ARTICLE 24

RENEWABLE & ALTERNATIVE ENERGY SYSTEM

24.0 PURPOSE

Bath Township recognizes that it may be in the public interest to permit the placement of renewable & alternative energy facilities within certain areas of the Township. Bath township also recognizes the need to protect its residents, property owners, business owners and visitors from unnecessary and unreasonable visual and sound interference. Bath township further recognizes that such facilities may have a negative health, safety, welfare and/or aesthetic impact upon adjoining and neighboring uses.

The Purpose of this Article is to establish general guidelines for the locations of residential commercial, and industrial renewable $ alternative energy systems to protect the public health, safety, comfort, and general welfare of Bath Township.

24.0.1 Recognizing the importance of clean, sustainable, and renewable energy sources, the township permits the use of residential, commercial, and industrial energy systems under the following regulations to ensure that the safety and welfare of those impacted in the Township is met.

24.0.2 All renewable and/or alternative energy systems shall only be located, constructed, repaired, extended, enlarged, converted, or altered in full compliance with the Bath Township Zoning Regulation, and shall require the issuance of a zoning certificate if applicable.

24.1 DEFINITIONS

ACCESS BUFFER: the distance and/or area from an adjacent landowner(s) property to the nearest portion of an energy facility, building, component, or supporting equipment.

ACCESS ROADS: Provides construction and service access to an energy collection area.

ADJOINING PROPERTY LINE: The property boundary lines between the real property for the proposed installation of an energy system and any adjacent parcel regardless of ownership.

dB(A): sound pressure level in decibels. Refers to the “a” weighted scale defined by the American National Standards Institute (ANSI) for weighting the frequency spectrum to mimic the human ear.

DECIBLE: A logarithmic unit of measurement that expresses the magnitude of sound pressure and sound intensity.

ELECTRICAL COLLECTION SYSTEM: Consists of underground and/or overhead cables that carry electricity from and within groups of energy collectors or generators and transmits it to collection substation and/or point of interconnection switchyard, which transfers the energy generated by the project to a regional power grid or connection to a point of final use.

ELECTOMAGNETIC FIELD (EMF): A combination of invisible electric and magnetic fields of force.

FEMA: Federal Emergency Management Administration.

FLOODPLAIN: Federal Emergency Management Administration (FEMA) identified special flood hazard areas (SFHA).

GROUND-MOUNTED SOLAR ENERGY COLLECTOR: The primary energy colleting component of an overall system that is not attached to and is separate from any building or structure.

GROUND-MOUNTED SOLAR ENERGY SYSTEM: An overall solar energy collection systems that includes all supporting components and equipment. The primary collector components are not attached to and are separate from any building or structure.

LACRPC: The Lima-Allen County Regional Planning Commission.

MEGAWATT (mw): A unit used to measure electricity. 1,000,000 watts = 1 mw.

ON-SITE ENERGY SYSTEM: An energy systems designed and installed to service ONLY toe needs within the limits of the application defined area or parcel of record on which the system is permitted. This could be for either personal use or commercial use.

ROOF-MOUNTED SOLAR ENERGY COLLETOR: A solar energy collector that is attached to a building roof.

SENSITIVE ENVIRONMENTAL AREAS: Any areas determined by the Ohio Department of Natural Resources that consist of unique or

sensitive ecological, biological or related ecosystems.

SFHA: Special Flood Hazard Area.

SOLAR COLLECTOR: A single device or combination of devices, structures, or components of a system that transform direct solar energy into thermal, chemical, and/or electrical energy and that contribute to the functional needs of the parcel where said devices(s) are located and/or provide to a collective energy supply to be distributed off site.

SOLAR COLLETION AREA: A clearly defined (within the application of the project) area containing the actual solar collector components and supporting equipment.

SOLAR ENERGY: Radiant energy (direct, diffuse, and reflected) received from the sun.

SOLAR ENERGY SYSTEM: A solar collector, other device and/or structural design features of a residential or commercial building that relies upon sunshine as an energy source and is capable of collecting, distributing, and/or storing radiant energy.

SOLAR PANEL: a panel consisting of an array of solar cells used to generate electricity directly from the sunlight.

