

**RECORD OF PROCEEDINGS
FREEDOM TOWNSHIP TRUSTEES
PUBLIC HEARING
Monday, December 21, 2009**

The Meeting was called to order by Chairman John Zizka at 7:00 pm on Monday, December 21, 2009. The purpose of the meeting, as advertised in the *Record Courier*, was to hold a public hearing on proposed amendments to the Freedom Township Zoning Resolution as presented to the Trustees by the Freedom Township Zoning Commission on November 19, 2009.

Trustees Present: J. J. Leet, James Hammar, John Zizka; Rosemary Nicholas, Fiscal Officer. Also present: Charles Duffield, Gil Krohn, Roy Martin, Mike Mikulski, Virginia Simpson.

Mr. Zizka reviewed recommendations of the Zoning Commission and Regional Planning Committee recommendations regarding the proposed amendments. With regard to proposed Amendment 1, Definitions, he read each proposed definition asking for discussion after each one. Mrs. Nicholas suggested that we consider eliminating numbering of the definitions. Mr. Zizka said this could not be acted upon at this meeting because it was not advertised; however, it will be referred back to the Zoning Commission for review and recommendation.

Mr. Hammar then made the motion, seconded by Mr. Leet, **to accept the proposed Amendment to the Zoning Resolution, Article VIII, Definitions, as follows, to be effective in 30 days (January 21, 2010). Roll call: Mr. Leet, yes; Mr. Hammar, yes; Mr. Zizka, yes. Motion carried. Resolution PH 12-21-09.1**

Article VIII Definitions

Section 801.0 Definitions (in alphabetical order, renumber as necessary)

43. **Small Energy System** – Is a renewable energy system to provide for energy needs, designed to serve single subject development or property. The purpose of a small energy system is to be an accessory use of the property.
44. **Small Solar Energy System** – Any solar collector or other solar energy device, or any structural design feature whose primary purpose is to provide for the collection, storage and distribution of solar energy for space heating or cooling, for water heating or for electricity that may be mounted on a building or on the ground and is not the primary use of the property.
45. **Small Wind Energy System** – A wind energy system consists of a wind turbine, a tower, and associated controls or conversion electronics, which is intended to primarily reduce on-site consumption of utility power. The purpose of a small energy system is to be an accessory use of the property.
46. **Solar Energy** – Means radiant energy (direct, diffuse, and reflected) received from the sun.
47. **Solar Energy Dual Purpose** – Means solar energy is collected to create energy from structures that are generally permitted; examples could be fences or walls. This would include exterior lighting for patios and walkways. Dual purpose structures should look primary like a fence, wall or light fixture and not the opposite for the purpose of generating electricity while blending into the landscape. The appearance of the structure should be commonly recognizable with the production of electricity interwoven or embedded into the structure not to dominate the appearance.
57. **Wind Energy/Turbine** – Mechanical equipment which is used to convert kinetic energy of the wind through the rotation of the mechanical equipment to facilitate the generation of electricity.

With regard to proposed Amendment 2, Add Solar/Wind Energy Zoning to Article IV, Mr. Zizka read each section, asking for discussion after each one.

With regard to § 415.1.3 B, Mr. Zizka made the motion, seconded by Mr. Hammar, **to add the word “structure” before the word “height” so that § 415.1.3 B would read: “B. Solar panels shall comply with the maximum permitted structure height of the zoning district.”** Roll call: Mr. Leet, yes; Mr. Hammar, yes; Mr. Zizka, yes. **Motion carried. Resolution PH 12-21-09.2**

With regard to § 415.1.3 C 1 b, Mr. Zizka made the motion, seconded by Mr. Hammar, **to add the word “structure” before the word “height” so that § 415.1.3 C 1 b would read: “b. Solar panels shall comply with the maximum permitted structure height of the zoning district.”** Roll call: Mr. Leet, yes; Mr. Hammar, yes; Mr. Zizka, yes. **Motion carried. Resolution PH 12-21-09.3**

With regard to §415.1.7 A, Fencing, after discussion Mr. Zizka made the motion, seconded by Mr. Hammar, **to amend this section to read as follows: “The supporting tower shall be enclosed with a six (6) foot high fence unless the base of the tower is not climbable for a distance of twelve (12) feet as measured from the ground.”** Roll call: Mr. Leet, yes; Mr. Hammar, yes; Mr. Zizka, yes. **Motion carried. Resolution PH 12-21-09.4**

Mr. Leet raised a question with regard to the chart on sound levels (decibels) noting that the numbers in the sound level column decline until it gets to the 1200-2400 level, then it goes from 40 to 46; he would expect that it would decline. Mr. Mikulski will verify that the numbers are correct.

With regard to 415.1.17 Certifications, Mr. Hammar questioned the requirement of a structural engineer registered specifically in Ohio. No changes were recommended.

