

VILLAGE OF FORRESTON

ORDINANCE NO. 2018-14

**ORDINANCE AMENDING THE VILLAGE OF FORRESTON
ZONING ORDINANCE FOR THE REGULATION
OF SOLAR ENERGY SYSTEMS**

ADOPTED BY THE
BOARD OF TRUSTEES
OF THE
VILLAGE OF FORRESTON
THIS 6 DAY OF August, 2018

Published in pamphlet form by authority of the Board of Trustees of the Village of Forreton,
this 6 day of August, 2018.

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**ORDINANCE AMENDING THE VILLAGE OF FORRESTON
ZONING ORDINANCE FOR THE REGULATION
OF SOLAR ENERGY SYSTEMS**

WHEREAS, the Board of Trustees and the President of the Village of Forreston desire to amend the Forreston Zoning Ordinance to regulate solar energy systems as hereinafter set forth; and

WHEREAS, 65 ILCS 5/11-13-1 grants the Village of Forreston the authority to regulate solar energy systems through zoning; and

WHEREAS, in accordance with applicable law and the procedures for an amendment to the Village's Zoning Ordinance set forth in Chapter 9-14-1 of said Zoning Ordinance, the matter has been referred to the Planning Commission for the Village of Forreston; and

WHEREAS, the Planning Commission for the Village of Forreston, after conducting a public hearing, has recommended that the amendment be adopted by the Board of Trustees.

NOW, THEREFORE, be it ordained by the Board of Trustees of the Village of Forreston as follows:

SECTION 1: The above recitals and findings are hereby made a part of this Ordinance as if incorporated herein.

SECTION 2: That the Forreston Zoning Ordinance, as amended, be further amended by adding a new Chapter 9-16 for "Solar Energy Systems" as follows:

"CHAPTER 9-16, SOLAR ENERGY SYSTEMS

SECTION:

- 9-16-1: Definitions
- 9-16-2: Solar Permit and Fees
- 9-16-3: Accessory Use
- 9-16-4: Principal Use

9-16-1: **Definitions:**

- A. *Building-integrated Solar Energy Systems:* An active 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.
- B. *Ground Mount:* A solar energy system mounted on a rack or pole that rests on or is attached to the ground.
 - C. *Photovoltaic System:* An active solar energy system that converts solar energy directly into electricity.
 - D. *Roof Mount:* A solar energy system that is mounted on a rack that is fastened onto a building roof.
 - E. *Roof Pitch:* The final exterior slope of a building roof calculated by the rise over the run, typically but not exclusively expressed in twelfths.
 - F. *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.
 - G. *Solar Collector:* An assembly, structure, and the associated equipment and housing, designed for gathering, concentrating, or absorbing direct and indirect solar energy for which the primary purpose is to convert or transform solar radiant energy into thermal, mechanical, chemical or electrical energy.
 - H. *Solar Energy:* Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.
 - I. *Solar Energy System:* A device, array of devices, or structural design feature, the purpose of which is to provide for: (i) generation of electricity; (ii) collection, storage and distribution of solar energy for space heating or cooling; (iii) daylight for interior lighting; or (iv) water heating.
 - J. *Solar Farm:* A commercial facility that converts sunlight into electricity, whether by photovoltaics (PV), concentrating solar thermal devices (CST), or other conversion technology, for the primary purpose of wholesale sales of generated electricity. A solar farm is the principal land use for the parcel on which it is located.
 - K. *Solar Garden:* A commercial solar-electric (photovoltaic) array, of no more than five (5) acres in size, that provides retail electric power (or a financial proxy for retail power) to multiple households or businesses residing in or located off-site from the location of the solar energy system.
 - L. *Solar Hot Water System:* A system (also referred to as Solar Thermal) that includes a solar collector and a heat exchanger that heats or preheats water for building heating systems or other hot water needs, including residential domestic hot water and hot water for commercial processes.
 - M. *Solar Mounting Devices:* Racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or the ground.

N. *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 (4) hours between the hours of 9:00 AM and 3:00 PM Standard Time on all days of the year.

9-16-2: **Solar Permit and Fees:**

A. *Permit Application*. It shall be unlawful to construct, alter, relocate or demolish any solar energy system without first applying for and obtaining a building permit as set forth in Title 7, Chapter 1 of the Forresteron Village Code, and a solar permit as more specifically provided for herein.

B. *Application Plans*. Every solar permit for the construction, alteration or relocation of a solar energy system shall be accompanied with a written plan and drawing for the proposed solar energy system. The written plan shall:

- i. Identify the owner and operator of the proposed solar energy system;
- ii. Indicate the zoning classification of the property and whether the solar energy system will be an accessory or principal use;
- iii. Include to-scale horizontal and vertical drawings showing the location of the system on the building or on the property, including all set-back and property lines, and the elevation of the solar energy system; and
- iv. For roof-mounted solar energy systems other than a flat roof, the elevation must show the highest finished slope of the solar collector and the slope of the finished roof surface on which it is mounted.

