



Planning Commission/Zoning Board of Appeals

Meeting Agenda

May 16, 2018

7:00 P.M. Village Hall, 10 S Municipal Drive

I. CALL TO ORDER

II. ROLL CALL

III. APPROVAL OF MINUTES

- a) April 18, 2018 Meeting

IV. PUBLIC HEARING

- a) None

V. NEW BUSINESS

- a) None

VI. OLD BUSINESS

- a) Petition #18-008 Zoning Ordinance Text Amendment—Solar Energy Systems
Applicant: Village of Sugar Grove

VII. COMMISSIONER COMMENTS AND MISCELLANEOUS INFORMATION

VIII. ADJOURNMENT

**VILLAGE of SUGAR GROVE
PLANNING COMMISSION/ZONING BOARD of APPEALS
MINUTES of April 18, 2018 MEETING**

1. **CALL TO ORDER:**

The meeting of the Sugar Grove Planning Commission / Zoning Board of Appeals (ZBA) was called to order at 7:00 p.m. by Chairman Irv Ochsenschlager in the Village Hall Board Room.

2. **ROLL CALL:**

Planning Commission/ZBA members present:

Chairman Irv Ochsenschlager, Jim Eckert, John Guddendorf, Larry Jones, James White, and Gregory Wilson

Absent: Rebecca Sabo

Also present: Renee Hanlon, Planning and Zoning Administrator

3. **APPROVAL OF MINUTES:**

Motion was made by Commissioner Jones to approve Minutes of the March 21, 2018 meeting of the Planning Commission/Zoning Board of Appeals. The motion was seconded by Commissioner Guddendorf.

Motion passed by unanimous voice vote

4. **PUBLIC HEARING:**

Petition 18-006: Zoning Text Amendment—Shipping Containers

Applicant: Village of Sugar Grove

Chairman Ochsenschlager called the public hearing to order at 7:02p.m. and administered the oath to all in attendance who wished to speak.

Renee Hanlon, on behalf of the applicant, explained that the purpose of the text amendment is to prohibit shipping containers in residential and commercial areas of the village. This amendment is brought forward due to the popularity of shipping containers as a popular upcycle item. She further explained that the text amendment includes an exception for Village owned properties with Village Board approval.

Commissioner White expressed his opposition to making an exception for Village owned properties.

Commissioner Guddendorf discussed the need for shipping containers as storage for the Corn Boil Festival Committee and as training structures for Sugar Grove Fire District personnel. He stated that the exception will benefit those organizations.

There being no additional persons interested in speaking on the matter, Chairman Ochsenschlager closed the public hearing at 7:10p.m.

Petition 18-007: Zoning Ordinance Text Amendment—Parks

Applicant: Village of Sugar Grove

Chairman Ochsenschlager called the public hearing to order at 7:15p.m. and administered the oath to all in attendance who wished to speak.

Renee Hanlon, on behalf of the petitioner, explained that “Parks” were omitted as a permitted use in all zoning districts during a recent zoning text amendment effort. This amendment corrects that mistake.

There being no additional persons interested in speaking on the matter, Chairman Ochsenschlager closed the public hearing at 7:18p.m.

Petition 18-008 Zoning Ordinance Text Amendment—Solar Energy Systems

Applicant: Village of Sugar Grove

Chairman Ochsenschlager called the public hearing to order at 7:20p.m. and administered the oath to all in attendance who wished to speak.

Renee Hanlon, on behalf of the applicant, provided a brief description of the text amendment. She explained that the text amendment establishes three (3) categories of solar energy systems: accessory solar energy system which includes individual property owners installing solar panels on their property for their personal use, solar gardens which are solar energy systems limited to five (5) acres of land area and two megawatts (2Mw) of total power output, and solar farms which are systems that exceed five (5) acres of land area and two Megawatts (2Mw) of total power output. Accessory systems will be permitted by right in all zoning districts while the larger systems will be permitted by special use in the A-1, B-1, B-2, B-3, BP, M-1, and I-1 districts. Lastly, she described the standards that must be met in order to establish solar energy systems.

Commissioner White led a discussion of the appropriateness of large solar energy system locations by zoning district.

Commissioner Guddendorf questioned how the ordinance will be administered in specific instances (i.e. multiple property owners building systems in close proximity to one another)

There being no additional persons interested in speaking on the matter, Chairman Ochsenschlager closed the public hearing at 7:45p.m.

5. **NEW BUSINESS:**

Petition 18-006: Zoning Ordinance Text Amendment—Shipping Containers
Applicant: Village of Sugar Grove

Chairman Ochsenschlager opened the floor to commissioners for discussion of the text amendment.

Commissioner White reiterated his aversion to the village owner property exception.

Commissioner White made the following motion: Based on the finding of fact, I move that the Planning Commissioner/Zoning Board of Appeals recommend to the Village Board approval of Petition #18-006 amending Section 11-3-2, Definitions, to add “Shipping Container, and to amend Section 11-4-7.D to add “Shipping Container” as an accessory building permitted by right in the A-1 Agriculture district, M-1 Limited Manufacturing district, and the I-1 Light Industrial district with no exception on Village owned properties by Village Board approval.

Commissioner Guddendorf seconded.

AYES: L. Jones, J. Guddendorf, J. Eckert, G. Wilson, J. White,
and I. Ochsenschlager
NAYS: None
ABSENT: R. Sabo

Motion passed

Petition 18-007: Zoning Ordinance Text Amendment—Parks
Applicant: Village of Sugar Grove

Chairman Ochsenschlager opened the floor to commissioners for discussion of the text amendment.

There being no discussion, Chairman Ochsenschlager stated that he would entertain a motion.

