LUC MODEL ZONING TEXT

Solar Energy: Definitions

Article *XXXX* Definitions.

Solar energy related definitions:

a) **Accessory Solar Energy**: A solar collection system consisting of one or more roof/structure mounted and/or ground/pole mounted solar collector devices and solar related equipment, and is intended to primarily reduce on-site consumption of utility power. A system is considered an accessory solar energy system only if it supplies electrical or thermal power solely for on-site use, except that when a property upon which the system is installed also receives electrical power supplied by a utility company, excess electrical power generated and not presently needed for on-site use may be used by the utility company.

b) **Principal Solar Energy Production Facility**: An area of land or other area used for a solar collection system principally used to capture solar energy and convert it to electrical energy. These production facilities primarily produce electricity to be used off-site. ~~Large~~ Principal solar energy production facilities consist of one or more free-standing ground/pole, or roof/structure 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 and facilities. ~~These production facilities primarily produce electricity to be provided off-site.~~Examples include "Small Solar Facility" and "Community Solar Facility" as defined by statute or herein.

c) **Solar Energy Equipment**: Items for the purpose of generation, transmission, and storage of electricity, including but not limited to a solar photovoltaic cell, solar panels, lines, pumps, inverter, batteries, mounting brackets, framing and/or foundation used for or intended to be used for the collection of solar energy.

d) **Solar Photovoltaic (PV)**: The technology that uses a semiconductor to convert light directly into electricity.

e) **Clear Fall Zone (Solar Energy):** An area surrounding a ground/pole mounted solar energy system into which the system and/or components might fall due to inclement weather, poor maintenance, faulty construction methods, or any other condition causing the structure's failure that shall remain unobstructed and confined within the property lines of the ~~primary~~ lot where the system is located. The purpose of the zone being that if the system should fall or otherwise become damaged, the falling structure will be confined to the ~~primary parcel~~ lot and will not intrude onto a neighboring property.

f) **Small Solar Facility:** Pursuant to ORC 519.213(A)(2), "Small Solar Facility" means solar panels and associated facilities with a single interconnection to the electrical grid and designed for, or capable of, operation at an aggregate capacity of less than 50 MW.

g) **Community Solar:** Also known as shared solar, or solar gardens, is an energy model that allows customers to buy or lease part of a larger off-site shared solar photovoltaic (PV) system. For the purposes of this Resolution, "Community Solar" is considered to be a "Principal Solar Energy Production Facility".

LUC Model Text (Zoning & Subdivision ~~Committee; July~~Committee; July 9, 2020)
LUC Model Text, Updated (Zoning & Subdivision Committee;)

LUC MODEL ZONING TEXT

Solar Energy Systems (Version 1)

Section *XXXX* Small Solar Energy Systems (Less than 50 MW)

A. Accessory Solar Energy Systems

It is the purpose of this regulation to promote the safe, effective, and efficient use of accessory solar energy systems installed to reduce the on-site consumption of utility-supplied electricity. An accessory solar energy system shall be considered a permitted accessory use in any district provided all requirements and regulations as set forth below are met.

No person shall cause, allow or maintain the use of an accessory solar energy system without first having obtained a zoning permit from the zoning inspector.

All accessory solar energy systems shall meet the following requirements:

1. A solar energy system is permitted in all zoning districts as an accessory to a principal use.
2. A solar energy system shall not be used for the generation of power for the sale or donation of energy to other users, although this provision shall not be interpreted to prohibit the sale or donation of excess power generated from time to time to the local utility company or the sale or donation of power as part of a net metering or similar arrangement. Net metering or similar arrangements are those where electricity produced by the accessory solar energy system displaces electricity that would otherwise be purchased from an electric utility or supplier for the lot where the accessory system is located. Net metering or similar arrangements shall be incidental and secondary to the production for on-site use.

~~2.~~3. Accessory solar energy systems with a generation output of five hundred (500) watts or less, or a combination of accessory solar energy systems with an aggregate generation output of five hundred (500) watts or less, shall not require a permit and shall be exempt from the requirements of this section, provided that the system is independent and disconnected from the electrical service(s) supplied to the lot on which the accessory solar energy system is located.

