

**MONTVILLE TOWNSHIP
ZONING COMMISSION MEETING
February 24, 2010**

PRESENT

John Vujevich, Chairperson
Alan Piatak, Vice Chairperson
Mary Pawlowski
Pat Ryan
Dave Wetzel
Elayne Siegfried, Alternate
Ron Potter, Alternate

ALSO PRESENT

J. Emrick, Zoning Inspector
B. Schwehm, Zoning Secretary
V. Ragnoni
M. Townsley

HANDOUTS: Ohio Department of Transportation/Letter dated 02-18-10/Drug Mart Valore Properties – Cross Creek Subdivision Variance Paperwork for BZA 3/1/10

AGENDA:

1. Approval of Minutes – January 13, 2010 and January 27, 2010
2. Presentation: Vertical Axis Wind Turbines/IC Green Energy, LLC/
Mr. Vince Ragnoni
3. Text Discussion/Review: Wind Turbines and Outdoor Hydronic Heaters
4. Safety Services Center/Landscaping & Demo Plans
5. Zoning Inspector Updates

The February 24, 2010 meeting of the Montville Township Zoning Commission was called to order at 7:03 p.m. by Chairperson Mr. John Vujevich.

ROLL CALL: Ms. Mary Pawlowski – here; Mr. Alan Piatak – here; Mr. Dave Wetzel – here; Ms. Pat Ryan – here; Mr. John Vujevich – here.

Commission Chairperson Vujevich asked, “Has the meeting been properly advertised and the necessary contiguous property owners notified?”

Zoning Inspector Emrick responded, “The meeting has been properly advertised and there were no contiguous property owners to notify.”

Commission Chairperson Vujevich said, “Everyone in attendance should sign in if they have not already done so. Anyone who wishes to speak should state their name and address for the record. The meeting is taped for transcription purposes. The official minutes of the meeting are the typed transcripts.”

1. Approval of Minutes**January 13, 2010**

MOTION: Commission Member Wetzel moved to approve the January 13, 2010 meeting minutes as written.

SECOND: Commission Member Ryan

ROLL CALL: Ms. Pat Ryan – yes; Ms. Mary Pawlowski – abstain; Mr. Dave Wetzel – yes; Mr. Alan Piatak – aye; Mr. John Vujevich – aye.

January 27, 2010

MOTION: Commission Member Wetzel moved to approve the January 27, 2010 meeting minutes as written.

SECOND: Commission Member Piatak

ROLL CALL: Mr. Alan Piatak – aye; Ms. Mary Pawlowski – aye; Ms. Pat Ryan – aye; Mr. Dave Wetzel – yes; Mr. John Vujevich – aye.

**2. Presentation: Vertical Axis Wind Turbines/IC Green Energy, LLC/
Mr. Vince Ragnoni**

Mr. Vince Ragnoni, IC Green Energy, 9225 Dean Road, Vermilion, Ohio and Mr. Mike Townsley, 5556 Mountain Lion Drive, LaGrange, Ohio presented a PowerPoint presentation on vertical axis wind turbines.

Mr. Ragnoni and Mr. Townsley said they were certified dealers for the Windspire, manufactured by Mariah Power, Reno, Nevada. The 1.2 kW grid-tie unit was manufactured in Michigan. Grid-tie meant that it tied directly into the electrical panel – no need for batteries, maintenance or switchover – everything was automatic. It was used by schools, small commercial or industrial applications, and residential uses. In addition an off-grid DC unit with a built in generator, electronics and a battery backup system was available.

Indicating the direction in which the industry was moving, Mr. Ragnoni showed slides of the following:

- Units at the Capitol Building.
- A building in San Francisco that was designed with a wind tunnel to capture the wind and produce electricity.
- A port in Dubai showing Windspires mounted at each boat dock which supplied power to the docks.
- A building in California (in a high wind area) with six Windspires mounted on it. The company wanted to visually demonstrate their commitment to going “green”

which reflected the conservation philosophies conducted within the building – lighting changes, paper recycling, etc.

- A unit used to supply power to charge an electric car.
- A home in Reno, Nevada with a residential unit. With winds of twelve miles per hour, it would produce approximately 2,000 kWh/year.
- Units setup at the Chicago Wind Power Show.
- A bank in Chicago with five units – all of which tied into the electrical panel.
- A high-wind unit which was shorter than other units.
- A school in Washington with units mounted on pole extensions.
- A spire incorporated into a solar light pole base.

