Amend Section 9-2-2 by deleting the following Definitions:

Conventional Energy System: An energy system utilizing fossil fuel, nuclear or hydroelectric energy and the components of such system, including transmission lines, burners, furnaces, tanks, boilers, related controls, distribution systems, room or area units and other components.

Energy Use Sites: Sites where energy is or may be used or consumed for generating electricity or for heating or cooling gases, solids, liquids, or other materials and where solar energy may be used cost effectively, as defined in the regulations of the Illinois department of commerce and economic opportunity, consistent with the purposes of the Illinois comprehensive solar energy act of 1977.

Joint Solar Energy System: A solar energy system that supplies energy for structures or processes on more than one lot or in more than one condominium unit or leasehold, but not to the general public and involving at least two (2) owners or users.

Solar Storage Mechanism: Equipment or elements (such as piping and transfer mechanisms, containers, heat exchangers, or controls thereof, and gases, solids, liquids, or combinations thereof) that are utilized for storing solar energy, gathered by a solar collector, for subsequent use.

Supplemental Conventional Energy System: A conventional energy system utilized for providing energy in conjunction with a solar energy system that provides not less than ten percent (10%) of the energy for the particular end use. "Supplemental conventional energy system" does not include any facilities of a public utility used to produce, transmit, distribute or store gas or electricity.

TO: Planning Commission February 26, 2020

FROM: Anna B. Kurtzman, Zoning Administrator

Subject: March 5, 2020 Solar Energy Systems Workshop

On December 5, 2019, and January 16, 2020, the Commission conducted workshops to consider language to be included in a draft ordinance, the purpose of this ordinance to address solar energy systems. During the course of these workshops the Commission requested that staff provide additional information and make some modifications to the proposed ordinance. The purpose of the March 5, 2020 workshop is to review and consider the requested information/changes. If, at the close of the workshop, the Commission is comfortable with the direction of the attached documents, staff will likely start the formal public hearing process (the hearing likely to occur in either April or May).

At the January 16th workshop the Commission specifically requested the following information and/or changes to be made to the draft ordinance (these changes reflected on the two attached documents – one a marked draft and the other a clean version reflecting the changes made):

1. Easements – Staff had recommended that there be language in the proposed code whereby applicants be advised to obtain solar energy (skyspace) easements. I also recommended that obtaining such easements would not be a requirement to obtain a permit. During the workshop there was discussion regarding whether to require such easements should, or shouldn't, be part of a permit application. After consulting with the Town's attorney regarding this specific point, Jessica Harrill, has recommended that the Town ensure that such permits are indeed in place. As such, you'll see in the latest draft provisions whereby showing proof of the easement be provided prior to the issuance of any permit for a solar energy system.

2. Signage – For Solar Energy Farms/Gardens I had recommended that identification and warning signs be placed at the entrance of the facility and along the property lines. I had recommended that separate sign permits would not be required for these signs and therefore would be exempt from the Town's Sign Code. The Commission requested that I verify with legal staff regarding the placement of this requirement – whether the sign code should also be amended. After advice from Ms. Harrill, you will find on the last page where the sign code is also being modified.

/abk
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Amend Section 9-2-2 by adding the following definitions:

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

ii**Grid-intertie Solar Energy System**: A photovoltaic solar energy system that is connected to an electric circuit served by an electric utility company.

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

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

ii**Photovoltaic System**: A solar energy system that converts solar energy directly into electricity.

ii~~**Renewable Energy Easement,**~~ [1]**Solar Energy Easement**[2]: An easement that limits the height or location, or both, of permissible development on the burdened land in terms of a structure or vegetation, or both, for the purpose of providing access for the benefited land to wind or sunlight passing over the burdened land.

ii~~**Renewable Energy System**: A solar energy or wind energy system. Renewable energy systems do not include passive systems that serve a dual function, such as a greenhouse or window.~~

ii**Roof-Mount**: A solar energy system mounted on a rack that is fastened to or ballasted on a building roof. Roof-mount systems are accessory to the principal use.

