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OCTOBER 25TH, 2023
ZONING COMMISSION MEETING

All proposed, new ordinance text has been highlighted and is depicted boldly...

RE: SOLAR ENERGY FACILITIES

ISSUE IDENTIFICATION: CASE 3-23-T

The Township Zoning Resolution currently does not acknowledge any processes, standards or requirements regarding solar energy facilities. Therefore, the Planning & Zoning staff has prepared the proposed new sections to Article 7 of the Union Township Zoning Resolution—specifically to acknowledge the manner(s) in which this type of use can occur. As a direct result of these proposed changes, modifications would also be necessary to certain sections of Article 6, regarding the Establishment of Districts as well.

Staff Report:

Please refer to ***PROPOSED, NEW*** Sections 750-764 (Article 7) of the Zoning Resolution:

• **“750. Purpose & Intent of Solar Energy Systems (SES)**

The purpose of this Section, and those that follow up to Section 762, is to regulate the placement, construction, and modification of Solar Energy Systems (SES) of all types in Union Township. The regulations set forth herein have been formulated to provide opportunities for solar harvesting operations while ensuring that specific conditions are met to protect the health, safety, and welfare of the public as these improvements are commissioned. The provisions of this Article regarding SES will:

- 1. Establish a reasonable and efficient process for the review and approval of SES applications;***
- 2. Prescribe required distances for setbacks for SES from buildings, property lines, and easements;***
- 3. Institute minimum performance regulations for SES;***
- 4. Create standards for the removal of SES and their appurtenant structures.***



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751. Definitions

Agrivoltaics: *A solar energy system co-located on the same parcel of land as agricultural production, including crop production, grazing, apiaries, or other agricultural products or services.*

Ground Mounted Solar Energy System: *An SES that is structurally mounted to the ground and does not qualify as an Integrated SES. For purposes of the Township zoning code, any solar canopy that does not qualify as an Integrated SES shall be considered a Ground Mounted SES, regardless of where it is mounted.*

Ground Mounted SES, Small: *A ground mounted SES with a site use size of less than or equal to ten thousand square feet (10,000 sq. ft.) that is used exclusively for private purposes and not used for commercial resale of energy, except for the surplus electrical energy back to the electrical grid. *See also Private Solar Energy System and Solar Energy System–Accessory (SES-A)*

Ground Mounted SES, Medium: *A ground mounted SES with a site use size of larger than ten thousand square feet (10,000 sq. ft.) but less than or equal to twenty (20) acres. *See also Solar Energy System–Commercial (SES-C)*

Ground Mounted SES, Large: *A ground mounted SES with a site use size of larger than twenty (20) acres. *See also Solar Energy System–Commercial (SES-C)*

Integrated Solar Energy System: *An SES where solar materials are incorporated into building materials, such that the two are reasonably indistinguishable, or where solar materials are used in place of traditional building components, such that the SES is structurally an integral part of a house, building, or other structure. An Integrated SES may be incorporated into, among other things, a building facade, skylight, shingles, canopy, light, or parking meter. *See also Solar Energy System–Accessory (SES-A)*

Rooftop Solar Energy System: *An SES that is structurally mounted to the roof of a house, building, or other structure and does not qualify as an Integrated SES. *See also Solar Energy System–Accessory (SES-A)*

Site Size: *The calculated area that includes the perimeter of the outermost panels together with any and all equipment necessary for the function of the SES, including transformers and inverters but not including perimeter fencing and landscaping buffers.*



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Solar Energy System (SES): *A device or structural design feature that provides for the collection of solar energy for electricity generation, consumption, or transmission, or for thermal applications.*

Solar Energy System–Accessory (SES-A): *A Small Ground Mounted SES, Integrated SES, or Rooftop SES. *See also Ground Mounted SES, Small.*

Solar Energy System–Commercial (SES-C): *A Medium Ground Mounted SES or Large Ground Mounted SES.*

