

ORDINANCE NO. 001 -2022

**AN ORDINANCE AMENDING CHAPTER 118-2
OF THE MUNICIPAL CODE OF THE CITY OF OTTAWA, ILLINOIS
(Solar Energy System/Text Amendments)**

WHEREAS, the Plan Commission of the City of Ottawa, Illinois, met at a public hearing in the Council Chambers of the City of Ottawa pursuant to a notice of the time and place of the hearing by publication in The Times of Ottawa, Illinois, on November 22, 2021 at 7:00 p.m., to hear evidence regarding zoning for solar energy installations and systems and proposed amendments to Chapter 118-2 of the Municipal Code of the City of Ottawa, Illinois (the Code); and,

WHEREAS, the Plan Commission of the City of Ottawa, Illinois, having heard the evidence produced at the public hearing, recommends to the Council of the City of Ottawa Illinois, as follows: (i) to allow solar energy systems as a permitted accessory use in all zoning districts if the specific requirements set forth in the ordinance are met, (ii) to allow accessory use solar energy systems as a conditional use in all zoning districts if the specific requirements set forth in the ordinance are not met, (iii) to allow as a primary use community scale solar energy systems as a conditional use in residential and commercial districts and as a permitted use in “D” Commercial and Light Industrial District, “E” Industrial District, “M” Mining District, “R” Rural District, and “POS” Park and Open Space District, and (iv) to allow as a primary use large scale solar energy systems as a conditional use in “D” Commercial and Light Industrial District, “E” Industrial District, “M” Mining District, “R” Rural District, and “POS” Park and Open Space District.

WHEREAS, the City Council of the City of Ottawa, Illinois finds these amendments to Section 118-2 of the Code are in the best interest of the public safety, convenience, and general welfare, and would be in harmony with the general purpose and intent of said Code.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF OTTAWA, ILLINOIS, AS FOLLOWS:

Section One: That the foregoing recitals are incorporated herein by reference as if set forth verbatim.

Section Two: That Section 118-2 is hereby amended by the addition of subsection (s) to read as follows:

(s) Solar Energy Systems.

- (1) *Scope.* This articles applies to all solar energy installations in the City of Ottawa
- (2) *Purpose and Intent.* The purpose of these regulations is to provide a uniform and comprehensive set of standards for the installation and use of solar energy systems. The City of Ottawa has adopted these regulations of the following purposes:
 - a. Climate change goals – The City of Ottawa is committed to reducing carbon and other greenhouse gas emissions. Solar energy is abundant, renewable, and non-polluting energy resource and its conversion to electricity or heat reduces dependence on nonrenewable energy resources and decreases that results from the use of conventional energy sources.
 - b. Local resource – Solar energy is an underused local energy resource and encouraging the use of solar energy will diversify the community’s energy options.
- (3) *Definitions.* For purposes of this section, the following words and phrases will have the meanings respectively described to them by this Section:

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.

Building integrated solar energy systems - A solar energy system that is an integral part of a principal or accessory building, rather than a separate mechanical device, replacing or substituting for an architectural or structural component of the building. Building integrated systems include, but are not limited to, photovoltaic or hot water solar energy systems that are contained within roofing materials, windows, skylights, and awnings.

Community scale solar energy system - A commercial solar energy system that converts sunlight into electricity for the primary purpose of serving electric demands off-site from the facility, either retail or wholesale. Community scale systems are principal uses and typically cover less than 10 acres.

Community solar garden - A solar energy system that provides retail electric power (or a financial proxy for retail power) to multiple community members or businesses

residing or located off site from the location of the energy system. Also referred to as shared solar.

Grid-intertie solar energy system - A photovoltaic solar energy system that is connected to an electric circuit served by an electric utility company.

Ground mounted - A solar energy system mounted on a rack or pole that rests or is attached to the ground. Ground mounted systems can be either accessory or principal uses.

Large scale solar energy systems - A commercial solar energy system that converts sunlight into electricity for the primary purpose of wholesale sales of generated electricity. A large scale solar energy system will have a project size greater than 10 acres and is the principal use for the parcel(s) on which it is located.

