

**NOTICE OF ADOPTION OF ORDINANCE AMENDING  
THE BURR OAK TOWNSHIP ZONING ORDINANCE**

BURR OAK TOWNSHIP, St. Joseph County, Michigan

Ordinance No. 2019-2A, which amends the Burr Oak Township Zoning Ordinance (Ordinance No. 2002-1) (the "Zoning Ordinance"), was adopted by the Burr Oak Township Board on August 5, 2019. The following is a summary of the ordinance adopted. All references to the articles, sections, and sub-sections amended refer to the articles, sections, and sub-sections of the Zoning Ordinance.

Ordinance No. 2019-2A amends the Zoning Ordinance as follows:

Section I: Amends Article 3 by adding definitions for the following terms: ancillary solar equipment; shadow flicker, solar collector surface; solar energy, solar energy system (SES); personal-scale SES; utility-scale SES; building mounted SES; ground mounted SES; Wind Energy Conversion Systems (WECS); Commercial WECS; Interconnected WECS; On-site Service WECS; Single WECS for Commercial Purposes; WECS Testing Facility; and Wind Farm.

Section II: Amends Section 5.3 by adding utility-scale SES, Commercial WECS, and WESC testing facilities as special land uses in the AG-Agricultural District.

Section III: Adds a new Article 14 that contains comprehensive regulations governing personal and utility scale solar energy systems.

Section IV: Adds a new Article 15 that contains comprehensive regulations governing on-site service and commercial wind energy systems.

Sections V, VI, and VII contain standard "Repeal," "Severability," and "Saving Clause" provisions.

Section VIII: Provides that Ordinance No. 2019-2A becomes effective 30 days after its publication.

A true copy of Ordinance No. 2019-2A may be reviewed or purchased by contacting Jacquilyn Wells at 269-689-3342 or mailing a request to: Township Clerk, Burr Oak Township Hall, 208 Front Street, P.O. Box 241, Burr Oak, Michigan 49030. Jacquilyn Wells, Burr Oak Township Clerk.

BURR OAK TOWNSHIP  
ST. JOSEPH COUNTY, MICHIGAN  
ORDINANCE NO. 2019-2A

ADOPTED: August 5<sup>TH</sup>, 2019

EFFECTIVE: September 2<sup>ND</sup>, 2019

An ordinance to amend the Burr Oak Township Zoning Ordinance (Number 2002-1) (the "Zoning Ordinance").

THE TOWNSHIP BOARD OF BURR OAK TOWNSHIP, ST. JOSEPH COUNTY, MICHIGAN,  
ORDAINS:

Burr Oak Township's Zoning Ordinance (Ordinance No. 2002-1) shall be amended as follows:

SECTION I: AMENDMENT OF ARTICLE 3

Article 3 is amended by adding the following definitions:

**Ancillary Solar Equipment:** Any accessory part or device of a solar energy system that does not require direct access to sunlight, such as batteries, electric meters, converters, or water heater tanks.

**Shadow Flicker:** Alternating changes in light intensity caused by the moving blade of a wind energy conversion system casting shadows on the ground and stationary objects such as dwellings.

**Solar Collector Surface:** Any part of a solar energy system that absorbs solar energy for use in the system's transformation process. The collector surface does not include frames, supports, and mounting hardware.

**Solar Energy:** Radiant energy received from the sun that can be collected in the form of heat or light by a solar energy system.

**Solar Energy System (SES):** A system (including solar collectors and ancillary equipment) either affixed to a permanent principal or accessory building or functioning as a freestanding structure, that collects, stores, and distributes solar energy for heating or cooling, generating electricity, or heating water. Solar energy systems include, but are not limited to, photovoltaic (PV) power systems and solar thermal systems.

**A. Personal-scale SES:** A solar energy system that is accessory to the principal use on the site. The total surface area of all solar collector surfaces within a personal-scale SES shall not exceed 1,500 square feet. The sale and distribution of excess available energy, if permitted, to an authorized public utility for distribution shall be incidental to this type of system, and not its primary purpose. Sale of excess energy to anything other than an authorized public utility shall be prohibited.

**B. Utility-scale SES:** A solar system that meets one or more of the following:

1. Is primarily used for generating electricity for sale and distribution to an authorized public utility;
2. The total surface area of all solar collector surfaces exceeds 1,500 square feet; and/or
3. Is not an accessory use or structure.

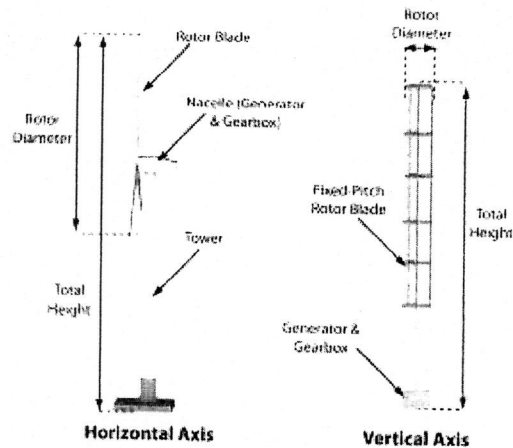
**C. Building-mounted SES:** A solar energy system affixed to a permanent principal or accessory building (i.e., roof or wall).