752. Solar Energy Systems (SES) Not Requiring a Zoning Permit

Rooftop SES and Integrated SES, both SES-As, may be established to serve permitted uses. Rooftop and Integrated SES-As may exceed the maximum allowed building height of the building or structure in which it is located by up to three (3) feet in all zoning districts; however, the collector surface and mounting devices for Rooftop SES shall not extend beyond the exterior perimeter of the building on which the system is mounted or built, unless the collector and mounting system has been explicitly engineered to safely extend beyond the edge, and an extension in these circumstances meets all applicable zoning setback standards. Although a zoning permit meeting the criteria in this Section may not be required for Rooftop and Integrated SES-As and appurtenant structures of this type, a building permit may be required and if necessary, must be applied for and approved prior to any site work.



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753. General Requirements for all Solar Energy Systems (SES)

The design and construction of all SES shall meet the following standards:

- 1. The construction, operation, maintenance, repair, removal, modification, restoration or enlargement of an SES following the effective date of this Section shall strictly comply with all applicable regulations of this Zoning Resolution in effect on the earlier of performance of the work or the date of application for Union Township's permission to perform such work;***
- 2. All property owners shall obtain, at their own expense, all permits and licenses required by applicable law, rule, regulation or code, and must maintain the same, in full force and effect, for as long as required by Union Township or any other governmental entity or agency having jurisdiction over the applicant;***
- 3. With respect to any SES that requires a permit from Union Township pursuant to this Section, all applicants shall apply to the Township to modify the height, relocate or rebuild such structure or appurtenant facilities and associated improvements;***
- 4. All SES shall conform to applicable industry standards of the American National Standards Institute (ANSI) and be approved by a solar certification program recognized by the American Council on Renewable energy (ACORE) or the Solar Energy Industries Association (SEIA). All SES that are over twenty (20) feet in height, when oriented at maximum tilt, must be designed by a professional engineer. The engineer must certify that the structures that are intended to be built for the SES is within acceptable code and industry standards—given local soil and climate conditions.***



754. Design and Construction

The design and construction of all SES shall meet the following standards:

- A. The foundation and attachments shall meet all local, Township, State and Federal structural requirements for loads, including wind and ice loads. Footing inspections may be required for all SES having footings;*
- B. All utilities at a SES site—except for transformers, inverters, substation, and controls—shall be installed underground and in compliance with all laws, resolutions, ordinances, rules and regulations of the Township;*
- C. Ground-mounted SES shall not be located over an existing utility easement, unless approval is obtained by the applicable utility providers;*
- D. Solar Energy Systems, and any and all accessory or associated facilities shall maximize the use of building materials, colors and textures designed to blend with and/or to harmonize with the natural surroundings;*
- E. All SES using a reflector to enhance solar production shall minimize glare from the reflector affecting adjacent or nearby properties.*
- F. Rooftop SES on pitched roofs that are visible from the nearest edge of the front road right-of-way shall have the same finished pitch as the roof on the structures on which they are intended to be mounted, and be no more than three (3) feet above the existing roof(s)—whether it is a pitched or flat roof.*
- G. All SES and supporting structures must consist of a non-reflective, unobtrusive color. No signage shall be permitted; however, the manufacturer's identification with ratings and the owner's contact information is allowed.*
- H. At Solar Energy Systems—Commercial (SES-C) project sites, an acceptable access and turn-around area shall be provided to assure adequate emergency and service access. Maximum use of existing roads, whether public or private, shall be made to the extent practicable. Road construction shall at all times minimize ground disturbance and the cutting of vegetation. Road grades shall closely follow natural contours to assure minimal visual disturbance and reduce soil erosion.*



- I. If an easement is required for location of a SES on the property, the easement shall be staked by a licensed and registered land surveyor so as to provide proof that the improvements have been constructed within the easement.*
- J. As set forth in Article 5 of this Resolution, the outside storage of materials, vehicles, products, parts or other similar items shall be prohibited unless approved as a principal permitted use through Site Plan Review (See Article 11). In situations where outside storage exists or is proposed, the Development Director or designee shall have the authority to determine the appropriate screening.*

755. Solar Energy Systems – Accessory (SES-As)

This Section applies to all zoning districts in Union Township.