Commissioner White made the following motion: Based on the finding of fact, I move that the Planning Commission/Zoning Board of Appeals recommend to the Village board approval of Petition #18-007 amending Section 11-4-22, Table of Permitted Uses, by adding “Park”, as presented by staff.

Commissioner Jones seconded.

AYES: L. Jones, J. Guddendorf, J. Eckert, G. Wilson, J. White,
and I. Ochsenschlager

NAYS: None

ABSENT: R. Sabo

Motion passed

Petition 18-008: Zoning Ordinance Text Amendment—Solar Energy Systems
Applicant: Village of Sugar Grove

Chairman Ochsenschlager opened the floor to commissioners for discussion of the text amendment.

Commissioner Eckert presented the commission an excerpt from the Illinois Administrative Code which lists the four (4) levels of solar energy systems as defined by the General Assembly (attached). Much discussion ensued about how to relate those levels to the definitions of solar energy systems in the proposed text amendment.

Commissioner Guddendorf asked a series of technical installation questions of Commissioner Eckert. Commissioner Eckert provided technical information on the installation and operation of solar energy systems.

Commissioner White suggested that Commissioner Eckert work with staff over the next month to finalize the proposed text amendment and the Commission reconsider the amendment at the May meeting.

Chairman Ochsenschlager asked staff to work with Commissioner Eckert to refine the amendment and bring it back to a future meeting for reconsideration.

Commissioner White made a motion to table the item until the next scheduled meeting.

Commissioner Guddendorf seconded the motion.

AYES: L. Jones, J. Guddendorf, J. Eckert, G. Wilson, J. White,
and I. Ochsenschlager

NAYS: None

ABSENT: R. Sabo

Motion passed

6. **OLD BUSINESS**
None.

7. **PLAN COMMISSIONER COMMENTS, PROJECTS UPDATES and MISCELLANEOUS INFORMATION**

Next meeting will be in May 16, 2018 at Village Hall.

8. **ADJOURNMENT**

Commissioner Eckert made a motion to adjourn the meeting. Commissioner Wilson seconded the motion.

Motion unanimously passed by voice vote.

Chairman Ochsenschlager adjourned the meeting at 8:20p.m.

Respectfully submitted,
Renee Hanlon
Recording Secretary

Attachment: *Part 466 Review Level Criteria*

Part 466 Review Level Criteria

Level 1: Lab-certified, inverter-based, distributed generation (DG) facility with a nameplate capacity of 25 kW or less (formerly ≤ 10 kW) - *Solar Energy System / Residential*

Level 2: Lab-certified DG facility where the proposed interconnection is to either a radial distribution circuit or a spot network serving one customer meeting one of the following criteria:

- For inverter-based systems, the size limit varies according to the voltage of the line at the proposed point of interconnection:

Line Voltage	Level 2 Eligibility
< 5 kV	≤ 500 kW
≥ 5 kV and < 15 kV	≤ 3 MW
≥ 15 kV and < 30 kV	≤ 4 MW
≥ 30 kV and ≤ 69 kV	≤ 5 MW

- **OR** Synchronous and induction systems must have a nameplate capacity of 2 MW or less.

Level 3: Lab-certified DG facility using reverse power relays or other protection functions that prevent power flow onto the electric distribution system, and meeting one of the following criteria:

- For interconnection request to the load side of an area network, the DG facility must have a nameplate capacity of 50 kW or less, and the aggregate of all generation on the area network must not exceed 5% of the network's maximum load; **OR**

- For interconnection request to a radial distribution circuit, the DG facility must have a nameplate capacity of 10 MVA or less, and the DG facility is not served by a shared transformer.

Level 4: DG facility with nameplate capacity of 10MVA or less and not meeting all of the screening criteria for a Level 1, 2, or 3 review.

Solar Energy System

UTILITY SCALE

VILLAGE PRESIDENT

P. Sean Michels

VILLAGE ADMINISTRATOR

Brent M. Eichelberger

VILLAGE CLERK

Cynthia Galbreath



COMMUNITY DEVELOPMENT DEPARTMENT

VILLAGE TRUSTEES

Sean Herron
Mari Johnson
Ted Koch
Heidi Lendi
Rick Montalto
David Paluch

A D V I S O R Y R E P O R T

TO: Planning Commission
FROM: Walter Magdziarz, Community Development Director
Renee Hanlon, Planning and Zoning Administrator
DATE: May 11, 2018
CASE FILE: 18-008 Zoning Text Amendment-Solar Energy System

PROPOSAL

This proposed text amendment provides: 1) a comprehensive revision to existing regulations for individual, accessory solar energy systems, 2) adds regulations for the installation and operation of both ground mounted and building mounted solar garden energy systems, and 3) adds regulations for the installation and operation of both ground mounted and building mounted solar farm energy systems.

GENERAL INFORMATION

HEARING DATE: ~~April 18, 2018~~ May 16, 2018
PROJECT NAME: Zoning Ordinance Text Amendment—Solar Energy System
PETITIONER: Village of Sugar Grove
ATTACHMENTS: Draft Text Amendment
Excerpt from 83 Illinois Administrative Code 466

BACKGROUND & HISTORY

During the public hearing of April 18, 2018 on this matter, Commissioner Eckert distributed an excerpt from the 83 Illinois Administrative Code 466 (attached) which categorizes solar energy systems based on capacity. After discussion, the commission directed staff to rewrite the draft ordinance to reference the state administrative code in the definitions of each category of solar energy system.

Commissioners also agreed that solar garden energy systems, when established as an accessory use, should be permitted by special use in the following additional zoning districts: E-1 Estate Residential, R-3 Medium Density Residential, and SR Senior Residential. These zoning districts provide for large lots and allow large buildings which have the potential to house accessory solar gardens. This change has been made to the draft ordinance.