**D. Ground-mounted SES:** A freestanding solar energy system that is not attached to and is separate from any building on the parcel of land on which the solar energy system is located.

**Wind Energy Conversion Systems (WECS):**

A. Generally shall mean a combination of:

1. A surface area (typically a blade, rotor, or similar device), either variable or fixed, for utilizing the wind for electrical power; and
2. A shaft, gearing, belt, or coupling utilized to convert the rotation of the surface area into a form suitable for driving a generator, alternator, or other electricity-producing device; and
3. The generator, alternator, or other device to convert the mechanical energy of the surface area into electrical energy, generally housed in a nacelle; and
4. The tower, pylon, building mount or other structure upon which any, all, or some combination of the above are mounted.
5. Other components not listed above but associated with the normal construction, operation, and maintenance of a WECS.



A WECS may have a horizontal axis, with a rotor that spins perpendicular to the ground, or a vertical axis, with a rotor that spins parallel to the ground.

**B. Commercial WECS:** Any WECS that is a single WECS for commercial purposes, any WECS within a wind farm, or any other WECS meant to provide power which is utilized off the site on which the WECS is located.

**C. Interconnected WECS:** A WECS that is electrically connected to the local electrical power utility system and could feed power back into the local electrical power utility system.

**D. On-site Service WECS:** A single WECS placed upon a lot or parcel with the primary intent to service the energy needs of only the structures and uses on the same lot or parcel.

E. **Single WECS for Commercial Purposes:** A single WECS placed upon a lot or parcel with the intent to sell or provide electricity to a site or location other than the premises upon which the structure is located. Said WECS may or may not be owned by the owner of the property upon which the WECS is placed.

F. **WECS Testing Facility:** A structure and equipment used to determine the potential for the placement of a WECS.

**Wind Farm:** Clusters of two (2) or more wind energy conversion systems (WECS) placed upon a lot or parcel with the intent to sell or provide electricity to a site or location other than the premises upon which the WECS are located. The WECS facilities may or may not be owned by the owner of the property upon which the WECS is placed.

## **SECTION II: AMENDMENT OF SECTION 5.3**

Section 5.3 is amended by adding the following as special land uses allowed in the AG-Agricultural District:

M. Utility-scale Solar Energy System as regulated in Article 14.

N. Commercial Wind Energy Conversion System and Wind Energy Conversion System testing facilities as regulated in Article 15.

## **SECTION III: ADDITION OF NEW ARTICLE 14 – SOLAR ENERGY SYSTEM REGULATIONS**

The following sections are added to regulate solar energy systems:

### **14.1 PURPOSE**

This Article establishes requirements and procedures by which the installation and operation of solar energy systems (SES) shall be governed within the Township.

### **14.2 REVIEW REQUIREMENTS**

1. A personal-scale SES shall be allowed as an accessory use in any zoning district except the R-3 Residential Mobile Home Park District, subject to the requirements of this Article and the issuance of certificate of approval under Section 17.2 of this Ordinance. The following situations do not require a certificate of approval under Section 17.2, but shall still comply with all other standards of this Ordinance:
  - a. The installation of one (1) building-mounted SES with a total solar collector surface area of less than twelve (12) square feet.
  - b. Repair and/or replacement of existing solar energy equipment provided that a certificate of approval was originally obtained for the system when initially installed if a certificate of approval was required and provided that there is no expansion of the size or coverage area of the SES.

2. A utility-scale SES may be permitted only as a special exception use in the Agricultural District and is subject to the requirements in Section 14.7, Article 20 (Site Plan Review) and Article 27 (Special Exception Uses).

### **14.3 APPLICATION FOR CERTIFICATE OF APPROVAL FOR PERSONAL-SCALE SES**

An application for a certificate of approval shall be filed for a personal-scale SES that is not exempt from the issuance of a certificate of approval under Section 14.2. The application shall include the following in addition to the requirements set forth in Article 17:

- a. Photographs of the property's existing conditions.
- b. Picture(s) of what the proposed SES will look like.
- c. A sketch plan to indicate where the SES is to be installed on the property (or, if building-mounted, the system's location on the permanent building), including property setbacks and the total solar collector surface. The proposed location of the SES shall be chosen to prevent impacts on neighboring properties and so as not to result in excessive glare on neighboring properties.
- d. Elevations showing the height of the SES, including the following:
  - (1) For ground-mounted systems, the height of the system above ground.
  - (2) For pitched roof-mounted systems, the elevation must show the highest finished height of the system and the height of the finished roof surface on which it is mounted.
  - (3) For flat roof-mounted systems, the elevations shall show the highest finished height of the system and the highest point of the roof, including any parapets of the building.
- e. Information from the manufacturer of the SES regarding the potential for glare from solar collector surface and how to reduce glare on neighboring properties.

### **14.4 GENERAL REQUIREMENTS FOR ALL PERSONAL-SCALE SES**

The following are requirements for all personal-scale SES:

1. The system shall be installed, maintained and used only in accordance with the manufacturer's directions. A copy of the directions shall be submitted with the certificate of approval application.
2. The system shall be located to minimize glare on adjacent properties and roadways.
3. The system and the installation thereof shall comply with this Ordinance, Michigan's Construction Code, with applicable ANSI (American National Standards Institute), NEC (National Electric Code), the National Building Code, and any other applicable federal, state and county requirements.
4. The system shall be removed when the device or equipment is no longer operating or when it has been abandoned. A SES shall be deemed abandoned when it has not produced electrical energy for twelve (12) consecutive months or longer.