Mr. Ragnoni said that standard units were approximately thirty feet tall and four feet wide. It was approximately ten feet from the ground to the cage, and the cage was twenty feet tall. The inverter and generator were contained in the hub located at the top of the pole. The units were quiet – about six decibels at nine feet away. The units were UL listed and IEEE certified, which meant in the event of a power outage, it automatically sensed the grid and shut down and could not send power back to the grid. The units had a twenty-year lifespan with a five-year warranty. The units were manufactured using 80 percent recycled steel/aluminum; they came in a variety of colors. The unit did not have an electronic starter – the unit moved with the wind and began producing power with winds at eight miles per hour.

Mr. Ragnoni said that a few units had been installed and more had been ordered by customers. He thought the units would become more common in the community.

Mr. Ragnoni said that the vertical axis wind turbines were designed to access wind at a lower elevation and any direction, and designed for turbulent wind. He said the prop-style wind turbines needed to be higher to catch clean wind, and they had a starting mechanism.

The Windspire included a WindSync program which allowed users to monitor production from their laptop computer. A ZigBee modem fed the information through a wireless router (300 feet maximum distance.)

The unit produced 2,000 kWh/year with winds at twelve miles per hour. It weighed approximately 950 pounds.

Mr. Ragnoni said that the units were affordable, attractive, aesthetically pleasing, quiet and environmentally friendly. There was not an issue with bird strikes because birds could see the units.

Vertical axis wind turbines cost approximately \$15,000 installed - including generator, monopole, inverter, foundation kit, disconnect, etc. There was a 30 percent federal tax credit available, and a \$1,000 incentive for a reference. The final cost was approximately \$5,500 after rebates and tax credits.

Mr. Ragnoni said that they also distributed WePower units – much larger units that were available in 1.2 kW, 3.4 kW, 5.5 kW and 12 kW. Depending upon wind speed, the 12 kW unit could produce 20,000 kWh per year. The minimum speed at which the unit produced power was eight miles per hour.

Mr. Ragnoni said that Best Buy was installing WePower units at their locations throughout the country. It was a visual confirmation of Best Buy's commitment to going green.

Commission Chairperson Vujevich asked what types of zoning issues had been encountered in locations where the vertical axis wind turbines had been installed. Mr. Ragnoni said that it had been a different story in just about every location. Some locations did not have zoning regulations in place and did not require any zoning approvals. Some locations required an engineered drawing and other locations required a licensed electrical contractor for installation. In some areas, conditional approval was required. Most locations had height restrictions. Some residential applications required approval from the homeowners' association.

Regardless of the zoning regulations, Mr. Ragnoni said that they tried to allow for a fall zone that was one (1) to one and one-half (1 ½) the height of the unit, and the fall zone could not extend beyond the owner's property line. He said fall zone requirements had not been an issue since the turbine height was only thirty feet.

Commission Chairperson Vujevich asked if the units had to be located in an open area. Mr. Ragnoni said that they tried to get them into an open area. He said each site was different; and based upon a site evaluation, the appropriate placement was determined. They encouraged homeowners to look at their own wind conditions and to use an anemometer to take wind samples. Wind estimators provide preliminary data by zip code; however, each site was unique.

Commission Chairperson Vujevich asked if the units were purchased for the payback or to go green. Mr. Ragnoni said that the units were purchased for both purposes. Every situation tended to be different.

Commission Chairperson Vujevich said that he used approximately 1,700 kWh a month, and the Windspire only produced 2,000 kWh annually. He questioned the payback when the initial cost of \$15,000 was considered.

Mr. Ragnoni said that 2,000 kWh was 50 percent of some people's electrical bill. He said electric usage at a given cost was reviewed to determine the most appropriate unit for each particular situation and site. Mr. Townsley said 2,000 kWh eliminated over one and one-half tons of carbon from the air.

To meet residential usage requirements, Commission Chairperson Vujevich asked if larger units or additional units would be more appropriate for a residential site. Mr. Ragnoni said that it would depend upon numerous individual factors – site, wind, etc.

Commission Chairperson Vujevich asked if the units could be mounted on a rooftop. Mr. Ragnoni replied, “no.” He said a rooftop unit was available; but due to vibration, he only recommended it for an outbuilding. Most communities had a thirty-five foot maximum height restriction in residential communities. The unit would exceed that height if mounted on the roof of a home that was twenty-five feet high.

