Jimmy Clark
Officer, CCPC

ATTEST:

 James A. Sailer
Officer, CCPC

