

ORDINANCE NO. 2021-_____

**AN ORDINANCE OF THE VILLAGE OF CALEDONIA, BOONE COUNTY, ILLINOIS,
AMENDING CHAPTER XXIII OF THE VILLAGE’S CODE OF ORDINANCES,
“RESERVED”**

WHEREAS, the Village of Caledonia (“Village”) has adopted a Code of Ordinances; and

WHEREAS, Chapter XXIII of the Village’s Code of Ordinances is currently “Reserved”;

WHEREAS, the Village desires to supplement the Village’s Code of Ordinances to address solar energy systems; and

WHEREAS, in order to implement the above changes, it is necessary to enact an Ordinance.

NOW THEREFORE, be it ordained by the President and Board of Trustees for the Village of Caledonia, Boone County, Illinois, as follows:

1. The above recitals are incorporated herein and made a part hereof.
2. Chapter XXIII of the Village of Caledonia’s Code of Ordinances, entitled “Reserved”, is hereby replaced in its entirety and shall hereafter read as follows:

“CHAPTER XXIII – SOLAR ENERGY SYSTEMS

23.101. COMPLIANCE REQUIRED; APPLICATION OF ARTICLE. It shall be unlawful to construct, maintain, or install a solar energy system in the Village of Caledonia except in compliance with the provisions of this Article.

23.102. ADHERENCE TO DESIGN STANDARDS. The general design and permitting standards applicable to all construction, maintenance and repair work in the Village of Caledonia shall apply to the installation of a solar energy system, including, but not limited to, the current Mechanical and Electrical Codes. The provisions of this Article shall be deemed to be requirements in addition to said general standards, provided, however, that where there is a conflict between the provisions of this Article and the provisions of another Article or Chapter, the provisions set forth in this Article shall be deemed to supersede any such conflicting provision as it pertains to the installation, maintenance, or repair of a solar energy system.

23.103. ROOF MOUNTED PV ARRAYS.

- (a) In addition to the general design standards applicable to all installations of structural or electrical components in the Village of Caledonia, roof mounted PV arrays shall further comply with the following design and installation requirements set forth in this section.

- (b) No roof-mounted PV array shall be constructed in a manner which creates an increased risk of falling ice or snow, or which causes water to follow directly from any panel to ground level.
- (c) For purposes of this section, a “pitched roof” shall be any roof with an angle of more than 12.00 degrees inclination as measured from the horizon. “Flat roof” shall be defined as any roof with an angle of 12.00 degrees or lower.
- (d) Height and Angle Restrictions
 - (1) For pitched roof installations
 - A. The highest edge of a PV array mounted on a pitched roof shall not exceed the height of the ridge of the roof section upon which the PV array is installed.
 - B. No panel shall be installed more than ten inches above, as measured perpendicular to the pitch, the existing roof surface.
 - C. All panels shall be installed at an angle which does not differ from the angle of the roof pitch by more than five degrees when measured against the horizon.
 - D. All PV arrays shall be mounted or affixed directly to a truss or support beam, and shall not be secured to the roof using only a decking anchor or mount.
 - (2) For flat roof installations
 - A. The highest edge of a PV array mounted on a flat roof shall not exceed fifteen feet beyond the existing roofline. The height of a PV array shall not be included in the height of the building for purposes of computing the height of a flat roof building.
 - B. Non-ballasted roof-mounted PV arrays shall be mounted or affixed directly to a truss or support beam, and shall not be secured to the roof using only a decking anchor or mount.
 - C. Ballasted roof-mounted PV arrays may be used provided that the structure on which they are to be located is structurally sufficient to support the added load stresses, including dead load, wind load, and rain/snow loads.
- (e) Setbacks and Pathways. All roof-mounted PV arrays shall observe setbacks and provide structurally supported, unobstructed pathways in accordance with this subsection.
 - (1) Pitched roof installations – large. Where the total coverage of a PV array exceeds 1,000 square feet on any building with a pitched roof:
 - A. No collector panel or mounting device shall extend closer than thirty-six inches to the edge of the roof as measured from the nearest edge of the roof to the solar array or mounting apparatus.
 - B. An obstructed walkway from eave to ridge no less than thirty-six inches shall be provided at regular intervals of no more than seventy-five feet if any PV array exceeds one hundred feet in length as measured parallel to the nearest ridgeline.
 - C. A minimum of an eighteen inch unobstructed pathway shall be maintained along each side of any ridge or valley (total thirty-six inch minimum width) and around any roof-mounted equipment, not include passive air vents.