The need for these regulations arises from the increased technical advancement, popularity, and government incentives associated with establishing and operating a solar energy system. The biggest spark to solar energy systems in the state of Illinois is the enactment of The Future Energy Jobs Act (Senate Bill 2814). This act specifically makes way for community solar systems by removing obstacles and providing incentives to the utility companies for the establishment of renewable energy systems. The act recognizes that many people would like to participate in a solar energy system; however, they might not have the money, space, or conditions to install and operate a solar energy system on their own roof. By the creation of community solar gardens, more people can participate in a local solar energy system. This text amendment recognizes the

state initiative and provides regulation for establishing and operating a solar energy system.

The Future Energy Jobs Act also provides funding to enforce the state renewable energy law which mandates that twenty five (25) percent of ComEd's and Ameren's power come from renewable sources by 2025. Solar and wind energy systems must be installed in order for the utilities to meet this mandated goal. The act further mandates that 4,300 MW of new solar and wind power must be built in the state before 2030. This act means more investment in renewable energy systems which will not only bring down the price of electricity and reduce our reliance on coal and nuclear energy, but will also create many new renewable energy jobs.

The Village is well situated to host such renewable energy investments; however, the current zoning ordinance expressly prohibits such community scale renewable energy systems within the Village. This text amendment seeks to provide guidance for the installation and operation of renewable energy systems whether an individual homeowner is installing solar panels on his/her roof or a commercial enterprise is building and maintaining a large scale wholesale solar energy production system.

The text amendment provides for the following types of solar energy system:

- Accessory solar energy system—solar collector roof or ground mounted on a single lot/building.



Solar garden energy system—solar array either ground or building mounted.



Solar farm energy system—solar array either ground or building mounted.



EVALUATION

The Village of Sugar Grove Zoning Ordinance provides the following standards for determining the appropriateness of a text amendment:

1. The amendment promotes the public health, safety, comfort, convenience and general welfare of the village, and complies with the policies and comprehensive land use plan and other official plans of the village.
 - *The promotion of renewable energy systems meets the comprehensive land use plan goal of preserving, protecting and enhancing the existing natural resources and environmentally sensitive open space area that are essential to the overall image and character of Sugar Grove and the goal of accommodating the future growth and development of sugar grove by planning for the phased expansion of utilities to meet projected growth.*
2. The trend of development in the area of the subject property is consistent with the amendment.
 - *The current trend in the State of Illinois is the development of renewable energy systems. By providing regulations for renewable energy systems, the Village is preparing for the trend.*
3. The requested zoning permits uses which are more suitable than the uses permitted under the existing zoning classification.
 - *Currently, the Zoning Ordinance does not provide for the larger solar energy systems that the State is encouraging.*
4. The amendment, if granted, will not alter the essential character of the neighborhood, and will not be a substantial detriment to adjacent property.
 - *The purpose of this amendment is to balance the need for solar energy systems with the maintenance of the Village's established small town character. These regulations provide for such systems to be established in the community while complying with regulations that will minimize any negative effects the use may produce.*

PUBLIC RESPONSE

The public hearing has been properly noticed. Staff have received no comment.

STAFF RECOMMENDATION

Staff recommends the Planning Commission/Zoning Board of Appeals approve Petition #18-008 amending Title 11 Zoning Regulations to provide regulations for solar energy system.

SAMPLE MOTION

Based on the finding of fact, I move that the Planning Commission/Zoning Board of Appeals recommend to the Village Board approval of Petition #18-008 amending Title 11 Zoning Regulations to provide regulation for the establishment and operation of solar energy systems.

Part 466 Review Level Criteria

Level 1: Lab-certified, inverter-based, distributed generation (DG) facility with a nameplate capacity of 25 kW or less (formerly ≤ 10 kW) - *Solar Energy System / Residential*

Level 2: Lab-certified DG facility where the proposed interconnection is to either a radial distribution circuit or a spot network serving one customer meeting one of the following criteria:

For inverter-based systems, the size limit varies according to the voltage of the line at the proposed point of interconnection:

Line Voltage	Level 2 Eligibility
< 5 kV	≤ 500 kW
≥ 5 kV and < 15 kV	≤ 3 MW
≥ 15 kV and < 30 kV	≤ 4 MW
≥ 30 kV and ≤ 69 kV	≤ 5 MW

Community Supply or Small C&I

OR Synchronous and induction systems must have a nameplate capacity of 2 MW or less.

Level 3: Lab-certified DG facility using reverse power relays or other protection functions that prevent power flow onto the electric distribution system, and meeting one of the following criteria:

For interconnection request to the load side of an area network, the DG facility must have a nameplate capacity of 50 kW or less, and the aggregate of all generation on the area network must not exceed 5% of the network's maximum load; **OR**

For interconnection request to a radial distribution circuit, the DG facility must have a nameplate capacity of 10 MVA or less, and the DG facility is not served by a shared transformer.

Level 4: DG facility with nameplate capacity of 10MVA or less and not meeting all of the screening criteria for a Level 1, 2, or 3 review.

Solar Farm

UTILITY SCALE

~~A. Definitions:~~ **Move to Section 11-3-2 Definitions** (note: add alphabetically)

~~LARGE ENERGY SYSTEM: A solar energy conversion system consisting of multiple solar collector panels, support structures, and associated controls or conversion electronics that are mounted on the ground as a principal use and with a nameplate capacity of one hundred (100) kilowatts or more.~~

SOLAR ENERGY SYSTEM: A system with the primary purpose of harvesting energy by transforming solar energy into another form of energy or transferring heat from a collector to another medium using mechanical, electrical, or chemical means.

