

**VILLAGE OF LONG GROVE
ORDINANCE NO. 20192020-O-__**

**AN ORDINANCE AMENDING THE LONG GROVE ZONING CODE
REGARDING ALTERNATIVE ENERGY SYSTEMS**

Adopted by the
President and Board of Trustees
of
the Village of Long Grove
this ____ day of _____, 20192020

Published in pamphlet form by direction
and authority of the Village of Long Grove,
Lake County, Illinois
this ____ day of _____, 20192020

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ORDINANCE NO. ~~2019~~2020-O-__

**AN ORDINANCE AMENDING THE LONG GROVE ZONING CODE
REGARDING ALTERNATIVE ENERGY SYSTEMS**

WHEREAS, the Long Grove Zoning Code ("**Zoning Code**") regulates the development and use of land within the Village of Long Grove; and

WHEREAS, the Village President and Board of Trustees ("**Village Board**") desire to encourage developments that incorporate the responsible use of alternative sources of energy within the Village so that such uses are in conformance and harmony with the existing land development and use patterns of the Village; and

WHEREAS, in order to allow for the development and use of alternative energy sources ("**AES**") in the Village while preserving the public health, safety, and welfare of the residents of the Village, the Village previously adopted Ordinance No. ~~2019~~2013-O-09, as amended from time to time, to establish regulations within the Zoning Code to govern the location, installation, operation, maintenance, and decommissioning of wind, solar, and geothermal energy systems in the Village (the "**AES Regulations**"); and

WHEREAS, pursuant to Ordinance No. 2019-O-05, the Village Board directed the Long Grove Plan Commission/Zoning Board of Appeals ("**PCZBA**") to review the AES Regulations and consider whether they should be amended to, *inter alia*: more appropriately address the potential impacts of AES on public health, safety, and welfare concerns of the Village; mitigate the risks associated with potentially-conflicting land uses; and better reflect the Village's land use policies and long-range planning goals (the "**Proposed Amendments**"); and

WHEREAS, pursuant to notice duly published in the *Daily Herald*, the PCZBA conducted a public hearing commencing on July 2, 2019 and thereafter continued from time to time and concluded on _____, September 3, 2019 concerning the Proposed Amendments; and

WHEREAS, at the conclusion of the public hearing, the PCZBA made findings and recommendations to the Board of Trustees regarding the Proposed Amendments; and

WHEREAS, thereafter, the Board of Trustees considered the PCZBA's recommendations and proposed amendments and on January 21, 2020 referred the Proposed Amendments back to the PCZBA for further review of certain matters; and

WHEREAS, pursuant to notice duly published in the *Daily Herald*, the PCZBA conducted a further public hearing commencing on March 3, 2020 and concluded on _____, 2020 concerning the Proposed Amendments; and

WHEREAS, at the conclusion of the public hearing, the PCZBA made further findings and recommendations to the Board of Trustees regarding the Proposed Amendments and recommended that the Board of Trustees adopt the Proposed Amendments, as set forth in this Ordinance; and

WHEREAS, having considered the findings and recommendations of the PCZBA, the President and Board of Trustees have found and determined that adoption of the Proposed Amendments, as set forth in this Ordinance, is in the best interests of the Village and its residents.

NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND THE BOARD OF TRUSTEES OF THE VILLAGE OF LONG GROVE, LAKE COUNTY, ILLINOIS, as follows:

SECTION ONE: Recitals. The foregoing recitals are incorporated into and made part of this Ordinance by this reference.

SECTION TWO: Amendment of Section 5-9-13 of the Village Code. Section 5-9-13, entitled "Wind Energy Systems (WES)," of Chapter 9, entitled "District Regulations of General Applicability," of Title V, entitled "Zoning Regulations" of the Village Code is hereby amended in partits entirety and shall hereafter be and read as follows:

5-9-13 WIND ENERGY SYSTEMS (WES)

A. ~~Purpose.~~ The purpose of this Section 5-9-13 is to:

- ~~1. Establish reasonable and uniform regulations for the location, installation, operation, maintenance, and decommissioning of Building-Mounted Wind Energy Systems (“BWES”) and Small Wind Energy Systems (“SWES”);~~
- ~~2. Assure that any development and production of wind-generated electricity in the Village is safe and to minimize any potentially adverse effects on adjoining properties and the broader community;~~
- ~~3. Facilitate the development and production of wind-generated electricity in the Village in a manner consistent with the predominately low density, countryside character of the Village;~~
- ~~4. Promote the supply of sustainable and renewable energy resources, in support of national, state, and local goals; and~~
- ~~5. Facilitate energy cost savings and economic opportunities for Village residents and businesses.~~

~~**B. Definitions:** Notwithstanding Section 5-12-13 of this Code, when used in this Section 5-9-13, the following terms shall have the meanings herein ascribed to them. Any terms not listed in this Subsection B shall have the meanings set forth in Section 5-12-13 of this Code~~

~~**Abandoned WES:** A WES that has not been repaired to Operable Condition within the applicable timeframe set forth in Paragraph 5-9-13(C)12 of this Section, or for which the owner has not made all submissions required pursuant to Section 5-11-8 of the Village Code.~~

~~**Ambient Sound:** The all-encompassing sound at a given location, usually a composite of sounds from many sources near and far. For the purpose of this Code, the “ambient sound level” shall mean the quietest of ten 10-second average sound levels measured when there are no nearby or distinctly audible sound sources (e.g., dogs or jets). Daytime ambient measurements should be made during mid-morning weekday hours, while nighttime measurements should be made after midnight.~~

~~**Blade:** The portion of a WES that is designed to capture the wind, causing the shaft to turn.~~

~~**Blade Tip:** The farthest extremes of a blade.~~

~~**Daytime hours:** The hours of the day from 7:00 am to 10:00 pm.~~

~~**Decibel (dB):** The unit of sound level based on a reference where 0 dB represents the threshold of hearing at 1000 Hz for a healthy young adult.~~

~~**FAA:** The Federal Aviation Administration of the United States Department of Transportation.~~

~~**FCC:** The Federal Communications Commission.~~

~~**Height:** When used in reference to a WES, "height" shall mean the vertical distance measured from lowest ground surface (grade) adjacent to the WES to the highest point of the WES. When used in reference to any other structure, "height" shall have the meaning set forth in Section 5-12-13 of this Code.~~

~~**High Quality Aquatic Resource:** Waters of the United States or Isolated Waters of Lake County that are determined to be critical due to their uniqueness, scarcity, function and/or value, in accordance with the Lake County Watershed Development Ordinance.~~

~~**Horizontal Axis Wind Turbine (HAWT):** A Turbine for which the main rotor shaft is arranged horizontally, and typically for which the main rotor shaft and generator are located at the top of the tower on which the WES is mounted and pointed into the wind in order to generate electricity.~~

~~**Low-Frequency Sound:** Sound with frequencies below 100 Hz, including audible sound and sound at a frequency below that of human hearing (i.e. infrasound).~~

~~**Nacelle:** That part of a turbine containing the shaft, gear box, and generator.~~

~~**Nameplate Wattage:** The amount of energy produced from a WES at maximum or optimum wind speeds within one hour, as indicated by the manufacturer.~~

~~**Nighttime hours:** The time between 10:00 pm on one calendar day and 7:00 am on the next calendar day.~~

~~**Nonparticipating Property:** Any property that is not owned by the owner of under common ownership with the property on which the WES is proposed or installed.~~

~~**Operable Condition:** For any WES, the condition of being capable of operating at full capacity while meeting all sound, shadow flicker and other applicable conditions set forth in this Code.~~

~~**Shadow Flicker:** The on and off strobe light effect caused by the shadow of moving blades cast by the sun upon a turbine's blades.~~

~~**Shadow Flicker Intensity:** The difference or variation in brightness at a given location in the presence and absence of a shadow.~~

~~**Silhouette:** The area covered by moving blades of a WES turbine, as viewed from the front elevation, described in square feet.~~

~~**Size:** When used in reference to a WES, "size" shall mean the area (as measured in square footage or acreage) lying within the perimeter of the WES, as determined by the Village. The perimeter shall encompass the footprint of the entire WES (including all associated equipment and structures) and the ground, building, or other surface on which such WES is mounted.~~

~~**Sound Level:** The A-weighted sound level in decibels (dB) (or the C-weighted level, if specified).~~

~~**Structural Engineer:** An Engineer who is licensed and registered to practice structural engineering in the State of Illinois under the Illinois Structural Engineering Act and whose principal professional practice is in the field of structural engineering.~~

~~**Sun Glint:** The reflection of sunlight off of a surface of the turbine, tower, or other component of a WES.~~