Commission Chairperson Vujevich asked what neighbors said when a vertical axis wind turbine was installed next door. Mr. Ragnoni said that they had not had any negative feedback. Typically it was more of a “wow” response. Mr. Townsley said that it was similar to a home bathroom remodel – property value increased 80 percent of the cost (a return on the initial investment after rebates). He said it was illegal for the property to be reassessed and the taxes increased on that basis. The property value increase was based on appeal. Commission Member Wetzel said it was similar to a gas well being located on a parcel.

Mr. Ragnoni said they looked at it as adding another electrical appliance that generated interest, saved money and potentially reduced the electric bill. If people who had the room and wind used the opportunity to install a turbine and reduce their electricity bill by 10 or 20 percent, a phenomenal savings would be realized.

Commission Member Ryan asked about the required spacing between units when multiple units were installed. Mr. Ragnoni said that the units needed to be about fifteen to twenty feet apart. Depending upon the site limitations and the zoning requirements, a larger unit may be recommended in lieu of multiple units.

Commission Chairperson Vujevich asked what the minimum lot size was for a unit. Mr. Ragnoni and Mr. Townsley indicated that the units could be installed on a standard city residential lot – approximately fifty feet by 160 feet.

Commission Member Ryan asked if the cost of the WePower unit was comparable to the Windspire unit. Mr. Ragnoni said that after rebates, the largest WePower unit (22,000 kWh per year with fifteen miles per hour wind) was approximately \$25,000 installed.

Commission Member Wetzel said the gentleman who spoke to the Zoning Commission regarding the prop-style turbines indicated that the objective was to produce less power than was consumed. Mr. Ragnoni confirmed that the objective was to produce enough power to meet the usage requirements, but not to over-produce.

Commission Member Wetzel asked if sales were stronger in the areas near Toledo. Mr. Ragnoni and Mr. Townsley said that interest was widespread – not in any one general area. Mr. Townsley said that the rebates from the State of Ohio were based on the power company. Many rural communities had electrical co-ops which did not qualify for rebates from the State of Ohio.

Mr. Ragnoni said that electric rates were projected to increase, and small wind turbines gave people options. Mr. Townsley said that the average home used between 10,000 and 12,000 kWh annually. If the customer used 10,000 kWh a year, they would save 20 percent. Mr. Ragnoni said that they also recommended other green measures to consumers such as changing to energy efficient lamps, buying energy star certified appliances, insulating, etc.

Commission Chairperson Vujevich explained that the Township was in the process of drafting regulations for wind turbines and thanked Mr. Ragnoni and Mr. Townsley for the information they shared.

Mr. Townsley recommended making wind turbines a conditionally permitted use to allow each situation to be addressed on an individual basis. Mr. Ragnoni agreed and said there was nothing stopping someone from trying to build their own unit, and a wide variety of applications was possible.

Commission Chairperson Vujevich asked what happened with the electrical box. Mr. Ragnoni said that with the smaller units, there was a 20 amp, single-pole breaker. The inverter and generator were built into the unit. The larger units had a controller and inverter mounted next to the electrical box (two-pole, 20 – 40 amp breaker). A disconnect was located on the side of the house. In the event the power company needed to work on the line, the unit could be turned off without disturbing the residents. The inverter converted the erratic AC voltage produced by varying wind speeds to DC voltage. The inverter stabilized the power and converted the power back into a clean, usable AC voltage. The controller sensed the grid and stopped producing if a variation outside a prescribed range was detected. The power that was produced and used slowed the electric meter; the meter ran in reverse if more power was generated than was being used.

Commission Member Wetzel asked if there was a manual disconnect. Mr. Ragnoni and Mr. Townsley said there was a manual disconnect.

Commission Member Wetzel asked what happened if strong winds were predicted. Mr. Ragnoni and Mr. Townsley said the units were equipped with an automatic breaking system for high-wind situations. The small units would brake intermittently based on the conditions. The larger units would pulse their brakes to slow themselves down but continued to produce power. The prop-style units shut down for an hour if they sensed an overspeed. If the unit came back on and again sensed an overspeed, the unit would shut down for twenty-four (24) hours – an entire day of good wind could be lost.

Commission Member Ryan asked if the WePower units operated quietly. Mr. Ragnoni and Mr. Townsley said that the WePower units were quiet. The wind would be heard over the noise generated by the unit.

3. Text Discussion/Review: Wind Turbines and Outdoor Hydronic Heaters

Referring to the minimum lot size for wind turbines, Commission Chairperson Vujevich wondered if the requirement should be reduced (less than ten acres) to allow for residential use of vertical axis wind turbines. Commission Member Wetzel thought the ten (10) acre minimum was appropriate; he did not think wind turbines should be allowed in residential subdivisions.

