

CASE NO. 895-AT-18

SUPPLEMENTAL MEMORANDUM #14

June 7, 2018

Petitioner: Zoning Administrator

Request: Amend the Champaign County Zoning Ordinance to add “Solar Farm” as a new principal use under the category “Industrial Uses: Electric Power Generating Facilities” and indicate that Solar Farm may be authorized by a County Board Special Use Permit in the AG-1 Zoning District and the AG-2 Zoning District; add requirements and fees for “Solar Farm”; add any required definitions; and make certain other revisions are made to the Ordinance as detailed in the full legal description in Attachment A.

Location: Unincorporated Champaign County

Time Schedule for Development: As soon as possible

Prepared by: **Susan Burgstrom**
Senior Planner

John Hall
Zoning Administrator

Brookens Administrative Center
1776 E. Washington Street
Urbana, Illinois 61802

(217) 384-3708

zoningdept@co.champaign.il.us

www.co.champaign.il.us/zoning

STATUS

Draft minutes from April 12, April 26, and May 3, 2018 are available for viewing on the ZBA meetings website: http://www.co.champaign.il.us/CountyBoard/meetings_ZBA.php.

Public comments received by P&Z Staff since May 3, 2018, can be found in Attachments B and D.

An article providing an update on the ZBA solar farm text amendment process was in the May 10, 2018 edition of the *County Star*; see Attachment C.

On May 18, 2018, Pattsy Petrie, County Board member, submitted a link to Minnesota Solar Energy Standards for Counties dated February 2014; see Attachment E.

On June 1, 2018, Phillip Geil submitted an email with information from Straight Up Solar; see Attachment F.

On June 4, 2018, the P&Z Department was made aware of a Final Determination dated April 3, 2018, by the Illinois Commerce Commission regarding co-located community PV solar farm; see Attachment G. Staff added to the definition of a community PV solar farm based on this determination.

DECISION POINTS

The Board indicated that they would review the proposed amendment point by point at the June 14th meeting. Staff has updated the proposed amendment with all comments to date. The annotated and clean versions are in Attachments H and I, respectively. Staff also updated the Finding of Fact for Case 895-AT-18, which can be found in Attachment J. P&Z Staff has identified the following decision points in the proposed amendment and in the Finding of Fact:

In the Proposed Amendment (annotated) dated June 7, 2018

Page	Item	Decision Point	Notes
9	6.1.5 D.(3)a.(a)	200 / 240 / 260 / 300 / 330 feet	
9	6.1.5 D.(3)b.	250 / 290 / 310 / 350 / 380 feet	
23	6.1.5 M.(2)a.(a)	500 or 1,000 feet	Note from staff: the proposed 1,000 feet is consistent with current screening requirement for outdoor storage and operations that is in Section 7.6.
24	6.1.5 N.(2)b.	“require” or “consult with”?	Note from John Hall: the word “consult” does not infer that ELUC can require anything and that is the essential part of this paragraph. I agree that ELUC needs to be careful but the wording needs to grant some authority to ELUC.
29	6.1.5 Q.(4)a.(a)	In years 1-5, Financial Assurance to cover {12.5% / 25% / 50% }	
31	6.1.5 Q.(4)b.(g)	less than \$1,000 per acre / exceed 150% of the decommissioning costs	Note from John Hall: placing a cap of 150% of the decommissioning cost could end up being \$1.50 per acre. Retain the \$1,000 per acre minimum and the applicant can then request a waiver if they believe the amount is too high.
32	6.1.5 Q.(4)e.	Years 20 through 25 ok?	

RE-PRINT OF OPTIONS FOR MINIMUM REQUIRED SEPARATION TO DWELLINGS

Minimum separation between solar farm equipment and dwellings has been revised several times over the course of this case’s public hearing process. As of the April 26, 2018 public hearing, discussion focused on a 200 feet separation between the solar farm perimeter fence and residential lots 5 acres or less, and 250 feet separation between the solar farm perimeter fence and a residential structure for lots 5 acres or larger. This does not include the proposed requirement of at least 275 feet separation between the solar farm perimeter fence and the inverter. This increase was offered in recognition of the likelihood of multiple community solar farms and/or large solar farms.

Using an online tool, “Estimating Sound Levels with the Inverse Square Law”, found at <http://hyperphysics.phy-astr.gsu.edu/hbase/Acoustic/isprob2.html>, P&Z Staff estimated the following sound levels:

- **475 FEET = 200 feet from property line to fence + 275 feet from fence to inverter (current amendment revision).** At this separation, the approximate calculated noise level of the SMA central inverter Model SC2750EV is 41.09 dB.
- **515 FEET = 240/290 feet + 275 feet to inverter.** 240 feet is a dimension that fits current large-scale agricultural equipment such as allowing four passes of a 60 feet wide planter, two passes of a 120 feet wide sprayer, and 6 passes of a 40 feet wide combine header. At this separation, the approximate calculated noise level of the SMA central inverter Model SC2750EV is 40.38 dB.
- **535 FEET = 260/310 feet + 275 feet to inverter.** At this separation, the approximate calculated noise level of the SMA central inverter Model SC2750EV is 40.05 dB.
- **575 FEET = 300/350 feet + 275 feet to inverter.** At this separation, the approximate calculated noise level of the SMA central inverter Model SC2750EV is 39.43 dB. This is the same separation as for a meat processing plant, per the table listing the separations in the current Ordinance distributed as Attachment F to Supplemental Memo #7 dated April 5, 2018.
- **605 FEET = 330/ 380 feet + 275 feet to inverter.** At this separation, the approximate calculated noise level of the SMA central inverter Model SC2750EV is 38.98 dB.

In the Finding of Fact dated June 14, 2018

Page	Item	Decision Point
15, 32	9.C.(2)c.(g), 16.E.(7)	Regarding 6.1.5 M.(2)a.(a): 500 or 1,000 feet <i>same as decision point in amendment</i>
17	11.A.(1)c.(b)ii.	Regarding 6.1.5 N.(2)b.: “require” or “consult with”? <i>same as decision point in amendment</i>
26	16.B.(4)a.(c)	less than \$1,000 per acre / exceed 150% of the decommissioning costs <i>same as decision point in amendment</i>
27	16.B.(5)i	Option 1: use alternative decommissioning plan, or Option 2: use original decommissioning plan and explain why
33	16.E.(9)e.(a)	Regarding 6.1.5 D.(3)a.(a): 200 / 240 / 260 / 300 / 330 feet <i>same as decision point in amendment</i>
34	16.E.(9)e.(b)	Regarding 6.1.5 D.(3)b.: 250 / 290 / 310 / 350 / 380 feet <i>same as decision point in amendment</i>

ATTACHMENTS

- A Legal advertisement
- B Email from Laurel Bergren received May 7, 2018, with attachment: Advantages of Letters of Credit dated April 8, 2015 by Carter H. Klein, retrieved from Lorman Educational Services on May 3, 2018
- C Theobald, Ben. “Champaign County ZBA: No decisions on solar farm ordinance.” *The County Star*, May 10, 2018
- D Email from Andy Robinson received May 17, 2018
- E Minnesota Solar Energy Standards for Counties dated February 2014, submitted by Patti Petrie on May 18, 2018
- F Email from Phillip Geil received June 1, 2018
- G Final Order 17-0838 by the Illinois Commerce Commission dated April 3, 2018 (online only)
- H Updated Revised Text Amendment dated June 7, 2018 – annotated
- I Updated Revised Text Amendment dated June 7, 2018 – clean
- J Revised Finding of Fact dated June 14, 2018

LEGAL PUBLICATION: WEDNESDAY, FEBRUARY 14, 2018

CASE: 895-AT-18

**NOTICE OF PUBLIC HEARING REGARDING A PROPOSED AMENDMENT TO THE
CHAMPAIGN COUNTY ZONING ORDINANCE.**

CASE: 895-AT-18

The Champaign County Zoning Administrator, 1776 East Washington Street, Urbana, has filed a petition to change the text of the Champaign County Zoning Ordinance. The petition is on file in the office of the Champaign County Department of Planning and Zoning, 1776 East Washington Street, Urbana, IL.

A public hearing will be held **Thursday, March 1, 2018, at 6:30 p.m.** prevailing time in the Lyle Shields Meeting Room, Brookens Administrative Center, 1776 East Washington Street, Urbana, IL, at which time and place the Champaign County Zoning Board of Appeals will consider a petition to:

Amend the Champaign County Zoning Ordinance as follows:

Part A. Amend Section 3 by adding definitions including but not limited to “NOXIOUS WEEDS” and “SOLAR FARM”.

Part B. Add paragraph 4.2.1 C.5. to indicate that SOLAR FARM may be authorized by County Board SPECIAL USE permit as a second PRINCIPAL USE on a LOT in the AG-1 DISTRICT or the AG-2 DISTRICT.

Part C. Amend Section 4.3.1 to exempt SOLAR FARM from the height regulations except as height regulations are required as a standard condition in new Section 6.1.5.

Part D. Amend subsection 4.3.4 A. to exempt WIND FARM LOT and SOLAR FARM LOT from the minimum LOT requirements of Section 5.3 and paragraph 4.3.4 B. except as minimum LOT requirements are required as a standard condition in Section 6.1.4 and new Section 6.1.5.

Part E. Amend subsection 4.3.4 H.4. to exempt SOLAR FARM from the Pipeline Impact Radius regulations except as Pipeline Impact Radius regulations are required as a standard condition in new Section 6.1.5.

Part F. Amend Section 5.2 by adding “SOLAR FARM” as a new PRINCIPAL USE under the category “Industrial Uses: Electric Power Generating Facilities” and indicate that SOLAR FARM may be authorized by a County Board SPECIAL USE Permit in the AG-1 Zoning DISTRICT and the AG-2 Zoning DISTRICT and add new footnote 15. to exempt a SOLAR FARM LOT from the minimum LOT requirements of Section 5.3 and paragraph 4.3.4 B. except as minimum LOT requirements are required as a standard condition in new Section 6.1.5.

Part G. Add new paragraph 5.4.3 F. that prohibits the Rural Residential OVERLAY DISTRICT from being established inside a SOLAR FARM County Board SPECIAL USE Permit.

Part H. Amend Subsection 6.1.1 A. as follows:

1. Add SOLAR FARM as a NON-ADAPTABLE STRUCTURE and add references to the new Section 6.1.5 where there are existing references to existing Section 6.1.4.
2. Revise subparagraph 6.1.1 A.11.c. by deleting reference to Section 6.1.1A. and add reference to Section 6.1.1A.2.

Part I. Add new subsection 6.1.5 SOLAR FARM County Board SPECIAL USE Permit with new standard conditions for SOLAR FARM.

Part J. Add new subsection 9.3.1 J. to add application fees for a SOLAR FARM zoning use permit.

Part K. Add new subparagraph 9.3.3 B.8. to add application fees for a SOLAR FARM County Board SPECIAL USE permit.

All persons interested are invited to attend said hearing and be heard. The hearing may be continued and reconvened at a later time.

Catherine Capel, Chair
Champaign County Zoning Board of Appeals

TO BE PUBLISHED: WEDNESDAY, FEBRUARY 14, 2018 ONLY

Send bill and one copy to: Champaign County Planning and Zoning Dept.
Brookens Administrative Center
1776 E. Washington Street
Urbana, IL 61802
Phone: 384-3708

Susan Burgstrom

From: John Hall
Sent: Monday, May 07, 2018 8:38 AM
To: Susan Burgstrom
Subject: FW: The advantages of LOCs
Attachments: Letters of Credit - Lorman resource.docx

RECEIVED

MAY 07 2018

CHAMPAIGN CO. P & Z DEPARTMENT

Follow Up Flag: Follow up
Due By: Friday, June 01, 2018 8:00 AM
Flag Status: Flagged

I had also forwarded this to Jacob

From: Laurel Bergren [mailto:laurel@arcperspectives.com]
Sent: Thursday, May 3, 2018 12:26 PM
To: John Hall <jhall@co.champaign.il.us>
Cc: 'Patrick Brown' <Patrick.Brown@baywa-re.com>; 'Patrick T. Fitzgerald' <pfitzgerald@MeyerCapel.com>
Subject: The advantages of LOCs

Hello John,

It was a pleasure speaking with you this morning. I have attached a document from Lorman Educational Services which covers most of my Letters of Credit conversation with US Bank Market President – Gary Quinn. Gary is based in Freeport, Illinois. I've also highlighted a couple of items in the text including the fact that a Letter of Credit is generally not considered an asset in the event of a bankruptcy.

Thank you so much for the time you have invested in the ordinance!

Laurel Bergren

Laurel Bergren
ARC Perspectives, Inc.
Vice President

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arcperspectives.com

Retrieved from Lorman Educational Services 5/3/18

<http://www.lorman.com/resources/letters-of-credit-advantages-and-disadvantages-16041>

Advantages of Letters of Credit

April 08, 2015

Author: Carter H. Klein

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MAY 07 2018

CHAMPAIGN COUNTY CLERK DEPARTMENT

Instant liquidity

– The terms of a letter of credit can specify that fax presentments are allowed and that the draw must be honored (or notice of dishonor given) within a few days or less.

– In some cases where letters of credit secure bonds, commercial paper or secure clearing obligations owed to commodities or security exchanges, the letter of credit will be payable on the same day presentation is made. – Payment is usually via wire transfer of funds by the issuer to the beneficiary's account.

Credit of a the Issuer Is Added

– By use of a letter of credit, the beneficiary is assured that the payment obligation is backed by credit of a bank which is substituted for or added to the credit of a corporate or individual applicant.

Independence of issuer

– Except for material fraud, the issuer's obligation to honor is independent of the obligations of the parties (applicant and beneficiary) and their disputes over the underlying contract which the letter of credit supports.

– The issuer only looks to see if the documents presented are timely and conform to the documentary conditions specified in the letter of credit.

– The issuer does not and should not involve itself in issues or investigations of whether the underlying contract has been properly performed.

Automatic Stay and Preferences

– A draw on a letter of credit to pay for an obligation of a bankrupt applicant is not normally regarded as transfer of the bankrupt's assets; rather the proceeds transferred are regarded as funds of the issuing bank. – As a result, courts will not normally enjoin a draw on a letter of credit even though the applicant has filed for bankruptcy.

– Because the draw on the letter of credit is of funds of the issuing bank, a court will not normally set aside as preferential a paydown of a debt from a draw on a letter of credit. Exception: Indirect preferences when a collateralized LC is issued for an already existing debt.

Pay now, litigate later

– Courts have taken the view that if there is a problem with the underlying contract or its performance while a draw is being made or about to be made on a letter of credit, the beneficiary should be entitled to draw and hold or use the proceeds until the dispute or litigation is resolved.

– Courts have used the phrase – “pay now, litigate later” to describe the beneficiary’s rights against the obligation of the issuer and applicant to allow the beneficiary to draw on the letter of credit.

– See Eakin v. Continental Illinois Nat. Bank & Trust Co., 875 F.2d 114 (7th Cir. 1989); In re Sabratek, Corp., 257 B.R. 732 (Bankr. Del. 2000).

Adaptability.

As is shown from the variety of uses for letters of credit enumerated above, a letter of credit can be tailored to secure almost any type of obligation. The draw conditions can require elaborate or simple certifications identifying the obligation secured and the events justifying the draw.

Statute of Limitations

Some courts have held that even though an underlying obligation which a letter of credit supports is no longer enforceable under a statute of limitations, the LC can still be drawn upon by the beneficiary to pay the debt owed. See Williams Service Group v. National Union Fire Ins. Co., 2012 WL 5233558 (11th Cir. Oct. 23, 2012).

Payment against right to receive goods

– Documentary credits used in international trade provide that the beneficiary must present to the issuer shipping documents, including bills of lading, to receive payment.

These documents are passed along to the applicant to enable it to receive the goods shipped which are being paid from a draw on the letter of credit.

– UCC §5-118 gives issuing, negotiating and confirming banks an automatic perfected and in most cases prior security interest in documents presented when they honor a draw on a letter of credit until they are reimbursed.

Disadvantages of Letters of Credit:

- Standby LC's are treated by issuers like loans – the applicant must be credit approved, set aside credit lines and frequently has to set aside collateral to secure its duty to reimburse the issuer if there is a draw on the LC.
- Other forms of credit support may be less costly, such as a bond, export credit insurance, documentary collection, open account sales, a security interest in collateral, or a corporate guaranty.
- For commercial letters of credit, the rules are complex, the documentary requirements exacting and subject to differing applications at the issuing bank level and as a result, discrepancy rates are very high – over 50% of all presentments are nonconforming (discrepant), although in 99% of the cases the discrepancies are waived or corrected.
- LC's have expiration dates to which attention must be paid.
- LC's sometimes require presentation of the original LC and all amendments.
- LC's must be amended each time there is a change in amount or terms.
- Rules and practice governing LC's, especially commercial LC's, can be complex.
- LC's can be misused to take advantage of applicants. E.g., Lloyds cases.
- LC's are only as good as the banks that issue them.
- LC's are sometimes difficult to terminate or cancel.

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MAY 07 2018

CHAMPAIGN CO. P & Z DEPARTMENT

CHAMPAIGN COUNTY ZBA

No decisions on solar farm ordinance

By: Ben Theobald
The Champaign County Zoning Board of Appeals held its fourth meeting on May 3 for to discuss the ordinance that will regulate solar farm construction in Champaign County. The board continues its ongoing discussions and has not yet voted on any type of action pertaining to the ordinance.

The largest proposed solar farm project that will be presented to the zoning board -- when an ordinance passes -- is around 1300 acres and would be located near the town of Sidney.

During the meeting the board discussed a number of issues of the solar farm ordinance. One was the difference between community solar installations, which tend to be under 25 acres, and the larger proposed farm in the Sidney area, which is on a more industrial scale.

Board member Frank Dinovo made it clear that he was against turning any administrative approval authority over to "political elected bodies" such as the county board for large installations such as the Sidney "Prairie Solar" project proposed by BayWa.

"They are ill-equipped to operate in a quasi-judicial manner and to keep extraneous political concerns from entering into the decision," Dinovo said. "That said, I understand that projects of significant magnitude can't be handled any other way. I'm fine with utility scale solar farms being treated as county board special use permits, but I feel strongly that community scale solar farms can be handled as straight forward regular special use permits by this body."

Taking down solar installations is as important as building them to the zoning ordinance being discussed. One of the issues is deciding who will pay for decommissioning, and how. John Hall, Zoning Director, had a disagreement with Dinovo on the board being in charge of handling the decommissioning agreement. "To have a decommissioning agreement that could end up costing the county

money and leaving that to the ZBA would be inappropriate," Hall said.

According to a memo given out at the public hearing, the current plan for decommissioning would be a submission of a letter of credit from the solar farm developer and money placed in escrow account over a five-year period until about the 20th year, at which time the equipment will degrade.