~~**Tower:** The structure on which a turbine is mounted, which structure is a component of a WES.~~

~~**Turbine:** The blades, nacelle, and tail of a WES.~~

~~**Vertical Axis Wind Turbine (VAWT):** A Turbine of which the main rotor shaft is arranged vertically and that does not need to be pointed into the wind in order to generate electricity.~~

~~C. **General Regulations.** Wind Energy Systems are only allowed as authorized in this Section 5-9-13 of the Village Code. Except as specifically provided otherwise in Subsections D and E of this Section 5-9-13, all WES shall comply with the general regulations set forth in this Subsection 5-9-13(C).~~

~~1. **Compliance with Laws.** All WES shall comply with all applicable Village, state, and federal laws and regulations, including without limitation the provisions of this Section 5-9-13, this Code, and all applicable Village building ordinances and regulations.~~

~~2. **Compliance with Permits.** All WES shall obtain and comply with all applicable permits pursuant to this Section 5-9-13, including without limitation building and electrical permits, and Special Use Permits, if applicable. All conditions imposed by the Village as a condition of issuance of these any such permits shall be complied with.~~

~~**Horizontal Axis Wind Turbines PROHIBITED.** No WES may include a Horizontal Axis Wind Turbine at any location for any use within the Village.~~

~~3. **Interference with Utilities, Roads, and Neighboring Properties.** No WES shall be operated in a manner so as to interfere with any public right-of-way or any utility system in the Village, or so as to interfere with the reasonable use and enjoyment of any other property in the Village.~~

4. ~~General Engineering Regulations.~~

- (a) ~~All WES facilities shall be designed to withstand a minimum wind velocity of at least 120 miles per hour.~~
- (b) ~~Each WES shall conform to all applicable industry standards, including without limitation the standards developed by the American National Standards Institute (ANSI).~~
- (c) ~~All WES facilities shall be equipped with automatic and manual braking systems.~~

5. ~~General Installation Regulations.~~

- (a) ~~WES facilities must be installed according to manufacturer specifications.~~
- (b) ~~All necessary electrical connections must be made by a licensed electrician.~~
- (c) ~~Applicable permits shall be applied for and obtained prior to commencement of installation activities for of any WES.~~

6. ~~General Sound Level Regulations.~~

- (a) ~~The average sound level produced by a WES shall not exceed the following maximums in the following locations:~~
 - (i) ~~On any Nonparticipating Property located within a Residential Zoning District (including Planned Unit Developments PUDs), or used for residential purposes or for a school: 50 dB(A) during daytime hours, and 40 dB(A) during nighttime hours;~~
 - (ii) ~~On any Nonparticipating Property used for industrial purposes, 65 db(A) at any time; and~~
 - (iii) ~~On any other Nonparticipating Property, 60 db(A) at any time.~~
- (b) ~~No WES shall operate with an average sound level more than 10 dB(A) above the non-operational ambient sound level, as measured on any Nonparticipating Property used for residential purposes or for a school that is within 500 feet of the WES, or, if none, on any other Nonparticipating Property.~~
- (c) ~~To limit the level of low frequency sound, the average C-weighted sound level during WES operation shall not exceed the A-weighted ambient sound level by more than 20 dB.~~

- (d) ~~Sound level meters used for sound measurement must meet the requirements of a Type 2 or better precision instrument according to ANSI S1.4 (American National Standard Specification for Sound Level Meters), and must measure the average sound level using an integrating sound level meter that meets the requirements of ANSI S1.43 (American National Standard Specifications for Integrating Averaging Sound Level Meters). Average sound level shall be calculated by time-averaging sound levels for a period of not less than one minute nor more than two minutes. Measurements shall not be made when ground level winds exceed 10 miles per hour.~~

~~7. General Shadow Flicker Regulations:~~

- (a) ~~No shadow flicker caused by any WES shall fall on any Nonparticipating Property that is either located in a Residential Zoning District (including PUDs), or that is used for residential purposes or for a school:~~
- ~~(i) at any time upon any building on a Nonparticipating Property that exists as of the date of first operation of the WES; or~~
 - ~~(ii) for more than 50 hours in a calendar year upon any portion of the buildable area of the Nonparticipating Property.~~
- (b) ~~No shadow flicker caused by any WES shall fall on any Nonparticipating Property that is not located in a Residential Zoning District (including PUDs), and that is not used for residential purposes or for a school:~~
- ~~(i) for more than one hour on any calendar day on any window of a building that exists as of the date of first operation of the WES; or~~
 - ~~(ii) for more than 50 hours in a calendar year upon any portion of the buildable area of any Nonparticipating Property.~~

~~In the event that an existing WES causes shadow flicker on a particular window of a Nonparticipating Property, no other WES may be constructed or operated in a manner that would cause shadow flicker on that window in excess of the limitations set forth in this Subparagraph 5-9-13(C)8(b) except upon issuance of a special use permit therefor by the Village Board of Trustees.~~

- (c) ~~As a condition of any permit issued pursuant to this Section 5-9-13, the Village may require the Applicant to commit to a schedule for turning WES turbines off, in order to ensure compliance with the applicable shadow flicker regulations set forth in this Paragraph 5-9-13(C)8.~~

8. ~~Cessation of Operation in Emergency.~~ The owner of the WES shall be required to immediately cease operation of the WES for the duration of any emergency, as determined by the Village. For purposes of this Paragraph 5-9-13(C)9, an emergency shall mean a condition or situation caused by the WES or a natural or manmade disaster that presents an imminent physical threat of danger to life or significant threat to property.
9. ~~Electronic Interference.~~ WES facilities shall not be operated so as to cause electromagnetic degradation in performance of microwave, television, radio, internet or other wireless transmissions, including public emergency communications systems, in a manner contrary to FCC regulations or other federal, state or local laws. For purposes of this Paragraph 5-9-13(C)10, "degradation in performance" shall be determined in accordance with the latest principles and standards of the American Institute of Electrical Engineers, the Institute of Radio Engineers, and the Electrical Industries Association.
10. ~~Maintenance.~~
- (a) ~~WES facilities shall be kept in Operable Condition at all times, except for reasonable maintenance and repair outages.~~
- (b) ~~Should a WES become inoperable for any reason except reasonable maintenance and repair as noted above, or should any part of the WES become damaged, or should a WES violate a permit condition, the owner of the WES shall cease operations immediately and remedy the condition within 90 days after receipt of a notice from the Village regarding the condition (or such longer time to which the WES owner and the Village may agree); provided, however, that if the condition presents an immediate threat to the public health, safety, or welfare, the owner of the WES shall remedy the condition promptly within such time as may be required by the Village.~~
11. ~~Decommissioning.~~
- A. ~~A WES that is not in Operable Condition for a period exceeding 90 consecutive days shall be deemed abandoned unless the owner of the WES is diligently pursuing maintenance, modifications, or repairs to the WES during such time. The owner of an abandoned WES and the owner of the property on which the WES is located shall cause the removal of all WES structures and facilities within 30 days after receipt of a notice of abandonment from the Village, or such longer time as the Village may specify. Decommissioning shall include:~~
- ~~1. Physical removal of the WES, including all systems, structures, equipment, security barriers, and electrical wiring lines from the site;~~

~~2. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations; provided, however, that WES equipment and building materials shall be disposed of by recycling, rather than landfilling, to the maximum extent possible; and~~

~~3. Stabilizing or re-vegetation of the site as necessary to minimize erosion and restoration of the subject property in accordance with the standards required by the Village's then-current applicable codes.~~

~~Notwithstanding the foregoing, the Village may allow the owner to leave landscaping or to abandon in place designated below-grade structures, foundations, or wiring in order to minimize disruption to vegetation, natural habitats, or existing structures.~~

~~B. Any abandoned WES that is not removed within 30 days after receipt of a notice of abandonment, or such other time as the Village and owner may agree, shall be deemed a public nuisance, which nuisance the Village shall have the right, but not the obligation, to summarily abate by removing such WES at the joint and several expense of the owners of the WES and of the property on which the WES is located. As a condition of permit approval for a WES, the applicant shall agree to allow the Village entry upon the subject property to remove an abandoned WES in accordance with this paragraph. In the case of such removal, the Village shall have the right, but not the obligation, to file a lien for reimbursement of any and all expenses incurred by the Village in connection with the removal, including, without limitation, attorney fees and accrued interest.~~

