

ORDINANCE NO. 612.24

GRATZ BOROUGH, DAUPHIN COUNTY, PENNSYLVANIA

**AN ORDINANCE AMENDING THE GRATZ BOROUGH ZONING ORDINANCE  
REDEFINING ELECTRICITY GENERATING PLANT AND CHANGING  
REGULATIONS IN REGARDS TO WIND FARMS AND MAJOR SOLAR ENERGY  
SYSTEMS**

The Council of Gratz Borough does hereby adopt the following amendments to the Gratz  
Borough Zoning Ordinance, adopted on May 16, 2019:

**SECTION 202. DEFINITION OF TERMS.** When used in this Ordinance, the following changed or additional words or terms shall have the following meanings, unless expressly stated otherwise or unless the context clearly indicates otherwise:

"Electricity Generating Plant" means a use devoted to the creation, storage, conversion, distribution, or transmission of electrical energy for use at another location. The term includes a facility which: (a) stores electrical energy and/or discharges it on command by an electrical utility or other entity; (b) stores, converts and/or places electrical energy back into the transmission system; or (c) involves the maintenance of utilities.

"Solar Array" means a group of solar panels.

"Solar Array Connection" means the low-voltage electric lines which connect Solar Related Equipment.

"Solar Easement" means a right, expressed as an easement, restriction, covenant, or condition contained in any deed, contract, or other written instrument executed by or on behalf of any landowner for the purpose of assuring adequate access to direct sunlight for solar energy systems.

"Solar Energy" means a radiant energy (direct, diffuse and/or reflective) received from the sun.

"Solar Energy System, Major" means a facility or area of land principally used to convert solar radiation to electricity or capture solar energy and convert it to electrical energy or power primarily for off-site use. A major solar energy system is a principal use of a lot consisting of one or more free-standing ground, or roof mounted solar collector devices, solar related equipment and other accessory structures and buildings including light reflectors, concentrators, and heat exchangers, substations, electrical infrastructure, transmission lines and other appurtenant structures.

"Solar Energy System, Minor" means a facility or area of land principally used to convert solar radiation to electricity or capture solar energy and convert it to electrical energy or power primarily for on-site use. A minor solar energy system is an accessory

use on the same lot as the principal use and consists of one or more free-standing or ground or roof mounted solar arrays or modules , or solar related requirement , intended to primarily reduce on-site consumption of utility power or fuels for use on-site by the generator.

"Solar Panel" means that part or portion of a solar energy system containing one or more receptive cells or modules, the purpose of which is to convert solar energy for use in space heating or cooling , for water heating or for electricity.

"Solar Related Equipment" includes a solar photovoltaic cell, module, panel, or array, or solar hot air or water collector device panels, lines, pumps, batteries, mounting brackets , framing and foundations or other structures used for or intended to be used for collection of solar energy.

**SECTION 602. SPECIFIC USES.** The following specific uses are amended and shall be subject to the following supplemental and additional regulations in addition to all other applicable provisions of the ordinance:

56. **Wind Farms and Major Solar Energy Systems.**

A. Wind Farm (WF).

1. Compliance Standards.

a. The design of a WF shall conform to applicable industry standards, including those of the American National Standards Institute (ANSI), Underwriters Laboratories (UL) Det Norske Veritas, Germanischer Lloyd Wind Energies, the American Society of Testing and Materials (ASTM), or other pertinent certifying organizations and comply with all applicable building and electrical codes of the borough. The applicant shall submit certificate of design compliance obtained by the equipment manufacturers from Underwriters Laboratories, Det Norske Veritas, Germanischer Lloyd Wind Energies, or other similar certifying organizations. The manufacturer specifications shall be submitted with the zoning permit application.

b. To the extent applicable, the WF shall comply with the PA Uniform Construction Code.

c. All electrical components of the WF shall conform to relevant and applicable local, state, and national codes, and relevant and applicable international standards.