- (2) Pitched roof installations – small. Where the total coverage of a PV array does not exceed 1,000 square feet on any building with a pitched roof:
 - A. If the total coverage of the PV array is less than twenty-five percent of the total area of the roof area of the structure, a minimum of a twelve inch unobstructed pathway shall be maintained along any horizontal ridge, and along any roof edge as measured from the nearest edge of the roof to the solar array or mounting apparatus.
 - B. If the total coverage area of the PV array is twenty-five percent or more of the total area of the roof area of the structure, a minimum of a twelve inch unobstructed pathway shall be maintained along any horizontal ridge, and along any roof edge as measured from the nearest edge of the roof to the solar array or mounting apparatus. A minimum thirty-six inch unobstructed pathway shall be provided from ridge to eave on any roof face on which a PV array is installed.
- (3) Flat roof installations. On any building with a flat roof:
 - A. No collector panel or mounting device shall extend closer than thirty-six inches to the edge of the roof as measured from the nearest edge of the roof to the solar array or mounting apparatus.
 - B. No collector panel or mounting device shall be placed closer than thirty-six inches from any roof-mounted equipment.
 - C. Any PV array exceeding 4,000 square feet in area shall provide unobstructed pathways of no less than thirty-six inches at regular intervals of no more than fifty feet.
- (f) Historic Buildings. No roof-mounted PV array shall be installed on any building or structure which has been designated as a historic landmark.
- (g) Permit Required. A permit application in compliance with Section 23.107 of this Chapter must be submitted by the applicant and approved by the Village of Caledonia prior to the commencement of any installation and/or construction of a roof mounted PV array.

23.104. GROUND MOUNTED PV ARRAYS.

- (a) In addition to the general design standards applicable to all installations of structural or electrical components in the Village of Caledonia, ground-mounted PV arrays shall further comply with the following design and installation requirements set forth in this section.
- (b) Height Restrictions. No portion of a ground-mounted PV array shall be taller than fifteen feet when measured from the ground to the highest point of a panel, at the highest angle of tilt, unless otherwise further limited by specific site requirements.
- (c) Setbacks and Pathways. No ground-mounted PV array shall be mounted within any required front yards. No pathways shall be required except as required for general maintenance of panels. In side and rear yards, any ground-mounted PV array shall be set back a minimum of ten feet from any property line.
- (d) Drainage. No ground-mounted PV array shall be constructed in a manner which increases drainage flow to any adjacent property. If the applicant provides a written report from a qualified professional engineer which indicates that the proposed installation will not increase water flow rates from the applicant's property, this

requirement shall be deemed satisfied for purposes of issuance of the permit only.

(e) Historic Districts. No ground mounted PV array shall be installed in a Historic District.

(f) Solar Canopies. A solar canopy shall not be deemed a ground-mounted PV array for purposes of these ordinances.

(g) Fencing Required. Any ground mounted PV array must be enclosed by fencing of at least eight (8) feet in height.

(h) Permit Required. A permit application in compliance with Section 23.107 of this Chapter must be submitted by the applicant and approved by the Village of Caledonia prior to the commencement of any installation and/or construction of a ground mounted PV array.

23.105. BUILDING MOUNTED PV ARRAYS.

(a) Building-mounted PV arrays which are mounted parallel with a wall of a building or structure shall be installed in accordance with the general design standards applicable to all installations of structural or electrical components in the Village of Caledonia.

(b) Building-mounted PV arrays which are not mounted flush to, or parallel with, a wall of a building or structure shall be installed in accordance with the general design standards applicable to all installations of structural or electrical components in the Village of Caledonia.

(c) A permit application in compliance with Section 23.107 of this Chapter must be submitted by the applicant and approved by the Village of Caledonia prior to the commencement of any installation and/or construction of a building mounted PV array.

23.106. BUILDING INTEGRATED PV ARRAYS. Building-integrated PV arrays which are mounted in direct contact with a wall or rooftop of a building, and affixed directly thereto, shall be treated as part of the structure, constituting a building facade, siding or roofing material, as the case may be, and shall be installed and regulated in the same manner as other design or structural elements generally. A permit application in compliance with Section 23.107 of this Chapter must be submitted by the applicant and approved by the Village of Caledonia prior to the commencement of any installation and/or construction of a building integrated PV array.