Commission Member Ryan suggested breaking out the regulations for the taller prop-style wind turbines from the smaller vertical axis wind turbines.

Commission Member Wetzel did not think it was practical to have a wind turbine on a lot that was only fifty feet wide. Commission Chairperson Vujevich did not believe it was up to the Zoning Commission to decide if it was *practical* – that decision was up to the individual homeowner.

Commission Member Wetzel thought that homeowners' associations would add bylaws for wind turbines. He asked if any of the newer subdivisions in the Township had addressed wind turbines in their bylaws. Zoning Inspector Emrick said that she had not seen any regulations for wind turbines in the documents she reviewed.

Commission Member Wetzel said that he would not want to live next door to someone who had a vertical axis wind turbine. He also thought locating a unit next to a lake (such as the lake in Fox Meadow) would detract from the view. Commission Member Piatak agreed.

Commission Member Wetzel suggested reducing the acreage to five acres for vertical axis wind turbines. He did not believe they were appropriate for subdivisions. Commission Member Ryan said that reducing the requirement to two acres would eliminate most residential developments.

Commission Chairperson Vujevich said that if wind turbines were listed as an accessory use (on a 10-acre minimum parcel) and someone in Fox Meadow wanted to put up a vertical axis wind turbine, they would have the option of applying for a variance.

Alternate Commission Member Siegfried thought setback and fall zone should dictate where wind turbines were allowed. She thought the homeowners' associations would address the aesthetic issues and develop regulations accordingly.

Commission Member Wetzel thought if wind turbine approval went before the Board of Zoning Appeals, contiguous property owners would be notified and included in the review process. Zoning Inspector Emrick said that contiguous property owners were also notified for development plan reviews. A development plan review was included as part of the approval process in the proposed regulations.

Commission Chairperson Vujevich reiterated that the unit he saw in Nevada would not have bothered him if he lived next door. Alternate Commission Member Siegfried said that she thought the larger prop-style turbines were more aesthetically pleasing than the smaller vertical units. Commission Member Ryan and Zoning Inspector Emrick could better visualize the smaller vertical units on a residential parcel.

Zoning Inspector Emrick referred to the draft of the proposed text for wind energy conversion systems and outdoor wood-fired Hydronic heaters. The Zoning Commission reviewed and discussed the proposed regulations as shown below.

Referring to the definitions below from Chapter 210 of the proposed regulations, the Zoning Commission revised the wording to provide for an accessory building or an accessory use to be constructed/established *concurrent with* or subsequent to the principal use. An accessory building and/or accessory use could not be established on a lot before the principal use was constructed or established.

ACCESSORY BUILDING: *A subordinate building detached from, but located on the same lot as, the principal or main building, the use of which is incidental and accessory to that of the main building or use and which is constructed **concurrent with** or subsequent to construction of the principal building or establishment of the **principal** use of land. (Revised)*

ACCESSORY USE: *A use that is on the same lot as and serves a purpose customarily incidental and subordinate to the principal use **and is established concurrent with or subsequent to construction of the principal** building or establishment of the **principal** use of the land. (Revised)*

The Zoning Commission agreed to add the following definitions to Chapter 210.

BUILDING, HUMAN OCCUPIED: *A structure constructed for human-occupation such as a residence, school, hospital, church, public library or other building used for public gathering that is occupied or in use when a wind energy conversion system permit application is submitted. (Effective)*

CHIMNEY: *Flue or flues that carry off exhaust from an Outdoor Wood Furnace firebox or burn chamber. (Effective)*

The Zoning Commission discussed using consistent terminology when referring to outdoor wood furnaces, outdoor wood boilers and/or outdoor wood-fired Hydronic heaters. Cross references would be added to the definitions.

EPA OWHH PHASE I PROGRAM QUALIFIED MODEL: *An Outdoor Wood-fired Hydronic Heater that has been qualified under the EPA OWHH Phase I Program administered by the United States Environmental Protection Agency. The model has met the EPA OWHH Phase I emission level and has the proper qualifying label and hangtag. **See also Outdoor Wood Furnace.** (Effective)*

EPA OWHH PHASE II PROGRAM QUALIFIED MODEL: *An Outdoor Wood-fired Hydronic Heater that has been qualified under the EPA OWHH Phase II Program administered by the United States Environmental Protection Agency. The model has met the EPA OWHH Phase II emission level and has the proper qualifying label and hangtag. See also Outdoor Wood Furnace. (Effective)*

FALL ZONE, CLEAR: *A clear fall zone is the area or radius surrounding a wind energy conversion system that if it were to fall, would remain confined within the property or parcel where the turbine is located. (Effective)*