Dinovo said that the board always makes decisions that expose the county to legal liability and that he doesn't have that concern. "I think frankly based on my experience, this board is more confident to deal with quasi-judicial administered decisions than the county board is," he said.

Dinovo also had an issue with a few provisions in the ordinance concerning land leveling and compaction. He argued that those are elements that can be handled between the landowner and the developer. "I don't see why we need to get involved in that," he said. "These are not things that are going to affect

other property issues. My experience with farmers is they are the smartest business people I know, I don't have concerns that they would have trouble."

Board member Marilyn Lee disagreed with Dinovo, claiming that what farmers would be dealing with would be out of the normal for them when it comes to their usual work. "They are not in the normal course used to dealing with a solar farm and all the aspects that may be entailed in that," she said. "I don't see that this is hardly any difference from reclamation versus the mitigation just to make sure that it protects the parties."

Zoning board members Brad Passalacqua and Debra Greist were both in agreement with Marilyn Lee. Passalacqua and Greist both felt that they were being true to the Champaign County's guideline demands on using farmland.

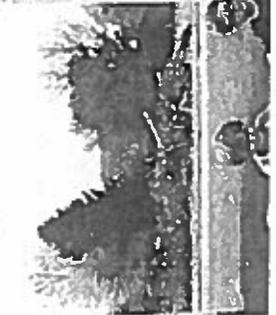
"It's very consistent with the rest of our policies, our land use and with our treatment of best prime farm ground," Passalacqua

noise levels.

The board was presented data by the Planning and Zoning staff of estimations of separation between a solar farm fence and residential property lines that ranged between 200 to 330 feet plus an additional 275 foot separation from the solar farm fence to the inverter. The inverter noise level range could be between 38.98 dB and 41dB at those distances.

Director John Hall is opposed to imposing noise level standard. He stated that the standards for the Illinois Control Board noise level are high and that with the separations presented they would be below those levels. "I can't guarantee it but I personally have no doubt you would ever exceed the pollution control level," Hall said. "Particularly in a rural area where there is farming, a railroad, and there is a village close by, there is noise. If adopting a lower noise standard could be done we would be better off, but it's not going to be done."

Noise from the inverters has been an ongoing discussion, and the meeting on Thurs was no exception. The Illinois Pollution Control Board has noise limits that could be used as a guideline, but they are higher than many opponents are willing to go on



Susan Burgstrom

From: John Hall
Sent: Thursday, May 17, 2018 4:28 PM
To: Susan Burgstrom
Subject: FW: Solar would cover 0.3% to 1% of CC farm land

RECEIVED

MAY 17 2018

CHAMPAIGN CO. P & Z DEPARTMENT

From: Andy Robinson [<mailto:andrew.robinson.1980@gmail.com>]
Sent: Thursday, May 17, 2018 4:11 PM
To: John Hall <jjhall@co.champaign.il.us>
Cc: Patsy Petrie <patsy2@gmail.com>
Subject: Solar would cover 0.3% to 1% of CC farm land

Hello Mr Hall,

I was discussing approximate percentages of Champaign Co that could potentially be covered by solar with Patsy Petri after a CCNet meeting today and I was curious if the County Zoning has ever made a GIS map of potential land coverage? I think this geographical representation would be very helpful for the county zoning board to understand the scope of these projects.

According to the presentation on 3/1 from Kankakee County Planning (Case 895-AT-18, ZBA 03/01/18, Attachment F Page 1 of 18 Page 101), the FEJA incentives for 3,000 MW of new solar and 1,300 MW of new wind would result in between 8,000 and 15,000 acres statewide. Even if all 8,000 acres were in Champaign County, which has over 600,000 acres of farmland, this would only be 1% of the farmland.

People I've spoken with in the industry estimate that there may be 4 times more applications for solar farms than there are incentives available. It is likely that many proposed projects may even become fairly competitive may result in only the best projects getting subscribers and going forward. This may result in favoring projects with dual uses such as pollinator friendly plantings or with the lowest subscription costs. I personally am very hopeful to possibly double the amount of flowering areas for impacted species such as Monarch butterflies, which are already greatly affected by common practices such as mowing roadways.

If we locally only had something like one large 1,000-1,400 acre farm, and 8-10, 10 acre farms, this 2,000 acres would be 0.3% of farmland. This would provide 600 MW of clean energy to our local grid and that could power about 90,000 homes. In 2 years of the Urbana-Champaign Solar group-buy program, there have been 160 rooftop installs totaling 1 MW of solar. This is considered excellent market penetration for an area of our size, but sunny roofs and people with enough money to make a long-term investment on their roof are limited. As far as a cost effective alternative to coal, ground mounted solar farms near existing power line infrastructure is the most cost effective way to actually offer lower electricity prices for customers.

A map of made up solar farm sites scattered across the county could illustrate how even a 1,000 acre farm can be laid out to only boarder 8-12 small 3-5 acre plots with homes on them. So, we are talking about possibly 12-24 residents being directly affected by these small and large solar farms. However, the electricity produced by these farms would benefit thousands of people in our local grid and would benefit everyone with reduced smoke in our air from coal and natural gas fired power plants. Not to mention environmental issues like the coal ash dump that my family canoes next to near Kickapoo State Park.

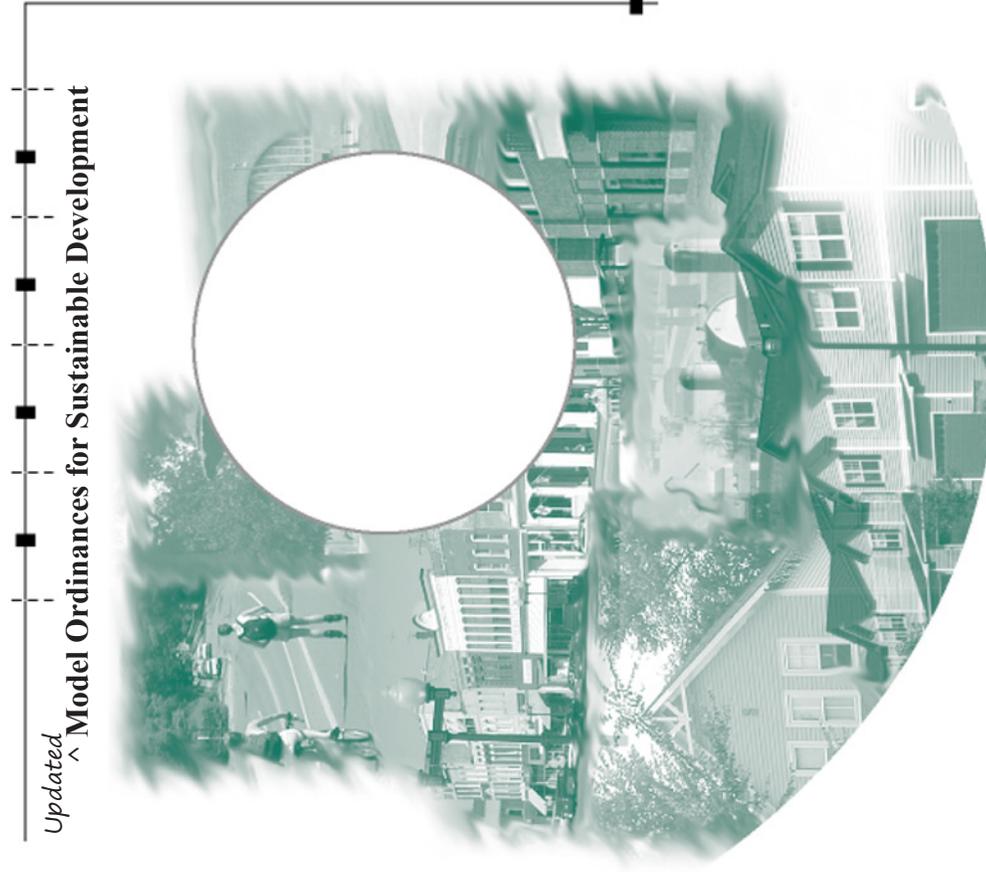
While we should protect farmland from mining, stripping top soil, or being covered in concrete, I would argue that converting less than 1% of this land to provide renewable power for thousands and the potential for dual uses such as pollinator friendly plantings far outweigh the impacts on farm land. I personally feel that the ground, air, and our community would be better off for setting more land aside for this type of energy and ecological diversification.

Thank you,

Andy Robinson

MREA Urbana-Champaign Solar3.0 Educational presenter

From Policy to Reality



Updated
Model Ordinances for Sustainable Development

2013
Minnesota Department of
Commerce, Division of
Energy Resources,
Minnesota Solar Challenge



Prepared for the Minnesota Department of Commerce by:



Brian Ross

501 Main Street SE #711
Minneapolis, MN 55414
612-588-4904
bross@crplanning.com

INTRODUCTION

In spite of its cold and dark reputation, Minnesota has good solar potential, as good as Houston, Texas and many parts of Florida. As solar energy system components have become more efficient and less costly an increasing number of solar energy installations have been installed in Minnesota. Since 2005, the interest in solar energy has rapidly increased such that many communities have had to address solar installations as a land use issue. Moreover, starting in 2014 many utilities will be making new investments in large-scale solar “farms,” and Minnesota has started to see new “community-shared” solar projects. Solar energy components continue to improve in efficiency and decline in price; the U.S. Department of Energy forecasts that solar energy will start to reach widespread cost parity with retail electric costs by 2016; solar is already a cost-competitive option in some locations.

Solar energy offers retail customers an alternative (or supplement) to utility power. Solar energy has become a symbol of energy self-sufficiency and environmental sustainability. The growth in solar installations is attributable more to the non-economic benefits than as an economic substitute to the utility. Households and businesses wanting to reduce their carbon footprint see solar energy as a strong complement to energy efficiency. Volatility in natural gas or propane prices makes free solar fuel look attractive as a price hedge.

Solar energy issues

Local governments will need to address solar energy installations in their development regulation in the near future. Three primary issues tie solar energy to development regulations:

- 1) *Protecting access to solar resources.* Development regulations can limit a property owner’s ability to access their solar resource. Moreover, solar access can be limited by buildings or vegetation on adjacent lots, and should be a consideration in zoning districts that allow tall buildings or in developing communities where subdivisions should enhance or protect homeowner’s access direct sunlight.
- 2) *Nuisance and safety considerations.* Solar energy systems have few nuisances, but visual impacts and safety concerns by neighbors sometimes create opposition to solar installations. Good design and attention to aesthetics can answer most concerns. But the misperception that solar energy systems are ugly and unsafe, rooted in poorly designed 1970s solar installations, have sometimes resulted in unnecessary regulation or outright prohibitions.
- 3) *Climate protection goals.* Local governments that have committed to meeting climate protection goals can meet some of their commitment by removing regulatory barriers to solar energy and incorporating low or no-cost incentives in development regulations to spur solar investment.

Model Solar Energy Standards

This ordinance was developed for the Minnesota Solar Challenge program, co-funded by the U.S. DOE Rooftop Solar Challenge. It was developed as a county/ rural community version of the Minnesota model Urban Solar Energy Standards, and was last updated February, 2014

Statutory Solar Access Requirement

Local governments within the seven-county metropolitan region are required under state law to address solar access in their comprehensive plans, and thus indirectly in their development regulation that implements the comprehensive plan (Minn. Stat. 473.859, Subd. 2 [b]). Refer to the Metropolitan Council Land Planning Handbook for more information.

Components of a solar standards ordinance

Solar energy standards should consider the following elements:

- Remove regulatory barriers and create a clear regulatory path (an as-of-right installation) to solar development for both accessory and (if appropriate) principal uses such as solar farms and ground-mount community shared solar installations.
- Address solar access issues within the subject property to ensure reasonable access not unduly limited by height, setback, or coverage limitation, recognizing the distinct design and function of solar technologies.
- If there are urban density developments, define aesthetic standards that retain an as-of-right installation while balancing design concerns.
- Encourage solar-ready subdivision and building design.
- Incorporate regulatory incentives that can spur private-sector solar investment.

Urban and rural communities

The model ordinance language addresses concerns that are primarily in counties, townships, and rural areas rather than cities and urban areas. The incentive portion of the urban model ordinance can be applied in rural areas, as are provisions addressing solar access and aesthetic considerations in those rural areas with development patterns at an urban scale (typically lots smaller than 1 acre).

Principal and accessory uses

This ordinance addresses solar energy as both a principal use and as an accessory use to the primary residential or commercial use. Counties and rural areas are much more likely to see “solar farms” or ground-mounted “community solar” installations. These solar installations are large arrays of hundreds or thousands of ground or pole-mounted panels covering anywhere from a few acres to over 100 acres. These land uses have different issues and need to be addressed in a substantially different manner than discussed in the urban model ordinance standards.

- I. Scope** - This article applies to all solar energy installations in Model County.
- II. Purpose** - Consistent with the County Comprehensive Plan, the intent of this Section is to allow reasonable capture and use, by households, businesses, and property owners, of their solar energy resource, and encourage the development of renewable energy businesses, consistent with community development standards. Model County has adopted this ordinance for the following purposes:
- A. Comprehensive Plan Goals** - To meet the goals of the Comprehensive Plan and preserve the health, safety and welfare of the County's citizens by promote the safe, effective and efficient use of active solar energy systems installed to reduce the on-site consumption of fossil fuels or utility-supplied electric energy. The following solar energy standards specifically implement the following goals from the Comprehensive Plan:
1. **Goal** – Encourage the use of local renewable energy resources, including appropriate applications for wind, solar, and biomass energy.
 2. **Goal** – Promote sustainable building design and management practices in residential, commercial, and industrial buildings to serve the needs of current and future generations.
 3. **Goal** – Assist local businesses to lower financial and regulatory risks and improve their economic, County, and environmental sustainability.
 4. **Goal** – Efficiently invest in and manage public infrastructure systems to support development and growth.
- B. GHG Reduction Goals** - Model County has committed to reducing carbon and other greenhouse gas emissions in its GHG Reduction Plan. Solar energy is an abundant, renewable, and nonpolluting energy resource and its conversion to electricity or heat will reduce our dependence on nonrenewable energy resources and decrease the GHG emissions and other air and water pollution that results from the use of conventional energy sources.
- C. Local Resource** - Solar energy is an under used local energy resource and encouraging the use of solar energy will diversify the community's energy supply portfolio and exposure to fiscal risks associated with fossil fuels.
- D. Improve Competitive Markets** - Solar energy systems offer additional energy choice to consumers and will improve competition in the electricity and natural gas supply market.

Comprehensive Plan Goals

Tying the solar energy ordinance to Comprehensive Plan goals is particularly important when the solar standards include regulatory incentives or solar requirements as described in the last section of this ordinance. If the Comprehensive Plan does not include goals that could address solar energy, and the community does not have some of policy foundation for encouraging private investment in solar energy (such as climate protection goals) the community should consider creating a local energy plan.

Climate Protection Strategies

Solar energy should be part of every community's portfolio for addressing climate change or energy independence considerations. Local governments that are participating in climate protection programs or the Cool Cities/ Cool Counties program can use private solar investment as a vehicle for meeting goals. Additional community benefits that improve sustainability are also spelled out in the findings section.

III. Definitions

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

Community Solar - A solar-electric (photovoltaic) array that provides retail electric power (or a financial proxy for retail power) to multiple community members or businesses residing or located off-site from the location of the solar energy system, consistent with Minn. Statutes 216B.1641 or successor statute. A community solar system may be either an accessory or a principal use.

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

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.

Passive Solar Energy System - A solar energy system that captures solar light or heat without transforming it to another form of energy or transferring the energy via a heat exchanger.

Photovoltaic System - A solar energy system that converts solar energy directly into electricity.

Renewable Energy Easement, Solar Energy Easement - 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, as defined in Minn Stat. 500.30 Subd. 3 or most recent version.

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.

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.

Solar Access - Unobstructed access to the solar resource (see definition below) on a lot or building, including access across adjacent parcel air rights, for the purpose of capturing direct sunlight to operate a solar energy system.

Solar Definitions

Not all these terms are used in this model ordinance, nor is this a complete list of solar definitions. As a community develops its own design standards for solar technology, many of the concepts defined here may be helpful in meeting local goals. For instance, solar daylighting devices may change the exterior appearance of the buildings, and the community may choose to distinguish between these devices and other architectural changes.

Solar Energy Standards - Counties

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 any day of the year.

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.

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.

Solar Daylighting - A device specifically designed to capture and redirect the visible portion of the solar spectrum, while controlling the infrared portion, for use in illuminating interior building spaces in lieu of artificial lighting.

Solar Energy - Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

Solar Energy Device - A system or series of mechanisms designed primarily to provide heating, cooling, electrical power, mechanical power, solar daylighting or to provide any combination of the foregoing by means of collecting and transferring solar generated energy into such uses either by active or passive means. Such systems may also have the capability of storing such energy for future utilization. Passive solar energy systems are designed as a solar energy device, such as a trombe wall, and not merely a part of a normal structure such as a window.

Solar Energy System - A device or structural design feature, a substantial purpose of which is to provide for the collection, storage and distribution of sunlight for space heating or cooling, generation of electricity, water heating, or providing daylight for interior lighting.

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.

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.

Solar Hot Air System - An active solar energy system that includes a solar collector to provide direct supplemental space heating by heating and re-circulating conditioned building air. The most efficient performance typically uses a vertically mounted collector on a south-facing wall.

Solar Resource

Understanding what defines a "solar resource" is foundational to understanding how land use regulation affects solar development. Solar energy resources are not simply where sunlight falls. A solar resource has minimum spatial and temporal characteristics, and needs to be considered not only today but also into the future. Solar energy equipment can not function as designed if installed in partial shade, with too few hours of daily or annual direct sunlight, or without southern or near-southern exposure. Many provisions of the model ordinance are predicated on the concept that a solar resource has definable characteristics that are affected by local land use decisions and regulation.

Solar Energy Standards - Counties

Solar Hot Water System (also referred to as Solar Thermal) - A system 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.

Solar Mounting Devices - Racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or the ground.

Solar Storage Unit - A component of a solar energy device that is used to store solar generated electricity or heat for later use.

IV. General standards - All solar energy systems shall comply with the following standards.

A. Interconnection agreement - All electric solar energy systems that are connected to the electric distribution or transmission system through the existing service of the primary use on the site shall obtain an interconnection agreement with the electric utility in whose service territory the system is located. Solar energy systems connected directly to the distribution or transmission system must obtain an interconnection agreement with the interconnecting electric utility. Off-grid systems are exempt from this requirement.

B. UL listing - Electric solar system components that are connected to a building electric system must have an Underwriters Laboratory (UL) listing

C. Electric code - All solar installations must comply with the Minnesota and National Electric Code.

D. Building code - All rooftop solar systems shall comply with the Minnesota Building Code.

E. Plumbing Code - Solar thermal hot water systems shall comply with applicable Minnesota State Plumbing Code requirements.