SOLAR FARM ENERGY SYSTEM: A solar energy system which meets the standards set forth by 83 Illinois Administrative Code 467, as amended from time to time.

SOLAR FARM ENERGY SYSTEM, ACCESSORY: A solar energy system which meets the standards set forth by 83 Illinois Administrative Code 467 and is incidental and subordinate to the principal use established on a zoning lot.

SOLAR GARDEN ENERGY SYSTEM: A solar energy system which meets the definition of a Level 2 or greater system as set forth by 83 Illinois Administrative Code 466, as amended from time to time.

SOLAR GARDEN ENERGY SYSTEM, ACCESSORY: A solar energy system which meets the standards of a Level 2 or greater system set forth by 83 Illinois Administrative Code 466 and is incidental and subordinate to the principal use established on a zoning lot.

~~SELF-CONTAINED SOLAR ENERGY SYSTEM: A professionally manufactured system that utilizes solar collectors to produce small amounts of power that are generated exclusively for a single device. A self-contained solar energy system is typically located in areas that are not in close proximity to a utility power source.~~

~~SMALL Level 1 SOLAR ENERGY SYSTEM: A solar energy conversion system consisting of one or more solar collector panels, support structure(s) and associated controls or conversion electronics that are mounted on a principal building, garage, shed, or on the ground as an accessory structure(s) and with a nameplate capacity of less than one hundred (100) kilowatts.~~ A solar energy system which meets the definition of a level 1 system as set forth by 83 Illinois Administrative Code 466, as amended from time to time.

~~SMALL SOLAR ENERGY SYSTEM, BUILDING MOUNTED: A type of small solar energy system that is mounted on the roof of a principal or accessory building, garage, or shed.~~ A building mounted solar energy system includes:

1. ~~Integrated: A building mounted solar energy system that is an integral part integrated into the design of a building, rather than a separate mechanical device, replacing or substituting for an architectural or structural part of the building.~~ Integrated systems include, but are not limited to, photovoltaic or thermal systems that are contained within roofing materials, skylights, shading devices and similar architectural components.
2. Flush Roof Mounted: A building mounted solar energy system that is mounted to a finished roof surface where the solar collector panels, once installed, project no farther than six inches (6") in height beyond the roof surface and is parallel to the roof surface.
3. Nonflush Roof Mounted: A building mounted solar energy system that is mounted to a finished roof surface where the solar collector panels, once installed, project more than six inches (6") in height beyond the roof surface.

~~SMALL SOLAR ENERGY SYSTEM, GROUND MOUNTED: A type of small solar energy system that is mounted to the ground.~~

~~SOLAR ENERGY SYSTEM: Equipment, whether permanent or temporary, that converts and stores or transfers energy collected from the sun into usable forms of energy such as thermal, electrical, and mechanical, and includes any solar collector panel, support structure, pole, base or foundation, control, wire, battery, energy storage device, inverter, transformer, generator, heat pump, heat exchanger, or other component used in the system.~~

TOTAL HEIGHT: The vertical distance from natural grade to the highest point of the solar energy system.

~~B. Large Solar Energy System Provisions: Large solar energy systems shall be prohibited within all zoning districts of the village and within the one and one-half (1½) mile radius surrounding the village limits.~~

11-4-21 SOLAR ENERGY SYSTEMS

~~G A. Small Solar Energy Systems: General Provisions: Small~~ Level 1 solar energy systems shall be a permitted accessory use in all zoning districts subject to the following provisions:

1. Ground mounted level 1 solar energy system.

~~4.~~ a. Permitted Use: use. Ground mounted small level 1 solar energy systems shall only be permitted as an accessory structure ~~to an existing principal building/principal use, must be mounted on the ground and must have a nameplate capacity of less than one hundred (100) kilowatts. in all zoning districts.~~

~~2.~~ b. Setbacks: A ground mounted small level 1 solar energy system with monopole support structure must shall be set back: ~~a. At~~ at least 1.1 times its total height from any the interior and rear property line of the zoning lot on which it is located.

~~b. At least 1.1 times its total height from any public road right of way.~~

~~At least 1.1 times its total height and no less than ten feet (10') from any overhead utility lines. A ground mounted small level 1 solar energy system without nonmonopole support structure shall be set back at least five feet (5') from the interior and rear property line of the zoning lot on which it is located.~~

c. Maximum lot coverage. The surface area of ground mounted solar panel(s) shall be included in the maximum lot coverage allowed on a zoning lot.

d. Easement. No ground mounted small level 1 solar energy system shall be located within an platted easement.

e. Public utility lines. A ground mounted level 1 solar energy system shall be setback at least 1.1 times its total height or at least ten feet (10') from overhead utility lines.

~~3.~~ f. Allowed Yards: yards. No ground mounted small level 1 solar energy components system shall be located within the front or corner side yard of any zoning lot.

~~4.~~ g. Total Height: height. Ground mounted small level 1 solar energy systems shall be limited to a maximum of fifteen ten feet (1510') in total height.

5. h. ~~Soil Conditions: conditions.~~ A soil analysis may be required as part of the building permit application and inspection process to confirm that the soils meet the minimum bearing capacity assumed by the structural design of the pole(s), support structure, and foundation.
- i. Wiring. All electrical wires associated with a level 1 solar energy system shall be buried.