ii**Roof Pitch**: The final exterior slope of a building roof calculated by the rise over the run, typically but not exclusively expressed in twelfths such as 3/12, 9/12, 12/12.

ii**Solar Collector**: A device, structure or a part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, mechanical, chemical, or electrical energy.

ii**Solar Collector Surface**: Any part of a solar collector that absorbs solar energy for use in the collector's energy transformation process. Collector surface does not include frames, supports and mounting hardware.

ii and iii**Solar Energy**: Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

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[1] The term "Renewable Energy" is only used in this definition section. As it is not used elsewhere in the document it is appropriate to remove it from the ordinance.

[2] Examine "solar energy easement" vs "solar skyspace easement" – at the moment the term "solar energy easement" is embedded in the "solar skyspace easement" provisions in Section 9-4-34.

[ii] and [iv]**Solar Energy System**: A solar energy system whose primary purpose is to harvest 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.

[ii]**Solar Farm**: A commercial facility that converts sunlight into electricity, whether by photovoltaics (PV), concentrating solar thermal devices (CST), or other conversion technology, for the primary purpose of wholesale sales of generated electricity. A solar farm is the principal land use for the parcel on which it is located.

[ii]**Solar Garden**: A commercial solar-electric (photovoltaic) array that provides retail electric power (or a financial proxy for retail power) to multiple households or businesses residing or located off-site from the location of the solar energy system

[ii]**Solar Heat Exchanger**: A component of a solar energy device that is used to transfer heat from one substance to another, either liquid or gas.

[ii]**Solar Hot Air System**: A solar energy system (also referred to as Solar Air Heat or Solar Furnace) that includes a solar collector to provide direct supplemental space heating by heating and recirculating conditioned building air. The most efficient performance typically uses a vertically mounted collector on a south-facing wall.

[ii]**Solar Hot Water System**: A system (also referred to as Solar Thermal) that includes a solar collector and a heat exchanger that heats or preheats water for building heating systems or other hot water needs, including residential domestic hot water and hot water for commercial processes.

[ii]**Solar Mounting Devices**: Racking, frames, or other devices that allow the mounting of a solar collector on to a roof surface of the ground.

[ii]**Solar Resource**: A view of the sun from a specific point on a lot or building that is not obscured by any vegetation, building, or object for a minimum of four hours between the hours of 9:00 AM and 3:00 PM Standard time on all days of the year.

[ii]**Solar Storage Unit**: A component of a solar energy device that is used to store solar generated electricity or heat for later use.

The following are definitions that are already in the Zoning Code and do not need to be modified – they are included in this document as a reminder of their existence.

Utility Facility, Large: Utility facilities serving the entire town or a region, in whole or in part, such as microwave stations; radio/television antennas; earth stations; two hundred thirty (230) kilovolt power transmission lines; natural gas regulator stations; sanitary wastewater reclamation and reuse facilities; facilities that provide for the transmission, transfer and distribution of telecommunications and data; and power generating facilities, except solar energy devices.

Permitted Use Table

Amend Section 9-3-7G (Other Uses)
Add:

	AG	R-1	R-2	R-3	R-4	C-1	C-2	I-1	I-2	P-1
Solar Farm	S							S		
Solar Garden	S							S		

Accessory Use Table

Amend Section 9-3-13B2 (Table of Permitted Yard Obstructions)
Delete:

Structure or Use	Front Yard	Corner Side Yard	Rear Yard	Side Yard
Solar Energy systems, attached	P	P	P	P
Solar Energy systems, detached	P	P	P	P

~~*Delete Section 9-3-13D*~~ [3]

~~Solar Skyspace Easements: The adoption of solar energy systems as permitted yard obstructions in subsection B2 of this section does not constitute a granting of a solar skyspace easement by the Town. A solar skyspace easement is not a prerequisite for obtaining a zoning or building certificate from the town but the owner/operator shall assume all responsibility for obtaining covenants, easements, or similar documentation to assure sufficient sunlight to operate the solar energy system unless adequate access to sunlight is provided by the site an assumes all risks associated with operating the solar energy system without a solar skyspace easement.~~