Off grid solar energy system - A photovoltaic solar energy system in which the circuits energized by the solar energy system are not electrically connected in any way to electric circuits that are served by an electric utility company.

Passive solar energy system - A solar energy system that captures solar light or heat without transforming it to another form of energy or transferring the energy via a heat exchanger.

Photovoltaic system - A solar energy system that converts solar energy directly into electricity.

Pollinator friendly solar - A solar installation that has been recognized as a pollinator friendly installation by the Illinois Department of Natural Resources (IDNR), consistent with State Statutes 525 ILCS 55.

Renewable energy easement, solar energy easement - An easement that limits the height, location, or both, of permissible development on the burdened land in terms of a structure, vegetation, or both, for the purpose of providing access for the benefitted land to wind or sunlight passing over the burdened land.

Roof mounted - A solar energy system mounted on a rack that is fastened to or ballasted on a structure roof. Roof mounted systems are accessory to the principal use.

Roof pitch - The final exterior slope of a roof calculated by the rise over the run, typically but not exclusively expressed in twelfths such as 3/12, 9/12, or 12/12.

Solar access - Unobstructed access to direct sunlight on a lot or building through the entire year, including access across adjacent parcel air rights, for the purpose of capturing direct sunlight to operate a solar energy system.

Solar carport - A solar energy system of any size that is installed on a carport structure that is accessory to a parking area, and which may include electric vehicle supply equipment or energy storage facilities.

Solar collector - A device, structure or a part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, mechanical, chemical, or electrical energy. The collector does not include frames, supports, or mounting hardware.

Solar daylighting - Capturing and directing the visible light spectrum for use in illuminating interior building spaces in lieu of artificial lighting, usually by adding a device or design element to the building envelope.

Solar energy - Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

Solar energy system - A device, array of devices, or structural design feature, the purpose of which is provide for generation or storage of electricity from sunlight, or the collection, storage and distribution of solar energy for space heating or cooling, daylight for interior lighting, or water heating.

Solar hot air system - (also referred to as solar air heat or solar furnace) A solar energy system that includes a solar collector to provide direct supplemental space heating by heating and re-circulating conditioned building air. The most efficient performance includes a solar collector to preheat air or supplement building space heating, typically using a vertically mounted collector on a south facing wall.

Solar hot water system - A system that includes a solar collector and heat exchanger that heats or preheats water for building heating systems or other hot water needs, including residential domestic hot water for commercial processes.

Solar mounting devices - Racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or the ground.

Solar ready design - The design and construction of a building that facilitates and makes feasible the installation of rooftop solar.

Solar resource - A view of the sun from a specific point on a lot or building that is not obscured by any vegetation, building, or object for a minimum of four hours between the hours of 9:00 AM and 3:00 PM Standard time on all days of the year, and can be measured in annual watts per square meter.

- (4) *Permitted Accessory Use.* Solar energy systems are a permitted accessory use in all zoning districts where the structures of any sort are allowed, subject to certain requirements as set forth in this section. Solar carports and associated electric vehicle charging equipment are a permitted accessory use on surface parking lots in all districts regardless of the existence of another building. Solar energy systems that do not meet the design standards set forth in this subsection below will require a conditional use permit.