2. Noise.

a. The audible sound from a wind turbine may not exceed 45 A-weighted decibels and shall also not exceed 55 C-weighted decibels, as each is measured at the lot line of a property of a non-participating landowner within one mile or less from the nearest property line on which a wind turbine is located unless a written waiver is provided by the owner of such property. This requirement shall be a maximum noise level using a Lmax standard, and not based upon an average. Audible tones from electrical or mechanical components are prohibited. Measurements shall comply with ANSI/ASA S12.9 Part 3, Short Term Measurements with an Observer Present; S 12.100, Methods to Define and Measure the Residual Sound in Protected Natural and Quiet Residential Areas; and Computer Modeling shall comply with ANSI/ASA S12.6 (ISO9613-2) Attenuation of sound during propagation outdoors- Part 2 General method of Calculation.

b. The above maximum noise limits shall be reduced to 42 A-weighted and 52 C-weighted decibels between the hours of 10 p.m. and 7 a.m., local time. However, the noise limits shall not be reduced below 45 A-weighted decibels where the applicant provides evidence that the current continuous background sound level without the wind turbines would be higher than 42 A-weighted decibels. The continuous background sound level shall be determined per the methods of ANSI/ASA S12.9 Part3 and ANSI/ASA S12.100.

c. All required noise studies and testing shall be completed by a qualified independent professional having specialized expertise in noise analysis. The qualifications of the person conducting the analysis shall be included in the conditional use application. ANSI standards shall be used for calibration of the noise meter.

d. With the conditional use application, the applicant shall provide a written noise study that projects the maximum sound levels at the property line of the nearest five non-participating landowners, and that recommends measures that may be used as conditions by the governing body to minimize noise impacts. The noise study shall document compliance with the A- and C- weighted decibels maximum level requirements of this subsection.

e. The applicant shall provide an independent written test of actual noise produced by the project upon completion, and every two subsequent years after the project is completed, to document compliance with the noise standards in this section. If the project will involve more than 10 total wind turbines, then the noise study shall also be completed after each 10 wind turbines are put into service. If the testing finds that the noise levels in this section are being violated, then the owner of the wind turbines shall immediately take the wind turbines out of service until such modifications, replacements, or repairs are made to the wind turbines as are required or necessary to make them comply with the noise levels of this section.

f. In addition to the noise studies provided above, at any time when the zoning officer has reasonable cause to believe that the noise limits are being violated, the zoning officer may request that the borough or its authorized agents conduct its own tests to ascertain compliance with the noise limits. The facility operator shall assist with the tests.

g. If the borough institutes an enforcement action because of a violation of the noise limits, and if the owner is found liable for the violation in a civil enforcement proceeding, then in addition to any other rights or remedies available to the borough, the judgement shall require the owner of the project to pay all of the borough's costs and expenses to prove non-compliance with the noise requirements, including the tests to determine the noise levels. Such costs shall be paid within 30 days by the facility owner after the final judgement. In the event the facility owner does not pay such costs within 30 days, the borough may pursue appropriate remedies at law or equity to recover such costs and expenses from the owner, including placing a municipal lien against the property upon which the project is located. By authorizing the facility owner to make application, the landowner consents to the ability of the municipality to place a lien against the land in the event of a violation.

✓ 3. Vibrations. A wind turbine shall not cause vibrations through the ground which are perceptible beyond the property line of the parcel on which it is located. Wind turbines may not cause airborne vibrations which are perceptible to people or structures.

✓ 4. Accessory Buildings, Structures, and Mechanical Equipment.

a. When an accessory building or structure is necessary, it shall comply with the principal building requirements of the zoning district in which it is located.

b. Accessory buildings, structures and equipment associated with WF shall be screened from any adjacent property that is residentially zoned or used for residential purposes under Section 419 of this ordinance, even if the WF is not adjoining a residential zoning district or dwelling unit. The screen shall consist of plant materials which provide a visual screen. In lieu of a planting screen, a decorative fence meeting the requirements of Section 419 of this ordinance may be used.

c. The design of accessory buildings and related structures shall, to the extent reasonable, use materials, colors, textures, screening, and landscaping that will blend into the natural setting and existing environment.

✓ 5. Underground Requirements . On-site transmission and power lines between wind turbines shall be placed underground.

✓ 6. Utility Notifications . The owner of a WF shall provide the municipality with written confirmation that the public utility to which the WF will be connected has been informed of the intent to install a grid connected system and approved of such connection.

✓ 7. Signage. WF shall not display advertising, except for reasonable identification of the turbine manufacturer, facility owner or operator.

✓ 8. Lighting. The WF shall not be artificially lighted, except to the extent required by the Federal Aviation Administration, the Pennsylvania Department of Transportation Bureau of Aviation (BOA) or other applicable authority that regulates air safety.