- A. Permits: A zoning permit, as set forth in Article 2 of this Resolution, shall be required prior to the construction, erection, placement, modification, or alteration of a Solar Energy System—Accessory (SES-A), except where exempted as applicable by Section 752 of this Article. A building permit may also be required.*
- B. Applicability: Any lawfully established SES-A, as defined, shall meet the Solar Energy System standards set forth in this Section.*
- C. Location:*
- 1. Rooftop SES shall be placed only on the roof of a structure.*
 - 2. Ground-mounted SES shall be placed within areas that meet the permitted setback requirements for accessory structures, in the applicable zoning district associated with the property.*
- D. Height Limit: The height of any Ground-Mounted SES is limited to twenty (20) feet, as measured from the natural grade below each panel to the top of each panel at its maximum tilt in the vertical direction. Rooftop and Integrated SES-As may exceed the maximum allowed building height of the building or structure in which it is located by up to three (3) feet in all zoning districts.*



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E. Residential Design: *In areas zoned Residential, Ground-Mounted SES shall be located behind the front of the principal residential structure.*

F. Decommissioning: *SES-As that are no longer producing energy for consumption using electricity shall be removed no later than six (6) months after final energy production occurs.*

G. Declaration of Public Nuisance: *Any SES-A, structure or portion thereof declared to be unsafe by the Township, by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage or abandonment is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal in accordance with best practices.*

756. Pre-Application Meeting

Prior to the submittal of an application that does not involve an exempt SES structure (as set forth in Section 752 of this Article) or a Solar Energy Systems – Accessory (SES-A), the applicant is required to contact the Township and its designated representatives to schedule a pre-application meeting. The purpose of this meeting is to address potential issues, which will help expedite the review and permitting process. The pre-application meeting shall include a site visit, if there has not been a prior site visit for the proposed site.



757. Solar Energy Systems – Commercial (SES-Cs)

This Section applies to all Industrial (M-1) zoning districts. For SES-Cs that are proposed to be located in an Estate Residential (ER) zoning district or a Business (B-1) zoning district, a Conditional Use Permit must be obtained.

- A. Permits: A Site Plan Review, in accordance with criteria set forth in Article 11 of this Resolution, shall be required prior to the construction, erection, placement, modification, or alteration of any SES-C. A building permit may also be required.***
- B. Applicability: Any lawfully established SES-C, as defined, shall meet the SES standards set forth in this Section.***
- C. Location:***
 - 1. Minimum Setback from Adjacent Non-Participating Properties: Any SES-C equipment, excluding perimeter fencing, poles, and wire necessary to connect the facility to an electric utility, must be setback at least one-hundred-and-fifty feet (150) feet from any property line of a non-participating landowner.***
 - 2. Minimum Setbacks from Adjacent Primary Structures for Non-Participating Properties: Any SES-C equipment, excluding perimeter fencing, poles, and wire necessary to connect the facility to an electric utility, must be setback at least two-hundred (200) feet from any primary structure(s) on property that is not part of the SES-C.***
 - 3. Minimum Setbacks from Adjacent Properties for Participating Properties: Property line setbacks between separate parcels of different ownership—both or all of which are participating as part of an SES-C—may be waived upon agreement of the landowners.***
 - 4. Minimum Setbacks from Principal Structures for Participating Properties: Any SES-C equipment, excluding perimeter fencing, poles, and wire necessary to connect the facility to an electric utility, must be setback at the same distance as the nearest primary structure on property that is part of the SES-C.***



5. *Minimum Setbacks from Adjacent Properties for Participating Properties: Any SES-C equipment, excluding perimeter fencing, poles, and wire necessary to connect the facility to an electric utility, must be setback at the same distance as a primary structure in the zoning district in which it is located—except for any pieces of equipment (such as inverters) that create objectionable sound levels during normal operations, which must meet the 150-foot setback set forth in item C1 of this Section for Adjacent Non-Participating Properties.*