No solar permit shall be issued except after approval of the plans and payment of the fee as provided for herein.

C. *Decommissioning Plan*. If the solar energy system will be designated as a principal use upon the property, a decommissioning plan shall be submitted with the application for a solar permit. The plan shall ensure that the owner or operator properly removes the equipment and/or facilities upon the abandonment or end of the project's term or after the solar energy system's useful life. A decommissioning plan shall include the following:

- i. The anticipated means and costs of removing the solar energy system;
- ii. Provisions for the removal of all structures and foundations, including the removal of all electrical transmission components and the restoration of soil and vegetation;
- iii. The identity of the party or parties responsible for decommissioning; and
- iv. A plan ensuring financial resources will be available to fully decommission the site. This may include a requirement for the posting of a bond, letter of

credit, or establishment of an escrow account to ensure proper decommissioning. The posting of a bond may be required prior to the issuance of a solar permit.

D. *Application Fees.* Every application for a solar permit as provided for herein shall be charged an application processing fee based on the total wattage anticipated to be generated by the solar energy system:

0-10 kilowatts (kW)	\$ 150.00
11-50 kilowatts (kW)	\$ 300.00
51-100 kilowatts (kW)	\$ 600.00
101-500 kilowatts (kW)	\$ 1,200.00
501-1,000 kilowatts (kW)	\$ 2,750.00
1,001-2,000 kilowatts (kW)	\$ 6,000.00
Over 2,000 kilowatts (kW)	\$ 6,000.00 + 200.00 for each additional 100 kilowatts (kW)

E. *Fee Surcharge.* Any person who constructs, alters, relocates or demolishes a solar energy system prior to the application, payment and issuance of a solar permit as required herein shall be charged two times the application fee.

9-16-3: **Accessory Use:**

A. *Permitted Accessory Use.* The following solar energy systems shall be allowed as an accessory use in all zoning districts within the Village limits when used exclusively for non-commercial purposes:

- i. A single ground-mount solar energy system;
- ii. Roof-mount solar energy systems; and
- iii. Building integrated solar energy systems.

B. *Requirements.* Solar energy systems under this section shall be subject to the following requirements:

- i. Height. The following height requirements shall be met:
 1. Building or roof-mounted solar energy systems shall not exceed the maximum allowed height in their respective zoning district.
 2. Ground-mounted solar energy systems shall not exceed ten (10) feet in height when oriented at maximum tilt.
- ii. Set-back. All minimum set-back requirements for the zoning district in which the solar energy system is in use must be satisfied, in addition to:
 1. Roof or building-integrated solar energy systems shall not extend beyond the exterior perimeter of the building on which the system

is mounted or built.

2. Ground-mounted solar energy systems shall not extend into the side-yard or rear setback when oriented at minimum design tilt.
3. No ground-mounted solar energy systems shall be allowed in the front yard of any property zoned for residential use.

iii. **Visibility.** Solar energy systems shall be designed to blend into the architecture of the building or be screened from routine view from public right-of-ways other than alleys. A solar energy system may be screened from routine view through use of fencing, shrubbery, trees, or such other landscaping or building as may be necessary to satisfy the visibility requirements herein. The color of the solar collector is not required to be consistent with other roofing materials. The visibility requirements as set forth herein are subject to the following:

1. Building-integrated solar energy systems shall be allowed regardless of whether the system is visible from the public right-of-way, provided that the building component in which the system is integrated meets all required set-back, land use or performance standards for the zoning district in which the building is located.
2. Roof-mounted solar energy systems shall be allowed regardless of whether the system is visible from the public right-of-way, provided that the highest finished pitch is no steeper than the roof pitch on which the system is mounted, and shall be no higher than twelve (12) inches above the roof.
3. Solar energy systems using a reflector to enhance solar production shall minimize glare from the reflector affecting adjacent or nearby properties.

iv. **Glare.** Solar energy systems shall be designed, constructed and sited to minimize or prevent glare and/or reflections on adjacent properties and roadways, and shall not materially and negatively impact the use thereon. A solar energy system shall not interfere with traffic, including air traffic, or otherwise create a safety hazard. In the event that reasonable glare and/or reflection concerns are raised within the Village, the owner will take actions to address those concerns, including but not limited to additional screening or otherwise modifying the solar energy system.

v. **Miscellaneous.**

1. Roof-mounted solar energy systems, excluding building-integrated systems, shall allow for adequate roof access for fire-fighting purposes to the roof upon which the panels are mounted.