~~C. Decommissioning Plan. As a condition of issuance of any special-use permit for a WES, and prior to issuance of any permit for construction of such WES, the owner shall prepare a decommissioning plan, which plan shall be subject to Village approval. Unless otherwise provided in the special use permit for the WES, the plan shall: (i) address all required components of the decommissioning process in accordance with this Section; (ii) show final site conditions after decommissioning is completed; and (iii) include an engineer's opinion of probable cost for decommissioning in accordance with the plan. Unless otherwise approved by the Village Board, the owner shall post a bond or letter of credit in a form acceptable to the Village in the amount of 130% of the engineer's estimate.~~

- (a) ~~A WES that is not in Operable Condition for a period exceeding 30 consecutive days shall be deemed abandoned. The owner of an abandoned WES and the owner of the property on which the WES is located shall cause the removal of all WES structures and facilities within 30 days after receipt of a notice of abandonment from the Village.~~
- (b) ~~Any abandoned WES that is not removed within 30 days after receipt of a notice of abandonment shall be deemed a public nuisance, which nuisance the Village shall have the right, but not the obligation, to summarily abate by removing such WES at the joint and several expense of the owners of the WES and of the property on which the WES is located. In the case of such removal, the Village shall have the right, but not the obligation, to file a lien for reimbursement of any and all expenses incurred by the Village in connection with the removal, including, without limitation, attorney fees and accrued interest.~~
- (c) ~~Upon removal of the WES, the subject property shall be restored to its original pre-WES construction condition.~~

- 12. ~~Architectural Review. The design, materials, and location of all proposed WES facilities shall be subject to Architectural Review pursuant to Section 5-11-19 of this Code.~~

~~D. Building Mounted Wind Energy Systems ("BWES")~~

- 1. ~~Permitted Locations. Building Mounted Wind Energy Systems shall be considered special uses in all residential zoning districts (including PUDs) and are only authorized subject to a Special Use Permit as provided for in Section 5-11-17 of this the Village Code as well as review and approval by the Architectural Commission. **BWES shall be allowed only as an accessory use in accordance with Section 5-9-1 of the Village Code, and not as a principal use, on zoning lots within the residential zoning districts.**~~

~~**Up to four (4) Building Mounted Wind Energy Systems BWES shall be allowed as a permitted use in any Business District or Office District as identified in Section 5-2-1 of the Village Code, (except for the B-1 Historic District where such structures shall not be permitted). Any additional BWES shall be allowed in a Business District or Office District, except the B-1 District, only upon issuance of a special use permit therefor. BWES shall be allowed only as an accessory use in accordance with Section 5-9-1 of the Village Code, and not as a principal use, on zoning lots within such zoning districts.**~~

- 2. ~~Permits Required. Building Mounted Wind Energy Systems BWES are only authorized to operate upon receipt of all applicable permits, which shall be issued upon compliance with the following:~~

- (a) ~~The owner of the property on which the BWES is proposed to be installed shall submit an application for building permits, as applicable, pursuant to Title 4 of the Long Grove Village Code. Such application shall include the Minimum Data Requirements identified in Section 5-11-8(E)14 and this Section 5-9-13 of the Village Code.~~
- (b) ~~Upon receipt of a complete application pursuant to Title 4 of the Long Grove Village Code, and subject to approval of the proposed BWES by the Architectural Commission pursuant to Section 5-11-19 of this Code, and approval of a Special Use Permit, if applicable, and upon review and determination by the Village that the application and the proposed BWES complies with the requirements set forth in this and other applicable codes the Village shall: (i) issue the permit(s) for the BWES; and (ii) record a maintenance covenant submitted with the Recorder of Deeds of Lake County, Illinois.~~
3. ~~Installation.~~ BWES devices may be structurally attached either on the roof or on the side of a building, if in accordance with the Village Building Code. ~~Subject to the special use permit requirements set forth in this Section 5-9-13.D,~~ there shall be no maximum number of BWES devices that may be installed on any property, provided that each such device complies with all applicable code provisions.
4. ~~Height.~~ No portion of any BWES facility shall extend more than 15 feet above the highest point of the building on which it is mounted, nor more than 35 feet above grade if located in any Residential District.
5. ~~Diameter.~~ Unless authorized pursuant to a special use permit, the maximum diameter of a BWES shall be as follows:
- (a) ~~For a BWES that is mounted on a residential building, or on a property abutting a Nonparticipating Property that is located within a Residential District or used for residential purposes (including PUDs), the diameter of the BWES shall not exceed the lesser of 10 feet, or 20 percent of the width of the front elevation of the building on which the BWES is mounted.~~
- (b) ~~For all other BWES, the diameter shall not exceed the lesser of 10 feet, or 50 percent of the width of the front elevation of the building on which the BWES is mounted.~~
6. ~~Color and Sun Glint.~~ BWES facilities shall be finished in a neutral color or as determined by the Architectural Commission. The finish shall be flat or matte, so as to reduce incidence of sun glint. The required coloration and finish shall be maintained throughout the life of the BWES.
7. ~~Signage.~~ No BWES shall have any advertising material, writing, picture, or signage, other than warning information or manufacturer identification.

~~8. Use and Energy Production Restrictions. The primary purpose of the BWES shall be the production of energy for consumption on the property on which the BWES is located. BWES shall not be constructed for the sole purpose of energy production for wholesale or retail sale purposes; provided, however, that excess energy produced by a BWES may be sold to a local electric utility company, subject to the requirements of Section 5-9-13.F.~~

~~9. Lighting. Lighting of BWES (including all appurtenant facilities or structures) shall be consistent with local, state, and federal laws, shall be used to the minimum extent necessary, and shall be limited to that required for safety or operational purposes. All lighting shall be shielded from abutting properties, shall be directed downward, and shall incorporate full cut-off fixtures.~~

~~E. Small Wind Energy Systems ("SWES").~~

~~1. Permitted Locations. Small Wind Energy Systems shall be considered special uses in all residential zoning districts (including PUDs) and shall be subject to the issuance of a special use permit as provided for in Section 5-11-17 of this Village Code as well as review and approval by the Architectural Commission. SWES shall be allowed only as an accessory use in accordance with Section 5-9-1 of the Village Code, and not as a principal use, on zoning lots within the residential zoning districts.~~

~~— One (1) SWES shall be allowed as a permitted use in any Business District or Office District as identified in Section 5-2-1 of the Village Code, except for the B-1 Historic District where such structures shall not be permitted. Any additional SWES shall be allowed on a property in a Business District or Office District, except the B-1 District, only upon issuance of a special use permit therefor. SWES shall be allowed only as an accessory use in accordance with Section 5-9-1 of the Village Code, and not as a principal use, on zoning lots within the Business Districts (except for the B-1 District) or Office Districts.~~

~~2. Permits Required. Small Wind Energy Systems SWES are only authorized to operate upon receipt of all applicable permits, which shall be issued upon compliance with the following:~~

~~(a) The owner of the property on which the SWES is proposed to be installed shall submit an application for building permits, as applicable, pursuant to Title 4 of the Long Grove Village Code. Such application shall include the Minimum Data Requirements identified in Section 5-11-8(E)14 and this Section 5-9-13 of the Village Code.~~

~~(b) Upon receipt of a complete application pursuant to Title 4 of the Long Grove Village Code, and subject to approval of the proposed SWES by the Architectural Commission pursuant to Section 5-11-19 of this Code, and approval of a Special Use Permit, if~~

applicable, and upon review and determination by the Village that the application and the proposed SWES complies with the requirements set forth in this and other applicable codes the Village shall: (i) issue the permit(s) for the SWES; and (ii) record a maintenance covenant submitted with the Recorder of Deeds of Lake County, Illinois.

3. ~~Use and Energy Production Restrictions.~~ The primary purpose of the SWES shall be the production of energy for local distribution and consumption on the property on which the SWES is located. SWES shall not be constructed for the sole purpose of energy production for wholesale or retail sale purposes; provided, however, that excess energy produced by an SWES may be sold to a local electric utility company, subject to the requirements of Section 5-9-13.F.

4. ~~Bulk Restrictions:~~

(a) ~~Setbacks.~~ All portions of all SWES (including, without limitation, the blades of any turbines) shall comply with the generally applicable setback restrictions for the Zoning District or building setbacks lines as established in a PUD in which the SWES is located and with the additional setback restrictions as follows, to be measured from the base of the SWES tower:

(i) ~~SWES facilities may not be constructed within or over any utility, water, sewer, or other type of recorded easement.~~

(ii) ~~SWES facilities may not be constructed within 50 feet of any body of water or wetlands, nor within 100 feet of any High Quality Aquatic Resources.~~

(iii) ~~SWES facilities shall be set back from all property lines, third party transmission lines, and communication towers a minimum distance equal to 110 percent of the height of the SWES.~~

(iv) ~~Guy wires and anchoring systems shall not be located closer than 30 feet from any property line or public right-of-way.~~

(v) ~~The blade tip, at its lowest point, shall have a ground clearance of not less than 15 feet.~~

(b) ~~Height.~~

(i) ~~Residential Districts.~~ The height of any SWES within residential zoning districts including PUDs shall be as authorized pursuant to a special use permit.