2. Building mounted level 1 solar energy system.

- a. Permitted ~~Use: use.~~ Building mounted ~~small level 1~~ solar energy systems shall ~~only~~ be permitted as ~~an~~ accessory structures, ~~must be mounted to the roof of a principal building, a garage, or a shed and must have a nameplate capacity of less than one hundred (100) kilowatts in all zoning districts.~~
4. b. ~~6. Electric: Wiring.~~ All electrical wires associated with ~~a small~~ a level 1 solar energy system, other than wires necessary to connect the solar collector panels to ~~the pole wiring, the pole wiring to the disconnect junction box, and the grounding wires,~~ ~~must~~ shall be hidden or enclosed in conduit.
3. c. Setbacks: Building mounted ~~small level 1~~ solar energy systems ~~must shall meet all building setback requirements, or accessory building setback requirements in the case of garages and sheds, and are not allowed to encroach into required yards. Additionally, they must~~ be set back a minimum of one foot (1') from all edges of the individual roof plane on which they are mounted.
4. d. Height: Nonflush roof mounted systems shall not extend above the highest point of the roof plane on which they are mounted.
5. e. Area: The solar collector panel surface area shall not exceed sixty percent (60%) of the roof plane upon which the solar collector panels are mounted. ~~If more than one roof area is to contain solar collector panels, the fire district shall review and comment on the installation of the solar collector panels to verify that adequate roof access is provided to emergency personnel in the event of an emergency.~~
6. f. Mounting ~~Location: location.~~ Nonflush roof mounted systems are prohibited on roof planes adjacent to front and corner side yards. ~~Integrated and flush~~ Flush roof mounted systems are permitted on any roof plane, ~~however if installed on roof planes adjacent to front and/or corner side yards they may only be installed on one plane with that plane being the highest plane.~~
7. g. ~~Weight And Wind Resistance: Building code.~~ A building mounted ~~small level 1~~ solar energy system shall meet all weight and wind resistance requirements of applicable building codes. A building mounted level 1 solar energy system shall not block access required by the building code or fire protection district.

3. General requirements for level 1 solar energy system.

a. Building ~~Permit~~: permit. ~~All small~~ A level 1 solar energy systems requires ~~an approved~~ valid building permit: prior to installation. Permit application shall include the following:

1. Plat of survey or scaled dimensioned drawing of the zoning lot indicating all buildings on the lot and the proposed location of the level 1 solar energy system.
2. If the system is to be building mounted, a scaled, dimensioned building elevation plan depicting the existing conditions and the proposed level 1 solar energy system. If the system is to be ground mounted, a scaled, dimensioned elevation drawing of the system.
3. Detailed installation drawings and specifications for the system.
4. Proof of certification in compliance with 83 Illinois Administrative Code 468 and proof of certification of electrician installing the system.
5. Proof that notification to the electric power company has been properly completed.
6. Plan for demolition and site restoration at the end of life of the system.
7. UL listing or approved equivalent for all component parts of the level 1 solar energy system.

~~a. In order to receive permit, small solar energy systems must be approved by a small solar certification program recognized by the Solar Rating Certification Corporation or other recognized industry association and be installed by an experienced installer.~~

~~b. Prior to permit issuance, the owner shall sign an acknowledgement that said owner will be responsible for any and all enforcement costs and remediation costs resulting from any violations of this section. These costs could include, but are not limited to, removal of system, property restoration necessary upon removal of the system, village legal expenses and hearing costs associated with violations of this section.~~

2. ~~b. Building Code/Safety Standards:~~ standards. Any owner or operator of a ~~small~~ a level 1 solar energy system shall maintain said system in compliance with the standards contained in the current and applicable state or local building codes and any applicable standards for solar energy systems that are published by the international building code and national electrical code as amended from time to time.
3. ~~c. Compliance:~~ If, upon inspection, the ~~community development director or his/her designee~~ zoning official, concludes that a solar energy system fails to comply with such codes and standards or constitutes a danger to persons or property, the ~~community development director or his/her designee~~ zoning official, shall require Immediate repair or removal of the system at the owner's expense.
4. ~~d. Color:~~ All support structures for small solar energy systems shall be a monochromatic, neutral, and nonreflective color and shall match the color of the material it is being mounted ~~to or the color of structures located on the lot.~~ Multiple solar collector panels shall match each other.
5. ~~e. Style:~~ When more than one solar collector panel is located on a zoning lot, the multiple solar collector panels shall be uniform in style.

f. Installation. The level 1 solar energy system shall be installed by a certified installer who meets the requirements set forth in 83 Illinois Administrative Code 468 as amended and a licensed electrical contractor.

~~7. Signs: No sign, other than a warning sign or installer, owner, or manufacturer identification sign as permitted by chapter 14 of this title, may be placed on any component of a small solar energy system.~~

8 g. ~~Lighting: Illumination.~~ A level 1 solar energy system shall not be artificially illuminated.

9 h. ~~Positioning:- Concentrated sunlight or glare from solar collector panel surfaces shall be oriented away from neighboring windows.~~ A level 1 solar energy system shall not create nuisance glare onto adjacent properties or public rights of way. A level 1 solar energy system shall be fixed and non-tracking.

10 i. ~~Quantity:-~~ One small level 1 solar energy system is permitted per zoning lot, ~~but ; however,~~ the system may include one or more solar collector panels. A ground mounted system and a building mounted system shall not both be installed on a single zoning lot.

~~11. Utility Notification And Interconnection: The utility company shall be informed of the customer's intent to install an interconnected customer owned generator. No small solar energy system shall be installed until proof of acceptance from the utility company has been provided to the village. Off grid systems (independent systems or systems not connected to the utility electrical system) shall be exempt from this requirement.~~

12 i. ~~Batteries~~ Energy storage equipment. All batteries and energy storage systems shall be ~~installed within buildings and not outside-~~ considered residential or commercial mechanical equipment, depending on principal use of the building, and shall be regulated as such.

j. Solar easement. The village does not guarantee access to sunlight for a solar energy system. Owners are encouraged to enter into a legal agreement with neighbors securing such access prior to the application for building permit. The village shall not be a party to a solar access agreement nor shall the village deny a building permit based solely on the project's potential for blocking an adjacent property's access to sunlight.