UTILITY GRID ENERGY SYSTEM: An energy generation facility or area of land principally used to convert renewable or alternative energy to electricity for resale and/or distribution to the common electric grid. Limited total capacity not to exceed 50mw.

WETLANDS: Lands on which water covers the soil or is present either at or near the surface of the soil (or within the root zone), all year or for varying periods of time during the year.

24.2 PERMITTED USES

24.2.1 On-Site Energy System are permitted in all Rural, Residential, Business, and Manufacturing Zoned Districts. Also, in Flood Plain Districts, only with proper permitting from the floodplain administrator (LACRPC) prior to development, and as defined herein.

24.2.2 Utility Grid Energy System shall only be permitted in M-1 Districts and subject to zoning regulations. A utility Grid Energy System shall conform to application requirements, site plan requirements, related State and/or Federal regulations, and include a decommissioning plan when the system is no longer in operation, abandoned and/or the ownership dissolved.

24.3 GENERAL REQUIREMENTS FOR ALL SOLAR ENERGY SYSTEMS

24.3.1 Ground-mounted solar energy systems are accessory uses, and subject to all zoning certificate requirements.

24.3.2 Solar energy systems may be installed on the surface of an existing structure, provided such instillation does not violate the permitted height requirements of the zoning district and/or use.

24.3.3 The installation of a solar energy system shall not negatively impact adjacent properties with additional or excessive storm water run-off and or drainage.

24.3.4 Panel and building mounts shall be installed per manufacture's specifications and local commercial building standards where applicable.

24.3.5 A Ground-Mounted solar energy shall meet all requirements for the setback distances of accessory structures in the zoning district.

24.3.6 Solar energy system components shall have an anti-reflective coating and shall not glare onto adjacent properties or towards the road right-of-way.

24.4 REGULATIONS FOR ON SITE GROUND MOUNTED SOLAR ENERGY SYSTEMS

Ground-Mounted solar energy systems shall be installed according to all zoning requirements which are applicable for structures.

24.4.1 APPLICATION AND SITE PLAN REQUIREMENTS

In all permitted districts, the applicant shall submit a zoning certificate application and a site plan containing ALL of the following information:

a. Property lines and physical dimensions of the applicant's property.

b. Location, dimensions, and types of existing major structures on the property.

c. Location of the proposed solar energy system and all associated equipment.

d. Location of easements, setbacks, obstructions, and square footage of the solar array area.

e. The right-of-way of any public road that is contiguous with the property

f. Solar energy system specifications, including, nut not limited to, manufacturer and model.

g. Any other documents deemed necessary by Township Zoning Inspector.

24.4.2 COMMERCIAL USE GROUND-MOUNTED SOLAR ENERGY SYSTEM REQUIREMENTS

a. Permitted Zoning Districts. Systems are only permitted in B1 & B2 Business Districts, RU Rural and M1 Manufacturing Districts. Regardless of location or pre-existing conditions, no system under this section shall be permitted in Residential Districts.

b. Permitted Locations. Systems are only permitted behind the rear building line of the principal building or structure. On corner lots ground mounted solar energy systems shall be permitted within the side yard and subject to corner lot setback distance requirements.

c. Height Limitations. Systems shall not exceed ten (10) feet in height measured from the average parcel ground level, at the base of such equipment. The height of the-ground mounted solar energy systems shall be measured from said ground level to the highest point of any system component.

d. Placement.

1. System shall meet the minimum setbacks for zoning district.

2. There shall be a minimum of a twenty-five (25) foot distance from all natural features including water courses, wooded lots, streams, wetlands, and floodplain locations. If located in a floodplain or an area of known localized flooding, all panels, electrical wiring, automatic transfer switched, inverters, etc. shall be located above the base flood elevation. All work within the floodplain must have a permit from the local floodplain administrator (LACRPC) prior to development.

3. System shall no be located over a septic system, leach field area or identified reserve area unless approved by the Allen County Health Department.

4. Systems shall be placed so that concentrated solar radiation or glare does not project onto nearby structures or roadways.

5. Systems shall have a visual buffer of natural vegetation, plantings, earth berms, and/or fencing that minimizes impacts of the solar energy system on the visual character to adjoining property owners, as per Article 6.21.

24.5 REGULATIONS FOR UTILITY GRID SOLAR ENERGY SYSTEMS

A Utility Grid solar energy System shall only be permitted in M1 Manufacturing districts.