Mr. Zizka asked if there was anything about these systems being conditionally permissible. Mr. Mikulski said no, if the applicant met the requirements, permission would be granted.

Mr. Zizka asked about including other structures in 415.1.18. It was determined that the current wording is adequate.

Mr. Hammar made the motion, seconded by Mr. Leet, **to accept the proposed Amendment to the Zoning Resolution, Article IV, Solar/Wind Energy Zoning, as follows, to be effective in 30 days (January 21, 2010).** Roll call: Mr. Leet, yes; Mr. Hammar, yes; Mr. Zizka, yes. **Motion carried. Resolution PH 12-21-09.5**

Article IV Special Notice for All Districts
§ 415.0 Solar/Wind Energy Zoning
§ 415.1 SMALL SOLAR AND WIND ENERGY SYSTEMS
§ 415.1.1 PURPOSE

Small solar and wind energy systems shall be permitted in all zoning districts, in accordance with the requirements of this Section. These systems shall be designed and shall operate at an aggregate capacity of less than five megawatts per site.

§ 415.1.2 ALLOWABLE NUMBER OF TOWERS AND WIND TURBINES

A. Towers

1. No more than one wind energy tower may be located on any single site of five acres or less, in accordance with this Section, unless otherwise stipulated in this Resolution.
2. Not more than one wind energy tower per five acres on lots greater than five acres.

B. Wind Turbines

Any number of wind energy system turbines may be in operation on a single site, in accordance with this Section.

C. Solar Panels

Any number of solar panels may be in operation on a single site, in accordance with this Section.

§ 415.1.3 HEIGHT

The total height of small solar and/or wind energy systems is measured as the vertical distance from the ground level to the tip of a wind generator blade when the tip is at its highest point, and shall not exceed the following maximum height requirements:

- A. Wind Towers
 - 1. Properties less than ½ acre in size – maximum 45 feet.
 - 2. Properties between ½ acre and one acre in size – maximum 80 feet.
 - 3. Properties greater than (1) acre to 2-½ acres – maximum 100 feet.
 - 4. Properties greater than 2-½ acres to 5 acres – maximum 120 feet.
 - 5. Properties greater than 5 acres in size – maximum 170 feet.
 - 6. Properties within 10,000 feet of an Airport must comply with FAA height standards and regulations.
- B. Solar panels shall comply with the maximum permitted structure height of the zoning district.
- C. Attachment to existing buildings and towers
 - 1. Building
 - a. Wind turbine(s) may be affixed to the building or the roof, providing that:
 - i. The total height of the wind turbine is less than 20 feet above the highest point of the building.
 - b. Solar panels shall comply with the maximum permitted structure height of the zoning district.
 - 2. Towers

A wind turbine may be attached to an existing tower, providing that:

 - a. The tower is designed to accommodate the wind turbine.
 - b. The tower is in compliance with Sections 415.1.5A and 415.1.6.B.

§ 415.1.4 LOCATION

- A. A solar and/or wind system shall only be located in the rear yard portion of any lot and conform to all building setback lines. An exception would be for dual purpose solar collectors. See solar energy dual purpose definition.
- B. Tower Set Backs

Except as otherwise stipulated in this Section, a tower:

 - 1. Shall be located at least 150 percent of its height from any public road right-of-way.
 - 2. Shall be located at least 150 percent of its height from any overhead utility lines, except those lines directly serving the subject property.
 - 3. Shall be located at least 150 percent of its height from all property boundaries.
 - 4. Guy Wire Anchors Set Backs
 - a. If guy wires are utilized as part of the tower design, then the guy wire anchors shall be placed at least 50 feet from the any abutting property boundaries.
 - b. The minimum distance a wind turbine may be from the property boundaries, if it is located on a building, must equal a distance of one and one-half (1½) times the total height of the wind turbine from the ground.

§ 415.1.5 INCENTIVES FOR NEW DEVELOPMENT

- A. Residential zoned properties that have access to both water and sewer service may have a residential density bonus of up to 10% more lots/units.
 - 1. Requires that each unit has a small energy system described above with a minimum of 5kW per day capability at time of certificate of occupancy.
- B. Commercial and Industrial zoned properties may have a building coverage bonus of up to 10%.
 - 1. Requires that each building has a small energy system described above with a 10kW per day capability or project site has a minimum of 20kW capability at the time of certificate of occupancy.
- C. All other zoning and building requirements must be demonstrated and/or provided before any incentives can be applied.

§ 415.1.6 VARIANCES

- A. There are no variances to the incentives listed above.
- B. Solar and Wind may be located in the front or side yard of primary structure if because of pre-existing geography, vegetation, built environment would preclude the use of solar or wind power in the rear of the primary structure.
- C. To request more than one tower per site/development.