~~D. Small Solar Energy Systems~~

~~B. Ground Mounted Accessory Solar Energy System Standards:~~

~~E. Small~~

~~C. Accessory Solar Energy Systems Building Mounted Standards:~~

~~F. Self-Contained Solar Energy System Standards:~~

~~1. Permitted/Allowed Use: Self-contained solar energy systems are a permitted use. Any low voltage self-contained solar energy systems shall be an allowed use.~~

~~2. Setbacks: A self-contained solar energy system shall be set back at least five feet (5') from the property line.~~

~~3. Allowed Yards: No self-contained solar energy system components shall be located in the front or corner side yard of any zoning lot, except for parking lot light poles.~~

~~4. Area: Self-contained solar energy systems shall be limited to a maximum aggregate solar collector panel surface area of six (6) square feet.~~

G

k. Abandonment, ~~Violations And Enforcement~~violations, and enforcement of level 1 solar energy system.

1. Abandonment: All abandoned or unused solar energy systems shall be deemed a nuisance after two (2) months of the cessation of operations unless an extension is approved by the village board. The village may act to abate such nuisance and require removal at the property owner's expense. After the solar energy system is removed, the owner of the property shall restore the site to its original condition, or to an approved improved condition within thirty (30) days of removal.

2. Violation: .It is unlawful for any person to construct, install or operate ~~a small~~ a level 1 solar energy system that is not in compliance with this section. It is unlawful for a person to disobey; fail, neglect, or refuse to comply with; or otherwise resist an order issued pursuant to this section. A separate offense is deemed committed on each day that a violation occurs or continues.

3. Enforcement: ~~-. The community development director, or his/her designee~~ zoning official, may enter any property for which a building permit has been issued under this section at any time subsequent to the installation of the level 1 solar energy system with at least twenty four (24) hour notice in order to conduct an inspection to determine whether there is any violation of this section or whether the conditions stated in the permit have been met. The ~~community— development director zoning official, or his/her designee~~, may issue a citation for any violation of this section. Nothing in this section may be construed to prevent the village of ~~Sugar Grove~~ sugar grove from using any other lawful means to enforce this section.

B. A solar garden energy system shall meet the following minimum requirements in addition to any special use conditions that the village board places on the special use permit.

1. Ground mounted solar garden energy system.

a. Security. A ground mounted solar garden energy system shall be enclosed by a self-locking eight (8) foot tall security fence posted with warning signs at all gates. Where this fence abuts properties zoned exclusively for residential uses, the fence shall be a solid wood, metal, or vinyl screening fence.

b. Setback. A ground mounted solar garden energy system shall meet the building setback requirements of the zoning district in which the zoning lot is located.

c. Screening and landscaping. Where a solar garden energy system is the principal use of the property, an undulating five (5) foot average height screening berm within the required street setback. The berm shall be planted with landscape materials at the following rate:

One (1) shade tree per fifty (50) linear feet
One (1) evergreen tree per fifty (50) linear feet
Three (3) deciduous shrubs per fifty (50) linear feet
Three (3) evergreen shrubs per fifty (50) linear feet
Three (3) ornamental trees may replace each one (1) shade tree
Ornamental grass may replace the deciduous shrubs at a rate approved by the zoning official

The site of a ground mounted solar garden energy system which abuts property zoned exclusively for residential uses shall be improved along the transition lot line with landscape materials at the following rate:

One (1) shade tree per fifty (50) feet
Three (3) shrubs per fifty feet
Ornamental grass may replace the shrubs at a rate approved by the zoning official.
These landscape materials shall be planted between the transition lot line and the solid fence required along this lot line.

d. Installation. The solar farm energy system shall be installed by a certified installer, an installer who meets the requirements set forth in 83 Illinois Administrative Code 468 as amended, and a licensed electrical contractor.

e. Ground cover. The site of a ground mounted solar garden energy system shall be improved and maintained with a drought tolerant, perennial vegetative ground cover over the entire property including under and around solar arrays. The purpose of this ground cover shall be the prevention of soil erosion and the management of stormwater run-off. Top soil shall not be removed from the property during construction nor during operation of the facility.

f. Special use permit required. Whether the solar garden energy system is a principal use of the zoning lot or an accessory use on the zoning lot, a special use permit shall be required. Either type of use shall comply with the special use permit process outlined in section 11-13-12 of this title.

g. Panel design. All panels shall be consistent in design and color. All panels shall be improved with an antireflective coating and shall not create a nuisance glare. All panels shall be maintained at a uniform height.

h. Drainage. A stormwater detention and subsurface drainage system shall be maintained during construction and operation of the solar garden energy system. The owner of the facility shall be responsible for repairing any damage to drain tiles and other drainage systems that result from construction, operation or maintenance of the solar garden energy system.

i. Utility lines. All utility lines shall be buried unless specifically approved by the village board through the special use process.

j. Tree preservation/mitigation. The intent of this provision is to mitigate the loss of healthy, mature trees in the village, by requiring replacement trees:

1. Existing trees, six inches (6") in diameter or greater, as measured at breast height (dbh), shall be preserved, when possible, according to a tree preservation plan prepared by the developer with input from the building and zoning official or designee. The tree preservation plan shall show:

- a. Protective fencing planned to be installed around the critical root zone of those trees identified for preservation, on both grading and landscape plans.
 - b. Trees that will have their roots pruned by a certified arborist, to avoid tearing and other damage during construction.
 - c. Locations where limestone and other materials that might negatively affect trees planned to be preserved will be stored on the property.
2. Where it is determined that trees six inches (6") dbh or greater must be removed to allow for proposed development, tree replacement will be required:
- a. Not less than one 3-inch caliper tree shall be required for each six inches (6") of tree proposed to be removed, as measured at breast height. However, in no instance shall more than three (3) 3-inch caliper replacement trees be required for any tree removed.
 - b. Unless otherwise determined by village board or zoning officer, replacement trees shall be required in addition to any other landscaping that may be required by this title, except landscape screening.
 - c. The number of trees that an individual property can support, according to good forestry practices, shall determine the number of replacement trees that will be required on an individual lot

2. Building mounted solar garden energy system.

- a. Setback. A roof mounted solar garden energy system shall be setback a minimum distance of five (5) feet from the edge of the roof.
- b. Installation. The solar farm energy system shall be installed by a certified installer, an installer who meets the requirements set forth in 83 Illinois Administrative Code 468 as amended, and a licensed electrical contractor.
- c. Special use permit required. The building mounted solar garden energy system is considered a special accessory use. Building mounted solar garden systems shall be approved through the special use permit process outlined in section 11-13-12 of this title.
- d. Panel design. Building mounted solar panels shall be fixed and non-tracking. Solar panels shall be improved with an antireflective coating and shall not produce nuisance glare. Solar panels may be installed on the building walls or as architectural features of the building, subject to village board approval.
- e. Wiring. All wiring shall be enclosed in conduit or buried within the building walls unless specifically approved by the village board through the special use process.

3. General requirements for solar garden energy system.

- a. Abandonment. A decommission plan shall be approved by the village board through the special use permit process. At the time of building permit, a letter of credit, or other financial surety instrument approved by the village board, in the amount of the estimated cost of decommission, as approved by the village engineer, shall be submitted to the village. If the solar garden is abandoned and not properly decommissioned, the village shall utilize the funds to restore the property to its original or an improved condition.
- b. Plan submission. An application for special use for a solar garden energy system shall include the following minimum information:

1. Plat of survey or scaled dimensioned drawing of the zoning lot indicating all buildings existing and proposed and the proposed location of the solar array and point of interconnection to public utility.
2. Management plan describing how subscriptions will be marketed or how energy will be consumed for a private system.
3. Detailed installation drawings and specifications for the system.
4. Proof of certification in compliance with 83 Illinois Administrative Code 468 and proof of certification of electrician installing the system.
5. Proof that notification to the electric power company has been properly completed.
6. Plan for demolition and site restoration at the end of life of the system.
7. Elevation drawing(s), artist rendering(s), or photographic depictions of how the solar garden facility will fit within the existing landscape.
8. Stormwater management plan.
9. Soil and wildlife conservation plan.
10. Foundation and/or racking plan developed by a professional engineer.
11. UL listing or approved equivalent for all component parts of the solar garden energy system.

c. Ownership. The village shall be notified of any change in ownership and/or management of the solar garden energy system.

d. Aviation protection. A solar garden energy system located within five hundred (500) feet of an airport or within approach zones of an airport, the applicant shall provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the airport traffic control tower cab and final approach paths, consistent with the interim policy, Federal Aviation Administration (FAA) review of solar energy projects on federally obligated airports or most recent version adopted by the FAA along with a letter of acceptance of the project design from the FAA.

C. Solar farm energy system shall meet the following minimum requirements in addition to any special use conditions that the village board places on the special use permit.

1. Ground mounted solar farm energy system.

a. Security. The solar farm energy system shall be enclosed by a self-locking eight (8) foot security fence posted with warning signs at all gates. Where this fence abuts properties zoned exclusively for residential uses, the fence shall be a solid wood, metal, or vinyl screening fence.

An exemption from the solid screening fence requirement may be permitted by the village board where the setback established for the solar farm from the transition lot line is at least five hundred (500) feet.

b. Setback. A ground mounted solar farm energy system shall meet the building setback requirements of the zoning district in which the parcel is located.

c. Screening and landscaping. The site of a ground mounted solar farm energy system shall be improved with an undulating five (5) foot average height screening berm within the required street setback. The berm shall be planted with landscape materials at the following rate:

- One (1) shade tree per fifty (50) linear feet
- One (1) evergreen tree per fifty (50) linear feet
- Three (3) deciduous shrubs per fifty (50) linear feet
- Three (3) evergreen shrubs per fifty (50) linear feet

Three (3) ornamental trees may replace each one (1) shade tree
Ornamental grass may replace the deciduous shrubs at a rate approved by the zoning official

The site of a ground mounted solar farm energy system which abuts property zoned _____ exclusively for residential uses shall be improved along the transition lot line with landscape materials at the following rate:

One (1) shade tree per fifty (50) feet

Three (3) shrubs per fifty feet

Ornamental grass may replace the shrubs at a rate approved by the zoning official.

These landscape materials shall be planted between the transition lot line and the solid fence required along this lot line.