- a. *Height* – Solar energy systems must meet the following height requirements:
 1. Building or roof mounted solar energy systems shall not exceed the maximum allowed height in any zoning district. For purposes of height measurement, solar energy systems other than building integrated systems shall be given an equivalent exception to height standards as building mounted mechanical devices or equipment.
 2. Ground or pole mounted solar energy systems are not permitted in residential zoning districts, which includes “A-1” “A-2”, and “B”. Ground or pole mounted solar energy systems are permitted in all other non-residential zoning districts and shall not exceed 15 feet in height when orientated at maximum tilt.
 3. Solar carports in non-residential districts shall not exceed 20 feet in height.
- b. *Setback* – Solar energy systems must meet the accessory structure setback for the zoning district and principle land use associated with the lot on which the system is located, as permitted below.
 1. Roof or building mounted solar energy systems - The collector surface and mounting devices for roof mounted solar energy systems 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 extend beyond the edge and setback standards are not violated. Exterior piping for solar hot water systems shall be allowed to extend beyond the perimeter of the building on a side yard exposure. Solar collectors mounted on the sides of buildings and serving as awnings are considered to be building integrated systems and are regulated as awnings.
 2. Ground mounted solar energy systems - Ground mounted solar energy systems may not extend into the side yard or rear setback when orientated at minimum design tilt, except as otherwise allowed for building mechanical systems.
- c. *Visibility* - Solar energy systems in residential districts must be designed to minimize visual impacts from the public right-of-way (ROW), as described in below. Visibility standards do not apply to systems in non-residential districts, except for an historic building or district as described in subsection e below.
 1. Building integrated photovoltaic systems - Building integrated photovoltaic solar energy systems shall be allowed regardless of whether the system is visible from the public ROW, provided the building component in which the system is integrated meets all required setback, land use or performance standards for the district in which it is located.
 2. Aesthetic restrictions - Roof or ground mounted solar energy systems shall not be restricted for aesthetic reasons if the system is not visible from the closest edge of any public ROW other than an alley or if the system meets the following standards:

- i. Roof mounted systems on pitched roofs that are visible from the nearest edge of the front right-of-way shall have the same finished pitch as the roof and be no more than 10 inches above the roof.
 - ii. Roof mounted systems on flat roofs that are visible from the nearest edge of the front ROW shall not be more than 5 feet above the finished roof and are exempt from any rooftop equipment or mechanical system screening.
 3. Reflectors – All solar energy systems using a reflector to enhance solar production shall minimize the glare from the reflector affecting adjacent or nearby properties.
- d. *Lot coverage* - Ground mounted systems total collector area will not exceed half the building footprint of the principal structure.
 1. For non-residentially zoned properties, ground mounted systems shall be exempt from lot coverage or impervious surface standards if the soil under the collector is maintained in vegetation and not compacted.
 2. Ground mounted systems will not count toward accessory structure limitations
 3. Solar carports in non-residential districts are exempt from lot coverage limitations.
- e. *Historic buildings* – Solar energy systems on buildings within designated historic districts or on locally designed historic buildings (exclusive of State or Federal historic designations) must receive approval of the Historic Preservation Commission, consistent with the standards for solar energy systems on historically designated buildings published by the U.S. department of the Interior.
- f. *Plan Approval Required* – All solar energy systems requiring a building permit shall also be subject to design review in accordance with the provisions of the "Design Review Ordinance" and "Manual of Downtown Design Guidelines" if necessary. In carrying out these responsibilities, the city shall be guided by the policies, principles, and standards contained in the City of Ottawa downtown plan and comprehensive plan, as adopted, and the City of Ottawa manual of design guidelines.
 1. Applications for solar energy systems shall be accompanied by to scale horizontal and vertical drawings. The drawings must show the location of the system on the building or on the property for a ground mounted system, including the property lines.
 2. Applications that meet the design requirements of this ordinance shall be granted administrative approval of the city planner and building official. Plan approval does not indicate compliance with Building Code or Electrical Code.
- g. *Approved solar components* – Electric solar energy system components must have a UL or equivalent listing and solar hot water systems must have an SRCC rating
- h. *Compliance with Building Code* – All solar energy systems must meet the approval of the local building code official, consistent with the International Building Code,

and the solar thermal systems must comply with HVAC related requirements of the Energy Code, and any pertinent City of Ottawa adopted codes.

- i. *Compliance with Electric Code* – All photovoltaic systems must comply with the National Electrical Code and City of Ottawa electrical ordinances.
- j. *Compliance with State Plumbing Code* – Solar thermal systems must comply with the applicable Illinois State Plumbing Code and City of Ottawa plumbing ordinances.
- k. *Utility notifications* – All grid inertie solar energy systems must comply with the interconnection requirements of the electrical utility. Of grid systems are exempt from this requirement.