~~3.~~4. Roof/~~Structure~~ Building mounted solar energy systems:

~~a. Shall be flush-mounted, or as long as it matches the slope of the roof, shall have a maximum tilt of no more than five (5) percent steeper than the roof pitch on which it is mounted.~~

~~b.~~a. Shall not extend beyond the perimeter (or edge of roof) of the building on which it is located.

~~c.~~b. May be mounted to a principal or accessory building.

~~d.~~ Combined height of the solar energy system and building to which it is mounted may not exceed the ridgeline of the roof for hip, gable, and gambrel roofs ~~and may not be taller than eighteen (18) inches above the roofline of a flat roof~~.

~~4.~~5. Ground/Pole mounted solar energy systems:

a. Shall be no taller than seventy-five (75) percent of the maximum building height allowed in that zoning district for accessory buildings.
b. Shall be permitted in the rear or side yard only.
c. Shall be erected within an established clear fall zone.
d. The minimum setback distance from the property lines for structures comprising solar energy systems and all related equipment shall be at least one hundred ten (110) percent of the height of any structure or at least twenty (20) feet from the nearest property line, whichever is greater.

6. Other structure-mounted solar energy systems:

a. Shall be no taller than seventy-five (75) percent of the maximum building height allowed in that zoning district for accessory buildings.
b. Shall be permitted in the rear or side yard only.
c. Shall be erected within an established clear fall zone.
d. The minimum setback distance from the property lines for structures comprising solar energy systems and all related equipment shall be at least one hundred ten (110) percent of the height of any structure or at least twenty (20) feet from the nearest property line, whichever is greater.

~~5.~~7. Solar energy systems shall be designed and located in order to prevent reflective glare toward any inhabited structure on adjacent properties as well as adjacent street right of ways.

~~6.~~8. Solar energy systems and all solar energy equipment that are no longer functioning shall be completely removed from the property within six (6) months from the date they are no longer producing electricity, become damaged, discontinued or broken. Any earth disturbance as a result of the removal of the ground mounted solar energy system shall be graded and reseeded within thirty (30) days of removal.

~~7.~~9. In addition to the site plan required for any zoning permit or conditional use permit, the following shall also be submitted at the time of application and shall include:

a. ~~Elevation~~ Height of the proposed solar energy system(s) at maximum tilt.
b. Evidence of established setbacks of 1.1 times the height of any ~~structure~~ ground/pole mounted or other structure-mounted solar energy system and "clear fall zone".
c. Proof of notice to the electric utility company, Soil and Water Conservation District (for drainage impact purposes) and County Health Department/District (for on-site sewage treatment impacts) regarding the proposal.

~~d. Letter from the County Health Department/District or appropriate sanitary sewer operating authority stating location will not interfere with the septic or sewer system, whichever is applicable, on the property.~~

B. Principal Solar Energy Production Facilities

No Principal Solar Energy Production Facility shall be located in a zoning district where such facilities are not explicitly listed as a permitted or conditionally permitted use.

It is not the purpose of this regulation to regulate a major utility facility, or subsidiary use, as defined by the Ohio Power Siting Board (50 MW or greater). It is also not the purpose of this regulation to regulate public utilities that meet the definitions as stated in the O.R.C. 4905.02 or O.R.C. 4905.03 and the three criteria of O.R.C. 4905.65(B).

Principal Solar Energy Production Facilities are prohibited in any district.

LUC Model Text (Zoning & Subdivision ~~Committee; July~~Committee; July 9, 2020)
LUC Model Text, Updated (Zoning & Subdivision Committee; _____)

LUC MODEL ZONING TEXT

Solar Energy Systems (Version 2)

Section *XXXX* Small Solar Energy Systems (Less than 50 MW)

A. Accessory Solar Energy Systems

It is the purpose of this regulation to promote the safe, effective, and efficient use of accessory solar energy systems installed to reduce the on-site consumption of utility-supplied electricity. An accessory solar energy system shall be considered a permitted accessory use in any district provided all requirements and regulations as set forth below are met.

No person shall cause, allow or maintain the use of an accessory solar energy system without first having obtained a zoning permit from the zoning inspector.