F. Reflectors - All solar energy systems using a reflector to enhance solar production shall minimize glare from the reflector affecting adjacent or nearby properties. Measures to minimize glare include selective placement of the system, screening on the north side of the solar array, modifying the orientation of the system, reducing use of the reflector system, or other remedies that limit glare.

G. Height limit - Building- or roof- mounted solar systems shall not exceed the maximum allowed height in any zoning district. For purposes of height measurement, solar systems other than building-integrated systems shall be considered to be mechanical devices and are restricted consistent with other building-mounted mechanical devices for the zoning district in which the system is being

Interconnection
Nearly all solar electric system are “grid-connected,” meaning that the system is connected to into the electric system of a building that is connected to the grid, or the solar installation is connected directly to the grid (such as a solar farm). In all cases, grid-connected systems need to have an interconnection agreement with the electric utility.

Glare
Solar collectors (the panels) have glass surfaces and thus can create glare. However, the glare is no different than glare from a glass window, and as panels are pitched toward the sun reflections are almost always upward. Moreover, solar panels are specifically designed to be anti-glare, as reflected light lowers the panel efficacy.

Reflectors
Unlike the solar collector, systems that use a reflector do create a potential glare situation that may be greater than building windows. Reflectors are designed to reflect, not absorb, light. However, the glare risk is intermittent and seasonal (usually only in the summer, early morning or late evening, and only for a limited amount of time). Counties may want to include provisions regarding reflector glare in the event that a glare nuisance situation arises in order to provide guidance for addressing the nuisance.

Solar Energy Standards - Counties

installed, except that solar energy systems shall not be required to be screened.

H. Visibility, commercial installations - Commercial rooftop systems shall be placed on the roof to limit visibility from the public right-of-way or to blend into the roof design, provided that minimizing visibility still allows the property owner to reasonably capture solar energy.

V. Standards for specific solar uses. The following standards apply to specific types of solar uses:

A. Rooftop solar energy systems - accessory to the primary land use, designed to supply energy for the primary use.

- (1) These systems are permitted accessory uses in all districts in which buildings are permitted.
- (2) No land use permit is required.

B. Ground-mount solar energy systems - accessory to the primary land use, designed to supply energy for the primary use.

- (1) Ground-mount systems are permitted accessory uses in all districts where buildings are permitted.
- (2) Ground-mount systems require a land use permit and are subject to the accessory use standards for the district in which it is located, including setback, height, and coverage limits.
- (3) The collector surface of a ground-mount system and any foundation, compacted soil, or other component of the solar installation that rests on the ground is considered impervious surface. Vegetated ground under the collector surface can be used to mitigate stormwater runoff.

C. Community solar energy systems - Roof or ground-mount solar energy systems, may be either accessory or primary use, designed to supply energy for off-site uses on the distribution grid, consistent with Minn. Statutes 216B.1641 or successor statute.

- (1) Rooftop community systems are permitted in all districts where buildings are permitted.
- (2) Ground-mount community solar energy systems are conditional uses in all districts.
- (3) An interconnection agreement must be completed with the electric utility in whose service territory the system is located.
- (4) All structures must comply with setback, height, and coverage limitations for the district in which the system is located.
- (5) Ground-mount systems must comply with all required standards for structures in the district in which the system is located.

Height Standards

In rural areas the height standards that apply to the principal and accessory uses are unlikely to constrain solar development. Solar resources are unlikely to be constrained by trees or buildings on adjacent lots, and is likely to have adequate an solar resource for a ground-mount application even if the roof is shaded.

Visibility and Aesthetic Considerations

Not all counties use design or aesthetic standards for commercial buildings. This standard is provided as an example for counties that do regulate commercial building design or the aesthetics of rooftop equipment. Solar arrays should be treated similar to other rooftop equipment, while accommodating the functioning of the system (screening requirements render the system useless).

Impervious Surface and Stormwater

The county should consider an important distinction between a ground-mount solar array and the roof of an accessory building; the uncompact and vegetated ground under the array can be used to infiltrate stormwater. Having the infiltration area does not eliminate all the impacts of the collector surface, but should be considered as a significant mitigating factor.

Community Solar or Solar Gardens

Community solar systems differ from rooftop or solar farm installations primarily in regards to system ownership and disposition of the electricity generated, rather than land use considerations. There is, however, a somewhat greater community interest in community solar, and thus counties should consider creating a separate category.

Solar Energy Standards - Counties

Stormwater and NPDES Standards

As noted with ground-mount accessory use installations, the county needs to understand the distinction between a ground-mount solar array and the roof of an accessory building as regards impervious surfaces. The collector surface is impervious, but the uncompact and vegetated ground under the array can be used to infiltrate stormwater. A solar farm will almost always require an NPDES permit. However, greater attention should be given, in developing the SWPPP, to how the applicant manages the ground under the panels than to the panels themselves. Perennial grasses planted under the panels and between arrays will substantially mitigate the effect of the panels on rainwater.

Site Plan

Solar farm developers should provide a site plan similar to that required by the county for any other development. Refer to your existing ordinance to guide site plan submittal requirements.

Aviation Standards

This standard was developed for the FAA for solar installations on airport grounds. It can also be used for surrounding areas, particularly for solar farm installations.

Agricultural Protection

If the county has ordinances that protect agricultural soils, this provision applies those same standards to solar development. Counties should understand, however, that solar farms do not pose the same level or type of risk to agricultural practices as does housing or commercial development.

D. Solar farms - Ground-mount solar energy arrays that are the primary use on the lot, designed for providing energy to off-site uses or export to the wholesale market.

- (1) **Conditional use permit** - Solar farms require a conditional use permit.
- (2) **Stormwater and NPDES** - Solar farms are subject to the County's stormwater management and erosion and sediment control provisions and NPDES permit requirements.
- (3) **Foundations** - 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.
- (4) **Other standards and codes** - All solar farms shall be in compliance with all applicable local, state and federal regulatory codes, including the State of Minnesota Uniform Building Code, as amended; and the National Electric Code, as amended.
- (5) **Power and communication lines** - Power and communication lines running between banks of solar panels and to nearby electric substations or interconnections with buildings shall be buried underground. Exemptions may be granted by the County in instances where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines, or distance makes undergrounding infeasible, at the discretion of the zoning administrator.
- (6) **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, service roads, floodplains, wetlands and other protected natural resources, topography, electric equipment, and all other characteristics requested by the County. The site plan should also show all zoning districts, and overlay districts.
- (7) **Aviation Protection** - For solar farms located within 500 feet of an airport or within the A or B safety zones of an airport, the applicant must 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.
- (7) **Agricultural Protection** - Solar farms must comply with site assessment or soil identification standards that are intended to protect agricultural soils.
- (8) **Decommissioning** - A decommissioning plan shall be required to ensure that facilities are properly removed after their useful life. Decommissioning of solar panels must occur in the event they are not in use for 12 consecutive months. The 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. Disposal of structures and/or founda-

Solar Energy Standards - Counties

tions shall meet the provisions of the County Solid Waste Ordinance. The County may require the posting of a bond, letter of credit or the establishment of an escrow account to ensure proper decommissioning.

V. Non-Conforming Accessory Installations - Model County encourages the installation of productive solar energy systems and recognizes that dimensional standards, height standards, and other standards to retain desired character and aesthetic must be balanced with the reasonable desire of building owners to harvest their renewable energy resources. Where the standards in Section IV. G., or H., cannot be met without diminishing the minimum reasonable performance of the solar energy system as defined in Section V. A., a non-conforming installation can be, if the County so chooses, permitted under a conditional use permit (CUP).

- A. **Minimum Performance Design Standards** - The following design thresholds are necessary for efficient operation of a solar energy system:
 1. **Fixed-Mount Solar Energy Systems** - Solar energy systems must be mounted to face within 45 degrees of south (180 degrees azimuth).
 2. **Solar Electric (photovoltaic) Systems** - Solar collectors must have a pitch of between 20 and 65 degrees.
 3. **Solar Hot Water Systems** - Solar collectors must have a pitch between 40 and 60 degrees.
 4. **System Location**- The system is located where the lot or building has a solar resource, as defined in this ordinance.

- B. **Standards for granting a CUP** - A CUP shall be granted by the zoning official if the applicant meets the following safety, performance and aesthetic conditions:
 1. **Aesthetic Conditions** - The solar energy system must be designed to blend into the architecture of the building or be screened from routine view from public right-of-ways to the maximum extent possible while still allowing the system to achieve efficient performance.
 2. **Safety Conditions** - All applicable health and safety standards are met.
 3. **Non-Tracking Ground-Mounted Systems** - Pole-mounted or ground-mounted active solar energy systems must be set back from the property line by three feet.

VI. Restrictions on Solar Energy Systems Limited - No homeowners' agreement, covenant, common interest community, or other contract between multiple property owners within a subdivision of Model County shall forbid installation of solar energy systems or create design standards that effectively preclude solar energy installations.

Decommissioning Standards

Solar farms should file a decommissioning plan with the county. Requiring financial surety for decommissioning may not be justified for small solar farms, as some farms could be too small to be able to acquire a bond or similar instrument. These standards could also apply to Community Solar installations.

Non-Conforming Accessory Installations

This provision allows property owners (usually in small lot areas) who have a solar resource to apply for a conditional use permit if dimensional standards or height limits restrict installations where the resource is located. On large lots dimensional or height standards are unlikely to limit the solar installation.

Homeowners' Associations

This provision would apply to new subdivisions and HOAs, and provides very general language for protecting solar development rights. Alternatively, the county could set aesthetic standards for solar development and limit the HOA from being more restrictive than the county (see the urban solar design standards for examples).

Solar Energy Standards - Counties

Solar Easements

Minnesota allows the purchase and holding of easements protecting access to solar and wind energy. Examples of what the easement must specify are noted below, see the statute for a complete list:

Required Contents - Any deed, will, or other instrument that creates a solar or wind easement shall include, but the contents are not limited to:

- (a) A description of the real property subject to the easement and a description of the real property benefitting from the solar or wind easement; and
- (b) For solar easements, a description of the vertical and horizontal angles, expressed in degrees and measured from the site of the solar energy system, at which the solar easement extends over the real property subject to the easement, or any other description which defines the three dimensional space, or the place and times of day in which an obstruction to direct sunlight is prohibited or limited . . .

Source: Minnesota Stat. 500.30 Subd. 3.

Renewable Energy Conditions

The community can use traditional development tools such as conditional use permits, PUDs, or other discretionary permits to encourage solar energy development. This model ordinance notes these opportunities for consideration by local governments. In most cases, additional ordinance language would need to be inserted into the community's ordinances. For instance, a provision that PUDs incorporate solar energy or ensure the buildings in the PUD are solar-ready construction, the provision should be included in the community's PUD ordinance.

VII. Solar Access - Model County encourages solar access to be protected in all new subdivisions and allows for existing solar to be protected consistent with Minnesota Statutes.

- A. **Easements Allowed** - Model County has elected to allow solar easements to be filed, consistent with Minnesota Stat. Chapter 500 Section 30. Any building owner can purchase an easement across neighboring properties to protect access to sunlight. The easement is purchased from or granted by owners of neighboring properties and can apply to buildings, trees, or other structures that would diminish solar access.
- B. **Subdivision Solar Easements** - Model County may require new subdivisions to identify and create solar easements when solar energy systems are implemented as a condition of a PUD, subdivision, conditional use, or other permit, as specified in Section 8 of this ordinance.

VIII. Renewable Energy Condition for Certain Permits

- A. **Condition for Rezoning or Conditional Use Permit** - Model County may, in an area where the local electric distribution system was installed more than twenty years ago, or where the local electric utility has documented a near-term need for additional distribution substation or conductor capacity, require on-site renewable energy systems as a condition for a rezoning or a conditional use permit.
 - 1. The renewable energy condition may only be exercised for new construction or major reconstruction projects.
 - 2. The renewable energy condition may only be exercised for sites that have 90% unimpeded solar or wind energy access, and for which the renewable energy system can reasonably meet all performance standards and building code requirements.

B. **Condition for Planned Unit Development (PUD) Approval** - Model County may require on-site renewable energy systems as a condition for approval of a PUD permit, in order to mitigate for:

- 1. Risk to the performance of the local electric distribution system,
- 2. Increased emissions of greenhouse gases,
- 3. Other risks or effects inconsistent with Model County's Comprehensive Plan.

IX. Solar Roof Incentives - Model County has identified the following incentives for development applications or subdivisions that will include buildings using active solar energy systems.

- A. **Density Bonus** - Any application for subdivision of land in the ___ Districts that will allow the

development of at least four new lots of record shall be allowed to increase the maximum number of lots by 10% or one lot, whichever is greater, provided all building and wastewater setbacks can be met with the increased density, if the applicant enters into a development agreement guaranteeing at each two kilowatts of PV or 64 square feet of solar hot water collector installed for each new residence.

B. Solar-Ready Buildings – Model County encourages builders to use solar-ready design in buildings. Buildings that submit a completed U.S. EPA’s Renewable Energy Ready Home Solar Photovoltaic Checklist and associated documentation will be certified as a Model County solar ready home, a designation that will be included in the permit home’s permit history.

C. Solar Access Conditions - On a site where the solar access standards of the subdivision ordinance are difficult to meet due to topography or road connectivity, the county shall consider non-conforming development patterns as a conditional use provided the applicant meets the following conditions:

1. **Solar Access Lots Identified** - At least ___% of the lots, or a minimum of ___ lots, are identified as solar development lots.
2. **Covenant Assigned** - Solar access lots are assigned a covenant that homes built upon these lots must include an active solar energy system. Photovoltaic systems must be at least one (1) KW in capacity and solar thermal systems must have at least 64 square feet of collector area.
3. **Additional Fees Waived** - Model County will waive any additional fees for filing of the covenant.

Solar Roof Incentives

This section of the model ordinance provides examples of incentives that can be incorporated into development regulation. Most cities and many counties use incentives to encourage desired public amenities in new development. These same tools and incentives can be used to encourage private investment in solar energy. Communities will not want to use all these incentives, but should select which ones make the most sense in their community (or create some other incentive that encourages solar energy). As with any incentive, an important element of creating the incentive is to engage planning or economic development staff in the creation of the incentive, so that staff can assist the developer in taking advantage of the provisions.

Solar Access in Subdivisions

Some local governments require solar orientation of new subdivisions (requiring a south-facing building or lot line to accommodate solar design in the buildings). Designing the subdivision around natural features or contours can make these provisions difficult to meet. This language offers an alternative to simply granting a variance to the solar orientation requirement.

From: Phillip Geil [<mailto:phgeil@gmail.com>]
Sent: Friday, June 1, 2018 8:56 AM
To: John Hall <jhall@co.champaign.il.us>
Subject: Fwd: Solar Smiles -- News from StraightUp Solar

The message from Straight Up Solar

----- Forwarded message -----

From: StraightUp Solar <hello@straightupsolar.com>

Date: Fri, Jun 1, 2018 at 1:30 AM

Subject: Solar Smiles -- News from StraightUp Solar

To: phgeil@gmail.com

RECEIVED

JUN 01 2018

CHAMPAIGN CO. P & Z DEPARTMENT

What is a Shine Mine?

StraightUp Solar is building mines across Illinois, but these are not your typical mines. These mines harvest the sun's rays to bring green clean energy to you, and to lower your electric bill. These StraightUp Solar Shine Mines, generally known as Community Solar Arrays, will be two megawatts each, which is about 10 acres of solar panels, or enough to provide electricity to 300 typical homeowners. They will be built in Southern and Central Illinois to put local communities to work.

Community Solar: one large solar array that produces electricity that is shared by more than one household, commercial, or nonprofit utility customer through a billing arrangement known as *virtual net metering*.

Community solar enables anyone with an Ameren electric bill to subscribe to a shared array, rather than owning and operating their own smaller on-site solar arrays. As a part of the Illinois Future Energy Jobs Act, you can subscribe to a Shine Mine to gain the cost-saving benefits of these new community solar arrays. Anyone can subscribe regardless of whether you own or rent your property. Community Solar "Shine Mines" are perfect for renters and those with shade concerns who cannot install solar.

How to Get Started: Work with StraightUp Solar to determine how much solar you would need to offset your energy usage, subscribe to that amount of solar, and then the energy production would be virtually metered at the array site which would then be deducted with your bill. **You can even subscribe to a Shine Mine even if you already have solar, but are not offsetting 100% of your current electrical usage.** Pretty amazing right?

Shine Mines are offered in Ameren Illinois territory, and are not currently offered in electric cooperatives at this time.

Have You Heard the News? MO Rebates are Back!

Recently the Missouri legislature passed a Grid Modernization bill that includes solar rebates for the next 5 years. Ameren is required to contribute \$5.6 million dollars to this rebate each year. This can be a 10-15% savings for residential projects and a 20-25% savings for commercial solar projects. These savings are in addition to the 30% federal tax credit, which will start to decrease in 2020.

These rebates were used up quickly last time they were around and now is the best time to get in line and claim your spot for this money. The rebate will be for \$0.50/watt until June 30, 2019 and you have to be installed with your system connected to the grid by that date. If you install on July 1st and beyond you will get \$0.25/watt for your solar system.

Has it been a while since you got a free solar quote? Now may be the best time to see if solar is right for you. Sign up today to get a quote and get in line to receive your solar rebate!

StraightUp Spotlight

Andy Seay

About Andy

Andy joined StraightUp Solar in May, 2018. He is leading our outreach efforts with Solarize Bloomington- Normal and Solar Urbana-Champaign group solar programs in central Illinois. Andy has jumped right in and is bringing people and solar closer together.

According to Andy he has always, "been fascinated by science, nature, and how things work so it's exciting to be working in an industry that is an intersection of all three." Additionally, he comes from a family of educators so he also enjoys helping more people understand both the science of how solar energy works as well as how it can help them personally.

Educational background

Andy recieved his Bachelor's degree in Computer Science from the University of Iowa. He also earned my NABCEP PV Associate certification after participating in the Midwest Renewable Energy Association Training Academy in early 2018.

Family and Hobbies

Andy is the the youngest of three. His parents as well as his sister and her family (three young boys) all live in Peoria, Illinois where Andy was born and raised. His brother and sister-in-law live in Memphis, TN and are expecting their first child in June. Andy's hobbies include hiking, playing guitar, reading science journals, and watching documentaries.

Andy was asked to describe what it means to be part of the StraightUp Solar Tribe and he shared:

"As someone who has recently made a career transition from a background in IT to the renewable energy industry, I feel excited and energized to be able to contribute to helping solve the issue of global climate change. The team here at StraightUp Solar is so thoroughly committed to its values and goals and I am really proud to say I am a part of the StraightUp Solar Tribe. "

Group Solar Programs Across Illinois

The [Midwest Renewable Energy Association \(MREA\)](#) has three [Grow Solar](#) programs happening across Illinois this summer, and StraightUp Solar is honored to have been competitively selected as the installer for all three of these community group purchase programs. We are proud to bring the benefits of group solar to the communities in Illinois where we have lived and worked for the past 12 years as a turnkey solar installer. If you live in any of the highlighted areas in the above image you qualify for these programs.