5. Where feasible, ancillary solar equipment shall be located inside of a building or be screened from public view. All ancillary solar equipment such as, but not limited to, water tanks, supports, batteries, and plumbing shall be screened to the maximum extent possible without compromising the effectiveness of the solar collectors. When solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of Michigan's Construction Code and when no longer in use shall be disposed of in accordance with applicable laws and regulations.

#### **14.5 GENERAL REQUIREMENTS FOR GROUND-MOUNTED, PERSONAL-SCALE SES**

The following are requirements for ground-mounted, personal-scale SES:

1. The height shall not exceed sixteen (16) feet measured from the ground at the base of such equipment to the highest point of the system.
2. The system shall be located only in the rear or side yard in all zoning districts and shall be located at least thirty (30) feet from the property line. Setbacks shall be measured from the property line (considered as a plane extending from the ground to the highest point of the SES) to the closest extension of the system. No part of the system shall be located within or above any required setback.
3. The system shall be permanently and safely attached to the ground. Proof of safety and reliability of the means of such attachment, in the form of certification by a professional engineer or other qualified person, shall be submitted with the zoning application.

#### **14.6 GENERAL REQUIREMENTS FOR BUILDING-MOUNTED, PERSONAL-SCALE SES**

The following are requirements for building-mounted, personal-scale SES:

1. If roof mounted, the system shall not project more than five (5) feet above the highest point of the roof and, in any circumstances, shall not exceed the maximum building height limitation for the zoning district in which it is located, and shall not project beyond the eaves of the roof. If wall mounted, the system shall not exceed the height of the building wall to which it is attached.
2. The system shall only be of such weight as can safely be supported by the roof or wall. Proof thereof, in the form of certification by a professional engineer or other qualified person, shall be submitted to the Township prior to installation.
3. The system shall be permanently and safely attached to the building or structure. Proof of safety and reliability of the means of such attachment shall be submitted to the Township prior to installation.

#### **14.7 UTILITY-SCALE SES**

1. Site Requirements for utility scale SES:
  - a. Minimum Area. Minimum project area shall be twenty (20) acres. Multiple parcels may be assembled to create a project area, but all parcels shall be contiguous along adjoining property lines for no less than fifty (50) feet. All setback requirements shall be measured from the project limits.

- b. Setbacks. No part of a SES facility shall be located within or above any required front, side or rear yard setback. When the system is adjacent to a residentially-zoned or used parcel, side and rear yard screening may be required as a condition of granting a special use permit.
  - c. Signs. One sign not exceeding thirty-two (32) square feet in area shall be allowed identifying the owner of the system. This provision shall not prohibit necessary warning signs, e.g. high voltage, etc, or any other signs required under these regulations.
  - d. Utility company interconnection (Interconnected SES). No SES shall be interconnected with a local electrical utility company until the utility company has reviewed and commented upon it. The interconnection of the SES with the utility company shall adhere to the National Electrical Code. All wiring from the SES facility to the connection to the utility grid shall be underground.
2. Application Requirements. In addition to the application requirements for special use permits in Section 27.1 of this Ordinance, an application for a special use permit for a utility-scale SES shall be accompanied by the following:
- a. Site Plan requirements in addition to the requirements in Section 27.2(B) of this Ordinance:
    - (4) Lot lines and dimensions. All exterior lot lines of the project area shall include bearings and distances.
    - (5) Location and height of all buildings, structures, security fencing, and other above ground structures associated with the SES. Where feasible, ancillary solar equipment shall be located inside of a building or be screened from public view.
    - (6) Location and type of all outdoor lighting. Lighting shall be directed downward and shielded from abutting properties.
    - (7) Existing and proposed setbacks of all structures located on the project site.
    - (8) Sketch elevation of the premises accurately depicting the proposed SES installation and its relationship to all structures within three hundred (300) feet.
    - (9) Access road to the SES with detail on dimensions, composition, and maintenance.
  - b. Planned security measures to prevent unauthorized trespass and access.
  - c. SES facility maintenance programs – Provide a description of the maintenance program used to maintain the SES facility.
  - d. Glare studies showing how glare from solar collector surfaces can be minimized or eliminated.
  - e. A copy of the manufacturer's installation instructions and blueprints shall be provided to the Township.
    - (1) Included as part of or as an attachment to the installation instructions shall be standard drawings of the structural components of the SES and support structures, including base and footings provided along with engineering data and calculations to demonstrate compliance with the structural design provisions of Michigan's Construction Code.

(2) Drawings and engineering calculations shall be certified by a registered engineer licensed in the State of Michigan.