OUTDOOR WOOD FURNACE: *Any equipment, device, appliance or apparatus, or any part thereof, which is installed, affixed or situated outdoors for the primary purpose of combustion of fuel to produce heat or energy used as a component of a heating system providing heat or a hot water source for the principle structure, the site, or any other building or structure on the premises. An Outdoor Wood Furnace may also be referred to as an Outdoor Wood Boiler or Outdoor Wood-Fired Hydronic Heater. (Effective)*

OUTDOOR WOOD FURNACE, EXISTING: *An Outdoor Wood Furnace that was purchased and installed prior to the effective date of this Chapter. (Effective)*

OUTDOOR WOOD FURNACE, NEW: *An Outdoor Wood Furnace that is first installed, established or constructed after the effective date of this Chapter. (Effective)*

The Zoning Commission agreed to revise the following definition as shown since vertical axis wind turbines had fins or vanes.

OVERSPEED CONTROL: *A mechanism used to limit the speed of ~~the blade~~ rotation on a wind energy conversion system so that it remains below the design limits of the wind turbine system. (Effective)*

The Zoning Commission changed the wording of the following definition for consistency.

SETBACK, WIND TURBINE: *The distance from the ~~wind alternative~~ energy ~~conversion~~ system to the property line and human-occupied structures on the turbine-site property. (Effective)*

The Zoning Commission discussed the possibility of shadow flicker from vertical axis wind turbines. The shadow flicker may not be as significant with the vertical axis turbines as the prop-style turbines, but the WePower unit had flat blades that may generate some degree of shadow flicker.

SHADOW FLICKER: *The visible flicker effect when rotating turbine blades cast shadows on the ground and nearby structures causing the repeating pattern of light and shadow. (Effective)*

SHORT TERM EVENTS: *As related to wind energy conversion systems, less than 48 hours for a period of increased rate of wind, and less than seven (7) days for power outages. (Effective)*

STRUCTURE, HUMAN OCCUPIED: *See Building, Human Occupied. (Effective)*

Zoning Inspector Emrick wondered if the last sentence of the definition for “Wind Turbine, Freestanding” should also be included in the zoning text. Alternate Commission Member Siegfried suggested removing the last sentence from the definition and including it as part of the regulations.

Commission Member Piatak pointed out that “wind energy conversion system” was included in the definition for “Wind Turbine, Freestanding.” However, a definition was not shown for “Wind Energy Conversion System.”

Alternate Commission Member Siegfried asked if wind farms were allowed. Commission Member Piatak said he thought the Commission had decided that wind farms would not be allowed.

Commission Member Ryan said that the energy being produced was for consumption by the owner of the lot upon which the turbine was built.

Commission Member Pawlowski said that vertical axis wind turbines only produced 2,000 kWh annually, and the average household usage was substantially more than that amount. Several units may be necessary to generate the required amount of power and could possibly be considered a wind farm.

Commission Member Piatak thought the Ohio Revised Code (ORC) defined a wind farm as generating power for off-site consumption and was considered a business.

Zoning Inspector Emrick said that she would provide the Zoning Commission with the information from the ORC regarding wind farms.

Alternate Commission Member Siegfried referred to Section 519.213 (A) of the ORC and read the following:

As used in this section, ‘small wind farm’ means wind turbines and associated facilities with a single interconnection to the electrical grid and designed for, or capable of, operation at an aggregate capacity of less than five megawatts.

Commission Chairperson Vujevich pointed out that a small wind farm was directly connected to the grid – not a home.

Commission Member Wetzel said that the residential units were also hooked into the grid – any extra energy that was generated but not consumed went back to the grid. It did not constitute a business or power utility.

Zoning Inspector Emrick asked if small wind farms (connected directly to the grid) were considered a business and/or public utility. She questioned if the Township could regulate a public utility.

Commission Member Ryan said she read about a place in Kansas where a municipality fought a proposed wind farm, based on aesthetics, and won.

Alternate Commission Member Siegfried read the following from the ORC which confirmed that the Township could regulate wind farms.

Notwithstanding division (A) of section 519.211 of the Revised Code, sections 519.02 to 519.25 of the Revised Code confer power on a board of township trustees or board of zoning appeals with respect to the location, erection, construction, reconstruction, change, alteration, maintenance, removal, use, or enlargement of any small wind farm, whether publicly or privately owned, or the use of land for that purpose,

Commission Member Wetzel said that Lake Erie and the Toledo area down to Vermilion and over to Lima were the only areas in Ohio that had adequate winds for wind farms.