These group programs bring you discounted rates, encourage communities to go solar, and make it more affordable for everyone to go solar. Under these programs you can purchase solar for your home, lease solar panels to bring down the cost of your utility bill, or subscribe to a Shine Mine to gain the benefit of community solar. Sign up for the programs, find out when educational Power Hours will take place, and learn more here:

- [Solarize Metro East](#)
- [Solar Bloomington-Normal 2.0](#)
- [Solar Urbana- Champaign 3.0](#)

150 people have signed up so far to get a free solar quote as part of these programs, and the more people that go solar the greater the savings. Sign up today!

Ray of Hope- Reinventing Power

StraightUp Solar has been featured in a film about how companies around the United States are Reinventing Power. Matt is one of our installers and comes from coal country. Now he has a job in the renewable energy industry.

[Watch the Trailer >>](#)

*StraightUp Solar is committed to inspiring a solar tribe
to create a sustainable world.*

Call us today to learn more: (844) 97-SOLAR

Marcia Lochmann

Director of Business Development & Sustainability

marcia@straightupsolar.com

StraightUp Solar | (844) 977-6527 | hello@straightupsolar.com | straightupsolar.com

Straight Up Solar | [10330 Page Industrial Blvd, St. Louis, MO 63132](#)

Unsubscribe_phgeil@gmail.com

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Sent by hello@straightupsolar.com in collaboration with

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Phillip Geil
2060B Cty. Rd. 125 E
Mahomet, IL (61853)



ELEVATE ENERGY
Smarter energy use for all

Menu

Community Solar

Home

Solar Access for All

What is Community Solar?

Business Models

Community Solar Business Case Tool

FAQs

Resources

Glossary

Launch Map

Business Models

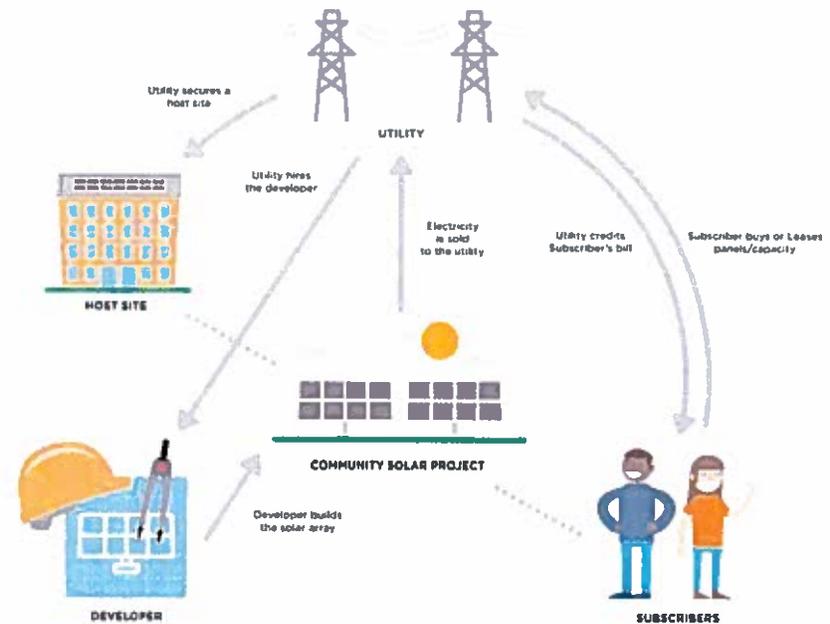
The ways subscribers receive benefits by participating in community solar vary based on local policy and regulations. Successful models have the following features in common:

- A billing mechanism to apply compensation to individual subscriber bills
- A solar rate that is as high or higher than the current electricity rate (retail value) to yield a positive return

Business models differ based on who develops and owns the solar array. There are three common business model structures based on ownership:

- **Utility-owned**
- **Developer-owned**
- **Special Purpose Entity-owned**

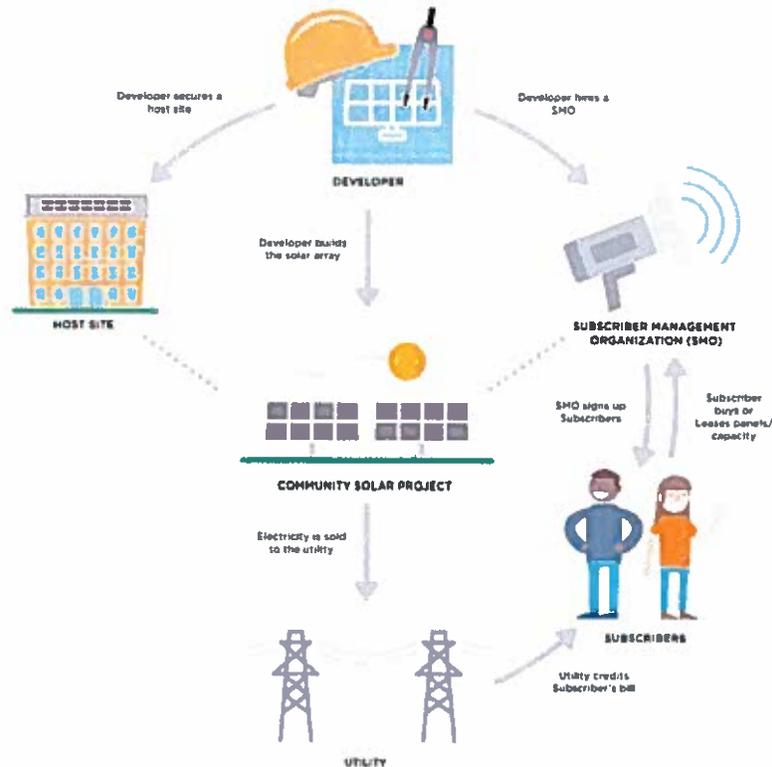
Utility-Owned Model



Utility-owned community solar is the most common structure used across the country. In this model, the local utility owns the solar array then sells or leases panels to subscribers or sells a set amount of solar electricity at a fixed rate for a defined term.

Subscribers participate in the community solar project by purchasing a share in the project in return for credits on their electricity bills. The value of those bill credits is typically determined by legislation or the regulation. Depending on the program design, subscribers may purchase the share entirely upfront or pay a monthly fee to the utility. Current laws in Illinois do not allow investor-owned utilities to own generation, including distributed generation like solar PV. Therefore, this model is currently not applicable in Cook County.

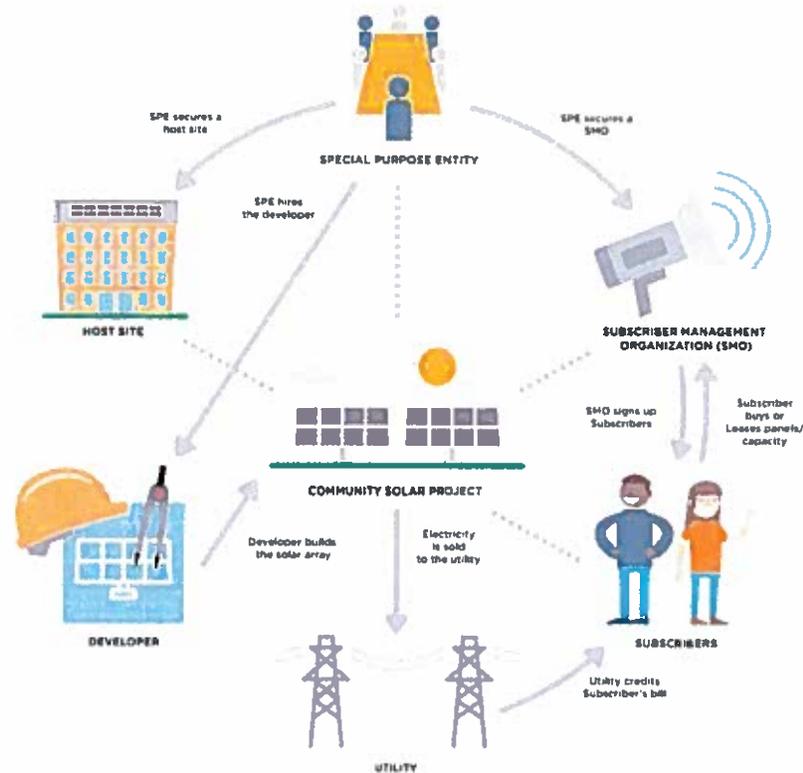
Developer-Owned Model



The developer-owned model is a common model in many parts of the country. In this model, a solar developer designs, builds, owns, and operates the community solar development. The developer finds a host site and leases it over the term of the agreement. The developer also secures the necessary financing, permits, and insurance to construct the community solar project. Typically, the developer works with a Subscriber Management Organization (SMO) to acquire subscribers and manage subscriptions. Subscribers buy or lease panels or purchase increments of solar power (kW) or electricity (kWh). The utility provides billing credits to subscribers for their share of the electricity generated from the community solar array. The developer operates and maintains the system as needed.

The developer-owned model is becoming more prevalent and is likely to become a viable option in Illinois. Developers with experience in community solar also typically have the technology to monitor solar generation and help manage the bill crediting functions required for community solar.

Special Purpose Entity Model



In this model, a business entity, known as a Special Purpose Entity (SPE), owns the community solar project. This entity can be a for-profit or nonprofit organization. While this model helps to ensure that most of the benefits of the community solar project are kept within the community, there are some challenges depending on the SPE organization.

For-profit organizations with a “tax appetite” can take advantage of significant tax credits and other tax incentives available for solar development. These benefits translate into significant financial returns. Conversely, nonprofit organizations, or newly created for-profit entities with little tax appetite, cannot access these tax benefits directly.

Nonetheless, the nonprofit SPE model has been successfully implemented. Examples include the 22 kW community solar project in University Park, MD or the 1.3 MW installation in Fort Collins, CO. Business models vary based on ownership and incentives. For instance:

- Some SPEs require partnering with capital and tax investors that share in the benefits and incentives, but

allow ownership to stay with the SPE

- Some non-profit SPEs work with donor communities to fund the project, foregoing most incentives
- Other SPEs are taking advantage of recent Internal Revenue Service (IRS) laws¹ that allow Renewable Energy Credits (RECs) and tax incentives to be passed through to subscribers without the complexity of tax investor partnerships

Whatever the structure established for an SPE model, it can involve complex legal, financial, and regulatory preparation in exchange for potentially greater benefits for the community.

¹ In late August 2015, the IRS issued a private letter ruling to an individual investor of a community solar array in Vermont, allowing the investor to take advantage of the 30 percent federal tax credit according to Section 25D of the Internal Revenue Code.

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STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Illinois Power Agency	:	
	:	
Petition for Approval of the IPA's	:	
Long-Term Renewable Resources	:	17-0838
Procurement Plan pursuant to	:	
Section 16-111.5(b)(5)(ii) of the	:	
Public Utilities Act.	:	

ORDER

April 3, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

1. Add the following to Section 3.0 Definitions (somewhat similar to the definition of WIND FARM):

NOXIOUS WEEDS: any of several plants designated pursuant to the Illinois Noxious Weed Law (505 ILCS 100/1 et seq.) and that are identified in 8 Illinois Administrative Code 220.

PHOTOVOLTAIC (PV): A type of solar energy system that produces electricity by the use of photovoltaic cells that generate electricity when struck by light.

PV SOLAR FARM: A unified development intended to convert sunlight into electricity by photovoltaic (PV) devices for the primary purpose of wholesale sales of generated electricity. A PV SOLAR FARM is under a common ownership and operating control even though parts of the PV SOLAR FARM may be located on land leased from different owners. A PV SOLAR FARM includes all necessary components including access driveways, solar devices, electrical inverter(s), electrical transformer(s), cabling, a common switching station, maintenance and management facilities, and waterwells. PV SOLAR FARM should be understood to include COMMUNITY PV SOLAR FARM unless specified otherwise in the relevant section or paragraph.

PV SOLAR FARM, COMMUNITY: A PV SOLAR FARM of not more than 2,000 kilowatt nameplate capacity that meets the requirements of Public Act 99-0906-20 ILCS 3855/1-10 for a “community renewable generation project” and provided that two COMMUNITY PV SOLAR FARMS may be co-located on the same or contiguous parcels as either a) two 2-MW projects on one parcel, or b) one 2-MW project on each of two contiguous parcels, as authorized by the Illinois Commerce Commission in Final Order 17-0838 on April 3, 2018.

2. Add new subparagraph 4.2.1 C.4. as follows:

4. A PV SOLAR FARM may be authorized as a County Board SPECIAL USE permit in the AG-1, Agriculture Zoning District or the AG-2 Agriculture Zoning District as a second PRINCIPAL USE on a LOT with another PRINCIPAL USE.

3. Add new subparagraph 4.3.4 H.4.i. as follows (similar to existing 4.3.4 H.4.h. for wind farms):

- i. PV SOLAR FARM except as PIPELINE IMPACT RADIUS regulations are required in Subsection 6.1.5.

4. Amend Section 5.2 as follows (similar to existing WIND FARM designation):

Add “PV SOLAR FARM” as a COUNTY BOARD Special Use Permit in the AG-1 District and AG-2 District by a “B”.

5. Add the following as footnote 15 under the Special Provisions for the AG-1 District in Section 5.3 (similar to existing footnote 14 for LOTS in a WIND FARM):

Decision point
Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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15. LOTS in a PV SOLAR FARM County Board SPECIAL USE Permit and intended for PV SOLAR FARM, related substations, and PV SOLAR FARM maintenance and management facilities are exempt from the requirements of Section 5.3 except as such regulations are required by Subsection 6.1.5.

6. Add new paragraph 5.4.3 F. as follows:

- F. The Rural Residential Overlay Zoning District is prohibited from being established within a PV SOLAR FARM County Board SPECIAL USE Permit.

7. Amend Section 6.1.1 to read as follows:

A. Site Reclamation Plan for NON-ADAPTABLE STRUCTURES

1. In the course of BOARD review of a SPECIAL USE request, the BOARD may find that a proposed STRUCTURE is a NON-ADAPTABLE STRUCTURE. Any WIND FARM and any PV SOLAR FARM shall be a NON-ADAPTABLE STRUCTURE. The Applicant for the SPECIAL USE request for a NON-ADAPTABLE STRUCTURE shall submit a site reclamation plan to the BOARD for the subject site.
2. The site reclamation plan shall be binding upon all successors of title, lessees, ~~and solar operators to the land~~ to any operator and/or owner of a NON-ADAPTABLE STRUCTURE, and to all parties to the site reclamation plan. Prior to the issuance of a SPECIAL USE Permit for such NON-ADAPTABLE STRUCTURES, the landowner or applicant shall also record a covenant incorporating the provisions of the site reclamation plan on the deed subject to the LOT, requiring that the reclamation work be performed and that a letter of credit be provided for financial assurance.
3. Separate cost estimates for Section 6.1.1 A.4.a., 6.1.1 A.4.b., and 6.1.1 A.4.c. shall be provided by an Illinois Licensed Professional Engineer.
 - a. Cost estimates provided shall be subject to approval of the BOARD.
 - b. Except as provided in Section 6.1.4 P. and Section 6.1.5 Q., the salvage value of the components of the NON-ADAPTABLE STRUCTURE shall not be credited to the cost estimates.
4. The site reclamation plan shall provide for:
 - a. removal of above-ground portion of any STRUCTURE on the subject site; site grading; and, interim soil erosion control;
 - b. below-ground restoration, including final grading and surface treatment;

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- c. any environmental remediation required by State or Federal law;
- d. provision and maintenance of a letter of credit, as set forth in Section 6.1.1 A.5.
5. No Zoning Use Permit for such SPECIAL USE will be issued until the applicant provides the COUNTY with an irrevocable letter of credit to be drawn upon a federally insured financial institution within 200 miles of Urbana or reasonable anticipated travel costs shall be added to the amount of the letter of credit.
- a. Unless specified elsewhere in this Ordinance, ~~the~~ irrevocable letter of credit shall be in the amount of one hundred fifty percent (150%) of an independent engineer's cost estimate to complete the work described in Section 6.1.1 A.4.a., Section 6.1.1 A.4.b., and Section 6.1.1 A.4.c.; ~~except~~
- b. The provisions of this subparagraph notwithstanding, a different amount may be required as a standard-special condition. ~~in Section 6.1.4 P. and Section 6.1.5 Q.~~
- c. This~~The~~ letter of credit, or a successor letter of credit pursuant to Section 6.1.1 A.6. or 6.1.1 A.12., shall remain in effect and shall be made available to the COUNTY for a term specified as a standard condition elsewhere in this ordinance, ~~for an indefinite term,~~ or for a different term that may be required as a standard-special condition. ~~in paragraph 6.1.4 P and 6.1.5 Q.~~
6. One hundred eighty (180) days prior to the expiration date of an irrevocable letter of credit submitted pursuant to this Section, the Zoning Administrator shall notify the landowner or applicant in writing and request information about the landowner or applicant's intent to renew the letter of credit, or remove the NON-ADAPTABLE STRUCTURE. The landowner or applicant shall have thirty (30) days to respond in writing to this request. If the landowner or applicant's intention is to remove the NON-ADAPTABLE STRUCTURE, the landowner or applicant will have a total of ninety (90) days from the date of response to remove it in accordance with Section 6.1.1A.4.a. At the end of ninety (90) days, the Zoning Administrator shall have a period of sixty (60) days to either:
- a. confirm that the bank has renewed the letter of credit; or
- b. inspect the subject property for compliance with Section 6.1.1 A.4.a.;
- c. draw on the letter of credit and commence the bid process to have a contractor remove the NON-ADAPTABLE STRUCTURE pursuant to Section 6.1.1 A.4.a.