23.107. PERMIT APPLICATIONS. A permit application requested pursuant to this Chapter shall contain at minimum the following information, plus any such additional information as may be required for mid scale and large scale solar energy systems as provided for in Sections 23.108 and 23.109.

(a) Name and address of the applicant;

(b) Name(s) and address(es) of owner(s) of proposed site;

(c) For small solar energy systems, roof-mounted PV arrays, ground mounted PV arrays, building mounted PV arrays and building integrated PV arrays, a detailed sketch, generally to scale, of the entire lot, including any buildings and accessory structures, applicable setbacks, adjacent roadways and showing the location of all planned PV arrays;

- (d) The manufacturer, type and nameplate capacity of all photovoltaic panels to be used in the project;
- (e) Total nameplate capacity of the solar energy system;
- (f) An indication of whether the applicant has obtained an interconnection agreement with the appropriate regional transmission organization, whether the electricity will be distributed privately, or whether the electricity will be consumed on site;
- (g) Types of mounts to be used (fixed or tracking);
- (h) The maximum height of panels at maximum inclination as mounted;
- (i) Type of groundcover to be utilized for any ground mounted PV array;
- (j) Name of installer.

23.108. ADDITIONAL PROVISIONS APPLICABLE TO MID SCALE SOLAR ENERGY SYSTEMS. .

Mid scale solar energy systems shall comply with the provisions of this section, in addition to the provisions pertaining to solar energy systems and PV arrays generally. Provided, the provisions of this section shall only be applicable to mid scale solar energy systems and large scale solar energy systems.

- (a) If the owner of the solar energy system is not the owner of the parcel on which it will be situated:
 - (1) A copy of the executed lease shall be provided at the time of application. Said lease may provide redacted provisions concerning the amount of rents to be paid;
 - (2) If not contained in the lease, a proposed decommissioning plan for the removal of all PV arrays and related equipment upon cessation of use shall be provided;
 - (3) The permit application shall be co-signed by the owner of the parcel on which the solar energy system is to be located.
- (b) The building permit application shall include, in addition to the information required by Section 23.107, the following information:
 - (1) A detailed, correct-to-scale site plan indicating:
 - A. The location and size of all proposed PV arrays (an outline shall suffice);
 - B. Location of any property lines within the project boundaries;
 - C. Location of any proposed buildings or ancillary structures;
 - D. Location of all relevant setbacks;
 - E. Location of any easements for ingress, egress, drainage, stormwater detention or otherwise;
 - F. The location and name of adjacent roadways;
 - G. All proposed points of vehicular ingress and egress;
 - H. Location and type of any proposed landscape screening;
 - I. Any proposed changes to grade or elevation;
 - J. Location of all power inverters, control units, and other electrical equipment;
 - K. Location of substation, if any;
 - L. Point of grid interconnection, if any;
 - M. Location of transmission lines, both existing and proposed;

- N. Location of any occupied buildings within the project area or on any adjacent properties located within 200 feet of any project area boundary;
 - O. Location and type of lighting;
 - P. Location, height, and type of any fencing.
- (2) Contact information for the project manager or site supervisor;
 - (3) Plans, if any, for traffic control and/or requested roadway closures during construction;
 - (4) The expected dates for start and completion of construction;
 - (5) A written report from a qualified professional engineer which indicates that the proposed installation will not increase water flow rates from the applicant's property;
 - (6) If any portion of the proposed site is within 500 feet of an airport, or is located within an identified Runway Protection Zone (RPZ), a Solar Glare Hazard Analysis Tool (SGHAT) report consistent with the FAA's then-current policy on solar energy projects;
 - (7) A plan for operation and maintenance of the solar energy system, setting forth, at a minimum, the following:
 - A. Measures for maintaining safe and secure access to the site;
 - B. General procedures for operational maintenance of the site;
 - C. Stormwater management plans
- (c) Any equipment necessary to the regulation, storage or control of electricity shall be enclosed in a primary building or accessory structure, unless otherwise required to be exposed to view for purposes of compliance with applicable code provisions or by interconnection or metering requirements imposed by any public utility.
 - (d) No additional overhead power lines shall be permitted to be installed. If additional power lines are needed for grid connection, the installation shall be underground only.
 - (e) Perennial vegetation, consisting of grasses and wildflowers native to the region, shall be maintained at all times as ground cover beneath any ground mounted PV arrays.