D. Design:

1. *Height Limit: The height of any SES-C ground-mounted solar equipment is limited to twenty (20) feet, as measured from the natural grade below each panel to the top of each panel at its maximum tilt in the vertical direction. Rooftop and Integrated SES may exceed the maximum allowed building height of the building or structure in which it is located by up to three (3) feet in all zoning districts.*
2. *Fencing: All SES-Cs and their appurtenant structures shall be located, fenced or otherwise secured in a manner that prevents unauthorized access. SES-C sites must have a completely fenced perimeter that is wildlife-friendly and can include clearance at the bottom of six (6) inches or less. The fencing for the perimeter must be at least six (6) feet in height with locking gate access and be designed to be harmonious with the natural surroundings to the extent feasible. Alternative fencing can be requested as part of the Site Plan Review process if the site is either incorporating agrivoltaics, or if the applicant is proposing alternative fencing and / or other barriers—including those that are natural— that are determined by Union Township to be equal to or better than the Resolution requirements and the intent of this Article.*
3. *Access: The operator of a SES-C must provide an emergency (knox) box with keys to the site and equipment lockers on site at the main entrance or an alternative emergency access solution to the site approved by the Development Director, or designee.*



- 4. Visual Buffers:** *A SES-C shall have, to the extent reasonably practicable, a visual buffer that is at least twenty (20) feet wide and provides a reasonable visual and lighting screen to reduce the view of the SES-C from: 1) the exterior perimeter of the fenced area of the site; and 2) non-participating residential uses and structures on adjacent lots, including those lots located across a road right-of-way (as set forth earlier in this Section). Visual buffers must be established and maintained in accordance with the most recent landscaping and bufferyard plan, and must meet the requirements below:*
- a. The buffer shall be installed to obscure the SES-C and shall contain staggered evergreen trees or bushes planted not less than eight (8) feet apart linearly. The Township may consider an alternative landscape buffer as a part of the zoning review, provided the alternative provides adequate screening, as determined by Union Township.*
 - b. Plantings shall be least four (4) feet tall at time of planting and shall reach a height of ten (10) feet within three (3) growing seasons.*
 - c. The trees may be trimmed but must maintain a height of at least ten (10) feet after the third growing season.*
 - d. Good husbandry techniques shall be followed with respect to vegetation, including but not limited to, proper pruning, proper fertilizing, and proper mulching, so that the vegetation will reach maturity as soon as practical and will have maximum density in foliage. Dead or diseased vegetation shall be removed and must be replanted in a manner consistent with this Section at the next appropriate planting time.*
 - e. Plants or grasses not part of the buffer area shall be maintained not to exceed a height of twelve (12) inches. The Township may approve a taller height upon a finding that it will not result in a nuisance.*
- 5. Ground Cover:** *Pollinator-friendly seed mixes and native plants are required around ground-mounted SES. *The Development Director or his or her designee may approve the redistribution of some of the required ground cover landscaping to other locations on the site, including required bufferyards.*



6. *Drainage: All Solar Energy Systems must meet the requirements of the County and Township regarding drainage and erosion control. Stormwater design and calculations must be done in accordance with Clermont County Water Management and Sediment Control (WMSC) regulations. Additionally, permits must also be obtained from Clermont County where applicable.*
7. *Lighting: Exterior lighting for a SES-C site shall be limited to that required for safety and operational purposes. If lighting is required, the Applicant shall provide a detailed lighting plan that meets all applicable Township, State and Federal regulations.*
8. *Signage: All Solar Energy Systems – Commercial (SES-Cs) and their appurtenant structures shall contain a standard metal road sign no larger than four (4) square feet in order to provide the name(s) of the owner(s) and operator(s) of the SES-C as well as emergency phone number(s) and the address of the site. This sign shall be visible from the access point of the site—but shall be located just outside of the road right-of-way, outside of the sight triangles in either direction—and shall not be lighted, unless lighting is required by applicable law, rule or regulation. A four (4) square-foot warning sign concerning voltage must also be placed at the base of all pad-mounted transformers and substations in a conspicuous location. No other signage, including advertising, shall be permitted.*
9. *Safety and Security: A safety and security plan must be submitted and must contain adequate provisions for site security and safety—including those involving emergency service responders. Union Township will share the plan with all affected service providers and obtain comments for the plan from each, along with their acknowledgment that they are capable of performing their respective duties under the plan. If necessary, the applicant will be responsible for providing training to Union Township service providers to ensure they can provide adequate services to the SES-C pursuant to the safety and security plan.*