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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7. The Zoning Administrator may find a NON-ADAPTABLE STRUCTURE abandoned in place. Factors to be considered in making this finding include, but are not limited to:
- a. the nature and frequency of use as set forth in the application for SPECIAL USE;
 - b. the current nature and frequency of use;
 - c. whether the NON-ADAPTABLE STRUCTURE has become a public nuisance, or otherwise poses a risk of harm to public health or safety;
 - d. whether the NON-ADAPTABLE STRUCTURE has been maintained in a manner which allows it to be used for its intended purpose, with no greater effects on surrounding properties and the public as a whole than was originally intended.
 - e. A court of law, an arbitrator, mediator, or any state or Federal agency charged with enforcing State or Federal law has made a finding that either said NON-ADAPTABLE STRUCTURE or the structures supporting said NON-ADAPTABLE STRUCTURE and/or any related site grading and soil erosion controls or lack of same, constitutes a public nuisance or otherwise violates State or Federal law, or any State or Federal agency charged with enforcing State or Federal law has made a final determination either imposing an administrative sanction on any person associated with the NON-ADAPTABLE STRUCTURE relating to its use or denying the NON-ADAPTABLE STRUCTURE a permit necessary for its lawful operation.
8. Once the Zoning Administrator has made a finding that a NON-ADAPTABLE STRUCTURE is abandoned in place, the Zoning Administrator shall issue ~~noted~~notice to the land owner at the owner's last known address, lessees, any operator and/or owner of a NON-ADAPTABLE STRUCTURE, and to all parties to the site reclamation plan, that the COUNTY will draw on the performance guarantee within thirty (30) days unless the owner appeals the Zoning Administrator's finding, pursuant to Section 9.1.8 or enters into a written agreement with the COUNTY to remove such NON-ADAPTABLE STRUCTURE in accordance with Section 6.1.1 A.4. within ninety (90) days and removes the NON-ADAPTABLE STRUCTURE accordingly.
9. The Zoning Administrator may draw on the funds to have said NON-ADAPTABLE STRUCTURE removed as per Section 6.1.1 A.4. of the reclamation agreement when any of the following occur:
- a. no response is received from the land owner within thirty (30) days from initial notification by the Zoning Administrator;

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- b. the land owner does not enter, or breaches any term of a written agreement with the COUNTY to remove said NON-ADAPTABLE structure as provided in Section 6.1.1 A.8.;
 - c. any breach or performance failure of any provision of the reclamation agreement;
 - d. the owner of record has filed a bankruptcy petition, or compromised the COUNTY's interest in the letter of credit in any way ~~to~~ specifically allowed by the reclamation agreement;
 - e. a court of law has made a finding that a NON-ADAPTABLE STRUCTURE constitutes a public nuisance;
 - f. the owner of record has failed to replace an expiring letter of credit within the deadlines set forth in Section 6.1.1 A.6.; or
 - g. any other conditions to which the COUNTY and the land owner mutually agree, as set forth in the reclamation agreement.
10. Once the letter of credit has been drawn upon, and the site has been restored to its original condition, as certified by the Zoning Administrator, the covenant entered pursuant to Section 6.1.1. A.2. shall expire, and the COUNTY shall act to remove said covenant from the record of the property at the Recorder of Deeds within forty-five (45) days.
11. The proceeds of the letter of credit may only be used by the COUNTY to:
- a. remove the NON-ADAPTABLE STRUCTURE and return the site to its condition prior to the placement of the NON-ADAPTABLE STRUCTURE, in accordance with the most recent reclamation agreement submitted and accepted in relation to the NON-ADAPTIVE STRUCTURE;
 - b. pay all administrative and ancillary costs associated with drawing upon the financial assurance and performing the reclamation work, which shall include, but not be limited to, attorney's fees; construction management and other professional service fees; and the costs of preparing request for proposal and bidding documents required to comply with state law or Champaign County purchasing policies; and
 - c. remove any covenants placed on the title in conjunction with Section 6.1.1. A.2.

The balance of any proceeds remaining after the site has been reclaimed shall be returned to the issuer of the letter of credit.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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12. Upon transfer of any property subject to a letter of credit pursuant to this Section, the new owner or applicant of record shall submit a new irrevocable letter of credit of same or greater value to the Zoning Administrator, prior to legal transfer of title, and shall submit a new site reclamation plan, pursuant to Section 6.1.1 A.4.a., and, for WIND FARMS, Section 6.1.4 P., and for PV SOLAR FARMS, 6.1.5 Q. Once the new owner or applicant of record has done so, the letter of credit posted by the previous owner or applicant shall be released, and the previous owner shall be released from any further obligations under the site reclamation plan.
 13. The Applicant shall provide evidence of any new, additional, or substitute financial assurance to the Zoning Administrator throughout the operating lifetime of the NON-ADAPTABLE STRUCTURE.
 14. Should the site reclamation plan, or any part of it, be deemed invalid by a court of competent jurisdiction, the associated SPECIAL USE permit shall be deemed void.

8. Add new subsection 6.1.5 as follows (NOTE: the following new subsection is based on the existing subsection 6.1.4 for “WIND FARM”):

6.1.5 PHOTOVOLTAIC (PV) SOLAR FARM County Board SPECIAL USE permit

A PHOTOVOLTAIC (PV) SOLAR FARM County Board SPECIAL USE permit may only be authorized in the AG-1 Zoning District or the AG-2 Agriculture Zoning District subject to the following standard conditions.

- A. In what follows, PV SOLAR FARM should be understood to include COMMUNITY PV SOLAR FARM unless specified otherwise in the relevant section or paragraph.
- B. General Standard Conditions
 - (1) The area of the PV SOLAR FARM County Board SPECIAL USE permit must include the following minimum areas:
 - a. All land that will be exposed to a noise level greater than that authorized to Class A land as established by 35 Ill. Admin. Code Parts 900, 901 and 910 under paragraph 6.1.5 I.
 - b. All necessary access lanes or driveways and any required new PRIVATE ACCESSWAYS. For purposes of determining the minimum area of the special use permit, access lanes or driveways shall be provided a minimum 40 feet wide area.
 - c. All necessary PV SOLAR FARM STRUCTURES and ACCESSORY STRUCTURES including electrical distribution lines,

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

inverters, transformers, common switching stations, and substations not under the ownership of a PUBLICLY REGULATED UTILITY and all waterwells that will provide water for the PV SOLAR FARM. For purposes of determining the minimum area of the special use permit, underground cable installations shall be provided a minimum 40 feet wide area.

- d. All aboveground STRUCTURES and facilities shall be of a type and shall be located in a manner that is consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.
- (2) The PV SOLAR FARM County Board SPECIAL USE permit shall not be located in the following areas:
- a. Less than one-and-one-half miles from an incorporated municipality that has a zoning ordinance unless the following is provided:
- (a) No part of a PV SOLAR FARM shall be located within a contiguous urban growth area (CUGA) as indicated in the most recent update of the CUGA in the Champaign County Land Resource Management Plan, and there shall be a separation of one-half mile from the proposed PV SOLAR FARM, to a municipal boundary at the time of application for the SPECIAL USE Permit, except for any power lines of 34.5 Kva or less and except for any proposed PV SOLAR FARM substation and related proposed connection to an existing substation.
- (b) The PV SOLAR FARM SPECIAL USE permit application shall include documentation that the ~~application applicant~~ has provided a complete copy of the SPECIAL USE permit application to any municipality within one-and-one-half miles of the proposed PV SOLAR FARM.
- (c) A municipal ~~Resolution of Non-opposition to resolution regarding~~ the PV SOLAR FARM by any ~~relevant~~ municipality located within one-and-one-half miles of the PV SOLAR FARM must be submitted to the ZONING ADMINISTRATOR prior to the consideration of the PV SOLAR FARM SPECIAL USE permit by the Champaign County Board or, in the absence of such a resolution, the ZONING ADMINISTRATOR shall provide documentation to the County Board that any municipality within one-and-one-half miles of the PV SOLAR FARM was provided notice of the meeting dates for consideration of the proposed PV SOLAR FARM SPECIAL USE Permit for both the Environment and Land Use Committee and the County Board.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- b. Less than one-half mile from the CR Conservation Recreation Zoning District.
- (3) Interconnection to the power grid
- a. The PV SOLAR FARM SPECIAL USE permit application shall include documentation that the applicant or PV SOLAR FARM is in the queue to acquire an interconnection agreement to the power grid.
 - b. Documentation of an executed interconnection agreement with the appropriate electric utility shall be provided prior to issuance of a Zoning Compliance Certificate to authorize operation of the PV SOLAR FARM.
- C. Minimum Lot Standards
- (1) There are no minimum LOT AREA, AVERAGE LOT WIDTH, SETBACK, YARD, or maximum LOT COVERAGE requirements for a PV SOLAR FARM or for LOTS for PV SOLAR FARM substations and/ or PV SOLAR FARM maintenance and management facilities.
 - (2) There is no maximum LOT AREA requirement on BEST PRIME FARMLAND.
- D. Minimum Standard Conditions for Separations for PV SOLAR FARM from adjacent USES and STRUCTURES

The location of each PV SOLAR FARM shall provide the following required separations as measured from the exterior of the above ground portion of the PV SOLAR FARM STRUCTURES and equipment including fencing except for fencing:

- (1) ~~[moved from 6.1.5 M.(1)c. per John Hall:] The PV SOLAR FARM perimeter fencing shall be set back from the street centerline a minimum of 10 feet from a SIDE or REAR LOT LINE but not less than 25 feet from the property line of any adjacent LOT that is three acres or less in area and a minimum of 40 feet from a MINOR STREET and a minimum of 55 feet from a COLLECTOR STREET and a minimum of 60 feet from a MAJOR STREET unless a greater separation is required by Section 6.1.5 D. and/or unless a greater separation is required for screening pursuant to Section 6.1.5 M.(2)a., but in no case shall the perimeter fencing be less than 10 feet from the RIGHT OF WAY of any STREET. A SETBACK of 55 feet from a MINOR STREET and a SETBACK of 75 feet from a COLLECTOR STREET and a SETBACK of 85 feet from a MAJOR STREET.~~
- (2) For properties participating in the solar farm: No required separation from any existing DWELLING or existing PRINCIPAL BUILDING except as

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

required to ensure that a minimum zoning lot is provided for the existing DWELLING or PRINCIPAL BUILDING.

(3) For properties not participating in the solar farm:

Need to determine the setback based on Supplemental Memo #13:

- a. For any adjacent LOT that is ~~three-five~~ acres or less in area (not including the STREET RIGHT OF WAY):
- (a) For any adjacent LOT that is bordered (directly abutting and/or across the STREET) on no more than two sides by the PV SOLAR FARM, at least 100-250 feet from any existing DWELLING or existing PRINCIPAL BUILDING and not less than 50-the separation shall be no less than {200 / 240 / 260 / 300 / 330 feet} from the property line, ~~and provided that the noise level caused by the PV SOLAR FARM complies with the applicable Illinois Pollution Control Board regulations.~~ This separation distance applies to properties that are adjacent to or across a STREET from a PV SOLAR FARM.
- (b) For any adjacent LOT that is bordered (directly abutting and/or across the STREET) on more than two sides by the PV SOLAR FARM, the separation shall exceed 200 feet as deemed necessary by the BOARD. provided that the noise level caused by the PV SOLAR FARM complies with the applicable Illinois Pollution Control Board regulations.

Need to determine the setback based on Supplemental Memo #13:

- b. For any adjacent LOT that is five acres or more in area (not including the STREET RIGHT OF WAY), at least 100-the separation shall be no less than {250 / 290 / 310 / 350 / 380} feet and the perimeter fencing shall be a minimum of 10 feet from a SIDE or REAR LOT LINE but not less than 250 feet from any existing DWELLING or existing PRINCIPAL BUILDING and not less than 50 feet from the property line of any adjacent LOT that is three-greater than five acres in- area and provided that the noise level caused by the PV SOLAR FARM complies with the applicable Illinois Pollution Control Board regulations. This separation distance applies to properties that are adjacent to or across a STREET from a PV SOLAR FARM.
- c. Additional ~~setback-separation~~ may be required to ensure that the noise level required by 35 Ill. Admin. Code Parts 900, 901 and 910 is not exceeded or for other purposes deemed necessary by the BOARD.

3(4) A separation of at least 500 feet from any of the following unless the SPECIAL USE permit application includes results provided from an analysis using the

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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 the most recent version adopted by the FAA, and the SGHAT results show no detrimental affect with less than a 500 feet separation from any of the following:

- a. any AIRPORT premises or any AIRPORT approach zone within five miles of the end of the AIRPORT runway; or
- b. any RESTRICTED LANDING AREA that is NONCONFORMING or which has been authorized by SPECIAL USE permit and that existed on or for which there had been a complete SPECIAL USE permit application received by April 22, 2010, or any approach zone for any such RESTRICTED LANDING AREA; or
- c. any RESIDENTIAL AIRPORT that existed on or for which there had been a complete SPECIAL USE permit application received by April 22, 2010, or any approach zone for any such RESIDENTIAL AIRPORT.

4(5) A separation of at least 500 feet between substations and transmission lines of greater than 34.5Kva to adjacent dwellings and residential DISTRICTS.

(6) Electrical inverters shall be located as far as possible from property lines and adjacent DWELLINGS consistent with good engineering practice. Inverter locations that are less than 275 feet from the perimeter fence shall require specific approval and may require special sound deadening construction and noise analysis.

(7) Separation distances for any PV SOLAR FARM with solar equipment exceeding 8 feet in height, with the exception of transmission lines which may be taller, shall be determined by the BOARD on a case-by-case basis.

(8) PV SOLAR FARM solar equipment shall be no less than 26 feet from the property line of any lot greater than 5 acres in area.

E. Standard Conditions for Design and Installation of any PV SOLAR FARM.

- (1) Any building that is part of a PV SOLAR FARM shall include as a requirement for a Zoning Compliance Certificate a certification by an Illinois Professional Engineer or Illinois Licensed Structural Engineer or other qualified professional that the constructed building conforms to Public Act 96-074 regarding building code compliance and conforms to the Illinois Accessibility Code.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- (2) Electrical Components
- a. All electrical components of the PV SOLAR FARM shall conform to the National Electrical Code as amended and shall comply with Federal Communications Commission (FCC) requirements.
 - b. Burying power and communication wiring underground shall be minimized consistent with best management practice regarding PV solar farm construction and minimizing impacts on agricultural drainage tile.
- (3) Maximum height. The height limitation established in Section 5.3 shall not apply to a PV SOLAR FARM. The maximum height of all above ground STRUCTURES shall be identified in the application and as approved in the SPECIAL USE permit.
- (4) Warnings
- a. A reasonably visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.
- (5) No construction may intrude on any ~~Any~~ easement or right of way for a GAS PIPELINE or HAZARDOUS LIQUID PIPELINE,; ~~or, any easement for~~ an underground water main or sanitary sewer,; or any easement for a drainage district ditch or tile, or any other public utility facility; unless specifically authorized by a crossing agreement that has been entered into with the relevant party.

F. Standard Conditions to Mitigate Damage to Farmland

- (1) All underground wiring or cabling for the PV SOLAR FARM shall be at a minimum depth of 5 feet below grade or deeper if required to maintain a minimum one foot of clearance between the wire or cable and any agricultural drainage tile or a lesser depth if so authorized by the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.
- (2) Protection of agricultural drainage tile
 - a. The applicant shall endeavor to locate all existing agricultural drainage tile prior to establishing any construction staging areas, construction of any necessary PV SOLAR FARM access lanes or driveways, construction of any PV SOLAR FARM STRUCTURES, any common switching stations, substations, and installation of underground wiring or cabling. The applicant shall contact affected landowners and tenants and the Champaign County Soil and Water

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

Conservation District and any relevant drainage district for their knowledge of tile line locations prior to the proposed construction. Drainage districts shall be notified at least two weeks prior to disruption of tile.

- b. The location of drainage district tile lines shall be identified prior to any construction and drainage district tile lines shall be protected from disturbance as follows:
- (a) All identified drainage district tile lines and any known existing drainage district tile easement shall be staked or flagged prior to construction to alert construction crews of the presence of drainage district tile and the related easement. ~~possible need for tile line repairs unless this requirement is waived in writing by the drainage district.~~
- (b) Any drainage district tile for which there is no existing easement shall be protected from disturbance by a 30-foot wide no-construction buffer on either side of the drainage district tile. The no-construction buffer shall be staked or flagged prior to the start of construction and shall remain valid for the lifetime of the PV SOLAR FARM SPECIAL USE Permit and during any deconstruction activities that may occur pursuant to the PV SOLAR FARM SPECIAL USE Permit.
- (c) Construction shall be prohibited within any existing drainage district easement and also prohibited within any 30-foot wide no-construction buffer on either side of drainage district tile that does not have an existing easement unless specific construction is authorized in writing by all commissioners of the relevant drainage district. A copy of the written authorization shall be provided to the Zoning Administrator prior to the commencement of construction.
- c. Any agricultural drainage tile located underneath construction staging areas, access lanes, driveways, any common switching stations, and substations shall be replaced as required in Section 6.3 of the Champaign County Champaign County Storm Water Management and Erosion Control Ordinance.
- d. Any agricultural drainage tile that must be relocated shall be relocated as required in the Champaign County Champaign County Storm Water Management and Erosion Control Ordinance.
- e. Conformance of any relocation of drainage district tile with the Champaign County Champaign County Storm Water Management and Erosion Control Ordinance shall be certified by an Illinois

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

Professional Engineer. Written approval by the drainage district shall be received prior to any backfilling of the relocated drain tile and a copy of the approval shall be submitted to the Zoning Administrator. As-built drawings shall be provided to both the relevant drainage district and the Zoning Administrator of any relocated drainage district tile.

- f. All tile lines that are damaged, cut, or removed shall be staked or flagged in such manner that they will remain visible until the permanent repairs are completed.
 - g. All exposed tile lines shall be screened or otherwise protected to prevent the entry into the tile of foreign materials, loose soil, small mammals, etc.
 - h. Permanent tile repairs shall be made within 14 days of the tile damage provided that weather and soil conditions are suitable or a temporary tile repair shall be made. Immediate temporary repair shall also be required if water is flowing through any damaged tile line. Temporary repairs are not needed if the tile lines are dry and water is not flowing in the tile provided the permanent repairs can be made within 14 days of the damage. All permanent and temporary tile repairs shall be made as detailed in the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R. and shall not be waived or modified except as authorized in the SPECIAL USE Permit.
 - i. All damaged tile shall be repaired so as to operate as well after construction as before the construction began.
 - j. Following completion of the PV SOLAR FARM construction, the applicant shall be responsible for correcting all tile line repairs that fail, provided that the failed repair was made by the Applicant.
- (3) All soil conservation practices (such as terraces, grassed waterways, etc.) that are damaged by PV SOLAR FARM construction and/or decommissioning shall be restored by the applicant to the pre-PV SOLAR FARM construction condition in a manner consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.
- (4) Topsoil replacement

For any open trenching required pursuant to PV SOLAR FARM construction, the topsoil shall be stripped and replaced as follows:

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- a. The top 12 inches of topsoil shall first be stripped from the area to be trenched and from an adjacent area to be used for subsoil storage. The topsoil shall be stored in a windrow parallel to the trench in such a manner that it will not become intermixed with subsoil materials.
 - b. All subsoil material that is removed from the trench shall be placed in the second adjacent stripped windrow parallel to the trench but separate from the topsoil windrow.
 - c. In backfilling the trench, the stockpiled subsoil material shall be placed back into the trench before replacing the topsoil.
 - d. The topsoil must be replaced such that after settling occurs, the topsoil's original depth and contour (with an allowance for settling) will be restored.
 - e. All topsoil shall be placed in a manner consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.
- (5) Mitigation of soil compaction and rutting
- a. The Applicant shall not be responsible for mitigation of soil compaction and rutting if exempted by the PV SOLAR FARM lease.
 - b. Unless specifically provided for otherwise in the PV SOLAR FARM lease, the Applicant shall mitigate soil compaction and rutting for all areas of farmland that were traversed with vehicles and construction equipment or where topsoil is replaced in open trenches.
 - c. All mitigation of soil compaction and rutting shall be consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.
- (6) Land leveling
- a. The Applicant shall not be responsible for leveling of disturbed land if exempted by the PV SOLAR FARM lease.
 - b. Unless specifically provided for otherwise in the PV SOLAR FARM lease, the Applicant shall level all disturbed land as follows:
 - (a) Following the completion of any open trenching, the applicant shall restore all land to its original pre-construction elevation and contour.