23.109. ADDITIONAL PROVISIONS APPLICABLE TO LARGE SCALE SOLAR ENERGY SYSTEMS.

Mid scale solar energy systems shall comply with the provisions of this section, in addition to the provisions pertaining to solar energy systems and PV arrays generally. Provided, the provisions of this section shall only be applicable to mid scale solar energy systems and large scale solar energy systems.

- (a) The permit application shall contain, at a minimum, the following:
 - (1) All items required to be submitted as part of the permit application for mid scale solar energy systems as set forth in Section 23.107 and 23.108.
 - (2) A statement of the date and location of the planned meeting required under subsection (c) of this section, which date shall be not less than seven days, nor more than sixty days after the date of filing the application.
 - (3) If the proposed site is more than five acres, an Ecological Assessment Tool (EcoCAT) report from the Illinois Department of Natural Resources conducted within two years prior to the filing of the application, indicating

that there are no threatened or endangered species or natural areas in the vicinity of the project or, if so, that adverse effects are unlikely pursuant to the proposed site plan or other measures taken to address concerns raised by the consultation.

- (4) A plan for operation and maintenance of the solar energy system, setting forth, at a minimum the following:
 - A. Measures for maintaining safe and secure access to the site;
 - B. General procedures for operational maintenance of the site;
 - C. An emergency response plan;
 - D. Stormwater management plans;
 - E. Landscape maintenance plans and arrangements;
 - F. On-site staffing; if applicable
 - (5) A decommissioning plan for removal of all PV arrays and equipment upon cessation of operations, indicating the party financially responsible for such removal.
- (b) A public meeting shall be held by the applicant prior to the approval of any application for the construction of a large scale solar energy system, in accordance with the provisions of this section:
- (1) The meeting shall be held at a suitable location within the corporate limits of the Village of Caledonia.
 - (2) All owners of property directly adjacent to the property on which the large solar energy system is to be constructed shall be provided notice of the meeting in the form required by subsection (4) hereof, via certified mail, return receipt requested, addressed to the owner of each such property as indicated upon the Boone County Assessor's records as of the date of mailing, at the address so indicated for such persons, of the date and time of the meeting. A copy of said notice shall also be provided to Boone County. The applicant shall provide all original certified mail receipts to Boone County upon request.
 - (3) In addition to the mailed notice required under subsection (b)(2) above, a notice shall be published no less than one time in a newspaper of general circulation within the Village of Caledonia in the form required by subsection (b)(4).
 - (4) The notice required by this section shall be in substantially the following form:

YOU ARE HEREBY NOTIFIED that [Applicant] is requesting the issuance of a building permit for the construction of a Solar Energy System exceeding one acre in total coverage, at [Address of Site]. A meeting to present and discuss the site plan and provide an opportunity for public comment will be held at [Location of Meeting], at [Date and Time of Meeting]. THIS WILL BE YOUR ONLY OPPORTUNITY TO PRESENT CONCERNS OR OBJECTIONS TO THE PROJECT.

- (5) At the time and place of the meeting, the applicant (or an appropriate representative thereof if applicant is a business entity) shall be present and provide a detailed explanation of the proposed project, which shall include, at

a minimum:

- A. A copy of a completed permit application, including a full-sized site plan, in the form and containing all of the information required for the permit application by Section 23.109(a), available for review by attendees for a reasonable time before and after the meeting.
- B. An opportunity for attendees to ask questions, and answers thereto provided in a meaningful and informative manner.
- C. Contact information for the applicant, or applicant's representative responsible for public inquiries, for the purpose of registering concerns or issues regarding construction, maintenance, or operations.
- D. Contact information for Boone County.

23.110. PERMIT REVIEW.

The Village of Caledonia, or its designee, shall review the permit application, all supporting documentation, and comments, if any provided by adjoining landowners at the meeting required hereby, if applicable.