(ii) ~~All Other Districts.~~ No portion of any SWES constructed in any zoning district other than a Residential District shall exceed 100 feet in height; provided, however, that no portion of any SWES shall exceed 65 feet in height if located within 500 feet of a Nonparticipating Property located within a Residential District or used for residential purposes.

5. ~~Diameter.~~ Unless ~~otherwise expressly~~ authorized pursuant to a special use permit, the diameter of a SWES shall not exceed 10 feet.

6. ~~Color and Sun Glint.~~ Except as approved by the Architectural Commission, all SWES facilities shall be finished in either off-white, light gray, or another neutral color. The finish shall be flat or matte, so as to reduce incidence of sun glint. The required coloration and finish shall be maintained throughout the life of the SWES.

7. ~~Signage.~~

(a) No SWES shall have any advertising material, writing, picture, or signage other than warning signage, turbine tower identification, or manufacturer or ownership information.

(b) Except for meteorological and weather devices, or bird flight diverters on guy wires ~~as depicted in the application materials provided pursuant to Section 5-9-13E2 of this Code~~, no flag, decorative sign, streamers, pennants, ribbons, spinners or waving, fluttering or revolving or attention getting devices shall be attached to any portion of the SWES.

(c) One or more warning signs, no less than eighteen square inches and no greater than two square feet in area, shall be posted at the base of an SWES tower. The sign shall include a notice of no trespassing, a warning of high voltage, and the emergency telephone number of the owner of the SWES.

(d) The sign area of any sign displaying the manufacturer's identification or ownership information shall be no larger than one square foot.

8. ~~Climb Prevention.~~ The base of the tower shall not be climbable for a vertical distance of 15 feet from the base, unless the tower is enclosed with a locked fence that is at least eight feet in height.

9. ~~Lighting.~~

(a) ~~SWES facilities shall comply with all applicable FAA lighting regulations and any other federal, state or Village lighting regulations.~~

(b) ~~SWES facilities shall not be artificially lighted except as expressly required by the FAA or as necessary for the safety of personnel performing maintenance of, or repairs to, the facilities. Any such artificial lighting shall be shielded so that no glare extends substantially beyond the property lines of the property on which the SWES is located.~~

(c) ~~Any security or emergency lighting shall be used only to the minimum extent necessary.~~

(d) ~~In order to reduce the impact on local wildlife, only red, dual red and white strobe, strobe-like, or flashing lights shall be used for SWES facilities.~~

10. ~~Environmental Impact.~~

(a) ~~SWES facilities, and the property on which such facilities are located, shall be maintained in accordance with the environmental plan submitted pursuant to Section 5-11-8(E)14(c)(iv) of the Village Code.~~

(b) ~~In order to reduce potential bird perching and nesting, all towers used for SWES facilities shall be designed as enclosed tubular structures with pointed tops, unless otherwise approved by the Village.~~

11. ~~Lot Coverage. The size of each SWES shall be included in the impervious surface coverage calculations for the property on which the system is located.~~

~~F. Reporting to Village. Unless otherwise provided in a special use permit issued for a WES, not less than once every 12 months, the owner of each WES shall submit to the Village: (1) a sworn statement that the operation and maintenance of the WES has been performed in compliance with all applicable directions issued by the manufacturer thereof, along with supporting evidence as may be requested by the Village; and (2) electric bills and related documentation for the property on which the WES is located for the preceding 12 months, to indicate the level of WES energy production and usage. If any report required by this section shows that a WES produced more than 110% of the annual energy usage of the property on which it is located (which shall be deemed to include the zoning~~

lot on which the WES is located as well as any adjacent zoning lots under common ownership and control), then the owner of the WES shall either: (i) modify the WES in a manner acceptable to the Village in order to reduce its production capacity to no more than 110% of the property's energy usage during the immediately preceding year; or (ii) make a contribution to the Village's Open Space Fund that is equivalent to the market value of the energy produced above the 110% threshold.

G. Indemnification. The owner of each WES, and the owner of the property on which the WES is located, shall jointly and severally defend, indemnify and hold harmless the Village and its officials from and against any and all claims, demands, losses, suits, causes of action, damages, injuries, costs, expenses and liabilities whatsoever including attorney's fees arising out of any permit, approval, inspection, or other act or omission of the Village, or any acts or omissions of the owners concerning the operation of the WES project without limitation, whether said liability is premised on contract or in tort.

H. Subsequent Development. No WES that is constructed and operated in compliance with this Section 5-9-13 shall be deemed to be in violation of this Section 5-9-13 solely as a result of any construction on, or rezoning of, any Nonparticipating Property that occurs after the lawful first date of operation of the WES.

Fees; Costs. Any third-party expenses incurred by the Village in connection with the compliance reviews set forth in Section 5-9-13F shall be deemed an additional application fee, and the owner of the WES and of the property on which the WES is located shall be responsible for such fee in accordance with Section 5-11-8D of this Code. Wind energy systems, whether mounted on the ground or attached to a building or other structure, are a prohibited use in all zoning districts within the Village. For purposes of this section, "wind energy system" means a system or device containing one or more turbines (whether orientated on a horizontal axis or a vertical axis) that are turned by wind to produce electricity.

SECTION THREE: Amendment of Section 5-9-14 of the Village Code. Section 5-9-14 of Chapter 9, entitled "District Regulations of General Applicability," of Title V, entitled "Zoning Regulations," of the Village Code is hereby amended in part and shall hereafter be and read as follows:

5-9-14 SOLAR AND GEOTHERMAL ENERGY SYSTEMS (SES)

A. Purpose. The purpose of this Section 5-9-14 is to:

1. Establish reasonable and uniform regulations for the location, installation, operation and maintenance of Solar and Geothermal Energy Systems ("SES");
2. Assure that any development and production of solar and geothermal energy systems SES is safe and minimizes any potentially adverse effects on the community;

3. Promote the supply of sustainable and renewable energy resources, in support of national, state and local goals; and
4. Facilitate energy cost savings and economic opportunities for residents and businesses situated within the Village.

A-1 Definitions. Notwithstanding Section 5-12-13 of this Code, when used in this Section 5-9-14, the following terms shall have the meanings herein ascribed to them. Any terms not listed in this Subsection A-1 shall have the meanings set forth in Section 5-12-13 of this Code.

Height: When used in reference to a SES, "height" shall mean the vertical distance measured from lowest ground surface (grade) adjacent to any structure, equipment, or facility comprising the SES or any part thereof to the highest point of such structure, equipment, or facility. When used in reference to any other structure, "height" shall have the meaning set forth in Section 5-12-13 of this Code.

Nonparticipating Property: Any property that is not under common ownership with the property on which the SES is proposed or installed.

Operable Condition: For any SES, the condition of being capable of operating at full capacity while meeting all conditions set forth in this Code.

Size: When used in reference to a SES, "size" shall mean the area (as measured in square footage or acreage) lying within the perimeter of the SES, as determined by the Village. The perimeter shall encompass the footprint of the entire SES (including all solar panels, all associated equipment and structures, as well as separations and gaps between and among panels and associated equipment and structures) and the ground, building, or other surface on which such SES is mounted.

B. Solar Energy System (SES) Regulations. ~~Solar Energy Systems-SES~~ are only allowed as authorized in this Section 5-9-14, and all ~~Solar Energy Systems-SES~~ shall comply with the regulations set forth in this Section 5-9-14.

1. **Compliance with Laws.** All ~~Solar Energy Systems-SES~~ shall comply with all applicable Village, state, and federal laws and regulations, including, without limitation, the provisions of this Section 5-9-14, this Code, and all applicable Village building ordinances and regulations.
2. **Compliance with Permits.** All ~~Solar Energy Systems-SES~~ shall obtain and comply with all applicable permits pursuant to this Section 5-9-14, including, without limitation building and electrical permits, all conditions imposed by the Village as a condition of issuance of these permits shall be complied with.
3. **Use and Energy Production Restrictions.** The sole purpose of the ~~Solar Energy System-SES~~ shall be the production of energy for local distribution and consumption on the property on which the ~~Solar Energy~~

System SES is located; provided, however, that excess energy produced by a Solar Energy System SES may be sold to a local electric utility company, subject to the requirements of Section 5-9-14.B(3-1), limitations of this section. The capacity size of an SES shall be limited to 110% of the electricity usage on the property where the SES is located during the 12 months preceding installation of the SES, as determined by the Village Engineer. If such data is unavailable, or if the SES is being installed in connection with a change of use of the subject property, then the capacity size of the SES shall be limited to 110% of the property's expected annual electricity usage as determined by the Village Engineer.