24.5.1 Application and Site Plan Requirements:

a. Physical dimensions of the property, existing structures, and proposed structures.

b. Locations of existing and proposed buildings and structures.

c. Locations of the proposed solar energy system and all associated equipment.

d. Location of easements, setbacks, obstructions, and square footage of the solar system area.

e. Public road rights-of-way that are contiguous with the property.

f. Existing topography.

g. Existing wetlands.

h. Proposed grading, removal of natural vegetation and relocation of wetlands (if applicable).

i. Setback distance indicated from roadways, properties, property lines, major structures, etc.

j. Proposed ingress and egress roadways, entrances/exits, interior roads, etc.

k. Proposed safety fencing to prevent trespassing.

l. Manufacturer's specifications and recommended installation methods for all major equipment, including solar panels, mounting systems, and foundations for poles or racks.

m. The number of panels to be installed and coverage area measurements.

n. Specific information of the type, size, height, rated power output of each proposed unit, performance, safety, and glare characteristic of each solar unit and accompanying equipment, if any.

o. Waterlines, fire hydrant locations, sewer lines and utility lines identified.

p. A description of the method of connecting the array to a building or substation.

q. Utility interconnection data and a copy of written notification to the utility of the connection.

r. A soil boring report.

s. Storm Water Pollution Prevention Plan (SWP3) application submitted and approved by the Allen County Engineer, if required.

t. Any additional information as normally required by the Township as part of this Zoning Resolution.

24.5.2 <u>Additional Documentation Requirements:</u>

In addition to requirements for information to be provided during the site plan review and development permit process, the system shall not be approved for operation until ALL the following are submitted:

a. Copy of all lease agreements and solar access easements.

b. Transference of Ownership Letter shall be submitted by the current solar energy system owner indicating that should the solar energy facility, solar farm and/or business entity be sold to another private or public utility, all specifications, requirements and terms and conditions applied by the Board of Zoning Appeals and/or the Zoning Inspector shall transfer with the new owners and shall remain in force and effect.

c. The applicant Shall Submit, based on the most current and accurate information available, a topographic drawing of the property that indicates how stormwater drains from the property, identifies the location od discharge points or areas, and identifies conditions present on the property that may contribute to soil erosion.

d. List of protected wildlife that may be on the property. A Wildlife Impact Statement from the Ohio Department of Natural Resources, comprising the potential impact on neighboring wildlife and any protected animals in the area shall be included.

e. Where interconnection to an electric utility grid is proposed, the applicant shall submit evidence that he electric utility provider has been informed of the customer's intent to install an interconnection with the local electric utility grid. Approval from the local utility must also be provided before operation of an interconnected facility will be authorized.

f. A performance Surety Bond shall be provided by the applicant or owner/operator to assure repairs to public roads which may be damaged by the construction of the project. The amount of this bond will be determined by mutual agreement of the applicant, owner or operation, and the Bath Township Board of trustee, or their designated representative.

g. The manufacturer's engineer AND another qualified engineer, who is licensed in the state of Ohio shall certify that the foundation and design of the system installation is within accepted professional standards, given local soil and climate conditions.

h. Project shall abide by all application fees, charges and expenses as stated in the Bath Township Fee Schedule. This shall include but not limited to Board of zoning Appeals fees, plan review fees, square footage fees, fence approval fees, and other fees required to be paid for development of this project. The applicant, property owner, or system owner shall pay all fees.

i. The zoning Inspector may require other studies, reports, certifications, and/or approvals to be submitted by the applicant to ensure compliance with this section.

24.5.3 Utility Grid Solar Energy System – General Requirement:

a. Mounting System. Solar collectors shall be mounted onto a pole, rack, or suitable foundation, in accordance with manufacturer specifications, in order to ensure the safe operation and stability of the system. The mounting structure (fixed or tracking capable) shall be comprised of materials approved by the manufacturer, which are able to fully support the system components, in accordance with applicable building permit requirements. Electrical components of the facility shall meet applicable electrical code requirements, and all electrical wires and lines less than 100kV that are used in conjunction with the solar energy facility shall be installed underground. Multiple mounting structures shall be spaced apart at the distance recommended by the manufacturer to ensure safety and maximum efficiency.