(5) *Principal Uses* - The City of Ottawa encourages the development of commercial or utility scale solar energy systems where such systems present few land conflicts with current and future development patterns. Ground mounted solar energy systems that are the principal use on the development lot or lots are conditional uses in certain districts and must follow the requirements set forth below.

a. *Principal Use General Standards*

1. *Site Design*

i. *Setbacks* – Community and large-scale solar arrays must meet the following setbacks:

- a. Property line setback for buildings or structures in the zoning district in which the system is located, except as determined in subsection v below.
- b. Roadway setback of 150 feet from the ROW centerline of State highways, and 100 feet from other roadways, except as determined in subsection v below.
- c. Setback of 150 feet from any existing dwelling unit, except as determined in subsection v below.
- d. Setback distance should be measured from the edge of the solar energy system array, excluding security fencing, screening, or berm.
- e. All setback can be reduced by 50% if the array is fully screened from the setback point of measurement.

ii. *Screening* – Community and large scale solar must be screened from existing residential dwellings.

- a. A screening plan shall be submitted that identifies the type and extent of screening.
- b. Screening shall be consistent with the City of Ottawa's Design Review Ordinance.
- c. Screening shall not be required along property lines within the same zoning district, except where the adjoining lot has an existing residential use.

- d. The City of Ottawa may require screening where it determines there is a clear community interest in maintaining a view shed.
 - iii. *Ground cover and buffer areas* - The following provisions shall apply to the clearing of existing vegetation and establishment of vegetated ground cover. Additional site specific conditions may apply as required by the City of Ottawa.
 - a. Large scale removal of mature trees on the site is discouraged. The City of Ottawa may set additional restrictions on tree clearing or require mitigation for cleared trees.
 - b. The project design shall include the installation and establishment of ground cover meeting the pollinator friendly standard consistent with 525 ILCS 55/1 “Pollinator Friendly Solar Site Act” or successor statutes and guidance as set by the Illinois Department of Natural Resources.
 - c. The applicant shall submit a vegetation management plan adhering to guidance set forth by the pollinator scorecard published by the Illinois Department of Natural Resources.
 - d. Pollinator friendly standards shall be maintained on the site for the duration of operation, until the site is decommissioned.
 - e. The City of Ottawa may require submittal of an inspection fee at the time of the initial permit application to support ongoing inspection of the pollinator friendly ground cover.
 - f. The applicant shall submit a financial guarantee in the form of a letter of credit or bond in the favor of the City of Ottawa equal to 125% of the costs to meet the pollinator standard. The financial guarantee shall remain in effect until vegetation is sufficiently established.
 - g. Plant material must not have been treated with systemic insecticides, particularly neonicotinoids.
 - iv. *Foundations* - A registered professional engineer shall certify the foundation and design of solar panel racking and support is within accepted professional standards, given local soil and climate conditions.
 - v. *Power and communication lines* - Power and communication lines running between banks of solar panels and to nearby electric substations or interconnections with buildings shall be buried underground. Exemptions may be granted by the City of Ottawa in instances where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines, or distance makes undergrounding unfeasible, at the discretion of the Community Development Director.

- vi. *Fencing* - Perimeter fencing for the site shall not include barbed wire or woven wire designs and shall preferably use wildlife friendly fencing standards that include clearance at the bottom. Alternative fencing can be used if the site is incorporating agrivoltaics.
2. *Stormwater and NPDES* - Solar farms are subject to the City of Ottawa's stormwater management and erosion and sediment control provisions and NPDES permit requirements. Solar collectors shall not be considered impervious surfaces if the project complies with ground cover standards, as described in A.1.c of this ordinance.
3. *Other standards and codes* - All solar farms shall be in compliance with all local, state, and federal regulatory codes, including the State of Illinois Uniform Building Code, as amended; and the National Electrical Code, as amended.
4. *Site Plan Required* - The applicant shall submit a detailed site plan as required by the City of Ottawa's Design Review Ordinance. Further, the site plan shall include both existing and proposed conditions, showing locations of all solar arrays, other structures, property lines, rights of way, service roads, flood plains, wetlands and other protected natural resources, topography, electric equipment, and all other characteristics as requested by the City of Ottawa. The site plan should show all zoning districts and overlay districts if applicable.
5. *Aviation protection* - For solar farms located within 500 feet of an airport or within approach zones of an airport, the applicant must complete and provide the results of a glare analysis through qualitative analysis of potential impact, field test demonstration, or geometric analysis of ocular impact in consultation with the Federal Aviation Administration (FAA) Office of Airports, consistent with the Interim Policy, FAA Review of Solar Energy Projects on Federally Obligated Airports, or most recent version adopted by the FAA.
6. *Agricultural protection*. Solar farms must comply with site assessment or soil identification standards that are intended to identify agricultural soils, including submitting an Agricultural Impact Mitigation Plan (AIMP) to the City of Ottawa and the Illinois Department of Agriculture, as required in Illinois Statutes (505 ILCS 147, or successor statute). The City of Ottawa may require mitigation for use of prime soils for solar array placement, including the following:
 - i. Demonstrating co-location of agricultural uses (agrivoltaics) on the project site.
 - ii. Using interim use that allows the site to be returned to agriculture at the end of life of the solar installation.