- f. A decommissioning plan detailing how the SES facility will be decommissioned following the operational life of the project. This plan must provide for the removal of all structures, concrete, piping, facilities, and other project materials above and below grade to be removed offsite for disposal. The plan must include a fully inclusive estimate of the costs associated with decommissioning and removal of structures, etc. prepared by a qualified engineer. The estimate amount shall include a mechanism for calculating increased removal costs due to inflation. This plan is subject to the approval of the Planning Commission. If the Planning Commission is not satisfied with the estimate provided by the applicant, the Planning Commission may seek a second estimate from a qualified engineer, at the applicant's expense.
- g. Additional detail as required by this section.
- h. At the Planning Commission's request, the applicant shall fund an environmental assessment or impact study and/or other relevant report(s) or studies (including, but not limited to, assessing the potential impact on endangered species, avian species and other wildlife) as required by the Planning Commission for review by the Planning Commission regarding the area or surrounding areas where the SES will be placed.

3. Performance Requirements. For purposes of this subsection 14.7(3), the term "applicant" shall include the applicant applying for the special use permit, the owner of the facility, and/or the operator of the facility.

- a. Inspection: Upon the issuance of a special use permit for a SES facility, the Township shall have the right to inspect the premises on which the SES facility is located at all reasonable times. The Township may hire a consultant to assist with any inspection of a SES facility at the applicant's cost.
  - b. Each SES facility must be kept and maintained in good repair and condition at all times. If a SES facility is not maintained in operational and reasonable condition or poses a potential safety hazard, the applicant shall take expeditious action to correct the situation. The applicant shall keep a maintenance log on the SES facility which the Township can review on a monthly basis.
  - c. Should the facility become abandoned, dangerous or obsolete, or not in compliance with this ordinance or the special use approval, then the applicant must decommission the facility, remove all components of the facility (above and below ground) from the site and properly dispose of the same, and return the land to its original state. The removal and restoration must occur within one (1) year of the event triggering the removal and restoration; however, any dangerous situation must be remedied immediately.
- (1) Security: If a special use is approved pursuant to this chapter, the Planning Commission may require a performance guarantee to ensure project completion covering the cost of the improvements pursuant to Section 18.8 of this Ordinance. In addition, the Planning Commission must require the applicant to provide a form of surety, either through escrow account, bond or otherwise, to cover the cost of the removal of the facility in the event the



applicant fails to remove the facility as specified in this subsection. The amount and form of security to ensure decommissioning, removal and restoration shall be determined and set by the Planning Commission; however, the amount shall not exceed 125% of the cost of removal and compliance (which shall include the increased removal costs due to inflation).

- (2) A performance guarantee shall be deposited or filed with the Township Clerk after a special use has been approved but before approval of a building permit for construction of the SES facility.
  - (3) The performance guarantee ensuring decommissioning, removal and restoration shall be kept in full force and effect during the entire time while a SES facility exists or is in place.
  - (4) The performance guarantee ensuring completion of the project shall remain in place until the project is completed and the Township approves the release of the security. The performance guarantee ensuring the decommissioning, removal and restoration shall be irrevocable and non-cancelable (except by the written consent of both the Township and the then-owner of the SES facility). Failure to keep the performance guarantee in full force and effect at all times while a SES facility exists or is in place shall constitute a material and significant violation of a special use approval and this Ordinance, and will subject the applicant to all available remedies to the Township, including possible enforcement action and revocation of the special use approval.
- d. Road repair: Any damages to a public road located within the Township resulting from the construction, maintenance, or operation of a SES facility shall be repaired at the applicant's expense.
  - e. Liability: The applicant shall insure the SES facility at all times for at least \$2,000,000 for liability to cover the applicant, Township and land owner.
  - f. The applicant shall be responsible for compensation to persons damaged by a SES, including damage caused by stray voltage from a SES.
  - g. Emergency services. Upon request, the owner/operator of the system shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the system shall be clearly marked. The owner/operator shall identify a responsible person for public inquiries throughout the life of the installation. An information sign shall be posted and maintained at the entrance(s) which lists the name and phone number of the operator.
  - h. Glare. The granting of a special use permit may be conditioned upon the SES not resulting in excessive glare on neighboring properties. The applicant shall take and shall continue to take (including implementing new technologies developed after the permit is issued) all reasonable steps to eliminate or significantly reduce any glare from the SES imposed on neighboring properties.
4. Building-mounted, utility-scale SES. In addition to the regulations set forth in this section, a building-mounted, utility scale SES shall also be subject to the general requirements applicable to a building-mounted, personal-scale SES as set forth in Section 14.6.

## **SECTION IV: ADDITION OF NEW ARTICLE 15 – WIND ENERGY SYSTEM REGULATIONS**

The following sections are added to regulate wind energy systems:

### **15.1 PURPOSE:**

This Article establishes requirements and procedures by which the installation and operation of wind energy conversion systems (WECS) shall be governed within the Township.

### **15.2 REVIEW REQUIREMENTS**

1. An on-site service WECS shall be allowed as an accessory use in any zoning district except the R-3 Residential Mobile Home Park District, subject to the requirements of this Article and the issuance of certificate of approval under Section 17.2 of this Ordinance.
2. Commercial WECS and WECS testing facilities associated with a commercial WECS may be permitted only as special exception uses in the Agricultural District and are subject to the requirements of this Article, Article 20 (Site Plan Review) and Article 27 (Special Exception Uses).