[3] ~~At the December 5, 2019 workshop the Planning Commission requested that staff re-review the status of the solar skyspace easement. Staff has recommended the creation of a new section of code addressing all aspects of solar energy systems. Staff is recommending that the above language be deleted from its current location (at the end of the accessory use section) and instead, with some modification, be included in the new section.~~

Add Section 9-4-34: Solar Energy Systems

A. Permitted Accessory Use: ~~A single ground-mount Solar Energy System for residential/business use where there is a principal structure shall be allowed as an accessory use in all zoning districts, subject to the granting of a Special Use Permit.~~ Roof mount or building integrated private solar energy systems must meet the building setbacks as required by Section 9-3-6A.[4]

1. [i]Solar Skyspace Easements: Prior to the issuance of issuance of a building permit, the building permit applicant shall provide documentation of the issuance and recordation of solar skyspace easements for the property(ies) adjacent to the subject property.[5] ~~The issuance of a permit for a solar energy system does not constitute a granting of a solar skyspace easement by the Town. A solar skyspace easement is not a prerequisite for obtaining a zoning or building certificate from the Town but the owner/operator shall assume all responsibility for obtaining covenants, easements, or similar documentation to assure sufficient sunlight to operate the solar energy system unless adequate access to sunlight is provided by the site and assumes all risks associated with operating the solar energy system without a solar energy easement.~~ [6]

B. Solar Farms and Solar Gardens that are the principal use on the property may only be located and permitted in an Agricultural (AG) district or a Light Industrial (I-1), but only when authorized and approved as a Special Use by the Town Board after public hearing and recommendation by the Planning Commission.

Such Special Use as may be allowed shall be subject to the following requirements, restrictions, and conditions:

1. Bulk Regulations:
   i. Minimum Lot Area: 5 Acres
   ii. Front and Corner Side Yard: 50 feet[iii]
   iii. Side Yard: 50 feet[iii]
   iv. Rear Yard: 50 feet[iii]
   v. Height: Ground or pole mounted solar energy system shall not exceed 10 feet in height as measured when the system is oriented at it's maximum tilt. All other equipment shall not exceed 15 feet in height.

2. [v]Off-Street Parking: There shall be a minimum of two (2) parking spaces with minimum dimensions of 10 by 20 feet. Accessways shall be a minimum of 12 feet wide. Parking

[4] I have re-inserted this sentence as I'm concerned that if we do not acknowledge roof-top and building integrated systems that they would not be allowed at all. At the January 16th meeting, the Commission questioned whether the roof-top systems should be included in the accessory use matrix. It should be noted that there isn't an accessory use matrix but rather a matrix entitled " Table of Permitted Yard Obstructions." As the roof-top solar energy systems would only be allowed within the building envelop and therefore no yard obstructions would be allowed, it would be inappropriate to include roof-top energy systems to this matrix.

[5] Per recommendation by Jessica Harrill, recommending that the Town obtain proof that easements are obtained prior to the issuance of a permit.

[6] Plan Commission isn't clear regarding the Town's liability in ensuring access to the sun. A legal interpretation has been requested.

spaces and accessways located on private property do not have to be paved but do need to have a minimum of a seven (7) inch compacted stone base. Accessways located within the right-of-way shall meet standards set by the Town Engineer

3. [7]Signage: An identification sign shall be posted at the entrance(s) to the site. Each such identification sign shall list the name and phone number of the operator.[v] In addition to the identification sign(s) there shall be appropriate warning signage that is posted along all property lines which are clearly visible on the site. Both the identification sign(s) and the warning sign(s) ~~shall be~~are exempt from Section 9-6 of the Municipal Code.

4. [ii]Power and Communication Lines: Power and communication lines running between banks of solar panels and to electric substations or interconnections with buildings shall be buried underground.