E. Decommissioning: A decommissioning plan, which must be prepared by a professional engineer, contractor, or other person with expertise or experience in decommissioning and removal of SES-C, shall be provided indicating the method of removing the SES-C at the end of its serviceable life, or upon discontinuance or abandonment of the SES-C.

1. Content: The decommissioning plan shall include, at a minimum, the following:

Written assurances shall be provided that the SES-C will be properly decommissioned upon discontinuance, abandonment, of the expiration of the serviceable life of the SES-C.

2. Discontinuation: Any SES-C shall be considered abandoned and a discontinued use, if at any time, any of the following apply:

i. The system has been abandoned for a period of one hundred-eighty (180) days in any three hundred-sixty-five (365) day period. For properties involving foreclosure, vacant residential structures, or for other unusual or extreme circumstances, a waiver may be requested to extend this time period. All waiver requests of this specific type must be submitted in writing to the Development Director or designee and may be issued only if the waiver is determined to be necessary and if the requested waiver does not adversely affect the other requirements of this Article;

ii. The system falls into such a state of disrepair that it creates a health or safety hazard;

b. Removal: An applicant's obligations shall include removal of all physical material pertaining to the project improvements to no less than a depth of four (4) feet below ground level. Said work shall be completed within 365 days of the discontinuation or abandonment of the SES-C. The restoration of the project area shall result in as near as practicable the condition of the site immediately before construction of such improvements.



- c. *Waste Management: All solid waste, whether generated from supplies, equipment, parts, packaging, operation, or maintenance of the system and associated facilities (including old parts and equipment) shall be removed from the site in a timely manner consistent with industry standards. All hazardous waste generated by the operation and maintenance of the facility, including but not limited to lubricating materials, cleaning materials, batteries, etc. shall be handled in a manner consistent with local, State, and Federal waste disposal rules and regulations and shall not be allowed to seep into the ground or come into contact with any open water.*
- d. *Written Notices: In the event Union Township reasonably believes an SES-C has not been properly decommissioned in accordance with this Section, the Township shall provide written notice to the SES-C owner and / or operator setting forth the alleged noncompliance with this Section. Such notice shall provide the owner and / or operator a reasonable time period, not to exceed sixty (60) days unless the Development Director determines good cause is shown for an extension, to resolve the issue. If the owner and / or operator fails to resolve the issue, the Township may take any available remedial action to enforce this Section.*
- e. *Costs Incurred by the Township: If Union Township removes a SES-C and/or appurtenant facilities, it may sell the salvage to defray the costs of removal. Each permittee, by virtue of the issuance of its construction permit or inspection certificate grants a license to Union Township to enter the property and to remove all commercial SES and/or appurtenant facilities pursuant to the terms of its approved decommissioning plan.*
- F. *Declaration of Public Nuisance: Any SES-C, structure or portion thereof declared to be unsafe by the Township, by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage or abandonment is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal in accordance with the approved decommissioning plan.*



758. Solar Energy Systems – Commercial (SES-Cs) Requiring Conditional Use Permit

For SEC-Cs that require conditional use approval from the Township (in accordance with Article 4 of this Resolution), the Township may disapprove a conditional use application for any of the following reasons (in addition to any other reason set forth in Article 4):

- 1. Conflict with safety and safety-related codes and requirements;***
- 2. Conflict with the historic nature or character of a neighborhood or historical district;***
- 3. Conflict with a purpose of an existing, specific zoning or land use designation;***
- 4. The placement and location of the SES would create an unacceptable risk, or the reasonable probability of such, to residents, the public, employees and agents of the Township, or employees of the service provider or other service providers;***
- 5. Conflicts with the provisions of this Resolution.***