b. Setbacks. System shall be installed as per the M1 Manufacturing district requirements.

c. Height Limitations. No portion of any component shall exceed 25 feet in height as measured from the grade at the base of the structure tot eh highest point.

d. Screening. The system area shall be fully screened from adjoining properties and adjacent roads as per Article 6.21 of the Bath Township Zoning Resolution.

e. Security. Fencing is required for the safety and security of the area and to prevent unauthorized access. Fencing shall be chain link industrial fence fabric with a height no less than ten (10) feet. An additional three (3) may be installed on the top of the fence with three wires of barbed wire material facing outward towards roadways and structures. Anti-climb material shall be utilized for sensitive areas of the project site. Access gates and equipment cabinets must be locked when not in immediate use. An emergency means of entry and lighting for first responders needing immediate access to facility shall be developed by owner in conjunction with the local fire authority prior to the installation.

f. Noise. Inverter noise shall not exceed 40 dBA, measured at the property line. Inverters shall be off and silent at sunset.

g. Glare and Lighting. System components shall be designed with an antireflective coating or at least shall no produce glare that would constitute a nuisance to occupants of neighboring properties, aircraft, or persons traveling adjacent on nearby roads. If lighting is required, it shall be activated by motion sensor, fully shielded and downcast type where the light does not spill onto any adjacent properties or into the nigh sky.

h. Maintenance Standards.

1. System shall be maintained in accordance with manufacturer's specifications.

2. The owner and operator shall maintain the system area relative to all buffer screening in compliance with approved plans.

3. Repairs to system components following natural disaster event shall be completed no later than 30 days after the event or as approved by the Zoning Inspector.

4. System shall be maintained in good condition and free of hazards, including but not limited to, faulty wiring, loose fastenings, painting, structural repairs, and integrity of secure measures.

5. The System owner or operator is responsible for the cost of maintaining the system and any private access roads throughout the complex.

i. Weed Control/Planting. The owner or designed maintenance individual of the system shall have weed prevention plan submitted to the township to ensure the area remains free and clear of overgrown vegetation, noxious weeds, briers, and other forms of uncontrolled vegetation.

j. Signage. A sign of no less than four square feet must be displayed in an easily noticed area from the public roadway indicating a physical address and telephone number for emergency calls. No system site components, fences, builders, or structures may include or display any advertising sign, banner, insignia, graphics, or lettering, except for typical manufacturing labels.

k. Climb Protection. All systems platform must be unclimbable by design or protected by anti-climbing devices.

l. Compliance with Other standards. All power and communication lines system components to electric substations or interconnections with building shall be buried underground. Exemptions may be granted by the Bath Township Board of Zoning Appeals in instances where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines.

24.5.4 Decommission Plan

A decommission plan shall be submitted as part of the zoning certificate approval process. The decommissioning plan shall include ALL of the following provisions and requirements.

a. Defined conditions upon which decommission will be initiated (i.e., end of lease, condition of a potential public safety hazard, the system is no longer used to produce power, etc.).

b. Removal of all non-utility owned equipment, conduits, structures, fencing, roads, and foundations; and restoration of property to condition prior to development of the renewable energy system. An affidavit by the property owner is required to release any portion of this provision.

c. The timeframe for compliance of disassembly, removal and all other related decommission activities.

d. A signed statement from the parties responsible for completing the decommission plan acknowledging such responsibility.

e. An estimate, approved by the Township Zoning Inspector, of the full cost of decommissions, without the inclusion of the salvage value of any or all components.

f. A performance bond equal tot eh decommission estimate must be posted and updated every five (5) years from the date of posting. The Bond must be posted at the time of the plan submission and shall be held by the Township fiscal Officer.

    1. The Township shall select an engineer of its choosing to conduct a re-appraisal every five (5) years. Fees to be paid by the applicant, property owner or system owner.

    2. Upon failure to fully complete the decommission plan, the Zoning Inspector may act, as authorized by this Zoning Resolution and/or any other applicable laws, to complete the plan.

    3. In the event of abandonment or discontinuation of service, the system owner shall be notified by Bath Township that ALL system components must be dismantled and removed from the property and the property restored to original condition, within twelve (12) months. If the owner fails to comply, Bath Township may enforce the decommission plan at the owner's expense.