5. [v]Batteries: If the solar farm or solar garden consists of batteries or storage of batteries, adequate design must be provided to ensure all local, State and Federal requirements regulating outdoor battery storage have been met.

6. [ii]Interconnection. An interconnection agreement must be completed with the electric utility in whose service territory the system is located.

7. [ii]Stormwater and NPDES. Solar Farms and Solar Gardens are subject to the Town's stormwater management and erosion and sediment control provisions and NPDES permit requirements.

8. [ii]Ground Cover and Buffer Areas. The site of a ground mounted Solar Farm or Solar Garden energy system shall be improved and maintained with a native 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. [iii]Top soil shall not be removed during development, unless part of a remediation effort.

9. [ii]Foundation. A qualified engineer shall certify that the foundation and design of the solar panels racking and support is within accepted professional standards, given local soil and climate conditions.

10. [ii]Other Standards and Codes. All Solar Farms and Solar Gardens shall be in compliance with all applicable local, state and federal regulatory codes.

11. [ii]Site Plan Required. A detailed site plan for both existing and proposed conditions must be submitted, showing location of all solar arrays, other structures, property lines, rights-of-way, easements, service roads, floodplains, wetlands and other protected natural resources, topography, electric equipment, and all other characteristics requested by the Town.

[7] At the request of the Planning Commission an email has been sent to Jessica H. requesting clarification – do we want to add a provision to the sign code which reinforces the exemption provisions.

12. iiiFAA Compliance. Solar Farms and Solar Gardens that are located within 500 feet of an airport or within approach zones of an airport, are required to complete and 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, FAA Review of Solar Energy Projects on Federally Obligated Airports, or most recent version adopted by the FAA.

13. iiiEndangered Species and Wetlands. Solar Farm and Solar Garden developers shall be required to initiate a natural resource review consultation with the Illinois Department of Natural Resources (IDNR) through the department's online, EcoCat program. Areas reviewed through this process will be endangered species and wetlands. The cost of the EcoCat consultation will be borne by the developer. Results of this consultation will be included in the Special Use application packet.

14. iiiUpon request from the Town, the owner or operator of a Solar Farm or Solar Garden must submit, within 14 calendar days, a current operation and maintenance report to the Town.

15. iiiDecommissioning

    i. A decommissioning plan shall be required to be submitted when applying for all Solar Farms and Solar Gardens, to ensure that facilities are properly removed after their useful life.

    ii. Decommissioning of solar panels must occur in the event they are not in use for 90 consecutive days.

    iii. The owner or operator will have 6 months to complete the decommissioning plan after operation of a Solar Farm or Solar Garden stops being operational.

    iv. The decommissioning plan shall include provisions for removal of all structures and foundations, restoration of soil and vegetation and a plan ensuring financial resources will be available to fully decommission the site.

    v. The Town Board of Trustees may require the posting of a bond, letter of credit, or the establishment of an escrow account to ensure the proper decommissioning. The posting of financial surety may be required prior to the issuance of a building permit for the facility. Said surety shall remained updated and valid until the Solar Farm/Solar Garden has been completely decommissioned in accordance with the latest approved decommissioning plan and restored in compliance with Section 9-4-34B15. As outlined in the ordinance establishing the Special Use Permit, the amount of surety shall be periodically reviewed by staff and the surety amount adjusted accordingly.

    vi. In the event that the State of Illinois enacts a law with regards to the decommissioning of a Solar Farm or Solar Garden, the strictest requirements shall prevail.

vii. The owner of a Solar Energy Facility shall submit an update to this decommissioning plan every three (3) to five (5) years following issuance of the special use.