2. Ground-mounted systems shall not exceed half the building footprint of the principal structure, and shall be exempt from impervious surface calculations if the soil under the collector is not compacted and maintained in vegetation. Foundations, gravel, or compacted soils are considered impervious.
3. Solar energy systems on buildings within designated historic districts or on locally designated historic buildings (exclusive of State or Federal historic designation) must be consistent with the standards for solar energy systems on historically designated buildings published by the U.S. Department of Interior.
4. Electric solar energy systems must be certified by a third-party for safety, performance and quality through a UL listing or approved equivalent and solar hot water systems must have an SRCC rating.
5. Solar energy systems shall comply with all applicable local and state building, electric and plumbing codes.

C. *Conditional Accessory Use.* Solar energy systems permitted under subsection (A) of this section that demonstrate that the requirements in subsection (B) cannot be met without materially diminishing the minimum reasonable performance of the solar energy system, as that term is defined herein, may request a special use permit from the Village.

- i. *Minimum reasonable performance.* The standards for the minimum reasonable performance of certain solar energy systems are as follows:
 1. Fixed-mount active solar energy systems. They should be mounted to face within forty-five (45) degrees of south (one hundred eighty-five (185) degrees azimuth).
 2. Solar electric (photovoltaic) systems. The solar collectors should have a pitch between twenty (20) and sixty-five (65) degrees.
 3. Solar hot water systems. The solar collectors need to be mounted at a pitch between forty (40) and sixty (60) degrees.
 4. Location of all solar energy systems. The solar energy system should be located where the lot or building has a solar resource, as defined herein.
- ii. *Special use permit.* A special use permit shall be granted, after review by the commission on buildings, regardless of whether the requirements in subsection (B) are not met, if the applicant demonstrates that the minimum reasonable performance of the solar energy system is materially diminished and that the following conditions are present:

1. Safety conditions. The solar energy system must meet all applicable local, state, and federal health and safety standards.
2. Aesthetic conditions. The solar energy system must be designed to blend into the architecture of the building or be screened from routine view from public right-of-ways other than alleys to the maximum extent possible, while still allowing the system to be mounted for efficient performance.
3. Non-tracking ground-mounted systems. Pole or ground-mounted solar energy systems must be set back from the property line by a minimum of one (1) foot.

D. *Restrictions on Solar Energy Systems Limited.* No homeowners' agreement, covenant, common interest community, or other contract between multiple property owners within the Village shall prohibit or restrict homeowners from installing solar energy systems. No energy policy statement enacted by a common interest community shall be more restrictive than the Village's solar energy standards.

9-16-4: **Principal Use:**

A. *Permitted Principal Use.* The following solar energy systems shall be allowed as a principal use within the Village of Forreston:

- i. Rooftop solar gardens.

B. *Conditional Principal Use.* The following solar energy systems shall be allowed as a conditional principal use within the Village and shall require a special use permit:

- i. Ground-mounted solar gardens; and
- ii. Solar farms.

C. *Requirements.* Solar energy systems under this section shall be subject to the following, in addition to all other height, set-back, visibility and other requirements as specified in section 9-16-3(B):

- i. Rooftop Solar Gardens.

1. An interconnection agreement must be completed with the electric utility in whose service territory the system is located.
2. Rooftop solar gardens are permitted on all properties within the Village zoned for business or manufacturing.

- ii. Ground-mounted Solar Gardens.

1. Ground-mounted solar gardens are permitted only after application for and approval of a special use permit, subject to such standards and conditions as provided for in section 9-16-3(C)(ii).

2. Must be less than five (5) acres in total size.
3. Ground-mounted gardens covering more than five (5) acres shall be considered solar farms.
4. An interconnection agreement must be completed with the electric utility in whose service territory the system is located.
5. Ground-mounted solar gardens are permitted on all properties within the Village zoned for business or manufacturing

iii. Solar Farms.

1. Solar farms are permitted only on properties within the Village zoned for manufacturing.
2. Solar farms are permitted only after application for and approval of a special use permit, subject to the same standards and conditions as provided for in section 9-16-3(C)(ii).
3. A solar farm shall comply in all respects with the Village's stormwater management ordinances.
4. Top soils shall not be removed during development, unless for remediation. Soils shall be planted and maintained with perennial vegetation to prevent erosion and manage run-off.
5. A qualified engineer shall certify that the foundation and design of the solar mounting devices are within accepted professional standards with respect to local soil and climate conditions.
6. An interconnection agreement must be completed with the electric utility in whose service territory the system is located.
7. Power and communication lines running between banks of solar panels and to nearby electric substations or interconnections with buildings shall be buried underground. This requirement may be excused when it is reasonably demonstrated to the commission on buildings that there are circumstances preventing the burying of said lines due to the natural landscape.
8. A sign shall be required identifying the owner and/or operator and provide a 24-hour emergency contact phone number. The sign shall comply in all respects with the Village's sign ordinances.
9. Prior to the construction of any solar farm within the Village that will necessitate the use of Village roads, the owner or operator of such solar farm shall enter into a road use agreement or some similar contract with the Village. The contract at a minimum shall

include provisions relating to the construction, maintenance and decommissioning of the solar farm, with terms agreeable to the Village, for the use and repair of Village roads during such periods. The special use permit provided for herein may be conditioned upon the execution of a road use agreement with the Village.