✓ 9. Color.

a. A WF shall be painted a non-reflective, flat color such as white, off grey, or grey unless required to be colored differently by FAA or BOA regulations.

b. The design of buildings and related structures shall, to the extent reasonable, use materials, colors, textures, screening, and landscaping that will blend the WF into the natural setting and existing environment.

10. Braking System. A WF shall be equipped with a redundant braking system. This includes both aerodynamic overspeed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Mechanical brakes shall be operated in a fail-safe mode. Stall regulation may not be considered a braking system for overspeed protection.

11. Shadow Flicker.

a. The applicant shall provide an analysis with a map of the shadow flicker impacts of the project upon any non-participating landowner's property that will be impacted by this effect. The analysis shall be conducted by a qualified professional using generally accepted modeling methods and shall estimate the number of hours per year that a non-participating landowner's property will be impacted by shadow flickering. No lot line of a non-participating landowner's property shall be affected by shadow flicker for a total of more than 20 hours per year, and no more than 30 minutes per day. Such analysis shall include recommendations for conditions that may be established by the Borough Council to minimize the number of affected non-participating landowner's properties, the hours affected and the severity of the impacts from shadow flicker. This provision shall not apply to an affected property if a written and signed waiver is provided by the owner of said property.

b. A WF shall be designed in such a manner as to not cause shadow flicker on a roadway.

12. Location. No part of any WF shall extend over parking areas, access drives, driveways, or sidewalks. No blade or any component part of a WF shall extend beyond the boundaries of the zoning district in which it is located. Wind turbines shall be separated from each other by a minimum distance of five times the diameter of the rotors.

13. Insurance. The WF owner or operator shall maintain a current general liability policy covering:

a. \$1,000,000 of personal or bodily injury to or death of any person.

b. \$3,000,000 for personal or bodily injury to or death of any number of persons arising from any one occurrence.

c. \$1,000,000 dollars for any instance of property damage.

d. An umbrella liability insurance coverage shall also be maintained with coverage to be not less than \$3,000,000 for each occurrence and \$3,000,000 in the aggregate. Certificates of insurance for the above required coverage shall be provided to the borough annually.

14. Application. In addition to the information required in zoning permit application, the applicant shall prepare and submit a narrative and survey map, which includes:

- a. An overview of the project;
- b. The project location;
- c. The approximate generating capacity of the WF;
- d. The approximate number, representative types and height or range of heights of wind turbines to be constructed, including their generating capacity, dimensions and respective manufacturers;
- e. A description of accessory facilities;
- f. A listing and map of the lots on which the proposed WF will be located; and
- g. A site plan showing the planned location of each wind turbine, lot lines, setback lines, access road and turnout locations, substation, electrical cabling from the WF to the substation, ancillary equipment, buildings, and structures, including permanent meteorological towers, associated transmission lines, and layout of all structures within the geographical boundaries of any applicable setback.

15. Contact Information. The WF owner or operator shall provide current contact information to the borough which includes a phone number and identifies a responsible person for the borough or the public to contact regarding emergencies, inquiries, and complaints for the duration of the project. The contact information shall also be conspicuously posted on the property so that a person would not believe they were trespassing while viewing it.

16. Emergency Preparedness Plan. The owner or operator of the WF shall furnish a written emergency preparedness plan outlining the procedures on how emergencies will be handled. The plan shall include the manner that the owner or operator will coordinate with local

emergency service providers in the event of an emergency. The plan shall be reviewed and approved by the local emergency service providers prior to the submission of the application with the borough.

✓ 17. SALDO. A WF shall constitute a subdivision and/or land development.

✓ 18. Decommissioning .

a. The WF owner is required to notify the borough immediately upon cessation or abandonment of the use. The WF shall be presumed to be discontinued or abandoned if no electricity is generated by the system for a continuous period of 12 months.

b. The WF owner shall then have six months in which to dismantle and remove the WF including all related equipment and appurtenances related thereto, including but not limited to buildings, cabling, electrical components, transmission and lines, foundations, and other associated facilities from the property. The owner shall also restore the land to its original condition pre-dismantling condition. If the owner fails to dismantle or remove the WF and restore the land within the six-month time-period, the borough may, but shall not be required to, complete the decommissioning and land restoration at the owner's expense.

c. At the time of issuance of the permit for the construction of the WF, the owner shall provide financial security to the borough to secure the expense of dismantling and removing the WF and restoration of the land to its original condition. The financial security shall be in the amount of 110 percent of the costs of decommissioning. The decommissioning funds shall be posted and maintain during the life of the project in the form of a performance bond, irrevocable letter of credit or other financial form of security acceptable to Borough Council.

d. An independent and certified professional engineer shall be retained by borough council at the owner's cost to estimate the total cost of decommissioning without regard to salvage value of the equipment, and the cost of decommissioning net salvage value of the equipment. Thereafter, the owner shall retain an engineer to provide the borough with cost estimates of decommissioning after the first year of operation and every fifth year thereafter.