16. [v]Restoration Requirements: The owner of a Solar Farm or Solar Garden shall provide the Zoning Administrator with a written notice of termination of operations or abandonment of the Solar Energy Facility. Within one hundred twenty (120) consecutive calendar days immediately following the Town's receipt of such written notice or within one hundred twenty (120) consecutive calendar days immediately following the termination of such Special Use, whichever first occurs, the owner of each such Solar Farm or Solar Garden shall:

    i. Remove all structures, buildings, solar panels, above ground improvements, outdoor storage, fencing, equipment, and roadways; and

    ii. Completely remove all foundations, pads, and underground electrical wires; and

    iii. Remove all hazardous material from the property and dispose of the hazardous material in accordance with all applicable Federal, Illinois, and Town laws, statues, ordinances, rules, and regulations; and

    iv. Restoration of all soil and vegetation.

17. [v]Bonds: Prior to the issuance of a building permit, the owner of a Solar Energy Facility shall provide the Town with a performance and payment bond with adequate security or surety bond in an amount determined adequate by the Town Board to guarantee the performance of the aforesaid restoration requirements and decommissioning plan.

18. [iv]Abandonment. A decommission plan shall be approved by the Town 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 Town Attorney, in the amount of the estimated cost of decommission, as approved by the Town Engineer, shall be submitted to the Town. If the Solar Farm or Solar Garden is abandoned and not properly decommissioned, the Town shall utilize the funds to restore the property to its original or an improved condition.

C. [i]Solar Skyspace Easements: Prior to the issuance of issuance of a building permit, the building permit applicant shall provide documentation of the issuance and recordation of solar skyspace easements for the property(ies) adjacent to the subject property. ~~The issuance of a permit for a solar energy system does not constitute a granting of a solar skyspace easement by the Town. A solar skyspace easement is not a prerequisite for obtaining a zoning or building certificate from the Town but the owner/operator shall assume all responsibility for obtaining covenants, easements, or similar documentation to assure sufficient sunlight to operate the solar energy system unless adequate access to sunlight is provided by the site and assumes all risks associated with operating the solar energy system without a solar energy easement.~~[8]

[8] Per recommendation by Jessica Harrill, recommending that the Town obtain proof that easements are obtained prior to the issuance of a permit.

D. [iii]For Solar Farms and Solar Gardens, commencing with the issuance of building permits, the Applicant, Owner, or Operator shall maintain a current general liability policy covering bodily injury and property damage with limits of at least $3 million per occurrence and $5 million in the aggregate. The Town shall be named as an individual insured on the policy to the extent the Town is entitled to indemnification.

E. [iii]Any Solar Energy System(s), Applicant, Owner, or Operator, whether individual or commercial shall defend, indemnify, and hold harmless the Town and its officials, employees, and agents (collectively and individually, the "Indemnified Parties") from and against any and all claims, demands, losses, suits, causes of actions, damages, injuries, costs, expenses, and liabilities whatsoever, including reasonable attorney's fees, except to the extent arising in whole or part out of negligence or intentional acts of such Indemnified Parties (such liabilities together known as "liability") arising out of Applicant, Owner, or Operators selection, construction, operation, and removal of the Solar Energy System(s) and affiliated equipment including, without limitation, liability for property damage or personal injury (including death), whether said liability is premised on contract or on tort (including without limitation strict liability or negligence). This general indemnification shall not be construed as limited or qualifying the Town's other indemnification rights available under the law.

Amend Section 9-6-5 by adding:

V. Identification and warning signs as required by Section 9-4-34B3.[9]

Amend Section 9-10-8 by "re-numbering" the sections. The existing "B" would become the new "C". A new "B" would be added:

B. Failure to Establish, Operate, or Construct a Special Use Permit for either a Solar Farm or Solar Garden: Unless the special use for either a Solar Farm or Solar Garden is established, constructed, and/or operating within three (3) years from the authorization date granting the special use, the special use permit shall expire, without further action by the Board of Trustees. Upon written application, the Town Board may authorize a single extension of the time limit for a period not to exceed one year.

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[i] From Existing Town of Cortland Code
[ii] From Grow Solar Model Ordinance
[iii] From DeKalb County Ordinance
[iv] From Sugar Grove Ordinance
[v] From Taylorville Ordinance

[9] Added at the recommendation of Jessica Harrill