D. *Additional Set-back, Screening and Lighting Requirements.* Solar gardens and/or solar farms, as applicable, in addition to the requirements specified in section 9-16-3(B), shall be subject to the following additional standards:

- i. **Solar Farm Set-back.** Solar farm above-ground improvements must be set back a minimum of twenty-five (25) feet from all property lines. However, for any such improvements including, but not limited to, fences or solar panels that abut a state highway, the minimum set back distance shall be one-hundred-fifty (150) feet from the centerline of the highway. In addition, solar farm above-ground improvements must be set back a minimum of (50) feet from the centerline of any non-state right-of-way.
- ii. **Additional Visual Screening.** Ground-mounted mechanical equipment that is visible outside the perimeter of the property on which a solar farm is located must be screened from view of roads and dwelling units located within five hundred (500) feet of the solar farm. The screening shall consist of:
 1. A landscaped area at least ten (10) feet in width with at least one (1) shrub per five (5) linear feet, plus at least one (1) evergreen tree per twenty-five (25) linear feet of perimeter area. At the time of planting, shrubs shall be at least three (3) feet in height and evergreen trees shall be at least five (5) feet in height; or
 2. A landscaped area at least ten (10) feet in width with a solid wall or privacy fence with a minimum height of eight (8) feet. At least one (1) evergreen tree is required per thirty (30) feet of the fence or wall.
 3. In addition, for residences that are adjacent to the solar farm, a landscaped berm of at least five (5) feet in height shall be installed. Such berm shall be landscaped with one (1) evergreen tree per twenty-five (25) linear feet along the adjacent property line.
- iii. **Lighting.** A solar garden or solar farm shall not be artificially illuminated, unless required by an applicable government agency or authority or approved by the Village as part of a special use permit. If lighting is required or approved by the Village, such lighting shall be limited to that required for safety and operational purposes and shall be reasonably shielded from abutting properties. Where feasible, lighting of the solar panels shall be

directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

- E. *Monitoring and Maintenance.* The owner and/or operator of a solar garden or solar farm is responsible for keeping the solar garden or solar farm in a safe, sound and well-maintained condition, including, if applicable, painting, grounds keeping, structural repairs, internal access drives and appropriate security measures. The owner of the solar garden or solar farm will certify to the Village at the start of commercial operations that it is in compliance with this ordinance and that its operation will comply with all federal, state and local regulations in effect at that time.
- F. *Abandonment and Decommissioning.* A solar garden or solar farm that does not produce energy for a continuous period of twelve (12) consecutive months or more and where the owner and/or operator is not pursuing the repair of such solar garden or solar farm will be presumed to be abandoned.
- i. Any solar garden or solar farm that is considered abandoned shall be decommissioned within one-hundred-eighty (180) days.
 - ii. Decommissioning, at a minimum, shall consist of:
 1. Physical removal of all solar photovoltaic installations, structures, equipment, security barriers, screening, and transmission lines from the site to a depth below grade of three (3) feet;
 2. Recycling or disposal of all solid and hazardous waste in accordance with local, state, and federal regulations;
 3. Stabilization or re-vegetation of the site, as necessary, to minimize erosion;
 4. Clean-up of any and all environmental contamination contributable to or arising out of the owner and/or operator's use of the solar garden or solar farm, necessary to return the property on which the solar garden or solar farm was constructed to the condition it was in prior to such use.
 5. All other requirements provided for in the solar garden or solar farm's decommissioning plan.
 - iii. If decommissioning is not completed within the time period required under this subsection, the Village may, but is not required to, cause the solar garden or solar farm to be deconstructed. Upon the occurrence of such event, the owner and/or operator of the solar garden or solar farm shall reimburse the Village for all costs it may have incurred in connection with the decommissioning of the site."

SECTION 3: The provisions and sections of this Ordinance shall be deemed to be separable, and the invalidity of any portion of this Ordinance shall not affect the validity of the remainder.

SECTION 4: All ordinances and parts of ordinances in conflict herewith are, to the extent of such conflict, hereby repealed.

SECTION 5: The Village Clerk is directed to publish this Ordinance in pamphlet form.

SECTION 6: This Ordinance shall be in full force and effect from and after its passage and publication in pamphlet form as provided by law.

Passed by the President and the Board of Trustees of the Village of Forreston, on this 6 day of August, 2018.

President

ATTEST:

Village Clerk

AYE

NAY