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B. Major Solar Energy Systems (MSES).

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1. Compliance with Industry Standards. The MSES layout, design and installation shall conform to applicable industry standards, such as those of the American National Standards Institute (ANSI), Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM), , Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electrical Testing Laboratory (ETL) , Florida Solar Energy Center (FSEC) or other similar certifying organizations, and shall comply with the PA Uniform Construction Code , regulations adopted by the Pennsylvania Department of Labor and Industry, and with all other applicable fire and life safety requirements The manufacturer specifications for the key components of the system shall be submitted as part of the permit application.

2. Installers. MSES installers must meet or exceed one of the following requirements :

a. Is certified by the North American Board of Certified Energy Practitioners (NABCEP) for solar thermal installation.

b. Has completed an Interstate Renewable Energy Council (IREC) Institute for Sustainable Power Quality (ISPQ) accredited solar thermal training program or a solar collector's manufacturer's training program and successfully installed a minimum of three solar thermal systems.

3. Maintain Good Working Order. Upon completion of installation, the MSES shall be maintained in good working order in accordance with manufacturer's standards and any other codes under which the MSES was constructed. Failure of the owner to maintain the MSES in good working order is grounds for enforcement action by the zoning officer under Section 1007 of this ordinance.

4. Underground Requirements. Solar Project Connections may be located above ground; however, DC voltage Solar Array Connections and AC Solar Facility Connections shall be located underground.

5. Utility Notification. The owner of a MSES shall provide the borough with written confirmation that the public utility company to which the MSES will be connected has been informed of the intent to install a grid connected system and approved of such connection.

6. Signage. No portion of the MSES shall contain or be used to display advertising. The manufacturer's name and equipment information or indication of ownership shall be allowed on any equipment of the MSES provided it complies with the nameplate and identification sign requirements of Section 902 of this ordinance .

7. Glare.

a. All MSES shall be placed such that concentrated solar radiation or glare does not project onto nearby properties, structures, buildings, and roadways.

b. The applicant has the burden of proving that any glare produced does not have a significant adverse impact on neighboring or adjacent uses either through siting or mitigation.

c. A glare study shall be submitted by the applicant to show compliance with this subsection at the time of the conditional use application.

8. Noise Study. A noise study shall be performed by the applicant and produced at the time of the conditional use application. The noise study shall be performed by an independent noise study expert and paid for by the applicant. The noise study shall address noise produced during construction and during the operation of the MSES. Noise from a MSES may not exceed 50dBA as measured at the lot line of the property where the MSES is located. This requirement shall be a maximum noise level using a Lmax standard, and not based upon an average.

9. Buffer, Screening and Landscape Requirements. A MSES shall be considered a land development and shall comply with the screening, buffering, and landscaping requirements of Section 419 of this ordinance, even if the MSES is not adjoining a residential zoning district or residential dwelling unit, including providing both a fence and buffer or planting strip. In addition, no trees or other landscaping required as a condition of approval may be removed during the installation or operation of a MSES.

10. Contact Information. The MSES owner or operator shall provide current contact information to the borough which includes a phone number and identifies a responsible person for the borough or public to contact regarding emergencies, inquiries, and complaints for the duration of the project. The contact information shall be conspicuously posted on the lot where the MSES is located so that a person would not believe they were trespassing while viewing it.

11. Emergency Preparedness Plan. The owner or operator shall furnish a written emergency preparedness plan outlining the procedures on how emergencies will be handled. The plan shall include the manner that the owner or operator will coordinate with local emergency service providers in the event of an emergency. The plan shall be reviewed and approved by the local emergency service providers prior to the submission of the application with the borough.

12. Solar Easements. Where a solar easement is proposed by the owner or landowner for a MSES, a written agreement in recordable form constituting a covenant running with the land shall be provided to the borough as part of the subdivision or land development. The borough shall not be a party to any agreement, nor an intended third-party beneficiary and shall not be responsible for enforcement or maintenance of any solar easement.