Zoning Inspector Emrick said that if wind farms were not specifically mentioned in the Zoning Resolution, they were not allowed.

Commission Chairperson Vujevich asked how many wind turbines would be considered a wind farm. More than one? Commission Member Piatak said that he did not think more than one would be classified a wind farm. He thought a definition from the ORC would help clarify what determined a wind farm.

Alternate Commission Member Siegfried read the following from the ORC that indicated a wind farm was considered a public utility that could be regulated:

The designation under this section of a small wind farm as a public utility for purposes of sections 519.02 to 519.25 of the Revised Code shall not affect the classification of a small wind farm or any other public utility for purposes of state or local taxation.

Zoning Inspector Emrick said she would research the information and forward it to the Zoning Commission.

WIND TURBINE, FREESTANDING: *A single mono-pole, ground-mounted, self-supporting tower wind energy conversion system designed to convert kinetic wind energy into rotational energy that drives an electrical generator, and includes all types of wind energy systems, turbines, cubes, spirals, etc. ~~The~~*

~~electricity is primarily generated for the on-site consumption of the owner of the lot upon which the turbine is built.~~ (Effective)

WOOD, NATURAL: Wood which has not been painted, varnished or coated with a similar material, has not been pressure treated with preservatives and does not contain resins or glues as in plywood or other composite wood products. (Effective)

Referring to Chapter 410, Schedule 410.8 C. 9. and 10. below, Commission Member Ryan asked why the smaller vertical axis wind turbines were not allowed in the side yard if there was enough room. Commission Chairperson Vujevich thought for aesthetic reasons the units should be limited to the rear yard.

<i>9. Wind Energy Conversion Systems (WECS) (Effective)</i>	<i>Rear</i>	<i>NA</i>	<i>(d)</i>	<i>(d)</i>
<i>10. Outdoor Wood-Fired Hydronic Heater EPA Phase II (Effective)</i>	<i>Rear</i>	<i>NA</i>	<i>(a)</i>	<i>(a)</i>
<i>Notes to Schedule 410.8:</i>				
<i>(a) Shall comply with side yard setback for principal buildings set forth in Schedule 410.5.</i>				
<i>(b) May project a maximum of 10 ft. into required yard.</i>				
<i>(c) Not permitted in cluster home areas. (Effective June 22, 2006)</i>				
<i>(d) Height of turbine plus ten feet.</i>				
<i>NA = Not applicable</i>				

L. Wind Energy Conversion Systems (WECS). (Effective)

Resources

American Wind Energy Association (AWEA), www.awea.org; In the Public Interest: How and Why to Permit for Small Wind Systems, www.awea.org/smallwind/pdf/inthepublicinterest/pdf; Jackson Officials Look to Regulate Wind Turbines, Massillon Independent, February 15, 2008; To Avoid Fights, Set Rules for Windmills Now, Experts Say, The Columbus Dispatch, March 17, 2008; Small Wind Electric Systems An Ohio Consumer s Guide, U.S. Department of Energy; Energy Savers Tips on Saving Energy and Money at Home, www.eere.energy.gov/consumerinfo/energy_savers; Wind Power for Home, Farm and Business: Renewable Energy for the New Millennium, www.chelseagreen.com; Alternative Energy Sources Ordinance, City of Norton, Summit County, Ohio; Draft Alternative Energy Source Code, City of Green, Summit County, Ohio; Draft Energy Generating Devices (non-commercial) as an Accessory Use Structure Resolution, Homer Township, Medina County, Ohio; Small or Distributed Wind Energy Systems presentation by Glen A. Ginesi, NexGen Energy Partners, www.NexGen-EnergyPartners.com; Industries Ready to Ride the Wind, Akron Beacon Journal, January 11, 2010; Air of Hope

Whirls In, Akron Beacon Journal, January 10, 2010; Bowling Green Wind Farm Might Grow, Akron Beacon Journal, January 10, 2010; Turbine Manufacturer Cranks into Gear, Akron Beacon Journal, January 11, 2010; Wind Power to the People, Medina Gazette, January 7, 2010.

Zoning Inspector Emrick asked if the Zoning Commission wanted to limit the number of wind turbines on a parcel, which may eliminate wind farms. Commission Member Ryan thought that based on the definition for a wind farm, it may be more appropriate to limit the amount of power that was generated.

