

The
AREA PLAN COMMISSION
of Tippecanoe County

Ordinance Committee
Notice of Public Hearing

Date: December 5, 2018

Time: 4:35 - 5:45pm

Place: County Office Building

Tippecanoe Room

20 North Third Street

Lafayette, Indiana 47901

AGENDA

I. APPROVAL OF MINUTES FROM THE NOVEMBER 7TH MEETING:

(The draft minutes will either be distributed at the meeting or sent out with the January 2nd Ordinance Committee packet.)

II. PROPOSED CHANGES TO THE UZO REGARDING WIND FARMS:

A discussion regarding amending our current UZO regulations regarding wind farms - John Burns

Documents:

[WIND FARMS MEMO.PDF](#)

III. CITIZEN COMMENTS

IV. ADJOURNMENT

MEMORANDUM

TO: APC Ordinance Committee
FROM: John Burns, Planner
DATE: November 29, 2018
SUBJECT: Revising the UZO regarding Wind Farms

Earlier this year, staff began hearing from citizens that a new wind farm is being proposed in the southwest part of the county. Some concerned citizens attended the August 2018 Ordinance Committee meeting and spoke during the citizen comment period voicing concerns about the WECS ordinance and whether it is strict enough. Citizens stated that because 10 years have passed, the regulations should be reviewed and checked against other peer community's ordinances. The Ordinance Committee heard additional comments from citizens at its October 3rd meeting. Topics of discussion included:

1. Limiting the overall height of towers;
2. increasing setbacks from non-participating properties;
3. addressing shadow flicker;
4. changing the type of night time lighting required by the FAA;
5. addressing the sound levels of noises generated; and
6. changing the required depth of underground infrastructure/support structures associated with the wind farm.

Staff was asked to research maximum tower height as well as the setback from non-participating properties. We researched as many as 17 different wind energy ordinances (15 of them located in Indiana) to understand the different types of development regulations for wind farms. Attached is a spreadsheet showing some of these regulations.

Both Benton and White Counties, immediately north and west of Tippecanoe, have ordinances that are nearly identical to ours (except that non-participating dwellings must be 1000 feet from a turbine versus our setback of 1,200 feet). A conversation with White County officials revealed that many turbines are set back farther (1,500 feet), a setback which was self-imposed by the developer not the zoning ordinance. The tallest of those turbines are approximately 499 feet tall. Benton County officials also stated that some of their turbines are set back farther than their minimum setback. The newest turbines currently under construction in Benton County are 620 feet tall.

The ordinance currently requires a setback for large turbines of 1.1 times the total height from property lines and utility lines. However, there is a stricter standard of 750 feet from a non-participating *property line* and 1200 feet from a non-participating *dwelling*.

Background:

In 2007 the first WECS (Wind Energy Conversion System) ordinance (UZO #55) was adopted creating development standards for micro-wind systems (roof-mounted), small wind systems (less than 50 kW and up to 140 feet tall) and large wind systems (more than 50 kW and more than 140 feet tall). In 2008 a second amendment was approved ensuring that all wiring associated with a wind farm be buried as well as limiting small wind systems to only rural, commercial and industrial zones (UZO #58). Finally, in 2010, a third amendment (UZO #66) was adopted with development standards for meteorological towers as well as changes to the setback from turbines to non-participating properties. Originally, the ordinance required a 1000' setback from both non-participating property lines and non-participating dwellings. This last

amendment changed the setback to 750' from a non-participating property line and 1200' to a non-participating dwelling. This effectively encumbers a portion of a non-participating property owner's land and their ability to build a house within that setback.

Proposed Amendment Options:

Regarding maximum tower height and setbacks from non-participating property owners, here are three options for tightening the existing regulations:

1. Create a ratio for non-participating properties based on the turbine height instead of a static dimension.

When the last amendment was written in 2010, the wind turbines being constructed had a total height of approximately 300 feet. With a setback of 1200 feet from a non-participating residence, this amounts to a ratio of 1:4. With wind turbines today approaching heights not imagined in 2010, the ratio has been greatly reduced. Currently in Benton County wind turbines are being erected with a total height of 620 feet. With our 1200 foot setback requirement, a turbine of this size would have a setback ratio of less than 1:2. Using a ratio of 1:4, a 620 foot tall turbine would require a setback of 2400 feet from a non-participant's residence.

2. Eliminate the setback to existing non-participating dwellings and increase the setback to a non-participating property line.

All ordinances researched require turbines to be set back from non-participating dwellings at least 1.1 times the overall height of the turbine. Some ordinances require setbacks much larger, such as 3,960 feet (Wabash County) and 2,640 feet (Whitley County). Neither of these county's have a wind farm existing or under development.

3. Adopt a maximum height cap for turbines.

While none of the ordinances from Indiana had a maximum height for turbines, Kankakee County, IL caps towers at 499 feet and Will County, IL allows a height up to 500 feet. Tippecanoe County currently has no maximum height requirement. For a frame of reference, the Tippecanoe County Courthouse is 226 feet tall, The Rise (student apartment building under construction at State and Chauncey in West Lafayette) is 164 feet tall and the three turbines at Citybus on Canal Road are 154.5 feet tall.

Community	Setback from non-participating	Other Setback requirements	Maximum Height	Sound	
Carroll County, IN	1.1 times the height for non-participating landowners property lines	1,000 feet for non-participating residential dwellings and 1.1 times the height setback from roads			
Montgomery County, IN	1,300 feet	1.1 times the height for property lines, 1,000 feet for participating residence			
Clinton County, IN	1,520 feet (or manufacturer rating, whichever is greater) for non-participating dwelling	1.1 times the height to a non-participant's property line			
Benton County, IN	1.1 times the height or 350', whichever is greater, for property lines, r/w, transmission lines	1,000 feet for 1 MW or more			
White County, IN	1.1 times the height from property lines, r/w (except r/w cannot be less than 350')	1,000 feet for residential dwellings			
Whitley County, IN	2,640 feet or 6.5 times the height, whichever is greater				
Grant County, IN	1.1 times the height from project boundary perimeter and r/w			60 decibels at nearest dwelling	
Randolph County, IN	1.1 times the height from non-participating property line	1,000 feet from leading edge of dwelling and 1.1 times the height from r/w, or 350 feet, whichever is greater		60 decibels at nearest dwelling	
Tipton County, IN	1.1 times the height or 350', whichever is greater, for property lines, r/w, transmission lines	1,000 feet from existing or occupied dwelling, and 1320 feet from platted major SD		variable based on octave band	
Noble County, IN	1,500 feet from residential use/zone or institutional use	setback from property line is 250' or 200% of the hub height	maximum height of 140 feet and rotor diameter of 100 feet		
Jay County, IN	1.1 times the height or 350 feet, whichever is greater	1,000 feet from residence		same as Tipton Co.	
Rush County, IN	1.1 times the total height but proposing 2 times the height	1,000 feet from non-participating residences	no maximum height but proposing 300 feet		
Wabash County, IN	3,960 feet from non-participating primary structures and 1,980 feet from participating	setback from all public roads, either 2 times the height or 1000 feet		32 decibels	
Marshall County, IN	1.5 times the height	1,000 feet from off-site residence		55 decibels off-site	
Kankakee County, IL	1,200 feet from non-participating dwelling (600 feet if home built after wind farm)	1.1 times the height from r/w, transmission lines and cell towers	maximum height of 499 feet		
Will County, IL		No portion of wind farm closer than 1,320 feet from residential zoning or residence	maximum height of 500 feet		