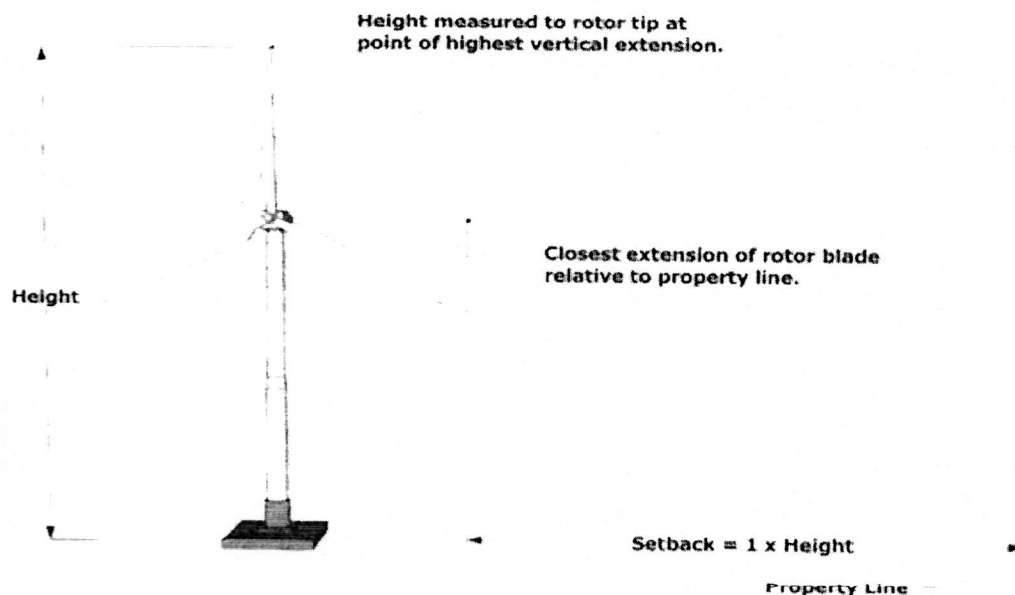
### **15.3 APPLICATION FOR CERTIFICATE OF APPROVAL FOR ON-SITE SERVICE WECS**

An application for a certificate of approval shall be filed for an on-site service WECS. The application shall include the following in addition to the requirements set forth in Article 17:

- a. Photographs of the property's existing conditions.
- b. Picture(s) of what the proposed on-site service WECS will look like.
- c. A sketch plan to indicate where the on-site service WECS is to be installed on the property (or, if building-mounted, the system's location on the permanent building), including property setbacks. The proposed location of the system shall be chosen to prevent impacts on neighboring properties.
- d. Elevations showing the height of the SES, including the following:
  - (1) For ground-mounted systems, the height of the system above ground.
  - (2) For pitched roof-mounted systems, the elevation must show the highest finished height of the system and the height of the finished roof surface on which it is mounted.
  - (3) For flat roof-mounted systems, the elevations shall show the highest finished height of the system and the highest point of the roof, including any parapets of the building.
  - (4) Information from the manufacturer of the system regarding noise levels or any other adverse impacts that could affect neighboring properties.

## 15.4 General requirements for all WECS

1. WECS height: The height of a WECS shall be the distance measured between the ground (at normal grade) and the highest point of the WECS (for a horizontal axis WECS, the measurement shall be to the tip of the rotor blade when the blade is in the full vertical position).
2. WECS setback. Setbacks shall be measured from the property line (considered as a plane extending from the ground to the highest point of the WECS) to the closest extension of the rotor relative to the property line (see graphic). No part of a WECS (including guy wire anchors, if present) shall be located within or above any required setback.



Measuring WECS Height and Setback

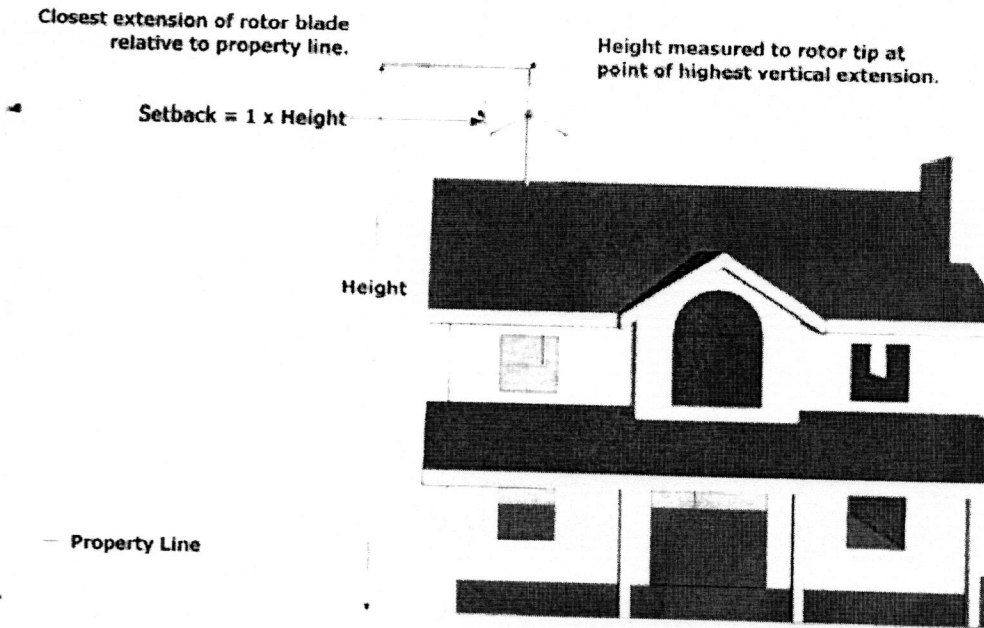
3. No sound attributed to the WECS in excess of 45 dB(A) shall be discernible at the property line.
4. Except as required for commercial WECS, there shall be no signs on the WECS other than the name of the manufacturer, which may only be affixed near the base of the tower or to the nacelle. No sign shall exceed three (3) square feet in area.
5. There shall be no lighting on or directed to the WECS, unless a beacon is required by the FAA.
6. The WECS shall be painted in a neutral matte color, such as gray or light blue, to blend into the background. A building mounted WECS may be painted in similar colors to those on the building.
7. A WECS shall have an automatic braking, governing, or feathering system to prevent uncontrolled rotation or over speeding. Emergency shut-off information shall be posted on the tower in an easily viewable location.