1. *Single mono-pole wind turbines (WECS) are permitted uses in all zoning districts as an accessory use on a parcel with a minimum of ten (10) acres.*

The Commission added the last sentence that was removed from the definition for “Wind Turbine, Freestanding” as item 2. below.

2. *The electricity shall be generated primarily for the on-site consumption of the owner of the lot upon which the turbine is built.*
3. *Wind turbines (WECS) supported by guy wires are not permitted.*
4. *No wind turbines shall be located in the front or side yards.*

The Zoning Commission discussed if it would be appropriate to add the need to comply with the IEEE (Institute of Electrical and Electronics Engineers) standards for the smaller, vertical axis wind turbines as well as the larger prop-style wind turbines to the item listed below. Zoning Inspector Emrick said that she would check with Mr. Ginesi to confirm that adding the wording for both types of turbines was appropriate.

5. *All wind turbines shall be UL listed and **comply with IEEE standards.***
6. *Freestanding wind turbines shall not be installed or erected on a mound or base for the intention of siting the system higher than the natural grade and shall not exceed 160 feet from natural grade to the tip of the blade at its vertical position.*
7. *The minimum fall zone for freestanding wind turbines shall be equal to the height of the turbine plus ten (10) feet and shall be measured from the base of the tower and shall be free from all overhead transmission lines, public or private streets, above ground gas or oil storage or pumping facilities, property lines, and/or buildings meant for human occupation.*

Commission Member Piatak wondered if all signage, other than specified below, should be prohibited from being part of the wind turbine. The Commission agreed on the change as noted below. In addition, the requirement would be added to Chapter 510, Sign Regulations.

8. *Signage identifying the manufacturer, owner, voltage and emergency contacts shall be posted on the wind turbine pole at eye level. Signage shall not exceed one (1) square foot and shall not require a permit. **No other signage shall be allowed.***

Referring to the item below, Zoning Inspector Emrick said she was looking into getting a decibel meter. The operator must be trained and certified to use it.

9. *The sound pressure level produced by a wind turbine shall not exceed 20 decibels above the ambient decibel level, measured at any property line abutting a contiguous property not owned by the system owner. The sound pressure level shall be measured by successively measuring the sound with the wind turbine turned on, and measured again with the turbine turned off. This level may be exceeded during short-term events, such as times of excessive wind speeds or during power outages. Sound examples:*

<i>Falling leaves</i>	<i>= 15 decibels</i>
<i>Whispering</i>	<i>= 25 decibels</i>
<i>Wind Turbines</i>	<i>= 45 decibels</i>
<i>Homes</i>	<i>= 55 decibels</i>
<i>Office noise</i>	<i>= 65 decibels</i>
<i>Inside car</i>	<i>= 85 decibels</i>

Commission Member Pawlowski thought that shadow flicker on neighboring properties should not be allowed. Commission Member Piatak said that eliminating shadow flicker would be almost impossible. It would not occur all day, but would be prevalent in the morning and evening and would vary with the position of the sun and direction of the wind.

At the very least, Commission Member Pawlowski thought *every* effort should be made to reduce or remove the impact of shadow flicker on neighboring properties.

Commission Member Ryan thought a plan showing the projected impact of shadow flicker could be required if neighbors were concerned about it having a significant impact on their parcel.

10. *During the location design phase, the owner shall anticipate possible shadow flicker on neighboring properties, and make reasonable efforts to reduce or remove the impact to **human** occupied structures.*
11. *Safety Standards include the following:*

To cover both vertical axis wind turbines and prop-style wind turbines the following change was made.

- a) *Each wind turbine system shall be equipped with both manual and automatic controls to limit the rotational speed ~~of the blade~~ to correspond with the design limits of the rotor.*
- b) *To control wind tower access, tower-climbing apparatus for freestanding wind turbines shall be located no closer than fifteen (15) feet from the ground; or have a locked anti-climb device*

installed on the tower; or the tower shall be completely enclosed by a locked, protective six (6) foot tall fence.

- c) *Wind turbines shall not be artificially lighted, except to the extent that may be required by the Federal Aviation Administration or other applicable authority that regulates air safety.*

Commission Member Piatak said that some cell phone towers had conduit on the outside of the monopole. The following wording was added to require the wiring to be within the monopole.