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- (b) Should uneven settling occur or surface drainage problems develop as a result of the trenching within the first year after completion, the applicant shall again restore the land to its original pre-construction elevation and contour.
 - c. All land leveling shall be consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.
- (7) Permanent Erosion and Sedimentation Control Plan
- a. Prior to the approval of any Zoning Use Permit, the Applicant shall provide a permanent soil erosion and sedimentation plan for the PV SOLAR FARM including any access road that conforms to the relevant Natural Resources Conservation Service guidelines and that is prepared by an Illinois Licensed Professional Engineer.
 - b. As-built documentation of all permanent soil erosion and sedimentation improvements for the PV SOLAR FARM including any access road prepared by an Illinois Licensed Professional Engineer shall be submitted and accepted by the Zoning Administrator prior to approval of any Zoning Compliance Certificate.
- (8) Retention of all topsoil
- No topsoil may be removed, stripped, or sold from the proposed SPECIAL USE Permit site pursuant to or as part of the construction of the PV SOLAR FARM.
- (9) Minimizing disturbance to BEST PRIME FARMLAND
- a. Any PV SOLAR FARM to be located on BEST PRIME FARMLAND shall minimize the disturbance to BEST PRIME FARMLAND as follows:
 - (a) The disturbance to BEST PRIME FARMLAND caused by construction and operation of the PV SOLAR FARM shall be minimized at all times consistent with good engineering practice.
 - ~~(b) The total amount of disturbance to BEST PRIME FARMLAND due to construction of solar photovoltaic arrays, interior access roads, equipment pads, underground cabling, transmission lines, and substations shall not exceed the disturbance that might otherwise occur due to construction of DWELLINGS that are permissible by right absent the construction of the PV SOLAR FARM. The disturbance caused by construction of the DWELLINGS shall assume DWELLINGS of typical size and related construction of driveways, septic systems (both active and~~

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

~~reserve), and ACCESSORY BUILDINGS of typical size and quantity.~~

- (b) Disturbance to BEST PRIME FARMLAND shall be offset by establishment of a vegetative ground cover within the PV SOLAR FARM that includes the following:
- i. The vegetative ground cover shall use native plant species as much as possible and shall be based on a site assessment of the site geography and soil conditions.
 - ii. The species selected shall serve a secondary habitat purpose as much as possible.
 - iii. Maintenance of the vegetative ground cover shall use a combination of management approaches to ensure safe, cost-effective, reliable maintenance while minimizing environmental risks.
 - iv. The plan to establish and maintain a vegetative ground cover that includes native plant species as much as possible shall be detailed in a landscape plan included in the PV SOLAR FARM SPECIAL USE permit application. The landscape plan shall include the weed control plan required by Section 6.1.5 P.(3).

G. Standard Conditions for Use of Public Streets

Any PV SOLAR FARM Applicant proposing to use any County Highway or a township or municipal STREET for the purpose of transporting PV SOLAR FARM or Substation parts and/or equipment for construction, operation, or maintenance of the PV SOLAR FARM or Substations(s), shall identify all such public STREETS and pay the costs of any necessary permits and the costs to repair any damage to the STREETS caused by the PV SOLAR FARM construction, as follows:

- (1) Prior to the close of the public hearing before the BOARD, the Applicant shall enter into a Roadway Upgrade and Maintenance agreement approved by the County Engineer and State's Attorney; or Township Highway Commissioner; or municipality where relevant, except for any COMMUNITY PV SOLAR FARM for which the relevant highway authority has agreed in writing to waive the requirements of subparagraphs 6.1.5 ~~GF~~.(1), (2), and (3), and the signed and executed Roadway Upgrade and Maintenance agreements must provide for the following minimum conditions:

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- a. The applicant shall agree to conduct a pre-PV SOLAR FARM construction baseline survey to determine existing STREET conditions for assessing potential future damage including the following:
 - (a) A videotape of the affected length of each subject STREET supplemented by photographs if necessary.
 - (b) Pay for costs of the County to hire a consultant to make a study of any structure on the proposed route that the County Engineer feels may not carry the loads likely during the PV SOLAR FARM construction.
 - (c) Pay for any strengthening of STREET structures that may be necessary to accommodate the proposed traffic loads caused by the PV SOLAR FARM construction.
 - b. The Applicant shall agree to pay for costs of the County Engineer to hire a consultant to make a study of any structure on the proposed route that the County Engineer feels may not carry the loads likely during the PV SOLAR FARM construction and pay for any strengthening of structures that may be necessary to accommodate the proposed traffic loads caused by the PV SOLAR FARM construction.
 - c. The Applicant shall agree upon an estimate of costs for any other necessary roadway improvements prior to construction.
 - d. The Applicant shall obtain any necessary approvals for the STREET improvements from the relevant STREET maintenance authority.
 - e. The Applicant shall obtain any necessary Access Permits including any required plans.
 - f. The Applicant shall erect permanent markers indicating the presence of underground cables.
 - g. The Applicant shall install marker tape in any cable trench.
 - h. The Applicant shall become a member of the Illinois state wide One-Call Notice System (otherwise known as the Joint Utility Locating Information for Excavators or "JULIE") and provide JULIE with all of the information necessary to update its record with respect to the PV SOLAR FARM.
 - i. The Applicant shall use directional boring equipment to make all crossings of County Highways for the cable collection system.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- j. The Applicant shall notify the STREET maintenance authority in advance of all oversize moves and crane crossings.
 - k. The Applicant shall provide the County Engineer with a copy of each overweight and oversize permit issued by the Illinois Department of Transportation for PV SOLAR FARM construction.
 - l. The Applicant shall transport the PV SOLAR FARM loads so as to minimize adverse impact on the local traffic including farm traffic.
 - m. The Applicant shall schedule PV SOLAR FARM construction traffic in a way to minimize adverse impacts on emergency response vehicles, rural mail delivery, school bus traffic, and local agricultural traffic.
 - n. The Applicant shall provide as much advance notice as is commercially reasonable to obtain approval of the STREET maintenance authority when it is necessary for a STREET to be closed due to a crane crossing or for any other reason. Notwithstanding the generality of the aforementioned, the Applicant will provide 48 hours notice to the extent reasonably practicable.
 - o. The Applicant shall provide signs indicating all highway and STREET closures and work zones in accordance with the Illinois Department of Transportation Manual on Uniform Traffic Control Devices.
 - p. The Applicant shall establish a single escrow account and a single Irrevocable Letter of Credit for the cost of all STREET upgrades and repairs pursuant to the PV SOLAR FARM construction.
 - q. The Applicant shall notify all relevant parties of any temporary STREET closures.
 - r. The Applicant shall obtain easements and other land rights needed to fulfill the Applicant's obligations under this Agreement.
 - s. The Applicant shall agree that the County shall design all STREET upgrades in accordance with the most recent edition of the IDOT Bureau of Local Roads and Streets Manual, 2005 edition.
 - t. The Applicant shall provide written Notice to Proceed to the relevant STREET maintenance authority by December 31 of each year that identifies the STREETS to be upgraded during the following year.
 - u. The Applicant shall provide dust control and grading work to the reasonable satisfaction of the County Engineer on STREETS that become aggregate surface STREETS.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- v. The Applicant shall conduct a post- PV SOLAR FARM construction baseline survey similar to the pre- PV SOLAR FARM construction baseline survey to identify the extent of repairs necessary to return the STREET to the pre- PV SOLAR FARM construction condition.
 - w. The Applicant shall pay for the cost of all repairs to all STREETS that are damaged by the Applicant during the construction of the PV SOLAR FARM and restore such STREETS to the condition they were in at the time of the pre-PV SOLAR FARM construction inventory.
 - x. All PV SOLAR FARM construction traffic shall exclusively use routes designated in the approved Transportation Impact Analysis.
 - y. The Applicant shall provide liability insurance in an acceptable amount to cover the required STREET construction activities.
 - z. The Applicant shall pay for the present worth costs of life consumed by the construction traffic as determined by the pavement management surveys and reports on the roads which do not show significant enough deterioration to warrant immediate restoration.
 - aa. Provisions for expiration date on the agreement.
 - bb. Other conditions that may be required.
- (2) A condition of the County Board Special Use Permit approval shall be that the Zoning Administrator shall not authorize a Zoning Use Permit for the PV SOLAR FARM until the County Engineer and State's Attorney; or Township Highway Commissioner; or municipality where relevant, has approved a Transportation Impact Analysis provided by the Applicant and prepared by an independent engineer that is mutually acceptable to the Applicant and the County Engineer and State's Attorney; or Township Highway Commissioner; or municipality where relevant, that includes the following:
- a. Identify all such public STREETS or portions thereof that are intended to be used by the Applicant during construction of the PV SOLAR FARM as well as the number of loads, per axle weight of each load; and type of equipment that will be used to transport each load.
 - b. A schedule of the across road culverts and bridges affected by the project and the recommendations as to actions, if any, required with respect to such culverts and bridges and estimated of the cost to replace such culverts and bridges;
 - c. A schedule of the anticipated STREET repair costs to be made in advance of the PV SOLAR FARM construction and following construction of the PV SOLAR FARM.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

d. The Applicant shall reimburse the County Engineer; or Township Highway Commissioner; or municipality where relevant, for all reasonable engineering fees including the costs of a third party consultant, incurred in connection with the review and approval of the Transportation Impact Analysis.

(3) At such time as decommissioning takes place the Applicant or its successors in interest shall enter into a Roadway use and Repair Agreement with the appropriate highway authority.

H. Standard Conditions for Coordination with Local Fire Protection District

(1) The Applicant shall submit to the local fire protection district a copy of the site plan.

(2) Upon request by the local fire protection district, the Owner or Operator shall cooperate with the local fire protection district to develop the fire protection district's emergency response plan.

(3) Nothing in this section shall alleviate the need to comply with all other applicable fire laws and regulations.

I. Standard Conditions for Allowable Noise Level

(1) Noise levels from any PV SOLAR FARM shall be in compliance with the applicable Illinois Pollution Control Board (IPCB) regulations (*35 Illinois Administrative Code* Subtitle H: Noise Parts 900, 901, 910).

(2) The Applicant shall submit manufacturer's sound power level characteristics and other relevant data regarding noise characteristics of proposed PV SOLAR FARM equipment necessary for a competent noise analysis.

(3) The Applicant, through the use of a qualified professional, as part of the siting approval application process, shall appropriately demonstrate compliance with the above noise requirements as follows:

a. The SPECIAL USE permit application for other than a COMMUNITY PV SOLAR FARM shall include a noise analysis that includes the following:

(a) The pre-development 24-hour ambient background sound level shall be identified at representative locations near the site of the proposed PV SOLAR FARM.

(b) Computer modeling shall be used to generate the anticipated sound level resulting from the operation of the proposed PV SOLAR FARM at all DWELLINGS and other PRINCIPAL

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

STRUCTURES within 1,500 feet of the proposed PV SOLAR FARM.

(c) Results of the ambient background sound level monitoring and the modeling of anticipated sound levels shall be clearly stated in the application and the application shall include a map of the modeled noise contours within 1,500 feet of the proposed PV SOLAR FARM.

(d) The application shall also clearly state the assumptions of the computer model's construction and algorithms so that a competent and objective third party can as simply as possible verify the anticipated sound data and sound levels.

b. For a COMMUNITY PV SOLAR FARM the Board may require submission of a noise analysis that meets the standard of paragraph 6.1.5 I.(3)a.

- (4) After construction of the PV SOLAR FARM, the Zoning Administrator shall take appropriate enforcement action as necessary to investigate noise complaints in order to determine the validity of the complaints and take any additional enforcement action as proves warranted to stop any violation that is occurring, including but not limited to the following:
- a. The Zoning Administrator shall make the Environment and Land Use Committee aware of complaints about noise that have been received by the Complaint Hotline.
 - b. If the Environment and Land Use Committee determines that the noise is excessive, the Environment and Land Use Committee shall require the Owner or Operator to take reasonable steps to mitigate the excessive noise.

J. Standard Conditions for Endangered Species Consultation

The Applicant shall apply for consultation with the Endangered Species Program of the Illinois Department of Natural Resources. The Application shall include a copy of the Agency Action Report from the Endangered Species Program of the Illinois Department of Natural Resources or, if applicable, a copy of the Detailed Action Plan Report submitted to the Endangered Species Program of the Illinois Department of Natural Resources and a copy of the response from the Illinois Department of Natural Resources.

K. Standard Conditions for Historic and Archaeological Resources Review

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

The Applicant shall apply for consultation with the State Historic Preservation Officer of the Illinois Department of Natural Resources. The Application shall include a copy of the Agency Action Report from the State Historic Preservation Officer of the Illinois Department of Natural Resources.

L. Standard Conditions for Acceptable Wildlife Impacts

The PV SOLAR FARM shall be located, designed, constructed, and operated so as to avoid and if necessary mitigate the impacts to wildlife to a sustainable level of mortality.

M. Screening and fencing

(1) Perimeter fencing

- a. PV SOLAR FARM equipment and structures shall be fully enclosed and secured by a fence with a minimum height of 7 feet.
- b. Knox boxes and keys shall be provided at locked entrances for emergency personnel access.

~~e. [moved to 6.1.5 D.(1) per John Hall:] The PV SOLAR FARM perimeter fencing shall be set back from the street centerline a minimum of 10 feet from a SIDE or REAR LOT LINE but not less than 25 feet from the property line of any adjacent LOT that is three acres or less in area and a minimum of 40 feet from a MINOR STREET and a minimum of 55 feet from a COLLECTOR STREET and a minimum of 60 feet from a MAJOR STREET unless a greater separation is required by Section 6.1.5 D. and/or unless a greater separation is required for screening pursuant to Section 6.1.5 M.(2)a., but in no case shall the perimeter fencing be less than 10 feet from the RIGHT OF WAY of any STREET.~~

~~dc.~~ Vegetation between the fencing and the LOT LINE shall be maintained such that NOXIOUS WEEDS are controlled or eradicated consistent with the Illinois Noxious Weed Law (505 ILCS 100/1 et seq.). Management of the vegetation shall be explained in the application.

~~e. Required location of fencing in relation to NON PARTICIPATING properties:~~

~~(a) The perimeter fencing shall be a minimum of 10 feet from a SIDE or REAR LOT LINE but not less than 25 feet from the property line of any adjacent LOT that is three acres or less in area.~~

~~(b) [Moved to 6.1.5 D.(3)b. per John Hall:] For any adjacent LOT that is bordered (directly abutting and/or across the STREET) on more than two sides by the PV SOLAR FARM, the separation shall exceed 200 feet as deemed necessary by the BOARD.~~

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

(2) Screening

- a. A visual screen shall be provided around the perimeter of the PV SOLAR FARM as follows:

Suggestion by Frank DiNovo – reduce to 500 feet. *Note from staff: the proposed 1,000 feet is consistent with the current screening requirement for outdoor storage and operations that is in Section 7.6.*

- (a) The visual screen shall be provided for any part of the PV SOLAR FARM that is visible to and located within ~~1,000~~ 500 feet of a DWELLING or residential DISTRICT. However, the visual screen shall not be required if the PV SOLAR FARM is not visible to a DWELLING or residential DISTRICT by virtue of the existing topography.
- (b) The visual screen shall be waived if the owner(s) of a relevant DWELLING(S) have agreed in writing to waive the screening requirement and a copy of the written waiver is submitted to the BOARD or GOVERNING BODY.
- (c) The visual screen shall be a vegetated buffer as follows:
- i. A vegetated visual screen buffer shall include a continuous line of native evergreen foliage and/or native shrubs and/or native trees and/or any existing wooded area and/ or ~~tallgrass prairie~~ plantings of tall native grasses and other native flowering plants and/or an area of agricultural crop production that will conceal the PV SOLAR FARM from view from adjacent abutting property may be authorized as an alternative visual screen subject to specific conditions.
 - ii. Any vegetation that is part of the approved visual screen buffer shall be maintained in perpetuity of the PV SOLAR FARM. If the evergreen foliage below a height of 7 feet disappears over time, the screening shall be replaced.
 - iii. The continuous line of native evergreen foliage and/or native shrubs and/or native trees shall be planted at a minimum height of 5 feet tall and shall be planted in multiple rows as required to provide a 50% screen within 2 years of planting. The planting shall otherwise conform to Natural Resources Conservation Service Practice Standard 380 Windbreak/Shelterbreak Establishment except that the planting shall be located as close as possible to the PV SOLAR FARM fence while still providing adequate clearance for maintenance.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- iv. A ~~tallgrass prairie~~ planting of tall native grasses and other native flowering plants may be used as a visual screen buffer for any PV module installation that is no more than 8 feet tall provided that ~~and~~ the width of planting shall be as authorized by the BOARD and the planting at least 10 30 feet wide in depth and shall otherwise be planted and maintained per the recommendations of the Natural Resources Conservation Service Practice Standard 327 Conservation Cover and further provided that the PV SOLAR FARM perimeter fence is opaque.
 - v. An area of agricultural crop production that is at least 30 feet in depth and may also be authorized by the BOARD as an alternative visual screen buffer with a width of planting as authorized by the BOARD provided that the PV SOLAR FARM perimeter fence is opaque. Any area of crop production that is used as a vegetated visual screen shall be planted annually and shall be replanted as necessary to ensure a crop every year regardless of weather or market conditions.
 - vi. Any vegetated screen buffer shall be detailed in a landscape plan drawing that shall be included with the PV SOLAR FARM SPECIAL USE permit application.

N. Standard Conditions to Minimize Glare

- (1) The design and construction of the PV SOLAR FARM shall minimize glare that may affect adjacent properties and the application shall include an explanation of how glare will be minimized.
- (2) After construction of the PV SOLAR FARM, the Zoning Administrator shall take appropriate enforcement action as necessary to investigate complaints of glare in order to determine the validity of the complaints and take any additional enforcement action as proves warranted to stop any significant glare that is occurring, including but not limited to the following:
 - a. The Zoning Administrator shall make the Environment and Land Use Committee aware of complaints about glare that have been received by the Complaint Hotline.