- 3.1 Reporting to Village.** ~~Unless otherwise provided in~~ As a condition of approval of a special use permit for an SES, ~~not less than once every 12 months,~~ the Village Board may, in its discretion, require the owner of: ~~(a) any~~ the SES that is accessory to a non-residential use; and ~~(b) any ground-mounted SES that is accessory to a residential use shall submit to the Village on an annual or other periodic basis: (1) a sworn statement that the operation and maintenance of the SES has been performed in compliance with all applicable directions issued by the manufacturer thereof, along with supporting evidence as may be requested by the Village; and/or (2) electric bills and related documentation for the property on which the SES is located for the preceding 12 months, to indicate the level of SES energy production and usage. If any report required by this section shows that a SES produced more than 110% of the annual energy usage of~~ As a condition of such special use permit, the property on which it is located (which shall be deemed to include the zoning lot on which the SES is located as well as any adjacent zoning lots under common ownership and control), then the Village Board may also prescribe requirements for the owner of the SES shall either: ~~(i) to modify the SES in a manner acceptable to the Village in order to reduce its production if its capacity to no more than exceeds 110% of the property's energy usage during the immediately preceding year; or (ii) make a contribution to the Village's Open Space Fund that is equivalent to the market value of the energy produced above the 110% threshold in one or more reporting periods.~~
4. **Interference with Utilities, Roads, and Neighboring Properties.** No Solar Energy System SES shall be operated in a manner so as to interfere with any public right-of-way or any utility system in the Village, or so as to interfere with the reasonable use and enjoyment of any other property in the Village.
5. **Engineering Requirements.** Solar Energy Systems SES shall conform to all applicable industry standards, including, without limitation, the standards developed by the American National Standards Institute. **No SES may utilize concentrated solar thermal technology in any zoning district. "Concentrated solar thermal technology" shall include any**

solar technology that uses lenses or mirrors, with or without tracking systems, to focus or reflect sunlight from a larger area into a smaller area.

5.1 Lighting. Lighting of SES (including all appurtenant facilities or structures) shall be consistent with local, state, and federal laws, shall be used to the minimum extent necessary, and shall be limited to that required for safety or operational purposes. All lighting shall be shielded from abutting properties, shall be directed downward, and shall incorporate full cut-off fixtures.

5.2 Maintenance.

- (a) **SES facilities shall be kept in Operable Condition at all times, except for reasonable maintenance and repair outages.**
- (b) **Should a SES become inoperable for any reason except reasonable maintenance and repair as noted above, or should any part of the SES become damaged, or should a SES violate a permit condition, the owner of the SES shall cease operations immediately and remedy the condition within 90 days after receipt of a notice from the Village regarding the condition, or such longer time to which the SES owner and the Village may agree; provided, however, that if the condition presents an immediate threat to the public health, safety, or welfare, the owner of the SES shall remedy the condition within such time as may be required by the Village.**

6. Building-Mounted Solar Energy Systems-SES.

- (a) **Solar Energy System Permit Required. Building-mounted ~~Solar Energy Systems-SES~~ are allowed as a permitted use in any zoning district, but only as an accessory use in accordance with Section 5-9-1 of the Village Code (and not as a principal use) on any property, and only upon issuance of a Solar Energy System permit in accordance with the following:
 - (i) The owner of the property on which the ~~Solar Energy System-SES~~ is proposed to be installed shall submit an application for building permits, as applicable, pursuant to Title 4 of the Long Grove Village Code. Such application shall include the Minimum Data Requirements identified in section 5-11-8(E)15 of this Code.
 - (ii) Upon receipt of a complete application pursuant to Title 4 of this Code, and upon a determination by the Village that the application and the proposed Building-Mounted ~~Solar Energy System-SES~~ comply with the requirements set forth in this and the other applicable codes the Village shall issue permits for the ~~Solar Energy System-SES~~.**

- (b) Location.
- (i) ~~Solar Energy Systems-SES~~ may be mounted on the roof of a permitted principal or accessory structure. ~~Solar Energy Systems-SES~~ shall not be mounted upon any other portion of any principal or accessory structure.
 - (ii) ~~Solar Energy Systems-SES~~ must either be: (1) an integral part of the structure, rather than a separate mechanical device, replacing or substituting for an architectural or structural part of the building, such as a photovoltaic or hot water system that are contained within roofing materials, windows, skylights, shading devices and similar architectural components; or (2) mounted flush with, and parallel to, a finished surface, at no more than six inches in height above that surface.
 - (iii) Applications and plans for a Building Mounted ~~Solar Energy System-SES~~ within the B-1 Historic District shall also be subject to review and approval by the Architectural Commission.
- (c) Horizontal Projection. ~~Solar Energy Systems-SES~~ shall not extend beyond the exterior perimeter of the structure on which the ~~System SES~~ is mounted.
- (d) Setbacks. All portions of building-mounted ~~Solar Energy Systems SES~~ shall comply with the generally applicable setback restrictions for the Zoning District or building setbacks lines as established in a Planned Unit Development (PUD) in which the ~~Solar Energy System-SES~~ is located.
- (e) Height. The height of any building-mounted ~~Solar Energy System SES~~ shall not exceed the lesser of: (i) the height of the peak of that portion of the roof of the structure on which the ~~System-SES~~ is mounted; and (ii) the generally applicable height restrictions for the Zoning District in which the ~~Solar Energy System-SES~~ is located. For purposes of this section, "height" shall be measured vertically from the lowest edge of the panel to the highest edge of the ~~Solar Energy System-SES~~.
- (f) Maximum Roof Coverage. No ~~Solar Energy System-SES~~ shall occupy more than 80% of the cumulative area of the face of the structure on which the ~~System SES~~ is mounted, unless the ~~System SES~~ is incorporated into, and is an integral part of, the structural elements of the face on which it is mounted.
- (g) Color. Building-mounted SES shall be framed and finished in a neutral color that blends with the color and finish of the building surface on which the SES is mounted.

Commented [A1]: The Board suggested that color/aesthetic regulations be considered for building-mounted SES

7. ~~Ground-Mounted Solar Energy Systems-SES~~. Ground mounted Solar Energy Systems-SES shall be considered special uses in all zoning districts, **and shall be allowed only as an accessory use in accordance with Section 5-9-1 of the Village Code, and not as a principal use, on any property.** Plans for ground mounted Solar Energy Systems-SES (excepting portable energy systems-SES for swimming pools listed in Section 5-9-14(B)8 below) shall be subject to the issuance of a special use permit as provided for in Section 5-11-17 of this title ~~and as~~ well as review and approval by the Architectural Commission. In addition to all other requirements of the Special Use Permit application, all applications for ground mounted Solar Energy Systems-SES shall include the Minimum Data Requirements identified in section 5-11-8(E)15 of this Code. In addition, plans for ground mounted solar energy system-SES shall comply with the minimum standards as follows:
- (a) Location.
 - (i) No ground-mounted Solar Energy System-SES constructed in a Residential District shall be located within any public or private right-of-way for street purposes.
 - (ii) No ground-mounted Solar Energy System-SES may be constructed within any off-street parking or loading space required pursuant to this Code.
 - (iv) Ground mounted Solar Energy Systems-SES shall be located on the same lot or parcel as the principal structure.
 - (v) **Unless otherwise expressly approved pursuant to special use permit, ground-mounted SES shall be located and within the rear yard of that the lot or parcel on which the principal structure is located.**
 - (b) Installation Angle; Rotation. All solar panels of a ground-mounted Solar Energy System-SES shall be installed not greater than, **and may be rotated not to exceed,** the maximum angle specified by the manufacturer.
 - (c) Setbacks. In all zoning districts, all portions of ground-mounted Solar Energy Systems-SES shall comply with the generally applicable setback restrictions for the Zoning District or building setbacks lines as established in a PUD in which the Solar Energy System-SES is located, as measured from the property line to the closest edge of the system; **provided that the required setbacks may be increased by such additional distance as is necessary to provide proper screening as required by this section.** Solar Energy Systems-SES (and parts thereof) shall not be deemed a permitted obstruction in any required yard. A Solar Energy System SES that is accessory to a public school use shall not be subject to

the setback requirements for public assemblies under Section 5-9-12 of this Title.