All accessory solar energy systems shall meet the following requirements:

1. A solar energy system is permitted in all zoning districts as an accessory to a principal use.
2. A solar energy system shall not be used for the generation of power for the sale or donation of energy to other users, although this provision shall not be interpreted to prohibit the sale or donation of excess power generated from time to time to the local utility company or the sale of donation of power as part of a net metering or similar arrangement. Net metering or similar arrangements are those where electricity produced by the accessory solar energy system displaces electricity that would otherwise be purchased from an electric utility or supplier for the lot where the accessory system is located. Net metering or similar arrangements shall be incidental and secondary to the production for on-site use.

~~2.~~3. Accessory solar energy systems with a generation output of five hundred (500) watts or less, or a combination of accessory solar energy systems with an aggregate generation output of five hundred (500) watts or less, shall not require a permit and shall be exempt from the requirements of this section, provided that the system is independent and disconnected from the electrical service(s) supplied to the lot on which the accessory solar energy system is located.

~~3.~~4. Roof/~~Structure~~Building mounted solar energy systems:

~~a. Shall be flush-mounted, or as long as it matches the slope of the roof, shall have a maximum tilt of no more than five (5) percent steeper than the roof pitch on which it is mounted.~~

~~b.~~a. Shall not extend beyond the perimeter (or edge of roof) of the building on which it is located.

~~c.~~b. May be mounted to a principal or accessory building.

~~d.~~ Combined height of the solar energy system and building to which it is mounted may not exceed the ridgeline of the roof for hip, gable, and gambrel roofs ~~and may not be taller than eighteen (18) inches above the roofline of a flat roof~~.

~~4.~~5. Ground/Pole mounted solar energy systems:

a. Shall be no taller than seventy-five (75) percent of the maximum building height allowed in that zoning district for accessory buildings.
b. Shall be permitted in the rear or side yard only.
c. Shall be erected within an established clear fall zone.
d. The minimum setback distance from the property lines for structures comprising the solar energy systems and all related equipment shall be at least one hundred ten (110) percent of the height~~s~~ of ~~the solar energy system~~any structure or at least twenty (20) feet from the nearest property line, whichever is greater.

6. Other structure-mounted solar energy systems:

a. Shall be no taller than seventy-five (75) percent of the maximum building height allowed in that zoning district for accessory buildings.
b. Shall be permitted in the rear or side yard only.
c. Shall be erected within an established clear fall zone.
d. The minimum setback distance from the property lines for structures comprising solar energy systems and all related equipment shall be at least one hundred ten (110) percent of the height of any structure or at least twenty (20) feet from the nearest property line, whichever is greater.

~~5.~~7. Solar energy systems shall be designed and located in order to prevent reflective glare toward any inhabited structure on adjacent properties as well as adjacent street right of ways.

~~6.~~8. Solar energy systems and all solar energy equipment that are no longer functioning shall be completely removed from the property within six (6) months from the date they are no longer producing electricity, become damaged, discontinued or broken. Any earth disturbance as a result of the removal of the ground mounted solar energy system shall be graded and reseeded within thirty (30) days of removal.

~~7.~~9. In addition to the site plan required for any zoning permit or conditional use permit, the following shall also be submitted at the time of application and shall include:

a. ~~Elevation~~ Height of the proposed solar energy system(s) at maximum tilt.
b. Evidence of established setbacks of 1.1. times the height of any ~~structure~~ ground/pole mounted or other structure-mounted solar energy systems and "clear fall zone".
c. Proof of notice to the electric company, Soil and Water Conservation District (for drainage impact purposes) and County Health Department/District (for on-site sewage treatment impacts) regarding the proposal.

~~d. Letter from the County Health Department/District or appropriate sanitary sewer operating authority stating location will not interfere with the septic or sewer system, whichever is applicable, on the property.~~

B. Principal Solar Energy Production Facilities

It is the purpose of this regulation to promote the safe, effective and efficient use of principal solar energy production facilities principally designed to produce greater levels of electrical energy, either for consumers with higher energy demand levels or designed primarily to produce energy to be supplied directly to the electrical grid. No Principal Solar Energy Production Facility shall be located in a zoning district where such facilities are not explicitly listed as a permitted or conditionally permitted use.