- (a) If an application is complete, and all applicable requirements of this chapter are met, including, but not limited to, applicable Electrical and Building Codes, the Village of Caledonia, or its designee, shall promptly issue a permit for the construction of the facility in accordance with the application. Provided that if the Village of Caledonia, or its designee, in its reasonably exercised discretion, believes that any portion of the application is incomplete, or any element thereof is deemed deficient in terms of compliance with accepted trade practices or the interests of public safety, the Village of Caledonia, or its designee, may deny the application, subject to the provisions of subsection (b) of this section.
- (b) In the event the Village of Caledonia, or its designee, denies any application, the Village of Caledonia, or its designee, may either deny the application outright, or in the alternative, may require alterations or additions to the proposed site plan or application to address any such issues. In either such case, the Village of Caledonia, or its designee, shall provide written findings indicating the reasons for the denial, and the revisions or remedies to the proposed installation, if any, which it deems necessary in order to allow a permit to issue.
- (c) Any decision to approve or deny an application, or requiring modifications to the site plan as a condition to approval, shall be provided to the applicant within fourteen days of (a) submission of the completed application or (b) the date of the public meeting if required by Section 23.109(b) in the case of a large scale solar system.
- (d) If the applicant does not agree with any finding or condition imposed by the Village of Caledonia, or its designee, the applicant may appeal the decision of the Village of Caledonia, or its designee in the matter provided for appeals for permit denials generally under these Codified Ordinances. Provided, that any application which is complete shall be presumed valid for purposes of any appeal, and the burden shall be on the Village of Duran, or its designee, to show by a preponderance of the evidence that the proposed installation, or a component thereof, is not in accordance with accepted trade practices or will create a danger to public health or safety.

(e) A permit review fee shall be payable at the time of application for any permit, according to the following schedule:

- (1) Roof Mounted, Building Mounted PV Array or Building Integrated PV Array: \$20.00
- (2) Small scale systems: \$25.00
- (3) Mid scale systems: \$75.00
- (4) Large scale systems, less than 5 acres: \$125.00
- (5) Large scale systems, greater than 5 acres: \$250.00

23.111. OPERATIONS.

- (a) Solar energy systems shall be operated in conjunction with all health and safety regulations applicable to other properties within the corporate limits of the Village.
- (b) The operator of a solar energy system shall be responsible to take all reasonably necessary steps to ensure public health and safety as it pertains to any electrical connections, transmission lines, or equipment located upon or adjacent to, any public right-of-way or easement.
- (c) Any PV array which has not been utilized for more than one year, shall be removed, along with any mounting hardware, any below-grade foundations, and exposed wiring, at the expense of the landowner on which the PV array is located. This provision shall apply regardless of any cost shifting provision contained in a contract between the property owner and the operator of the solar energy system concerning decommissioning.
- (d) With respect to mid scale solar energy systems and large scale solar energy systems, the operator shall:
 - (1) Control access to the property, by persons and/or wildlife, in order to prevent any public nuisance or hazard to public health and safety;
 - (2) Provide access to the project area by emergency management and law enforcement personnel at all times;
 - (3) Ensure that any approved lighting is maintained in operating condition.

23.112. SOLAR ACCESS.

In order to preserve access to solar resources by all residents, the following provisions restrict the construction of structures on adjacent lots which may cause a significant decrease in the amount of available sunlight to a particular lot.

- (a) Solar Access Areas. Two solar access areas are hereby established as defined below. The purpose of dividing the Village into solar access areas is to provide solar access protection for each area of the Village consistent with planned densities, topography, and lot configuration and orientations.
 - (1) Solar access area I (SA-1) – SA-1 is designed to protect solar access principally for residential areas where, because of planned density, topography or lot configurations or orientations, the preponderance of lots therein currently enjoy such access and where solar access of this nature would not unduly restrict permissible development. SA-1 includes all property in all Residential Districts.
 - (2) Solar access area II (SA-2) – SA-2 is designed to protect solar access principally for rooftops in areas where, because of planned density,

topography or lot configuration or orientation, the preponderance of lots therein currently enjoy such access and where solar access of this nature would not unduly restrict permissible development. SA-2 includes all property not included in SA-1.

(b) Solar Access Protection.