- (d) Height. The height of a ground-mounted ~~Solar Energy System~~ SES shall not exceed the height limitation for accessory structures.
- (e) Lot Coverage and Size. The total solar panel surface area of each ground-mounted ~~solar energy system~~ SES shall be included in the ~~lot~~ impervious surface coverage calculations for the property on which the system is located. In no event may an SES be greater than [] acres (square feet) in size.
- (f) Screening and Bufferyards. Ground-mounted ~~Solar Energy Systems~~ SES shall be properly screened from adjacent lots. For the purpose of this subsection (f), proper screening shall be deemed to consist of permanent vegetative screening large enough and dense enough to substantially screen the energy system from view from adjacent lots in a manner that is consistent with the character of the neighborhood and existing uses on the adjacent lots. All landscaping and screening shall be installed and maintained in accordance with this Section and plans approved as part of the special use permit for the SES. All required landscaping shall be continually maintained by the owner or other person responsible for maintenance of the premises. Any ground-mounted SES that is 0.5 acres (21,780 square feet) or greater in size shall be subject to the following additional standards:
 - 1. Landscaping and screening shall be located as near as practicable to the perimeter of the property on which the SES is located unless otherwise approved by the Village Board pursuant to special use permit. In considering modifications to the perimeter landscaping requirement, the Village Board may consider the size, topography, and layout of the SES, the subject property, and Nonparticipating Properties.
 - 2. Landscaping shall be of a sufficient height and density to provide year-round screening in accordance with this paragraph (f) subject to a reasonable grow-in period after the initial planting as specified in the special use permit, but not to exceed 3 years.
 - 3. The Village may require the screening plan to include construction and maintenance of earthen landscaped berms.
 - 4. The owner of the SES shall submit a maintenance plan, which shall be subject to Village Board approval as part of the special use permit, which shall, at a minimum,

Commented [A2]: The Board suggested that the PCZBA consider setting a cap on the maximum size of ground-mounted SES

provide for: (i) continuous and permanent maintenance of all required landscaping consistent with the special use permit and good forestry practices; (ii) a periodic comprehensive review of the health and density of the landscaping in cooperation with the Village; and (iii) replacement of any dead, dying, damaged, or diseased landscaping within one growing season after identification as such.

5. Delivery to the Village of a performance bond or letter of credit in an amount determined by the Village Forester to ensure the protection or replacement of all required landscaping for a period of at least two years after the SES begins operating.

(g) ~~Rotation~~—Ground-mounted Solar Energy System panels may rotate not to exceed the maximum angle as specified by the manufacturer.

Pollinator-Friendly and Native Plantings. In order to prevent erosion, manage stormwater run-off, and provide ecological benefits, ground-mounted SES that are 0.5 acres (21,780 square feet) or greater in size must: (i) be planted with low-profile native prairie species using a seed mix appropriate for the region and site-specific soil conditions; and (ii) provide native perennial vegetation and foraging habitat that is beneficial to game birds, song birds, and pollinators in accordance with the site management practices identified in the Pollinator Friendly Solar Site Act, 525 ILCS 55/1 et seq., all in accordance with a plan approved by the Village Forester. Ground-mounted SES that are less than 0.5 acres (21,780 square feet) in size are encouraged to incorporate pollinator-friendly and native plantings as described in this subsection.

(h) **Environmental Impact. SES that are 0.5 acres (21,780 square feet) or greater in size, and the property on which such systems are located, shall be maintained in accordance with the environmental plan submitted pursuant to Section 5-11-8(E)15(c) of the Village Code.**

8. ~~Portable Solar Energy Systems-SES for Swimming Pools.~~ Portable Solar Energy Systems-SES for swimming pools may only be constructed and used within the Village in accordance with the following provisions:

(a) No portable Solar Energy System-SES may be constructed or used prior to April 1 or after October 31 of any calendar year.

(b) No portable Solar Energy System-SES may be used for any purpose other than the provision of heat for an outdoor swimming pool located within a Residential District.

- (c) ~~Portable Solar Energy Systems~~ SES shall be constructed and used in accordance with the applicable provisions of Chapter 9, Section 5-9-1 (D) (3) of this Code.

9. Decommissioning.

- (a) A SES that is not in Operable Condition for a period exceeding 90 consecutive days shall be deemed abandoned unless the owner of the SES is diligently pursuing maintenance, modifications, or repairs to the SES during such time. The owner of an abandoned SES and the owner of the property on which the SES is located shall cause the removal of all SES structures and facilities within 30 days after receipt of a notice of abandonment from the Village, or such longer time as the Village may specify in the notice. Decommissioning shall include:
- a. Physical removal of the SES, including all systems, structures, equipment, security barriers, and electrical wiring lines from the site;
- b. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations; provided, however, that energy system equipment and building materials shall be disposed of by recycling, rather than landfilling, to the maximum extent possible; and
- c. Stabilizing or re-vegetation of the site as necessary to minimize erosion and restoration of the subject property in accordance with the standards required by the Village's then-current applicable codes.

Notwithstanding the foregoing, the Village may allow the owner to leave landscaping or to abandon-in-place designated below-grade structures, foundations, or wiring in order to minimize disruption to vegetation, natural habitats, or existing structures.

- (b) Any abandoned SES that is not removed within 30 days after receipt of a notice of abandonment, or such other time as the Village and owner may agree, shall be deemed a public nuisance, which nuisance the Village shall have the right, but not the obligation, to summarily abate by removing such SES at the joint and several expense of the owners of the SES and of the property on which the SES is located. As a condition of permit approval for a SES, the applicant shall agree to allow the Village entry upon the subject property to remove an abandoned SES in accordance with this paragraph. In the case of such removal, the Village shall have the right, but not the obligation, to file a lien for reimbursement of any and all expenses incurred by the Village in connection with the removal, including, without limitation, attorney fees and accrued interest.

Commented [A3]: The Board expressed concerns about proper end-of-life disposal of solar panels and limited disposal/recycling options that may be available to property owners. The PCZBA may wish to consider whether any modifications to the disposal requirements would be appropriate in light of these concerns.

- (c) **Decommissioning Plan. Prior to, and as a condition of, issuance of any permit for: (i) a SES that is accessory to a non-residential use; or (ii) a SES accessory to a residential use that is 0.5 acres (21,780 square feet) or greater in size, the owner shall prepare a decommissioning plan, which plan shall be subject to Village approval. Unless otherwise required by any special use permit for a SES, the plan shall: (iii) address all required components of the decommissioning process in accordance with this Section; (iv) show final site conditions after decommissioning is completed; and (v) include an engineer's opinion of probable cost for decommissioning in accordance with the plan. Unless otherwise approved by the Village Board, the owner shall post a bond or letter of credit in a form acceptable to the Village in the amount of 130% of the engineer's estimate.**

Commented [A4]: The Board discussed concerns about the effectiveness of decommissioning plan and bond requirements since legal requirements, available technology, and costs might change significantly over the life of the SES. The PCZBA may wish to consider whether modifications to the decommissioning requirements would be appropriate to address these issues.

- (a) ~~A Solar Energy System that is not capable of operating at full capacity for a period exceeding 30 consecutive days shall be deemed abandoned. The owner of an abandoned Solar Energy System and the owner of the property on which the Solar Energy System is located shall cause the removal of all Solar Energy System structures and facilities within 30 days after receipt of a notice of abandonment from the Village.~~
- (b) ~~Any abandoned Solar Energy System that is not removed within 30 days after receipt of a notice of abandonment shall be deemed a public nuisance, which nuisance the Village shall have the right, but not the obligation, to summarily abate by removing such System at the joint and several expense of the owners of the System and of the property on which the System is located. In the case of such removal, the Village shall have the right, but not the obligation, to file a lien for reimbursement of any and all expenses incurred by the Village in connection with the removal, including, without limitation, attorney fees and accrued interest.~~
- (c) ~~Upon removal of the Solar Energy System, the owner of record of the subject property shall restore that portion of the subject property on which the System was installed in accordance with the standards required by the Village's then current applicable codes.~~

C. Fees; Costs. Any third-party expenses incurred by the Village in connection with the compliance reviews set forth in Section 5-9-14B3.1 shall be deemed an additional application fee, and the owner of the SES and of the property on which such system is located shall be responsible for such fee in accordance with Section 5-11-8D of this Code.

D. Geothermal Energy System Regulations. All Geothermal Energy Systems shall comply with the regulations set forth in this Section 5-9-14.