§ 415.1.7 FENCING

- A. The supporting tower shall be enclosed with a six (6) foot high fence unless the base of the tower is not climbable for a distance of twelve (12) feet as measured from the ground
- B. All access doors to wind turbines and electrical equipment shall be locked to prevent entry by non-authorized persons.

§ 415.1.8 ELECTRICAL INTERFERENCE

The small wind energy system shall not cause any radio, television, microwave, or navigation interference. If a signal disturbance problem is identified, the applicant shall correct the problem within 90 days of being notified of the problem.

§ 415.1.9 NOISE

The wind energy system shall not exceed the sound level (decibels) specified in Section 415.1.9.1 when measured at the property line.

§ 415.1.9.1

Maximum permitted sound levels (decibels) for small wind energy system.

Octave Band, Cycles / Second	Sound Level Measured at the Property Lines Cannot Exceed the Following
0 – 75	72
75 – 150	67
150 – 300	59
300 – 600	52
600 – 1200	40
1200 – 2400	46
2400 – 4800	34
Over 4800	32

§ 415.1.10 COMPLIANCE WITH FAA REGULATIONS

All towers shall be painted a non-contrasting gray, blue, white, green or similar color, minimizing its visibility, unless otherwise required by the Federal Aviation Administration (FAA). The applicant has the responsibility of determining the applicable FAA regulations and securing the necessary approvals. Copies of letters must be included as part of the application process.

§ 415.1.11 LIGHTING

Except as required by law, a tower shall not be illuminated and lighting fixtures or signs shall not be attached to the tower. If lighting is required by FAA regulations, white strobe lights shall not be permitted at night unless FAA permits no other alternatives. No lighting shall be constructed, placed or maintained in a manner that will constitute a nuisance to any surrounding property and shall in no way impair safe movement of traffic on any street or highway.

§ 415.1.12 ADVERTISING

No advertising is permitted anywhere on the facility, with the exception of signage being utilized for product identification and warnings.

§ 415.1.13 WARNINGS

- A. A clearly visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.
- B. 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 ten feet from the ground.
- C. Emergency contact information must be clearly visible at the base.

§ 415.1.14 MAINTENANCE

- A. The design and location of the wind energy system shall ensure that all maintenance can be conducted from the installation site.
- B. A small wind energy system that is not functional shall be repaired by the owner within 180 days of the day on which the system last functioned.
- C. When a system reaches the end of its useful life and can no longer function, the owner of the system shall remove the entire system within 180 days of the day on which the system last functioned. The owner is solely responsible for removal of the entire system and all costs, financial or otherwise, of system removal.

§ 415.1.15 SAFETY FEATURES

- A. The small wind energy system turbine shall be required to have an automatic over-speed control to render the system inoperable when the winds are in excess of the speed the system is designed to accommodate.
- B. The small wind energy system shall be required to have a manually operable method to render the system inoperable in the event of a structural or mechanical failure of any part of the system.

§ 415.1.16 BLADE CLEARANCES

- A. The clearance or the distance between the blades of a wind turbine and the blades of another wind turbine shall be no less than 10 feet.
- B. The clearance or the distance between the blades of a wind turbine and the ground shall be no less than 15 feet.

§ 415.1.17 CERTIFICATIONS

- A. The foundation, tower and compatibility of the tower with the rotor and rotor-related equipment shall be certified in writing by a structural engineer registered in Ohio that they conform with good engineering practices and comply with the appropriate provisions of the Ohio Building Codes.
- B. The electrical system shall be certified in writing by an electrical engineer, registered in Ohio, that it conforms with good engineering practices and complies with the standards of the utility company.
- C. The rotor overspeed control system shall be certified in writing by a mechanical engineer, registered in any state, that it conforms with good engineering practices.

§ 415.1.18 DECOMMISSIONING AND RECLAMATION

- A. Within six (6) months of the termination of any Wind Energy System, the owner of the property must provide for the decommission and the reclamation of the site.
- B. The property owner shall adhere to the following provisions, to ensure the removal of all Wind Energy System equipment, including any and all towers used exclusively for Wind Energy System projects:

1. All applications, that include a tower used exclusively for Wind Energy System projects shall, as part of the application and plan review process, include a plan for the reclamation for both the tower and the tower site, in the event the facility is no longer functioning in the fashion as originally intended. The reclamation plan should include the removal and disposal of all obsolete and/or abandoned equipment, as well as the reclamation of the area with vegetation to prevent erosion.
2. The applicant will submit a letter of credit, performance bond, or other security acceptable to the Township to cover the costs of the tower's removal, of no less than \$100.00 per vertical foot of tower height, measured from the finished grade.

There being no further business, Mr. Hammar made the motion, seconded by Mr. Leet, **to adjourn the meeting at 8:18 pm. Roll call: Mr. Leet, yes; Mr. Hammar, yes; Mr. Zizka, yes. Motion carried. Resolution PH 12-21-09.6**

Trustee

Trustee

Trustee

Fiscal Officer