8. A WECS shall employ an anti-climbing device or be designed to prevent climbing and other unauthorized access.
9. A WECS shall not be installed in any location where its proximity to existing fixed broadcast, re-transmission or reception antenna for radio, television or wireless phone or personal communication systems would produce electromagnetic interference with signal transmission or reception.
10. The applicant shall provide written evidence that the WECS complies with all applicable federal, state and county requirements, in addition to this Ordinance.
11. All WECS installations shall comply with applicable ANSI (American National Standards Institute), NEC (National Electric Code) and National Building Code standards.
12. A WECS shall be removed when the device or equipment is no longer operating or when it has been abandoned. A WECS shall be deemed abandoned when it has not produced electrical energy for twelve (12) consecutive months or longer.

### **15.5 ON-SITE SERVICE WECS**

1. On-site service WECS test facility. An application for an on-site service WECS test facility shall follow the same application and certificate of approval process as a non-test facility.
2. On-site service WECS general requirements:
  - a. Power rating of the on-site service WECS turbine shall not be greater than 50 kW.
  - b. The on-site service WECS shall provide energy only to the structures and uses on the same property upon which the tower is located and must be owned or leased by the owner of the same property; however, this does not prevent distribution to the local utility company, through net metering, of any power that is generated beyond the needs of the structures or uses on the property. Except for the local utility company, power generated by the WECS may not be provided to any other property or entity.
  - c. An existing and approved on-site service WECS may be repaired and maintained; however, a WECS may only be replaced with a new or replacement WECS by filing a new application for a certificate of approval and obtaining a certificate of approval.
3. Ground-mounted on-site service WECS:
  - a. There shall be no more than one (1) ground mounted on-site service WECS per parcel or lot.
  - b. The on-site service WECS shall be located on the property so that it is set back from the nearest property line a distance equal to the WECS height, measured to the closest vertical extension of the rotor blade relative to the property line (see illustration).

- c. Lot area. The on-site service WECS height shall be limited by available setbacks as required in this section; however, no WECS height shall exceed fifty (50) feet on a property less than one (1) acre in area; seventy-five (75) feet on a property at least one acre but less than three (3) acres in area; or one hundred (100) feet on a property three (3) acres in area or greater.
  - d. The minimum rotor blade tip clearance from grade shall be twenty (20) feet.
  - e. The minimum rotor blade tip clearance from any structure shall be twenty (20) feet.
  - f. The diameter of the rotor shall be dependent upon maximum WECS height and rotor blade tip clearance, but in no case shall it exceed fifty (50) feet.
  - g. The tower used to support a WECS shall be adequately anchored meeting applicable codes and standards, as certified by an engineer.
4. Building mounted on-site service WECS:
- a. There may be more than one (1) on-site service WECS mounted on a single building; however, each individual WECS shall meet all of the requirements in this subsection, and each WECS shall be separated from any other WECS no less than ten (10) feet, measured between the maximum extension of the rotors.
  - b. The diameter of the rotor shall not exceed twenty (20) feet.
  - c. The WECS height shall not exceed the maximum height for principal buildings in the district, plus fifteen (15) feet.
  - d. The WECS shall be mounted so that it is set back from the nearest property line(s) a distance equal to the combined height of the WECS and the height of the portion of the structure on which it is mounted. The setback shall be measured from the property line (considered as a plane extending from the ground to the highest point of the WECS) to the closest extension of the rotor relative to the property line (see graphic).



**Building Mounted WECS Height and Setback**

- e. A building mounted WECS shall not be mounted to the vertical face of a gable end or dormer that is visible from the road. To the greatest degree possible, the WECS shall be mounted to the building in the least visible location.
- f. The mount and the structure used to support a building mounted WECS shall meet applicable codes and standards, as certified by an engineer.