An exemption from the requirements of this paragraph may be permitted by the village board where the setback established for the solar farm is at least five hundred (500) feet from the street and/or transition lot line.

d. Installation. The solar farm energy system shall be installed by a certified installer, an installer who meets the requirements set forth in 83 Illinois Administrative Code 468 as amended, and a licensed electrical contractor.

e. Ground cover. The site of a ground mounted solar farm energy system shall be improved and maintained with a drought tolerant, perennial vegetative ground cover over the entire property including under and around solar panels. The purpose of this ground cover shall be the prevention of soil erosion and the management of stormwater run-off. Top soil shall not be removed from the property during construction nor during operation of the facility.

f. Special use permit required. A solar farm energy system shall be considered through the special use permit process outlined in section 11-13-12 of this title. _____

g. Panel design. All panels shall be of consistent design and color. All panel shall be improved with an antireflective coating and shall not create a nuisance glare. All panels shall be maintained at a uniform height.

h. Drainage. A stormwater detention and subsurface drainage system shall be maintained during construction and operation of the solar farm energy system. The owner of the facility shall be responsible for repairing any damage to drain tiles and other drainage systems that result from construction, operation, or maintenance of the solar farm energy system.

i. Utility lines. All utility lines shall be buried unless specifically approved by the village board through the special use process.

j. Tree preservation/mitigation. The intent of this provision is to mitigate the loss of healthy, mature trees in the village, by requiring replacement trees:

1. Existing trees, six inches (6") in diameter or greater, as measured at breast height (dbh), shall be preserved, when possible, according to a tree preservation plan prepared by the developer with input from the building and zoning official or designee. The tree preservation plan shall show:

a. Protective fencing planned to be installed around the critical root zone of those trees identified for preservation, on both grading and landscape plans.

b. Trees that will have their roots pruned by a certified arborist, to avoid tearing and other damage during construction.

- c. Locations where limestone and other materials that might negatively affect trees planned to be preserved will be stored on the property.
- 2. Where it is determined that trees six inches (6") dbh or greater must be removed to allow for proposed development, tree replacement will be required:
 - a. Not less than one 3-inch caliper tree shall be required for each six inches (6") of tree proposed to be removed, as measured at breast height. However, in no instance shall more than three (3) 3-inch caliper replacement trees be required for any tree removed.
 - b. Unless otherwise determined by village board or zoning officer, replacement trees shall be required in addition to any other landscaping that may be required by this title, except landscape screening.
 - c. The number of trees that an individual property can support, according to good forestry practices, shall determine the number of replacement trees that will be required on an individual lot

2. Building mounted solar farm energy system.

- a. Setback. A roof mounted solar farm energy system shall be setback a minimum distance of five (5) feet from the edge of the roof.
- b. Installation. The solar farm energy system shall be installed by a certified installer, an installer who meets the requirements set forth in 83 Illinois Administrative Code 468 as amended, and a licensed electrical contractor.
- c. Special use permit required. A building mounted solar farm energy system is considered a special accessory use. Building mounted solar farm systems shall be considered through the special use permit process outlined in section 11-13-12 of this title.
- d. Panel design. Building mounted solar panels shall be fixed and non-tracking. Solar panels may be installed on the building walls or as architectural features of the building, subject to village board approval. Panels shall be improved with an antireflective coating and shall not create a nuisance glare.
- e. Wiring. All wiring shall be enclosed in conduit or buried in the building walls unless specifically approved by the village board through the special use process.

3. General requirements for solar farm energy system.

- a. Abandonment. A decommission plan shall be approved by the village board during the special use permit process. At the time of building permit, a letter of credit, or other financial surety instrument approved by the village board, in the amount of the estimated cost of decommission, as approved by the village engineer, shall be submitted to the village. If the solar farm is abandoned and not properly decommissioned, the village shall utilize the funds to restore the property to its original or an improved condition.
- b. Plan submission. An application for special use for a solar farm energy system shall include the following minimum information:
 - 1. Plat of survey or scaled dimensioned drawing of the zoning lot indicating all buildings existing and proposed and the proposed location of the solar array and transmission lines.

2. Management plan describing how subscriptions will be marketed or how energy will be consumed for a private system.
3. Detailed installation drawings and specifications for the system.
4. Proof of certification in compliance with 83 Illinois Administrative Code 468 and proof of certification of electrician installing the system.
5. Proof that notification to the electric power company has been properly completed.
6. Plan for demolition and site restoration at the end of life of the system.
7. Elevation drawing(s), artist rendering(s), or photographic depictions of how the solar farm system will fit within the existing landscape.
8. Stormwater management plan
9. Soil and wildlife conservation plan
10. Foundation and/or racking plan developed by a professional engineer.
11. UL listing or approved equivalent for all component parts of the solar garden energy system.

c. Ownership. The village shall be notified of any change in ownership and/or management of the solar farm energy system.

d. Aviation protection. A solar farm energy system located within five hundred (500) feet of an airport or within approach zones of an airport, the applicant shall provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the airport traffic control tower cab and final approach paths, consistent with the interim policy, Federal Aviation Administration (FAA) review of solar energy projects on federally obligated airports or most recent version adopted by the FAA along with a letter of acceptance of the project design from the FAA.

11-4-7: ACCESSORY USES, STRUCTURES, AND BUILDINGS (Note: add in alphabetical order)

	A-1	E-1	R-1	R-2	R-3	SR	B-1	B-2	B-3	BP	OR2	M-1	I-1
Accessory structures:													
Level 1 solar energy system, building or ground mounted	P	P	P	P	P	P	P	P	P	P	N	P	P
Solar farm energy system, building mounted	S	N	N	N	N	N	N	N	S	S	N	S	S
Solar garden energy system, building or ground mounted	S	S	N	N	S	S	S	S	S	S	N	S	S
Solar panels	P	P	P	P	P	P	P	P	P	P	N	P	P

11-4-7.F Additional Standards for Specific Accessory Uses, Accessory Buildings, and Accessory Structures (Note: Add alphabetically and renumber appropriately)

#. Solar Farm Energy System. A special use permit for this accessory use shall be processed in compliance with section 11-13-12 of this title including public hearing before the planning commission/zoning board of appeals and final approval, approval with conditions, or denial by the village board.