1. ~~Compliance with Laws. All Geothermal Energy Systems shall comply with all applicable Village, county (including, without limitation, applicable regulations of the Lake County Health Department), state, and~~

~~federal laws and regulations, including, without limitation, the provisions of this Code, and all Village building ordinances and regulations.~~

- ~~2. Compliance with Permits. All Geothermal Energy Systems shall obtain and comply with all applicable Geothermal Energy Systems permits including, without limitation, all conditions imposed by the Village as a condition of issuance of the permits.~~
- ~~3. Permitted Locations. Geothermal Energy Systems are allowed as a permitted use in any zoning district, but only upon issuance of applicable building permits in accordance with the following:
 - ~~(a) The owner of the property on which the Geothermal Energy System is proposed to be installed shall submit an application for building permits, as applicable, pursuant to Title 4 of the Long Grove Village Code. Such application shall include the Minimum Data Requirements identified in section 5-11-8(E)19 of this Code.~~
 - ~~(b) Upon receipt of a complete application pursuant to Title 4 of this Code, and upon review and determination by the Village that the application and the proposed Geothermal Energy System complies with the requirements set forth in this and the other applicable codes, the Village shall issue permits for the Geothermal Energy System.~~~~
- ~~4. Engineering Requirements. Geothermal Energy Systems shall conform to all applicable industry standards, including, without limitation, the standards developed by the American National Standards Institute.~~
- ~~5. Setbacks. All components of a Geothermal Energy System that are located above ground shall comply with the generally applicable setback restrictions for the Zoning District or building setbacks lines as established in a Planned Unit Development (PUD) in which the system is located.~~
- ~~6. Installation in Rights of Way Prohibited. No portion of a geothermal energy system shall be installed in any right-of-way or in any easement dedicated for roadway purposes.~~

~~**D7. Indemnification. The owner of each Solar or Geothermal Energy System SES, and the owner of the property on which the Solar or Geothermal Energy System SES is located, shall jointly and severally defend, indemnify and hold harmless the Village and its officials from and against any and all claims, demands, losses, suits, causes of action, damages, injuries, costs, expenses and liabilities whatsoever including attorney's fees arising out of any permit, approval, inspection, or other act or omission of the Village, or any acts or omissions of the owners concerning the operation of the Solar or Geothermal Energy System SES, including, without limitation, whether said liability is premised on contract or on tort.**~~

SECTION FOUR: Addition of New Section 5-9-15 of the Village Code. Chapter 9, entitled

"District Regulations of General Applicability," of Title V, entitled "Zoning Regulations," of the Village Code is hereby amended to add a new Section 5-9-15, which shall hereafter be and read as follows:

5-9-15 GEOTHERMAL ENERGY SYSTEMS (GES)

A. Purpose. The purpose of this Section 5-9-15 is to:

- 1. Establish reasonable and uniform regulations for the location, installation, operation and maintenance of GES;**
- 2. Assure that any development and production of GES is safe and minimizes any potentially adverse effects on the community;**
- 3. Promote the supply of sustainable and renewable energy resources, in support of national, state and local goals; and**
- 4. Facilitate energy cost savings and economic opportunities for residents and businesses situated within the Village.**

B. Definitions. Notwithstanding Section 5-12-13 of this Code, when used in this Section 5-9-15, the following terms shall have the meanings herein ascribed to them. Any terms not listed in this Subsection B shall have the meanings set forth in Section 5-12-13 of this Code.

Height: When used in reference to a GES, "height" shall mean the vertical distance measured from lowest ground surface (grade) adjacent to any structure, equipment, or facility comprising the GES or any part thereof to the highest point of such structure, equipment, or facility. When used in reference to any other structure, "height" shall have the meaning set forth in Section 5-12-13 of this Code.

Nonparticipating Property: Any property that is not under common ownership with the property on which the GES is proposed or installed.

Operable Condition: For any GES, the condition of being capable of operating at full capacity while meeting all conditions set forth in this Code.

C. General Regulations. All GES shall comply with the regulations set forth in this Section 5-9-15.

- 1. Compliance with Laws. All GES shall comply with all applicable Village, county (including, without limitation, applicable regulations of the Lake County Health Department), state, and federal laws and regulations, including, without limitation, the provisions of this Code, and all Village building ordinances and regulations.**

2. Compliance with Permits. All GES shall obtain and comply with all applicable GES permits including, without limitation, all conditions imposed by the Village as a condition of issuance of the permits.
3. Permitted Locations. GES are allowed as a permitted use in any zoning district, but only as an accessory use (and not as a principal use) on any zoning lot, and only upon issuance of applicable building permits in accordance with the following:
 - (a) The owner of the property on which the GES is proposed to be installed shall submit an application for building permits, as applicable, pursuant to Title 4 of the Long Grove Village Code. Such application shall include the Minimum Data Requirements identified in section 5-11-8(E)16 of this Code.
 - (b) Upon receipt of a complete application pursuant to Title 4 of this Code, and upon review and determination by the Village that the application and the proposed GES complies with the requirements set forth in this and the other applicable codes, the Village shall issue permits for the GES.
4. Engineering Requirements. GES shall conform to all applicable industry standards, including, without limitation, the standards developed by the American National Standards Institute.
5. Setbacks; Height. Any components of a GES that are located above ground shall comply with: (i) the generally applicable height limitations for accessory structures for the Zoning District in which the system is located; and (ii) the generally applicable setback restrictions for the Zoning District or building setbacks lines as established in a Planned Unit Development (PUD) in which the system is located.
6. Installation in Rights-of-Way Prohibited. No portion of a GES shall be installed in any right-of-way or in any easement dedicated for roadway purposes.
7. Lighting. Lighting of GES (including all appurtenant facilities or structures) shall be consistent with local, state, and federal laws, shall be used to the minimum extent necessary, and shall be limited to that required for safety or operational purposes. All lighting shall be shielded from abutting properties, shall be directed downward, and shall incorporate full cut-off fixtures.
8. Maintenance.
 - (a) GES facilities shall be kept in Operable Condition at all times, except for reasonable maintenance and repair outages.

(b) Should a GES become inoperable for any reason except reasonable maintenance and repair as noted above, or should any part of the GES become damaged, or should a GES violate a permit condition, the owner of the GES shall cease operations immediately and remedy the condition within 90 days after receipt of a notice from the Village regarding the condition, or such longer time to which the GES owner and the Village may agree; provided, however, that if the condition presents an immediate threat to the public health, safety, or welfare, the owner of the GES shall remedy the condition within such time as may be required by the Village.

9. Use and Energy Production Restrictions. The sole purpose of the GES shall be the production of energy for consumption on the property on which the GES is located.

10. Reporting to Village. Not less than once every 12 months, the owner of each GES that is accessory to a non-residential use shall submit to the Village a sworn statement that the operation and maintenance of the GES has been performed in compliance with all applicable directions issued by the manufacturer thereof, along with supporting evidence as may be requested by the Village.

D. Indemnification. The owner of each GES, and the owner of the property on which the GES is located, shall jointly and severally defend, indemnify and hold harmless the Village and its officials from and against any and all claims, demands, losses, suits, causes of action, damages, injuries, costs, expenses and liabilities whatsoever including attorney's fees arising out of any permit, approval, inspection, or other act or omission of the Village, or any acts or omissions of the owners concerning the operation of the GES, including, without limitation, whether said liability is premised on contract or on tort.

E. Decommissioning.

1. A GES that is not in Operable Condition for a period exceeding 90 consecutive days shall be deemed abandoned unless the owner of the GES is diligently pursuing maintenance, modifications, or repairs to the GES during such time. The owner of an abandoned GES and the owner of the property on which the GES is located shall cause the removal of all GES structures and facilities within 30 days after receipt of a notice of abandonment from the Village, or such longer time as the Village may specify in the notice. Decommissioning shall include:

- a. Physical removal of the GES, including all systems, structures, equipment, security barriers, and electrical wiring lines from the site;**
- b. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations;**

provided, however, that energy system equipment and building materials shall be disposed of by recycling, rather than landfilling, to the maximum extent possible; and

- c. Stabilizing or re-vegetation of the site as necessary to minimize erosion and restoration of the subject property in accordance with the standards required by the Village's then-current applicable codes.

Notwithstanding the foregoing, the Village may allow the owner to leave landscaping or to abandon-in-place designated below-grade structures, foundations, or wiring in order to minimize disruption to vegetation, natural habitats, or existing structures.

- 2. Any abandoned GES that is not removed within 30 days after receipt of a notice of abandonment, or such other time as the Village and owner may agree, shall be deemed a public nuisance, which nuisance the Village shall have the right, but not the obligation, to summarily abate by removing such System at the joint and several expense of the owners of the GES and of the property on which the GES is located. As a condition of permit approval for a GES, the applicant shall agree to allow the Village entry upon the subject property to remove an abandoned GES in accordance with this paragraph. In the case of such removal, the Village shall have the right, but not the obligation, to file a lien for reimbursement of any and all expenses incurred by the Village in connection with the removal, including, without limitation, attorney fees and accrued interest.
- 3. Decommissioning Plan. Prior to, and as a condition of, issuance of any permit for a GES that is accessory to a non-residential use, the owner shall prepare a decommissioning plan, which plan shall be subject to Village approval. The plan shall: (iii) address all required components of the decommissioning process in accordance with this Section; (iv) show final site conditions after decommissioning is completed; and (v) include an engineer's opinion of probable cost for decommissioning in accordance with the plan. Unless otherwise approved by the Village Board, the owner shall post a bond or letter of credit in a form acceptable to the Village in the amount of 130% of the engineer's estimate.