Suggestion by Frank DiNovo – change “ELUC shall require” to “ELUC shall consult with...” *Note from John Hall: the word “consult” does not infer that ELUC can require anything and that is the essential part of this paragraph. I agree that ELUC needs to be careful but the wording needs to grant some authority to ELUC.*

- b. If the Environment and Land Use Committee determines that the glare is excessive, the Environment and Land Use Committee shall {require / consult with} the Owner or Operator to take reasonable steps to mitigate the excessive glare such as the installation of additional screening.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- O. Standard Condition for Liability Insurance
- (1) The Owner or Operator of the PV SOLAR FARM shall maintain a current general liability policy covering bodily injury and property damage with minimum limits of a least \$5 million per occurrence and \$5 million in the aggregate.
 - (2) The general liability policy shall identify landowners in the SPECIAL USE permit as additional insured.
- P. Operational Standard Conditions
- (1) Maintenance
 - a. The Owner or Operator of the PV SOLAR FARM must submit, on an annual basis, a summary of ~~the~~ operation and maintenance reports to the Environment and Land Use Committee and any other operation and maintenance reports as the Environment and Land Use Committee reasonably requests.
 - b. Any physical modification to the PV SOLAR FARM that increases the number of solar conversion devices or structures and/ or the land area occupied by the PV SOLAR FARM shall require a new County Board SPECIAL USE Permit. Like-kind replacements shall not require re-certification nor will replacement of transformers, cabling, etc. provided replacement is done in a fashion similar to the original installation.
 - c. The Application shall explain methods and materials used to clean the PV SOLAR FARM equipment including an estimation of the daily and annual gallons of water used and the source of the water and the management of wastewater. The BOARD may request copies of well records from the Illinois State Water Survey and may require an estimate by a qualified hydrogeologist of the likely impact on adjacent waterwells.
 - (2) Materials Handling, Storage and Disposal
 - a. All solid wastes related to the construction, operation and maintenance of the PV SOLAR FARM shall be removed from the site promptly and disposed of in accordance with all federal, state and local laws.
 - b. All hazardous materials related to the construction, operation and maintenance of the PV SOLAR FARM shall be handled, stored, transported and disposed of in accordance with all applicable local, state and federal laws.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- (3) Vegetation management
- a. The PV SOLAR FARM SPECIAL USE permit application shall include a weed control plan for the total area of the SPECIAL USE permit including areas both inside of and outside of the perimeter fencing.
 - b. The weed control plan shall ensure the control and/ or eradication of NOXIOUS WEEDS consistent with the Illinois Noxious Weed Law (505 ILCS 100/1 et seq.)
 - c. The weed control plan shall be explained in the application.

Q. Standard Condition for Decommissioning Plan and Site Reclamation Plan

- (1) The Applicant shall submit a signed site reclamation plan conforming to the requirements of paragraph 6.1.1 A.
- (2) In addition to the purposes listed in subparagraph 6.1.1 A.4. the reclamation plan shall also include provisions for anticipated repairs to any public STREET used for the purpose of reclamation of the PV SOLAR FARM and all costs related to removal of access driveways.
- (3) The site reclamation plan required in paragraph 6.1.1 A. shall also include the following:
 - a. A stipulation that the applicant or successor shall notify the GOVERNING BODY by certified mail of the commencement of voluntary or involuntary bankruptcy proceeding, naming the applicant as debtor, within ten days of commencement of the proceeding.
 - b. A stipulation that the applicant shall agree that the sale, assignment in fact or law, or such other transfer of applicant's financial interest in the PV SOLAR FARM shall in no way affect or change applicant's obligation to continue to comply with the terms of this plan. Any successor in interest, ~~or~~ assignee, and all parties to the decommissioning plan and site reclamation plan shall assume the terms, covenants, and obligations of this plan and agrees to assume all reclamation liability and responsibility for the PV SOLAR FARM.
 - c. Authorization for the GOVERNING BODY and its authorized representatives for right of entry onto the PV SOLAR FARM premises for the purpose of inspecting the methods of reclamation or for performing actual reclamation if necessary.
 - d. A stipulation that at such time as decommissioning takes place the applicant, ~~or~~ its successors in interest, and all parties to the decommissioning plan and site reclamation plan are required to enter

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

into a Roadway Use and Repair Agreement with the relevant highway authority.

- e. A stipulation that the Applicant, its successors in interest, and all parties to the decommissioning plan and site reclamation plan shall provide evidence of any new, additional, or substitute financing or security agreement to the Zoning Administrator throughout the operating lifetime of the project.
- f. A stipulation that the Applicant, its successors in interest, and all parties to the decommissioning plan and site reclamation plan shall be obliged to perform the work in the site reclamation plan before abandoning the PV SOLAR FARM or prior to ceasing production of electricity from the PV SOLAR FARM, after it has begun, other than in the ordinary course of business. This obligation shall be independent of the obligation to pay financial assurance, and shall not be limited by the amount of financial assurance. The obligation to perform the reclamation work shall constitute a covenant running with the land.
- g. The site reclamation plan shall provide for payment of any associated costs that Champaign County may incur in the event that decommissioning is actually required. Associated costs include all administrative and ancillary costs associated with drawing upon the financial assurance and performing the reclamation work and shall include but not be limited to attorney's fees; construction management and other professional service fees; and the costs of preparing request for proposals and bidding documents required to comply with state law or Champaign County purchasing policies.
- h. The depth of removal of foundation concrete below ground shall be a minimum of 54 inches. The depth of removal of foundation concrete shall be certified in writing by an Illinois Licensed Professional Engineer and the certification shall be submitted to the Zoning Administrator.
- i. Underground electrical cables at a depth of 5 feet or greater may be left in place.
- j. The hole resulting from the removal of foundation concrete during decommissioning shall be backfilled as follows:
 - (a) The excavation resulting from the removal of foundation concrete shall only be backfilled with subsoil and topsoil in similar depths and similar types as existed at the time of the original PV SOLAR FARM construction except that a lesser quality topsoil or a combination of a lesser quality topsoil

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

and a subsoil that is similar to the native subsoil may be used at depths corresponding to the native subsoil but not less than 12 inches below grade.

- (b) The native soils excavated at the time of the original PV SOLAR FARM construction may be used to backfill the concrete foundation excavations at the time of decommissioning provided that the soils are adequately stored throughout the operating lifetime of the PV SOLAR FARM. The methods for storing the excavated native soils during the operating lifetime of the PV SOLAR FARM shall be included in the site reclamation plan.
- (c) If the excavated native soils are not stored for use for backfilling the concrete foundation excavations, a qualified soil scientist or Illinois Licensed Professional Engineer shall certify that the actual soils used to backfill the concrete foundation excavations are of equal or greater quality than the native soils or that, in the case of subsoil, the backfill soil meets the requirements of this paragraph. The certification shall be submitted to the Zoning Administrator.
- (d) An Illinois Licensed Professional Engineer shall certify in writing that the concrete foundation excavations have been backfilled with soil to such a depth and with a minimum of compaction that is consistent with the restoration of productive agricultural use such that the depth of soil is expected to be no less than 54 inches within one year after backfilling.
- k. A stipulation that should the site reclamation plan be deemed invalid by a court of competent jurisdiction the PV SOLAR FARM SPECIAL USE permit shall be deemed void.
- l. A stipulation that the Applicant's obligation to complete the site reclamation plan and to pay all associated costs shall be independent of the Applicant's obligation to provide financial assurance.
- m. A stipulation that the liability of the Applicant's failure to complete the site reclamation plan or any breach of the site reclamation plan requirement shall not be capped by the amount of the financial assurance.
- n. If the Applicant desires to remove equipment or property credited to the estimated salvage value without the concurrent replacement of the property with property of equal or greater salvage value or if the Applicant installs equipment or property increasing the cost of decommissioning after the PV SOLAR FARM begins to produce

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

electricity, at any point, the Applicant shall first obtain the consent of the Zoning Administrator. If the Applicant's lien holders remove equipment or property credited to the salvage value the Applicant shall promptly notify the Zoning Administrator. In either of these events the total financial assurance shall be adjusted to reflect any change in total salvage value and total decommissioning costs resulting from any such removal or installation.

(4) To comply with paragraph 6.1.1 A.5., the Applicant shall provide financial assurance in the form of an irrevocable letter of credit and an escrow account as follows:

- a. At the time of Special Use Permit approval, the amount of financial assurance to be provided for the site reclamation plan shall be ~~150~~125% of the decommissioning cost as determined in the independent engineer's cost estimate to complete the decommissioning work described in Sections 6.1.1 A.4.a. and 6.1.1 A.4.b. and 6.1.1 A.4.c. and shall otherwise be compliant with Section 6.1.1.A.5. except that if the SOLAR PV modules have an unlimited warranty of at least 10 years and also have a limited power warranty to provide not less not than 80% nominal power output up to 25 years and proof of that warranty is provided at the time of Zoning Use Permit approval, financial assurance may be provided for the site reclamation plan as follows:

Need to determine scale of financial assurance:

- (a) No Zoning Use Permit to authorize construction of the SOLAR FARM shall be authorized by the Zoning Administrator until the SOLAR FARM owner shall provide the County with Financial Assurance to cover {12.5% / 25% / 50% } of the decommissioning cost as determined in the independent engineer's cost estimate to complete the decommissioning work described in Sections 6.1.1 A.4.a. and 6.1.1 A.4.b. and 6.1.1 A.4.c. and otherwise compliant with Section 6.1.1 A.5.
- (b) On or before the sixth anniversary of the Commercial Operation Date, the SOLAR FARM Owner shall provide the County with Financial Assurance to cover 62.5% of the decommissioning cost as determined in the independent engineer's cost estimate to complete the decommissioning work described in Sections 6.1.1 A.4.a. and 6.1.1 A.4.b. and 6.1.1 A.4.c. and otherwise compliant with Section 6.1.1 A.5.
- (c) On or before the eleventh anniversary of the Commercial Operation Date, the SOLAR FARM Owner shall provide the

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

County with Financial Assurance to cover 125% of the decommissioning cost as determined in the independent engineer's cost estimate to complete the decommissioning work described in Sections 6.1.1 A.4.a. and 6.1.1 A.4.b. and 6.1.1 A.4.c. and otherwise compliant with Section 6.1.1 A.5.

- b. Net salvage value may be deducted from decommissioning costs as follows:
- (a) One of the following standards shall be met:
 - i. The Applicant shall maintain the PV SOLAR FARM free and clear of liens and encumbrances, including financing liens and shall provide proof of the same prior to issuance of the SPECIAL USE Permit; or
 - ii. The Applicant shall deduct from the salvage value credit the amount of any lien or encumbrance on the PV SOLAR FARM; or
 - iii. Any and all financing and/or financial security agreements entered into by the Applicant shall expressly provide that the agreements are subject to the covenant required by Section 6.1.1 A.2 that the reclamation work be done.
 - (b) The Applicant shall provide proof of compliance with paragraph 6.1.5. Q.(4)b.(a) prior to issuance of any Zoning Use Permit and upon every renewal of the financial assurance and at any other time upon the request of the Zoning Administrator.
 - (c) The Applicant shall provide in the site reclamation plan for legal transfer of the STRUCTURE to the demolisher to pay the costs of reclamation work, should the reclamation work be performed.
 - (d) The net estimated salvage value that is deducted from the estimated decommissioning costs shall be the salvage value that results after all related costs for demolition and any required preparation for transportation for reuse or recycling or for simple disposal and other similar costs including but not limited to the decommissioning of the PV SOLAR FARM STRUCTURES, equipment, and access roads.
 - (e) Estimated salvage value shall be based on the average salvage price of the past five years as published in a reputable source

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

for salvage values and shall reflect sound engineering judgment as to anticipated changes in salvage prices prior to the next update of estimated net salvage value.

- (f) The deduction from the estimated decommissioning costs for net estimated salvage value shall be capped at 70% of the total net estimated salvage value even though the total actual salvage value shall be available in the event that decommissioning is actually required.

Suggestion by Frank to have total financial assurance not to exceed 150% of decommissioning costs after deduction of the full estimated salvage value. *Note from John Hall: placing a cap of 150% of the decommissioning cost could end up being \$1.50 per acre. I recommend retaining the \$1,000 per acre minimum and the applicant can then request a waiver if they believe the amount is too high.*

- (g) The total financial assurance after deduction of the net estimated salvage value shall not {be less than \$1,000 per acre / exceed 150% of the decommissioning costs}.
- (h) The credit for net estimated salvage value attributable to any PV SOLAR FARM may not exceed the estimated cost of removal of the above-ground portion of that PV SOLAR FARM on the subject site.
- c. The GOVERNING BODY has the right to require multiple letters of credit based on the regulations governing federal insurance for deposits.
- d. The Applicant shall adjust the amount of the financial assurance to ensure that it reflects current and accurate information as follows:
- (a) At least once every three years for the first 12 years of the financial assurance and at least once every two years thereafter or, if the SOLAR PV modules have an unlimited warranty of at least 10 years and also have a limited power warranty to provide not less not than 80% nominal power output up to 25 years and proof of that warranty is provided at the time of Zoning Use Permit approval, then at least once every five years for the first 25 years of the financial assurance and at least once every two years thereafter, the Applicant shall use an independent Illinois Licensed Professional Engineer to provide updated estimates of decommissioning costs and salvage value, by including any changes due to inflation and/or change in salvage price. The Applicant shall, upon receipt, provide a copy of the adjusted Professional Engineer's report to the Zoning Administrator.
- (b) At all times, the total combined value of the irrevocable letter of credit and the escrow account shall equal or exceed the amount

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

of the independent engineer's cost estimate as increased by known and documented rates of inflation based on the Consumer Price Index since the PV SOLAR FARM was approved.

Need to determine if this change is ok for when escrow deposits would be made:

- e. The applicant or PV SOLAR FARM owner shall gradually pay down the value of the irrevocable letter of credit by placing cash deposits in an escrow account in equal annual installments over the first 13 years of the PV SOLAR FARM operation except that if the SOLAR PV modules have an unlimited warranty of at least 10 years and also have a limited power warranty to provide not less not than 80% nominal power output up to 25 years and proof of that warranty is provided at the time of Zoning Use Permit approval, the applicant or SOLAR FARM owner may gradually pay down the value of the irrevocable letter of credit by placing cash deposits in an escrow account in equal annual installments over the 20th through the 25th years of the SOLAR FARM operation. as follows:
- (a) The applicant or PV SOLAR FARM owner and the GOVERNING BODY shall agree on a mutually acceptable financial institution at which an escrow account shall be established.
 - (b) The GOVERNING BODY shall be the beneficiary of the escrow account for the purpose of the reclamation of the PV SOLAR FARM in the event that the PV SOLAR FARM owner is incapable of decommissioning the PV SOLAR FARM.
 - (c) The applicant or PV SOLAR FARM owner shall grant perfected security in the escrow account by use of a control agreement establishing the County as an owner of record, pursuant to the Secured Transactions Article of the Uniform Commercial Code, 810 ILCS 9/101 et seq.
 - (d) The applicant or SOLAR FARM owner shall make equal annual deposits to the escrow account over a ~~12-time~~ period as required in Section 6.1.5 Q.(4)e. and shall simultaneously provide a replacement irrevocable letter of credit that is reduced accordingly.
 - (e) At all times the total combined value of the irrevocable letter of credit and the escrow account shall be increased annually as necessary to reflect actual rates of inflation over the life span of the SOLAR FARM and the amount shall be equal to or exceed ~~150~~125% of the amount of the independent engineer's cost estimate as increased by known and documented rates of inflation since the SOLAR FARM was approved.

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- (f) Any interest accrued on the escrow account that is over and above the total value required by subparagraph 6.1.5 Q.(4)b. ~~(d)~~ shall go to the PV SOLAR FARM owner.
- (g) In order to provide funding for decommissioning at the time of decommissioning, the PV SOLAR FARM applicant or PV SOLAR FARM owner may exchange a new irrevocable letter of credit in an amount equal to the amount in the escrow account in exchange for the GOVERNING BODY agreeing to a release of the full amount of the escrow account.
- f. Should the salvage value of components be adjusted downward or the decommissioning costs adjusted upward pursuant to paragraph 6.1.5 Q.(4)d., the amount to be placed in the escrow account pursuant to this paragraph 6.1.5 Q.(4) shall be increased to reflect the adjustment, as if the adjusted estimate were the initial estimate.
- g. Any financial assurance required per the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R. shall count towards the total financial assurance required for compliance with paragraph 6.1.1 A.5.
- h. Unless the Governing Body approves otherwise, the Champaign County State's Attorney's Office shall review and approve every Letter of Credit and every agreement regarding the Escrow Account prior to acceptance by the Zoning Administrator.
- (5) In addition to the conditions listed in subparagraph 6.1.1 A.9. the Zoning Administrator may also draw on the funds for the following reasons:
- a. In the event that any PV SOLAR FARM or component thereof ceases to be functional for more than six consecutive months after it starts producing electricity and the Owner is not diligently repairing such PV SOLAR FARM or component.
- b. In the event that the Owner declares the PV SOLAR FARM any PV SOLAR FARM component to be functionally obsolete for tax purposes.
- c. There is a delay in the construction of any PV SOLAR FARM of more than 6 months after construction on that PV SOLAR FARM begins.
- d. Any PV SOLAR FARM or component thereof that appears in a state of disrepair or imminent collapse and/or creates an imminent threat to the health or safety of the public or any person.
- e. Any PV SOLAR FARM or component thereof that is otherwise derelict for a period of 6 months.

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- f. The PV SOLAR FARM is in violation of the terms of the PV SOLAR FARM SPECIAL USE permit for a period exceeding ninety (90) days.
 - g. The Applicant has failed to maintain financial assurance in the form and amount required by the special use permit or compromised the COUNTY's interest in the site reclamation plan.
 - h. The COUNTY discovers any material misstatement of fact or misleading omission of fact made by the Applicant in the course of the special use permit zoning case.
 - i. The Applicant has either failed to receive a copy of the certification of design compliance required by paragraph 6.1.5 D. or failed to submit it to the County within 12 consecutive months of receiving a Zoning Use Permit regardless of the efforts of the Applicant to obtain such certification.
- (6) The Zoning Administrator may, but is not required to, deem the PV SOLAR FARM abandoned, or the standards set forth in Section 6.1.5 ~~PQ~~(5) met, with respect to some, but not all, of the PV SOLAR FARM. In that event, the Zoning Administrator may draw upon the financial assurance to perform the reclamation work as to that portion of the PV SOLAR FARM only. Upon completion of that reclamation work, the salvage value and reclamation costs shall be recalculated as to the remaining PV SOLAR FARM.
 - (7) The Site Reclamation Plan shall be included as a condition of approval by the BOARD and the signed and executed irrevocable letter of credit and evidence of the escrow account must be submitted to the Zoning Administrator prior to any Zoning Use Permit approval.
- R. Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture.
- (1) If provided by state law, ~~T~~the Applicant shall enter into an Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture.
 - (2) The Applicant shall bear full responsibility for coordinating any special conditions required in the SPECIAL USE Permit in order to ensure compliance with the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture.
 - (3) All requirements of the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture shall become requirements of the County Board SPECIAL USE Permit.
 - (4) Champaign County shall have the right to enforce all requirements of the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

S. Complaint Hotline

- (1) Prior to the commencement of construction on the PV SOLAR FARM and during the entire term of the County Board SPECIAL USE permit and any extension, the Applicant and Owner shall establish a telephone number hotline for the general public to call with any complaints or questions.
- (2) The telephone number hotline shall be publicized and posted at the operations and maintenance center and the construction marshalling yard.
- (3) The telephone number hotline shall be manned during usual business hours and shall be an answering recording service during other hours.
- (4) Each complaint call to the telephone number hotline shall be logged and identify the name and address of the caller and the reason for the call.
- (5) All calls shall be recorded and the recording shall be saved for transcription for a minimum of two years.
- (6) A copy of the telephone number hotline shall be provided to the Zoning Administrator on a monthly basis.
- (7) The Applicant and Owner shall take necessary actions to resolve all legitimate complaints.