**15.6 COMMERCIAL WECS AND WECS TESTING FACILITIES ASSOCIATED WITH A COMMERCIAL WECS**

- 1. Site Requirements.
  - a. Compliance with general requirements. In addition to the requirements of this subsection, all requirements of Section 15.4 shall be met.
  - b. Minimum Area. Minimum project area shall be twenty (20) acres. Multiple parcels may be assembled to create a project area, but all parcels shall be contiguous along adjoining property lines for no less than fifty (50) feet. All setback requirements shall be measured from the project limits.
  - c. Height. The permitted maximum height of a WECS or WECS testing facility shall be two hundred and fifty (250) feet, subject to setback limitations. Towers shall be required to be less than two hundred and fifty (250) feet in height under the following circumstances:
    - (1) Where setbacks require a lesser height per subparagraph d, below.
    - (2) When state or federal regulations require a lesser height.

- (3) As part of special land use review, a determination is made that lesser tower heights would be more appropriate for a certain area of the community.
- d. **Setbacks.** No part of a WECS or testing facility (including guy wire anchors) shall be located within or above any required front, side or rear yard setback. WECS towers shall be setback from the closest property line a minimum distance equal to one and a half (1.5) feet for every one (1) foot of WECS height. No portion of a WECS or WECS testing facility shall be located within thirty (30) feet of an above ground utility line.
- e. **Separation.** Each WECS shall be spaced at least one-quarter mile apart.
- f. **Rotor clearance.** Blade-arcs created by the WECS shall have a minimum of thirty (30) feet of clearance over any structure, overhead power line, land or tree.
- g. **Tower access.** To prevent unauthorized climbing, WECS and testing facility towers must comply with one of the following provisions:
- (1) Tower climbing apparatus shall not be located within twelve (12) feet of the ground.
  - (2) A locked anti-climb device shall be installed on the tower.
  - (3) A tower capable of being climbed shall be enclosed by a locked, protective fence at least six (6) feet high.
- h. **Signs.** Each WECS may have one (1) sign not exceeding three (3) square feet in area, that identifies the name of the manufacturer, located on the tower or the nacelle. In addition, each WECS and WECS testing facility shall have one (1) sign, not to exceed two (2) square feet in area, posted near the base of the tower or mounting apparatus. The sign shall contain the following information:
- (1) Warning: high voltage.
  - (2) Manufacturer's name.
  - (3) Emergency phone number.
  - (4) Emergency shutdown procedures.
- i. **Utility company interconnection (Interconnected WECS).**
- (1) No WECS shall be interconnected with a local electrical utility company until the utility company has reviewed and commented upon it. The interconnection of the WECS with the utility company shall adhere to the National Electrical Code.
  - (2) All wiring from the WECS facility to the connection to the utility grid shall be underground.

2. Application Requirements. In addition to the application requirements for special use permits in Section 27.2 of this Ordinance, an application for a commercial WECS or WECS testing facility shall be accompanied by the following:
  - a. Site Plan requirements in addition to the requirements in Section 27.2(B) of this Ordinance:
    - (1) Lot lines and dimensions. All exterior lot lines of the project area shall include bearings and distances.
    - (2) Location and height of all buildings, structures, towers, guy wires, guy wire anchors, security fencing, and other above ground structures associated with the WECS.
    - (3) Locations and height of all adjacent buildings, structures, and above ground utilities located within three hundred (300) feet of the exterior boundaries of the site housing the WECS and/or testing facility. The boundaries shall include the outermost locations upon which towers, structures, fencing, facilities, and other items associated with a WECS are placed. Specific distances to other on-site buildings, structures, and utilities shall be provided.
    - (4) Existing and proposed setbacks of all WECS and other structures located on the project site.
    - (5) Sketch elevation of the premises accurately depicting the proposed WECS installation and its relationship to all structures within three hundred (300) feet. For wind farms in which case numerous towers of similar height are planned, sketches are necessary only at borders of proposed project and when adjacent to other established structures within three hundred (300) feet.
    - (6) Access road to the WECS and testing facility with detail on dimensions, composition, and maintenance.
  - b. Planned security measures to prevent unauthorized trespass and access.
  - c. WECS and testing facility maintenance programs – Provide a description of the maintenance program used to maintain the WECS and testing facility, including removal when determined to be obsolete.
  - d. Shadow flicker studies, to show how shadow flicker can be minimized or eliminated.
  - e. A copy of the manufacturer's installation instructions and blueprints shall be provided to the Township.
    - (1) Included as part of or as an attachment to the installation instructions shall be standard drawings of the structural components of the WECS and support structures, including base and footings provided along with engineering data and calculations to demonstrate compliance with the structural design provisions of Michigan's Construction Code.
    - (2) Drawings and engineering calculations shall be certified by a registered engineer licensed in the State of Michigan.