- F. Fees; Costs. Any third-party expenses incurred by the Village in connection with the compliance reviews set forth in Section 5-9-15.C.10 shall be deemed an additional application fee, and the owner of the GES and of the property on which such system is located shall be responsible for such fee in accordance with Section 5-11-8D of this Code.

Commented [A5]: The Board discussed concerns about the effectiveness of decommissioning plan and bond requirements in legal requirements, available technology, and costs might change significantly over the life of an AES system. Although the Board discussion focused on SES, the PCZBA may wish to consider whether any similar modifications to the decommissioning requirements for GES would be appropriate.

SECTION FIVE: Amendment of Subsection 5-11-8(E)(15) of the Village Code. Subsection E, entitled "Minimum Data Requirements," of Section 8, entitled "Applications," of Chapter 11, entitled "Zoning

Administration and Enforcement," of Title 5, entitled "Zoning Regulations," of the Village Code is hereby amended in part and shall hereafter be and read as follows:

5-11-8 APPLICATIONS

* * *

E. Minimum Data Requirements.

* * *

15. Applications for Solar Energy Systems (SES).

(a) Generally Applicable Requirements.

- (i) The name, address, and telephone number of the person, firm, or corporation that will construct or install the proposed ~~Solar Energy System~~ **SES**.
- (ii) Elevation drawings and/or photographs, and a site plan, depicting the location, size, and design details of all existing structures on the subject property and of the proposed ~~Solar Energy System~~ **SES**, which materials shall set forth all applicable zoning compliance data.
- (iii) The manufacturer's specifications of the solar collectors and other devices of the proposed system, including, without limitation, wattage capacity, the dimensions of the collectors, the mounting mechanisms, the foundation details, and the structural requirements for the ~~System~~ **SES** and a copy of the directions issued by the manufacturer of the proposed SES for the proper installation, operation, and maintenance of the SES.
- (iv) Plans and specifications showing the method of construction of the proposed system, including details regarding the support of the system and its attachment to any structure.
- (v) A copy of stress sheets and calculations prepared by a licensed professional engineer showing that the proposed system is designed for the deadload or windload, in the amount required by the manufacturer and all applicable law.
- (vi) A line drawing of the electrical components, as supplied by the manufacturer, in sufficient detail to allow for a determination that the manner of installation conforms to this Code and other applicable law.

- (vii) A certification of design compliance for the proposed ~~Solar Energy System~~ SES with respect to the applicable noise, structural, and safety regulations set forth in the Village Code, which certification must have been obtained from Underwriters Laboratories (UL) or an equivalent independent testing agency approved by the Building Commission.
 - (viii) A signed indemnification agreement in accordance with Subsection 5-9-14(D) of this Code.
 - (ix) **An executed maintenance covenant, on a form provided by the Village, providing that the owner and all subsequent owners of the subject property will maintain the SES in accordance and compliance with Section 5-9-14 of this Code and with the maintenance directions issued by the manufacturer of the SES.**
 - (x) **Insurance. Proof of homeowner or business general liability insurance, as appropriate, with a minimum coverage level of \$1,000,000 per occurrence.**
 - (xi) **Electric Utility. Approval letter from the local electric utility company, if the system is to be connected to the energy grid.**
- (b) Ground-Mounted Systems - Site Plan. In addition to the requirements set forth in Section 5-11-8 "Applications" of this Code, for all ground-mounted ~~Solar Energy Systems~~ SES, the applicant shall submit a site plan, drawn to scale, signed and sealed by a Professional Engineer licensed in the State of Illinois, and including, without limitation, the following:
- (i) The existing and proposed contours, at a minimum of two foot intervals;
 - (ii) The location, setbacks, exterior dimensions and square footage of all structures on the subject property and of all structures proposed as part of the ground-mounted ~~solar energy system~~ SES, as well as all applicable zoning compliance data; and
 - (iii) The location of any overhead or underground power lines and utility easements.
- (c) **Environmental Impact Studies and Plans.**
- (i) **For any proposed SES that is 0.5 acres (21,780 square feet) or greater in size, the applicant shall request, and submit to the Village, evaluations regarding the impact**

of the proposed SES on the local environment and local wildlife from the Illinois Department of Natural Resources, the United States Fish and Wildlife Service, and the Lake County Soil and Water Conservation District.

(ii) Upon request of the Village, the applicant shall submit an environmental plan to mitigate or eliminate any adverse impact of the proposed SES on the local environment and local wildlife, which plan shall be subject to the approval of the Village in consultation with the Illinois Department of Natural Resources and the United States Fish and Wildlife Service.

16. Applications for Geothermal Energy Systems (GES).

- (a) The name, address, and telephone number of the person, firm, or corporation that will construct or install the proposed ~~Geothermal Energy System~~ **GES**.
- (b) A project summary and a site plan, which shall include, without limitation, information regarding the manufacturer of the system and the system specifications.
- (c) The location and size of existing waterways, wetlands, one hundred-year floodplains, sanitary sewers, field drain tiles, storm sewer systems, aquifers, and water distribution systems.
- (d) The location of any underground power lines and utility easements.
- (e) A signed indemnification agreement in accordance with Subsection 5-9-14 (D) of this Code.
- (f) An executed maintenance covenant, on a form provided by the Village, providing that the owner and all subsequent owners of the subject property will maintain the GES in accordance and compliance with Section 5-9-14 of this Code and with the maintenance directions issued by the manufacturer of the GES.**
- (g) Insurance. Proof of homeowner or business general liability insurance, as appropriate, with a minimum coverage level of \$1,000,000 per occurrence.**
- (h) Electric Utility. Approval letter from the local electric utility company, if the system is to be connected to the energy grid.**

SECTION SIX: Amendment to Section 5-12-13 of the Village Code. Section 13, entitled "Definitions," of Chapter 12, entitled "Applicability and Interpretation," of Title V, entitled "Zoning Regulations," of the Village Code is hereby amended in part as follows:

5-12-13 DEFINITIONS

When used in this title, the following terms shall have the meanings herein ascribed to them:

* * *

ACCESSORY STRUCTURE OR USE: See section 5-9-1(b) of this title.

* * *

BUILDING, ACCESSORY: See "ACCESSORY STRUCTURE OR USE." ~~A subordinate building or portion of a principal building, the use of which is incidental to that of the principal building and customary in connection with that use.~~

* * *

BUILDING, PRINCIPAL: See "PRINCIPAL STRUCTURE OR BUILDING." ~~A nonaccessory building in which the principal use of a lot on which it is located is conducted.~~

* * *

PRINCIPAL STRUCTURE OR BUILDING: A structure or building on a zoning lot intended to be utilized for a principal use and to which any other structure on such lot must be accessory.

* * *

PRINCIPAL USE: The use of a zoning lot, whether a permitted or specially permitted use, designated by the owner of such lot as the primary or main use of such lot and to which any other use on such lot must be accessory.

* * *

USE: The purpose or activity for which the land, or building thereon, is designed, arranged or intended, or for which it is occupied or maintained.

* * *

USE, ACCESSORY: See "ACCESSORY STRUCTURE OR USE." ~~A subordinate use such as a private garage, which is clearly and customarily incidental to the principal use of a building or premises and which is located on the same lot as the principal building or use, except for such accessory parking facilities as are specifically authorized to be located elsewhere.~~

* * *

USE, PRINCIPAL: See "PRINCIPAL USE." ~~The main use of land or building as distinguished from a subordinate or accessory use.~~

* * *

SECTION SIX: Effective Date of Amendments. Notwithstanding any moratorium adopted by the Village with respect to alternative energy devices, the amendments to the Zoning Code set forth in this Ordinance shall be in full force and effect upon the effective date of this Ordinance.

SECTION SEVEN: Effective Date of Ordinance. This Ordinance shall be in full force and effect upon its passage, approval, and publication in pamphlet form in the manner provided by law.

PASSED this ____ day of _____, 20192020.

AYES: ()

NAYS: ()

ABSENT: ()

APPROVED this ____ day of _____, 20192020.

Village President

ATTEST:

Village Clerk