- d) *Transmission and power lines shall be placed underground and wiring from the turbine to ground level shall be within the monopole.*

12. *Wind turbines and components shall be painted or finished with a non-reflective unobtrusive color that blends into the surrounding landscape to the greatest extent possible.*

13. *Freestanding Wind Turbine Maintenance and Removal:*

- a) *The property owner is responsible for ensuring that the wind turbine operates as designed and in compliance with the guidelines of the Montville Township Zoning Resolution. If a wind turbine system ceases to perform as originally intended for more than six (6) consecutive months, the property owner is responsible for repair or totally removing all parts of the system no later than ninety (90) days after the end of the six (6) month period.*
- b) *Upon failure to remove an inoperable wind turbine within the required timeframe, the Montville Township Zoning Office shall issue a Notice of Violation directing the removal of the wind turbine and all components within ninety (90) days. Upon confirming continuing noncompliance, the Montville Township Zoning Office may contract with a contractor to remove all wind turbine components as established in the required entry agreement provided by the property owner at the time of permit application.*
- c) *The property owner is responsible for all costs and expenses incurred in connection with securing, removing, and disposing of the system. Upon failure to pay invoices for all such costs and expenses within thirty (30) days of invoicing by the Montville Township Fiscal Officer or designee, any unpaid costs will be placed as a lien to be collected as part of the real estate taxes.*

Zoning Inspector Emrick wondered if the Zoning Commission would like to specifically state that a development plan review and zoning certificate were required for all wind turbines. The Commission agreed to add item 14. a) below.

14. *Application Submittal Requirements:*

- a) *A Development Plan Review and Zoning Certificate shall be required for residential and commercial wind turbines.*

Commission Chairperson Vujevich suggested changing “Ohio Edison” to “public utility company” as shown below.

- b) *Submittals shall include a development plan, a line drawing identifying the electrical components of the system, detailed specifications for the wind turbine to be installed, a property entry agreement providing Montville Township access to the site in the event that decommissioning is required, evidence that the applicant has communicated with ~~the public utility company Ohio Edison~~ regarding interconnection to the utility grid.*

Zoning Inspector Emrick referred to item iii. below and asked if “structures within 100 feet” was appropriate.

After extensive discussion regarding the intent of items ii. and iii. shown below and the relationship between the two items, the Commission amended item iii. as shown below.

- c) *Development Plan Requirements shall be drawn to scale and clearly detail the following:*
- i. *Information about the proposed site, including all parcels, property lines, dimensions of the site, acreage, parcel number(s), current zoning district and use.*
 - ii. *Indicate the location and dimensions of existing structures on the site, noting which are human occupied structures and on adjoining property not owned by the applicant within 100 feet of the property lines in all directions.*
 - iii. *Free-standing turbines: Indicate the exact location and height of the proposed wind turbine, setbacks to all property lines on the site and to all human-occupied structures. ~~within 100 feet.~~*

The Zoning Commission agreed to continue reviewing the text at their next meeting.

4. Safety Services Center/Landscaping & Demo Plans

The Zoning Commission reviewed the Safety Services Center Demolition Plan. The revised Landscaping Plan was reviewed in comparison to the original Landscaping Plan. Commission Chairperson Vujevich said that the Commission originally requested that the plantings be moved away from the windows and that had been done. In response to the Commission’s request to use smaller plants, Commission Member Piatak said that fourteen (14) boxwoods replaced twelve (12) dogwoods that were shown on the original plan.

MOTION: Commission Member Wetzel moved to approve the Safety Services Center Landscaping and Demolition Plans as presented.

SECOND: Commission Member Ryan.

ROLL CALL: Ms. Mary Pawlowski – aye; Ms. Pat Ryan – aye; Mr. Dave Wetzel – aye; Mr. Alan Piatak – aye; and Mr. John Vujevich – aye.

5. Zoning Inspector Updates

Zoning Inspector Emrick referred to the letter from the Ohio Department of Transportation (ODOT) regarding the ingress and egress on State Route 3 for Discount Drug Mart. The ingress/egress was again denied by ODOT. Discount Drug Mart had thirty (30) days to appeal.

Zoning Inspector Emrick also referred to the email from ODOT regarding Pride One’s construction drive on State Route 3.

Zoning Inspector Emrick said that Mr. Tim Powers came into the office with another plan for the corner of State Routes 57 and 162 showing senior housing, etc. The project would be funded through private investors.

Zoning Inspector Emrick said that the variance for the acreage of the proposed Cross Creek Subdivision was scheduled for Monday, March 1, 2010.

MOTION: Commission Member Ryan moved to adjourn the meeting.

SECOND: Commission Member Wetzel.

A collective oral vote was taken with all Zoning Commission members in favor of adjourning. The February 24, 2010 Zoning Commission meeting was adjourned at 9:39 p.m.

Respectfully submitted,

Bonnie Schwehm

Signature _____
Chairperson

Date _____