13. SALDO. All MSES shall constitute a subdivision and/or land development.

14. Decommissioning .

a. The MSES owner is required to notify the borough immediately upon cessation or abandonment of the use. The MSES shall be presumed to be discontinued or abandoned if no electricity is generated by the MSES for a continuous period of 12 months.

b. The MSES owner shall then have six months in which to dismantle and remove the MSES including all solar related equipment or appurtenances related thereto, including but not limited to buildings, cabling, electrical components, transmission lines, foundations, and other associated facilities from the lot. The owner shall also restore the land to its original condition pre- dismantling condition. If the owner fails to dismantle or remove the MSES and restore the land within the six-month time-period, the borough may, but shall not be required to, complete the decommissioning and land restoration at the owner's expense.

c. At the time of issuance of the permit for the construction of the MSES, the owner shall provide financial security to the borough to secure the expense of dismantling and removing the MSES and restoration of the land to its original condition. The financial security shall be in the amount of 110 percent of the costs of decommissioning. The decommissioning funds shall be posted and maintain during the life of the project in the form of a performance bond, irrevocable letter of credit or other financial form of security acceptable to Borough Council.

d. An independent and certified professional engineer shall be retained by Borough Council at the owner's cost to estimate the total cost of decommissioning without regard to salvage value of the equipment, and the cost of decommissioning net salvage value of the equipment. Thereafter, the owner shall retain an engineer to provide the borough with cost estimates of decommissioning after the first year of operation and every fifth year thereafter.

15. Ground Mounted MSES. In addition to the other requirements of this subsection, ground mounted MSES shall also comply with the following:

a. Minimum lot size of 10 acres.

b. Minimum setback from a front lot line shall be 200 feet, and 100 feet from all other lot lines.

c. Maximum height of ground mounted solar panels shall be 10 feet above the ground elevation surrounding the system. All MSES components and structural supports for connections shall not exceed the maximum building height of the C-1 Zoning District.

d. Maximum Building Coverage . The maximum impervious surface of the solar arrays of a ground mounted MSES, regardless of the mounted angle of any solar panels, along with the Solar Related Equipment shall be considered buildings for purposes of this subsection and shall comply with the maximum percentage of building coverage under the C-1 Zoning District.

16. Roof and Wall Mounted MSES. The total height of a building with a roof and/or wall mounted system shall not be more than three feet above the maximum building height specified for a principal building within the C-1 Zoning District.

17. Stormwater runoff from an MSES shall be managed in accordance with the requirements of the Gratz Borough Stormwater Management Ordinance. Proof of compliance shall be required at the time of the conditional use application.

18. Insurance. The MSES owner or operator shall maintain a current general liability policy covering:

a. \$1,000,000 of personal or bodily injury to or death of any person.

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b. \$3,000,000 for personal or bodily injury to or death of any number of persons arising from any one occurrence.

c. \$1,000,000 dollars for any instance of property damage.

d. An umbrella liability insurance coverage shall also be maintained with coverage to be not less than \$3,000,000 for each occurrence and \$3,000,000 in the aggregate. Certificates of insurance for the above required coverage shall be provided to the borough annually.

19. Application. In addition to the information required in zoning permit application, the applicant shall prepare and submit a narrative and survey map at the time of application for a conditional use, which includes:

a. An overview of the project;

b. The project location;

c. The approximate generating capacity of the MSES in kilowatt hours;

d. The approximate number, representative types and height or range of heights of MSES to be constructed, including their generating capacity, dimensions and respective manufacturers;

e. A description of accessory facilities;

f. A listing and map of the lots on which the proposed MSES will be located; and

g. A site plan showing the planned location, lot lines, and setback lines of the MSES and Solar Related Facilities, including access roads.

These amendments to the Gratz Borough Zoning Ordinance shall take effect immediately following their adoption.

The remaining provisions of the Gratz Borough Zoning Ordinance shall remain the same unchanged, except as amended by this ordinance.

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This Ordinance is enacted and adopted this 12<sup>th</sup> day of June, 2024.

ATTEST:

GRATZ BOROUGH COUNCIL:



Secretary

Cindy L. Shade

Kyri Bendis  
President

[Signature]  
Vice President

Cyrus G. Schaefer  
Council Member

[Signature]  
Council Member

[Signature]  
Council Member

Approved by the Mayor: [Signature]