- (1) Solar fence. A solar fence is hereby hypothesized for each lot located in the Village. Each solar fence completely encloses the lot in question, and its foundation is contiguous with the lot lines. Such fence is vertical, is opaque and lacks any thickness. Said concept shall be applied to all calculations required by this section. The term “solar fence” as used throughout this section shall refer to such hypothetical fence specifically as described in this subsection.
- (2) No person shall erect an object or structure on any other lot that would shadow a protected lot in SA-1 to a greater degree than the lot would be shaded by a solar fence twelve feet in height, between two hours before and two hours after local solar noon on a clear winter solstice day.
- (3) No person shall erect an object or structure on any other lot that would shade a protected lot in SA-2 to a greater degree than the lot would be shaded by a solar fence twenty-five feet in height, between two hours before and two hours after local solar noon on a clear winter solstice day.
- (4) Maximum height. Notwithstanding anything to the contrary contained herein, nothing in this section prevents a structure in SA-1 from being erected up to a height of twenty-five feet, or a structure in SA-2 from being erected up to a height of thirty-five feet, if located within the allowed buildable area of the lot.
- (5) Any application for a variance of any requirement of this section shall include, in addition to the requirements for variations generally as set forth in these Codified Ordinances, the following:
 - A. A graphic representation showing the shadows that would be cast by the proposed structure between two hours before and two hours after local solar noon on a clear winter solstice day;
 - B. The solar fences on all lots that the shadows would touch;
 - C. All possible obstructions of solar access protected by permit; and
 - D. Provide additional information as may be required by the Village of Caledonia or its designee.
- (6) Existing structures. A structure in existence on the date of establishment of an applicable solar access area, or structures and vegetation in existence on the date of issuance of an applicable solar access permit, are exempt from the application of this section. For purposes of this section, structures are deemed to be in existence on the date of issuance of a development permit authorizing its construction.
- (7) Temporary solar obstructions. Unavoidable temporary obstructions of protected solar access necessitated by construction activities or other necessary and lawful purposes are exempt to the extent that they do not exceed ten days in any three month period and thirty days in any year.

- (8) Solar analysis. When a solar analysis is required for any review process, it shall be prepared in compliance with the methods described in materials provided by the Village of Caledonia or its designee.

23.113. VARIANCE REQUEST.

To the extent that any applicant desires a variation from any of the provisions contained in this Chapter, the applicant may submit a Solar Energy Systems Variance Application to the Village of Caledonia, subject to any more restrictive provisions contained elsewhere in this Chapter. The fee for a Solar Energy Systems Variance Application shall be \$25.00 and shall be paid to the Village of Caledonia concurrently with the submission of the Application. The corporate authorities of the Village of Caledonia shall discuss and rule on the variance request at a meeting of the Village of Caledonia Board of Trustees within forty-five (45) days of the request. Any proposed variation shall be passed by the concurrence of a majority of all members then holding office on the Village Board, including the President. A Solar Energy Systems Variance Application shall become effective immediately after it is granted by the Village of Caledonia Board of Trustees. A Solar Energy Systems Variance Application which was previously granted shall lapse and become void one year following the date on which the variance became effective unless prior to the expiration of one year construction is commenced and diligently pursued toward completion on the site which was the subject of the Solar Energy Systems Variance Application. A variance may be renewed for an additional period of one year provided that prior to the expiration of one year from the date of the variance originally becoming effective, an application for renewal of the variance is made to the Village of Caledonia.

23.114. LICENSED CONTRACTORS.

No work shall be performed on any solar energy system, no any component thereof, by any person who is not a licensed commercial contractor.”

3. To the extent that conflicts exist between any provisions in the Village of Caledonia’s Code of the Ordinances and the International Building Code, the National Electrical Code, the International Mechanical Code, the International Residential Code for One and Two-Family Dwellings, the Illinois State Plumbing Code, the International Property Maintenance Code, and the International Fuel Gas Code, along with the adopted supplements and Amendments, the language in said Code shall control over the Village of Caledonia’s Code of Ordinances.
4. This Ordinance shall be in full effect from and after its passage and approval.

PASSED by the Village Board this ____ day of _____, 2021

APPROVED by the President of the Village Board this ____ day of _____, 2021

EFFECTIVE this ____ day of _____, 2021.

Rod Fritz, President
Village of Caledonia, Illinois

ATTEST:

Sue Pfaffinger, Clerk
Village of Caledonia, Illinois

AYES: _____
NAYS: _____
ABSENT: _____