It is not the purpose of this regulation to regulate a major utility facility, or subsidiary use, as defined by the Ohio Power Siting Board (50 MW or greater). It is also not the purpose of this regulation to regulate public utilities that meet the definitions as stated in the O.R.C. 4905.02 or O.R.C. 4905.03 and the three criteria of O.R.C. 4905.65(B).

All principal solar energy production facilities shall meet the following requirements:

1. The proposed solar energy project must be located on a lot of at least ~~five (5)~~ ten (10) acres ~~of land~~ in size.
2. For purposes of determining lot coverage, the total surface area of all ground/pole mounted ~~and freestanding solar collectors~~solar energy systems including cells, panels, and water collector devices shall be considered impervious and shall count toward the maximum percent of a lot to be occupied. This is in addition to any standard calculation as defined in this Resolution for lot coverage. ~~Panels mounted on the roof of any building shall be subject to the maximum height regulations as specified in the underlying zoning district.~~
3. To the extent feasible, all on-site utility and transmission lines, that are the responsibility of the principal solar energy production facility to maintain, shall be placed underground.
4. Roof/~~Structure~~Building mounted solar energy systems:
    ~~a. Shall be flush-mounted, or as long as it matches the slope of the roof, shall have a maximum tilt of no more than five (5) percent steeper than the roof pitch on which it is mounted.~~
    ~~b.~~a. Shall not extend beyond the perimeter (or edge of roof) of the building on which it is located.
    ~~c.~~b. May be mounted to a principal or accessory building.
    ~~d.~~ Combined height of the solar energy system and building to which it is mounted may not exceed the ridgeline of the roof for hip, gable, and gambrel roofs ~~and may not be taller than eighteen (18) inches above the roofline of a flat roof~~.

5. Ground/Pole mounted solar energy systems:
    a. Shall be no taller than seventy-five (75) percent of the maximum building height allowed in that zoning district for accessory buildings.
    b. Shall be erected within an established clear fall zone.
    c. The minimum setback distance from the property lines for structures comprising solar energy systems and all related equipment shall be at least one hundred ten (110) percent of the height of any structure or at least twenty (20) feet from the nearest property line, whichever is greater.
6. Other structure-mounted solar energy systems:
    a. Shall be no taller than seventy-five (75) percent of the maximum building height allowed in that zoning district for accessory buildings.
    ~~Shall be permitted in the rear or side yard only.~~
    b. Shall be erected within an established clear fall zone.
    ~~b.~~c. The minimum setback distance from the property lines for structures comprising solar energy systems and all related equipment shall be at least one hundred ten (110) percent of the height of any structure or at least twenty (20) feet from the nearest property line, whichever is greater.

~~6.~~7. Solar energy systems shall be designed and located in order to prevent reflective glare towards any inhabited building on adjacent properties as well as adjacent street ~~right of ways~~right-of-way. Applicants must complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT), or an equivalent report, for neighboring lots and right-of-way.

~~7.~~8. The proposed principal solar energy production facility must comply with any applicable airport zoning overlay and height restrictions, and the ability to comply with the FAA regulations pertaining to hazards to air navigation must be demonstrated.

9. All mechanical equipment of solar energy systems including any structure for batteries or storage cells, shall be completely enclosed by a minimum ~~eight (8)~~ seven (7) foot high fence with a self-locking gate, and provide screening in accordance with the zoning resolution.

10. Screening shall be established in accordance with the provisions of this Resolution, be maintained in good condition, and free of all advertising or other signs . In addition to any other screening requirements of this Resolution, the following standards shall apply:
    a. Any buildings and solar energy equipment shall be screened from ground-level view from any adjacent road right-of-way, any adjacent lot with a residential use, and any residential zoning district.
    b. Screening shall consist of vegetation, mounding, natural landforms, or any combination thereof. Screening may be supplemented by fencing or walls, but shall not be the primary method.
        i. Fencing shall incorporate gaps or spaces of at least six (6) inches by six (6) inches to allow passage of small mammals.

c. Screening shall be a minimum of six (6) feet in height.
d. Mounding shall be seeded and planted with trees. The base of the mound shall not be graded at an angle greater than forty five degrees (45°).
~~a.~~ e. Screening shall be clustered around groups of solar energy equipment and buildings and not the entirety of the lot to allow for "wildlife corridors" where wildlife can traverse the lot.