- f. A decommissioning plan detailing how each WECS or WECS testing facility will be decommissioned following its operational life. This plan must provide for the removal of all structures, concrete, piping, facilities, and other project materials above and below grade to be removed offsite for disposal. The plan must include a fully inclusive estimate of the costs associated with decommissioning and removal of structures, etc. prepared by a qualified engineer. The estimate amount shall include a mechanism for calculating increased removal costs due to inflation. This plan is subject to the approval of the Planning Commission. If the Planning Commission is not satisfied with the estimate provided by the applicant, the Planning Commission may seek a second estimate from a qualified engineer, at the applicant's expense.
          - g. Additional detail as required by this section.
          - h. At the Planning Commission's request, the applicant shall fund an environmental assessment or impact study and/or other relevant report(s) or studies (including, but not limited to, assessing the potential impact on endangered species, avian species and other wildlife) as required by the Planning Commission for review by the Planning Commission regarding the area or surrounding areas where the WECS will be placed.
3. Approval of testing facilities. The grant of a special use permit for a WECS testing facility does not guarantee subsequent approval of a commercial WECS. Should the testing facility prove the viability of a commercial WECS, a separate special use application to establish one or more commercial WECS is required.
4. Performance Requirements. For purposes of this subsection 15.6(4), the term "applicant" shall include the applicant applying for the special use permit, the owner of the facility, and/or the operator of the facility.
  - a. Inspection: Upon the issuance of a special use permit for a WECS or WECS facility, the Township shall have the right to inspect the premises on which the WECS is located at all reasonable times. The Township may hire a consultant to assist with any inspection of a WECS or testing facility at the applicant's cost.
  - b. Each WECS and testing facility must be kept and maintained in good repair and condition at all times. If a WECS is not maintained in operational and reasonable condition or poses a potential safety hazard, the applicant shall take expeditious action to correct the situation. The applicant shall keep a maintenance log on each WECS which the township can review on a monthly basis.
  - c. Should a WECS or WECS testing facility become abandoned, dangerous or obsolete, or not in compliance with this ordinance or the special use approval, then the applicant must decommission the WECS or WECS testing facility, remove all components (above and below ground, except that concrete below ground shall only be required to be removed to a depth of six (6) feet) from the site and properly dispose of the same, and return the land to its original state. The removal and restoration must occur within one (1) year of the event triggering the removal and restoration; however, any dangerous situation must be remedied immediately.

- (1) Security: If a special use is approved pursuant to this chapter, the Planning Commission may require a performance guarantee to ensure project completion covering the cost of the improvements pursuant to Section 18.8 of this Ordinance. In addition, the Planning Commission must require the applicant to provide a form of surety, either through escrow account, bond or otherwise, to cover the cost of the removal of all WECS (including any WECS testing facilities) in the event the applicant fails to remove one or more WECS (including any WECS testing facility) as specified in this subsection. The amount and form of security to ensure decommissioning, removal and restoration shall be determined and set by the Planning Commission; however, the amount shall not exceed 125% of the cost of removal and compliance (which shall include the increased removal costs due to inflation).
  - (2) A performance guarantee shall be deposited or filed with the Township Clerk after a special use has been approved but before approval of a building permit for construction of the WECS or WECS testing facility.
  - (3) The performance guarantee ensuring decommissioning, removal and restoration shall be kept in full force and effect during the entire time while a WECS or WECS testing facility exists or is in place.
  - (4) The performance guarantee ensuring completion of the project shall remain in place until the project is completed and the Township approves the release of the security. The performance guarantee ensuring the decommissioning, removal and restoration shall be irrevocable and non-cancelable (except by the written consent of both the Township and the then-owner of the WECS or WECS testing facility). Failure to keep the performance guarantee in full force and effect at all times while a WECS or WECS testing facility exists or is in place shall constitute a material and significant violation of a special use approval and this Ordinance, and will subject the applicant to all available remedies to the Township, including possible enforcement action and revocation of the special use approval.
- d. Road repair: Any damages to a public road located within the Township resulting from the construction, maintenance, or operation of a WECS or testing facility shall be repaired at the applicant's expense.
  - e. Liability: The applicant shall insure each commercial WECS at all times for at least \$2,000,000 for liability to cover the applicant, Township and land owner.
  - f. The applicant shall be responsible for compensation to persons damaged by a WECS, including damage caused by stray voltage from a WECS.

## **SECTION V: SEVERABILITY**

Should any section, clause or provision of this ordinance be declared by the courts to be invalid, the same shall not affect the validity of this ordinance as a whole or any part thereof other than the part or portion thereof so declared to be invalid.

**SECTION VI: REPEAL**

All ordinances or parts of ordinances in conflict herewith are hereby repealed only to the extent necessary to give this ordinance full force and effect.

**SECTION VII: SAVING CLAUSE**

All suits, proceedings, or prosecutions, whether civil or criminal, for causes arising, or acts done or committed prior to this amendment, may be commenced, maintained and/or prosecuted as if this amendment had not been made.

**SECTION VIII: EFFECTIVE DATE**

This ordinance shall take effect 30 days after publication as required by law.

The foregoing ordinance was offered by Mary Gould and supported by Mike Perry, the vote being as follows:

YEAS: 4 - George Letts, Mary Gould, Mike Perry + Rich Baker

NAYS: \_\_\_\_\_

ABSENT: 1 - Jackie Wells

Ordinance declared adopted.

Jacquilyn Wells  
Jacquilyn Wells  
Township Clerk

I hereby certify the foregoing to be a true copy of an Ordinance adopted at a regular meeting of the Burr Oak Township Board held on August 5th, 2019. I further certify that a summary of the foregoing Ordinance was published in the Sturgis Journal, Sturgis, Michigan, on September 24th, 2019 and an attested copy of the Ordinance was filed with the St. Joseph County Clerk's office on September 4th, 2019.

Dated: September 4th, 2019

Jacquilyn Wells, Clerk  
Jacquilyn Wells, Township Clerk