- iii. Placing agricultural conservation easements on an equivalent number of price soil acres adjacent to or surrounding the project site.
7. *Decommissioning* - A decommissioning plan shall be prepared and submitted as part of the Agricultural Impact Mitigation Plan (505 ILCS 147).
- i. Decommissioning of the system must occur in the event the project is not under use for 12 consecutive months.
 - ii. The plan shall include provisions for removal of all structures and foundations, restoration of soil and vegetation, and consistency with all standards from the AIMP.
 - iii. Disposal of structures and/or foundations shall meet the provisions of the City of Ottawa’s Solid Waste Ordinance (Chapter 82).
 - iv. Financial assurances shall be provided to the City of Ottawa consistent with the Illinois Department of Agriculture standard agricultural impact mitigation agreement.

- b. *Community Scale Solar (also known as shared solar)* – The City of Ottawa permits the development of community scale solar subject to the following standards:
- 1. *Rooftop gardens permitted* – Rooftop community systems are permitted in all districts where buildings are permitted.
 - 2. *Community scale uses* – Ground mounted community solar energy systems must cover no more than 10 acres (project boundaries). Ground mounted solar developments covering more than 10 acres shall be considered large scale solar.
 - 3. *Dimensional standards* – All structures must comply with setback and height standards for the zoning district in which the system is located.
 - 4. *Other standards* - Ground mounted systems must comply with all required standards for structures in the zoning district in which the system is located.

c. *Large scale solar* - Ground mounted solar energy arrays that are the principal use on the lot, designed for providing energy to off-site uses or export to the wholesale market, are permitted as conditional uses in certain zoning districts.

(6) The chart below outlines each type of solar energy system and the zoning districts in which each type of solar energy system is a permitted use or a conditional use:

Use Type	A-1, A-2, B	C-1, C-2, C-3	C-4, C-5, C-6	D, E	M, R, POS
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Use Type	A-1, A-2, B	C-1, C-2, C-3	C-4, C-5, C-6	D, E	M, R, POS
Large Scale Solar				C	C
Community Scale Solar (excluding rooftop community gardens)		C	C	P	P
Accessory Use Ground Mounted Solar		P	P	P	P
Rooftop Solar (including rooftop community gardens)	P	P	P	P	P

P = permitted
C = conditional use

Section Three: That all ordinances or parts thereof which conflict with the provisions of this Ordinance are hereby repealed to the extent of such conflict.

Section Four: This ordinance shall be in full force and effect immediately following its passage, approval and publication in pamphlet form.

	Aye	Nay	Absent
Commissioner Eichelkraut	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commissioner Ganiere	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commissioner Pearson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commissioner Less	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mayor Aussem	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Passed and Approved this 4th day of January 2022.


 Daniel F. Aussem, Mayor

ATTEST:

Shelly L. Munks

Shelly L. Munks, City Clerk

Published in pamphlet form by authority of the Council of the City of Ottawa, LaSalle County,
Illinois this 4th day of January, 2022.

Shelly L. Munks

Shelly L. Munks, City Clerk

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