11. Buffering shall be established in accordance with the provisions of this Resolution. In addition to any other buffering requirements of this Resolution, the following standards shall apply:
    a. A one-hundred and twenty (120) foot ~~buffer~~setback along stream boundaries (including ephemeral and intermittent streams).
    b. A one-hundred and twenty (120) foot ~~buffer~~setback from Category 1 and 2 wetland boundaries.
    c. A three-hundred (300) foot ~~buffer~~setback from Category 3 wetland boundaries.
12. Setback requirements for solar energy equipment not housed in a building, shall be:
    a. One-hundred and fifty (150) feet from lot lines of non-participating lots.
    b. Three-hundred (300) feet from any dwelling.
    c. One-hundred and fifty (150) feet from the edge of any adjacent road right-of-way.

~~8.~~ Setbacks for all other buildings and structures from ~~property~~ lot lines and adjacent zoning districts shall be twenty (20) feet or the principal structure setback for the underlying zoning district, whichever is greater.
    ~~a. Roof-mounted solar energy equipment are exempt from setback requirements, provided that the equipment is located within the footprint of the roof.~~

13. Ingress and egress driveways, interior access/maintenance roads, and any off-street parking and circulation routes shall be constructed with a durable and dust-free surface.
14. Areas that are undeveloped, areas not required for regular maintenance, and other spaces not devoted to the active use of the lot (such as in between rows of ground mounted solar panels) shall be landscaped with vegetation in such a manner as to prevent soil erosion by wind or rain or the spreading of invasive species and noxious weeds. Plantings shall follow the standards set forth in the Ohio Department of Natural Resources (ODNR) *Guidance for Proposed Solar Energy Facilities in Ohio*.

~~9.~~15. Solar energy systems and all solar energy equipment that are no longer functioning shall be completely removed from the property within six (6) months from the date they are no longer producing electricity, become damaged, discontinued or broken. Any earth disturbance as a result of the removal of the ground mounted solar energy system shall be graded and reseeded within thirty (30) days of removal.

~~10.~~16. In addition to the site plan required for any zoning permit or conditional use permit, the following shall also be submitted at the time of the application and shall include:

a. ~~Elevation~~ Height of the proposed solar energy system(s) at maximum tilt.
b. Evidence of established setbacks of 1.1 times the height of any ~~structure~~ ground/pole mounted or other structure-mounted solar energy systems and "clear fall zone".
c. Proof of notice to the electric utility, Soil and Water Conservation District (for drainage impact purposes) and County Health Department/District (for on-site sewage treatment impacts) ~~company~~ regarding the proposal.
~~d. Letter from the County Health Department/District or appropriate sanitary sewer operating authority stating location will not interfere with the septic or sewer system, whichever is applicable, on the property.~~
d. Letters from the County Engineer, Township, and State Department of Transportation regarding the status of any Road User Maintenance Agreement.
e. A drainage plan, including any methods of stormwater management, and existence of any subsurface drainage systems. The County Engineer's Office, Soil and Water Conservation District, and if applicable, the Farm Service Agency shall be contacted to confirm the existence, or potential existence, and location of any subsurface drainage systems.
f. Proof of notice and/or compliance with County-level stormwater and sediment control regulations.
g. A narrative of expected and potential impacts to ecological, cultural, archeological, and agricultural resources and impacts to neighboring land uses.~~l~~
h. A landscaping plan.
i. A screening and buffering plan, including any wildlife corridors.
j. A narrative addressing the expected life span of the facility, expected regular maintenance activities, and an end-of-life decommissioning plan.
~~e.~~k. A list of all adjacent property owners, their parcel numbers, and addresses.

LUC Model Text (Zoning & Subdivision Committee; July 9, 2020)
LUC Model Text, Updated (Zoning & Subdivision Committee; _____)