759. Retention of Expert Assistance and Reimbursement by Applicant

The Township may require a 3rd party, independent review by experts to assist Township staff in reviewing and evaluating SES-C applications, particularly those involving new construction or one or more significant modification(s) of the site. The Applicant shall bear all reasonable costs associated with the 3rd party expert evaluation and consultation(s) to the Township. Where it is deemed applicable and necessary, the Township must agree to the scope and complexity of the project before a reputable, mutually agreed upon 3rd party expert can be selected by both the Township and Applicant. At minimum, the 3rd party expert must evaluate and analyze the application in consideration of all of the applicable Township ordinances, must determine whether the application is complete or not, and must identify if there are any compliance issues or a need for one (1) or more Variances.



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760. Maintenance and Inspections

Any physical modification to the SES-C must be reported to the Development Director or his or her designee to determine if it is necessary to have the SES-C re-certified by a professional engineer licensed in the State of Ohio and to determine if a new zoning permit is required.

The Union Township Development Director or his or her designee will be responsible for contacting all owners or operators of a SES-C that does not meet applicable codes and regulations. Once notified in writing, the owner or operator of a SES-C will be required to address any repairs or alterations within thirty (30) days after receiving notice—or within a longer period of time mutually acceptable to both parties. During this time period, the owner or operator of a SES-C may retain a licensed 3rd party professional engineer familiar with SES-C systems to prepare and submit to the appropriate Union Township officials a written report which addresses the repairs or alterations required, and which suggests alternate methods for addressing the concerns or provides evidence that said repairs or alterations are unnecessary. The Union Township Development Director or his or her designee will consider any such written report and determine whether the repairs or alterations should be made as originally requested, or as suggested in the written report.

762. Avoidance and Mitigation of Damages to Public Infrastructure

Applicants of all Solar Energy Systems—Commercial (SES-Cs) shall identify all roads to be used for the purpose of transporting system materials, parts, and / or equipment for the construction, operation, or maintenance of the SES-C and shall:

- 1. Conduct a pre-construction baseline survey in coordination with the impacted transportation authorities to determine existing road conditions. The survey shall include photographs and a written agreement to document the condition of the public facility as the SES-C is being constructed;***
- 2. Obtain any applicable weight and size permits from all impacted transportation authorities prior to construction;***



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~~3. Prepare a written statement that acknowledges that the Applicant will be responsible for addressing on-going road maintenance, drainage, erosion control, or dust issues identified by the Union Township Service Department, the Ohio Department of Transportation (ODOT), the Ohio Environmental Protection Agency (Ohio EPA), or another applicable public agent during all phases of the construction process. All such issues must be addressed in the prescribed time(s) and manner(s) set forth by the applicable governmental entity.~~

762. Variances

The Board of Zoning Appeals may grant a Variance for any requirement of this Article if it determines that such action is warranted given the nature of an individual project, and that such action will serve to preserve the purpose and intent of these regulations.



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(ER, Estate Residential District and B-1 Business District)

Please refer to Article 6, Sections 612 and 662 of the Zoning Resolution:

“612. Conditional Uses. (ER Residential District)

- Add “*Solar Energy System – Commercial (SES-Cs)*”

(ER, Estate Residential District, R-1 Single Family Detached Structure Zoning Districts, R-2 Single Family Detached Structure Zoning Districts, R-3 Planned Multifamily Residential Zone, R-4 Single Family Variable Structure Residential Zone, B-1 Business Zone, M-1 Industrial Zone)

Please refer to Article 6, Sections 613, 623, 634, 653, 663 and 673 of the Zoning Resolution:

“...Accessory Uses, *Provided a Principal Permitted Use Exists...*

- Add “*Solar Energy System–Accessory (SES-A)*”

(1M-1 Industrial Zone)

Please refer to Article 6, Section 671 of the Zoning Resolution:

“...Principal Permitted Uses...

- Add “*Solar Energy System–Commercial (SES-C)*”