T. Standard Condition for Expiration of PV SOLAR FARM County Board SPECIAL USE Permit

A PV SOLAR FARM County Board SPECIAL USE Permit designation shall expire in 10 years if no Zoning Use Permit is granted.

U. Application Requirements

- (1) In addition to all other information required on the SPECIAL USE Permit application and required by Section 9.1.11 A.2. the application shall contain or be accompanied by the following information:
 - a. A PV SOLAR FARM Project Summary, including, to the extent available:
 - (a) A general description of the project, including its approximate DC and AC generating capacity; the maximum number and type of solar devices; the potential equipment manufacturer(s).
 - (b) The specific proposed location of the PV SOLAR FARM including all tax parcels on which the PV SOLAR FARM will be constructed.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- (c) The specific proposed location of all tax parcels required to be included in the PV SOLAR FARM County Board SPECIAL USE Permit.
 - (d) A description of the Applicant; Owner and Operator, including their respective business structures.
- b. The name(s), address(es), and phone number(s) of the Applicant(s), Owner and Operator, and all property owner(s) for the PV SOLAR FARM County Board SPECIAL USE permit.
 - c. A site plan for the SOLAR FARM indicating the following:
 - (a) The approximate planned location of all PV SOLAR FARM STRUCTURES, property lines (including identification of adjoining properties), required separations, public access roads and turnout locations, access driveways, solar devices, electrical inverter(s), electrical transformer(s), cabling, switching station, electrical cabling from the PV SOLAR FARM to the Substations(s), ancillary equipment, screening and fencing, third party transmission lines, meteorological station, maintenance and management facilities, and layout of all structures within the geographical boundaries of any applicable setback.
 - (b) The site plan shall clearly indicate the area of the proposed PV SOLAR FARM County Board SPECIAL USE Permit as required by subparagraph 6.1.5 A.(1).
 - (c) The location of all below-ground wiring.
 - (d) The location, height, and appearance of all above-ground wiring and wiring structures.
 - (e) The separation of all PV SOLAR FARM structures from adjacent DWELLINGS and/ or PRINCIPAL BUILDINGS or uses shall be dimensioned on the approved site plan and that dimension shall establish the effective minimum separation that shall be required for any Zoning Use Permit. Greater separation and somewhat different locations may be provided in the approved site plan for the Zoning Use Permit provided that that the greater separation does not increase the noise impacts and /or glare that were approved in the PV SOLAR FARM County Board SPECIAL USE Permit. PV SOLAR FARM structures includes substations, third party transmission lines, maintenance and management facilities, or other significant structures.

Decision point

Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

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- d. All other required studies, reports, certifications, and approvals demonstrating compliance with the provisions of this Ordinance.
 - e. The PV SOLAR FARM SPECIAL USE permit application shall include documentation that the ~~application applicant~~ has provided a complete copy of the SPECIAL USE permit application to any municipality within one-and-one-half miles of the proposed PV SOLAR FARM as required by Section 6.1.5 B.(2)a.(b).
 - f. A municipal ~~Resolution of Non-opposition to resolution regarding~~ the PV SOLAR FARM by any ~~relevant~~ municipality located within one-and-one-half miles of the PV SOLAR FARM must be submitted to the ZONING ADMINISTRATOR prior to the consideration of the PV SOLAR FARM SPECIAL USE permit by the Champaign County Board or, in the absence of such a resolution, the ZONING ADMINISTRATOR shall provide documentation to the County Board that any municipality within one-and-one-half miles of the PV SOLAR FARM was provided notice of the meeting dates for consideration of the proposed PV SOLAR FARM SPECIAL USE Permit for both the Environment and Land Use Committee and the County Board as required by Section 6.1.5 B.(2)a.(c).
 - g. Documentation of an executed interconnection agreement with the appropriate electric utility shall be provided prior to issuance of a Zoning Compliance Certificate to authorize operation of the PV SOLAR FARM as required by Section 6.1.5 B.(3)b.
- (2) The Applicant shall notify the COUNTY of any changes to the information provided above that occurs while the County Board SPECIAL USE permit application is pending.
 - (3) The Applicant shall include a copy of the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture with the Zoning Use Permit Application to authorize construction.

9. Add the following paragraph 9.3.1 J. for Zoning Use Permit fee:

- J. PV SOLAR FARM with not more than 7.5 megawatt nameplate rating..... \$1,800 per megawatt (includes COMMUNITY PV SOLAR FARM)
- PV SOLAR FARM with nameplate rating of more than 7.5 megawatts.... \$13,500 plus \$1,260 for each megawatt more than 7.5 megawatts

10. Revise subsection 9.3.3 as follows:**9.3.3 Zoning Case Filing Fees**

Decision point
Revised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

A. General Provisions

- (1) No zoning case filing shall be accepted until the filing fee has been paid.
- (2) No zoning case filing fee shall be waived unless the Zoning Administrator determines that the petition is the only means reasonably available to bring a property into compliance with the provisions of this ordinance and the non-compliance is due solely to staff error.
- (3) No zoning case filing fee shall be refunded after required legal notice has been made by mail or publication unless the Zoning Administrator determines such filing to have been based solely upon staff error.
- (4) No amendment to any petition which requires new legal notice shall be considered until an amended petition fee has been received unless the Zoning Administrator determines such amendment to be required due solely to staff error.
- (5) The fee for SPECIAL USE permits shall be determined based on the larger of the following (except for County Board WIND FARM or PV SOLAR FARM SPECIAL USE Permits):
 - a. the area of farmland taken out of production as a result of the SPECIAL USE; or
 - b. when farmland will not be taken out of production as a result of the SPECIAL USE, the land area taken up by the existing STRUCTURES and all proposed CONSTRUCTION proposed in the SPECIAL USE application.
- (6) When some combination of VARIANCE, SPECIAL USE and Map Amendment cases is required simultaneously for the same property, the total filing fee shall include the following (except for County Board WIND FARM or PV SOLAR FARM Special Use Permits):
 - a. The standard fee for the most expensive individual zoning case; and
 - b. one-half of the standard fee for any other required VARIANCE, SPECIAL USE, or Map Amendment provided that
 - c. no additional fees shall be included for multiple zoning cases of the same type that can be advertised in the same legal advertisement.

B. Fees

- (1) VARIANCES

Decision pointRevised since original text dated February 22, 2018

Attachment H. Revised Proposed Amendment - Annotated

June 7, 2018

- a. ADMINISTRATIVE VARIANCES.. \$100
- b. Minor or Major VARIANCES..... \$200
- (2) SPECIAL USE permits and Map Amendments (except for County Board WIND FARM or PV SOLAR FARM Special Use Permit)
 - a. Two acres or less and Base Fee for larger areas\$400
 - b. More than two acres but no more than 12 acres add \$40 per acre to Base Fee for each acre over two acres
 - c. More than 12 acres add \$10 per acre for each acre over 12 acres and add to fees in a. and b. above
- (3) Appeals and Interpretations.....\$200
- (4) Change of Nonconforming Use.....\$100
- (5) Amendment to Petitions (requiring new legal notice)\$100
- (6) County Board WIND FARM Special Use Permit..... \$20,000 or \$440 per WIND FARM TURBINE TOWER, whichever is greater
- (7) BIG WIND TURBINE TOWER SPECIAL USE Permit per BIG WIND TURBINE TOWER.....\$3,300
- (8) County Board PV SOLAR FARM Special Use Permit
 - PV SOLAR FARM with not more than 7.5 megawatt nameplate rating.....\$1,320 per megawatt (includes COMMUNITY PV SOLAR FARM)
 - PV SOLAR FARM with nameplate rating of more than 7.5 megawatts to 112.5 megawatts.....\$9,240 plus \$102 for each megawatt more than 7.5 megawatts and up to 112.5 megawatts
 - PV SOLAR FARM with more than 112.5 megawatt nameplate rating..... \$180 per megawatt ~~over 112.5 megawatts~~

Decision point
Revised since original text dated February 22, 2018

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

1. Add the following to Section 3.0 Definitions (somewhat similar to the definition of WIND FARM):

NOXIOUS WEEDS: any of several plants designated pursuant to the Illinois Noxious Weed Law (505 ILCS 100/1 et seq.) and that are identified in 8 Illinois Administrative Code 220.

PHOTOVOLTAIC (PV): A type of solar energy system that produces electricity by the use of photovoltaic cells that generate electricity when struck by light.

PV SOLAR FARM: A unified development intended to convert sunlight into electricity by photovoltaic (PV) devices for the primary purpose of wholesale sales of generated electricity. A PV SOLAR FARM is under a common ownership and operating control even though parts of the PV SOLAR FARM may be located on land leased from different owners. A PV SOLAR FARM includes all necessary components including access driveways, solar devices, electrical inverter(s), electrical transformer(s), cabling, a common switching station, maintenance and management facilities, and waterwells. PV SOLAR FARM should be understood to include COMMUNITY PV SOLAR FARM unless specified otherwise in the relevant section or paragraph.

PV SOLAR FARM, COMMUNITY: A PV SOLAR FARM of not more than 2,000 kilowatt nameplate capacity that meets the requirements of 20 ILCS 3855/1-10 for a “community renewable generation project” and provided that two COMMUNITY PV SOLAR FARMS may be co-located on the same or contiguous parcels as either a) two 2-MW projects on one parcel, or b) one 2-MW project on each of two contiguous parcels, as authorized by the Illinois Commerce Commission in Final Order 17-0838 on April 3, 2018.

2. Add new subparagraph 4.2.1 C.4. as follows:

4. A PV SOLAR FARM may be authorized as a County Board SPECIAL USE permit in the AG-1, Agriculture Zoning District or the AG-2 Agriculture Zoning District as a second PRINCIPAL USE on a LOT with another PRINCIPAL USE.

3. Add new subparagraph 4.3.4 H.4.i. as follows (similar to existing 4.3.4 H.4.h. for wind farms):

- i. PV SOLAR FARM except as PIPELINE IMPACT RADIUS regulations are required in Subsection 6.1.5.

4. Amend Section 5.2 as follows (similar to existing WIND FARM designation):

Add “PV SOLAR FARM” as a COUNTY BOARD Special Use Permit in the AG-1 District and AG-2 District by a “B”.

5. Add the following as footnote 15 under the Special Provisions for the AG-1 District in Section 5.3 (similar to existing footnote 14 for LOTS in a WIND FARM):

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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15. LOTS in a PV SOLAR FARM County Board SPECIAL USE Permit and intended for PV SOLAR FARM, related substations, and PV SOLAR FARM maintenance and management facilities are exempt from the requirements of Section 5.3 except as such regulations are required by Subsection 6.1.5.

6. Add new paragraph 5.4.3 F. as follows:

- F. The Rural Residential Overlay Zoning District is prohibited from being established within a PV SOLAR FARM County Board SPECIAL USE Permit.

7. Amend Section 6.1.1 to read as follows:

A. Site Reclamation Plan for NON-ADAPTABLE STRUCTURES

1. In the course of BOARD review of a SPECIAL USE request, the BOARD may find that a proposed STRUCTURE is a NON-ADAPTABLE STRUCTURE. Any WIND FARM and any PV SOLAR FARM shall be a NON-ADAPTABLE STRUCTURE. The Applicant for the SPECIAL USE request for a NON-ADAPTABLE STRUCTURE shall submit a site reclamation plan to the BOARD for the subject site.
2. The site reclamation plan shall be binding upon all successors of title, lessees, to any operator and/or owner of a NON-ADAPTABLE STRUCTURE, and to all parties to the site reclamation plan. Prior to the issuance of a SPECIAL USE Permit for such NON-ADAPTABLE STRUCTURES, the landowner or applicant shall also record a covenant incorporating the provisions of the site reclamation plan on the deed subject to the LOT, requiring that the reclamation work be performed and that a letter of credit be provided for financial assurance.
3. Separate cost estimates for Section 6.1.1 A.4.a., 6.1.1 A.4.b., and 6.1.1 A.4.c. shall be provided by an Illinois Licensed Professional Engineer.
 - a. Cost estimates provided shall be subject to approval of the BOARD.
 - b. Except as provided in Section 6.1.4 P. and Section 6.1.5 Q., the salvage value of the components of the NON-ADAPTABLE STRUCTURE shall not be credited to the cost estimates.
4. The site reclamation plan shall provide for:
 - a. removal of above-ground portion of any STRUCTURE on the subject site; site grading; and, interim soil erosion control;
 - b. below-ground restoration, including final grading and surface treatment;
 - c. any environmental remediation required by State or Federal law;

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- d. provision and maintenance of a letter of credit, as set forth in Section 6.1.1 A.5.
5. No Zoning Use Permit for such SPECIAL USE will be issued until the applicant provides the COUNTY with an irrevocable letter of credit to be drawn upon a federally insured financial institution within 200 miles of Urbana or reasonable anticipated travel costs shall be added to the amount of the letter of credit.
- a. Unless specified elsewhere in this Ordinance, the irrevocable letter of credit shall be in the amount of one hundred fifty percent (150%) of an independent engineer's cost estimate to complete the work described in Section 6.1.1 A.4.a., Section 6.1.1 A.4.b., and Section 6.1.1 A.4.c.
 - b. The provisions of this subparagraph notwithstanding, a different amount may be required as a special condition.
 - c. The letter of credit, or a successor letter of credit pursuant to Section 6.1.1 A.6. or 6.1.1 A.12., shall remain in effect and shall be made available to the COUNTY for a term specified as a standard condition elsewhere in this ordinance, an indefinite term, or for a different term that may be required as a special condition.
6. One hundred eighty (180) days prior to the expiration date of an irrevocable letter of credit submitted pursuant to this Section, the Zoning Administrator shall notify the landowner or applicant in writing and request information about the landowner or applicant's intent to renew the letter of credit, or remove the NON-ADAPTABLE STRUCTURE. The landowner or applicant shall have thirty (30) days to respond in writing to this request. If the landowner or applicant's intention is to remove the NON-ADAPTABLE STRUCTURE, the landowner or applicant will have a total of ninety (90) days from the date of response to remove it in accordance with Section 6.1.1A.4.a. At the end of ninety (90) days, the Zoning Administrator shall have a period of sixty (60) days to either:
- a. confirm that the bank has renewed the letter of credit; or
 - b. inspect the subject property for compliance with Section 6.1.1 A.4.a.;
 - c. draw on the letter of credit and commence the bid process to have a contractor remove the NON-ADAPTABLE STRUCTURE pursuant to Section 6.1.1 A.4.a.
7. The Zoning Administrator may find a NON-ADAPTABLE STRUCTURE abandoned in place. Factors to be considered in making this finding include, but are not limited to:

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- a. the nature and frequency of use as set forth in the application for SPECIAL USE;
 - b. the current nature and frequency of use;
 - c. whether the NON-ADAPTABLE STRUCTURE has become a public nuisance, or otherwise poses a risk of harm to public health or safety;
 - d. whether the NON-ADAPTABLE STRUCTURE has been maintained in a manner which allows it to be used for its intended purpose, with no greater effects on surrounding properties and the public as a whole than was originally intended.
 - e. A court of law, an arbitrator, mediator, or any state or Federal agency charged with enforcing State or Federal law has made a finding that either said NON-ADAPTABLE STRUCTURE or the structures supporting said NON-ADAPTABLE STRUCTURE and/or any related site grading and soil erosion controls or lack of same, constitutes a public nuisance or otherwise violates State or Federal law, or any State or Federal agency charged with enforcing State or Federal law has made a final determination either imposing an administrative sanction on any person associated with the NON-ADAPTABLE STRUCTURE relating to its use or denying the NON-ADAPTABLE STRUCTURE a permit necessary for its lawful operation.
8. Once the Zoning Administrator has made a finding that a NON-ADAPTABLE STRUCTURE is abandoned in place, the Zoning Administrator shall issue notice to the land owner at the owner's last known address, lessees, any operator and/or owner of a NON-ADAPTABLE STRUCTURE, and to all parties to the site reclamation plan, that the COUNTY will draw on the performance guarantee within thirty (30) days unless the owner appeals the Zoning Administrator's finding, pursuant to Section 9.1.8 or enters into a written agreement with the COUNTY to remove such NON-ADAPTABLE STRUCTURE in accordance with Section 6.1.1 A.4. within ninety (90) days and removes the NON-ADAPTABLE STRUCTURE accordingly.
 9. The Zoning Administrator may draw on the funds to have said NON-ADAPTABLE STRUCTURE removed as per Section 6.1.1 A.4. of the reclamation agreement when any of the following occur:
 - a. no response is received from the land owner within thirty (30) days from initial notification by the Zoning Administrator;
 - b. the land owner does not enter, or breaches any term of a written agreement with the COUNTY to remove said NON-ADAPTABLE structure as provided in Section 6.1.1 A.8.;

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- c. any breach or performance failure of any provision of the reclamation agreement;
 - d. the owner of record has filed a bankruptcy petition, or compromised the COUNTY's interest in the letter of credit in any way specifically allowed by the reclamation agreement;
 - e. a court of law has made a finding that a NON-ADAPTABLE STRUCTURE constitutes a public nuisance;
 - f. the owner of record has failed to replace an expiring letter of credit within the deadlines set forth in Section 6.1.1 A.6.; or
 - g. any other conditions to which the COUNTY and the land owner mutually agree, as set forth in the reclamation agreement.
10. Once the letter of credit has been drawn upon, and the site has been restored to its original condition, as certified by the Zoning Administrator, the covenant entered pursuant to Section 6.1.1. A.2. shall expire, and the COUNTY shall act to remove said covenant from the record of the property at the Recorder of Deeds within forty-five (45) days.
11. The proceeds of the letter of credit may only be used by the COUNTY to:
- a. remove the NON-ADAPTABLE STRUCTURE and return the site to its condition prior to the placement of the NON-ADAPTABLE STRUCTURE, in accordance with the most recent reclamation agreement submitted and accepted in relation to the NON-ADAPTIVE STRUCTURE;
 - b. pay all administrative and ancillary costs associated with drawing upon the financial assurance and performing the reclamation work, which shall include, but not be limited to, attorney's fees; construction management and other professional service fees; and the costs of preparing request for proposal and bidding documents required to comply with state law or Champaign County purchasing policies; and
 - c. remove any covenants placed on the title in conjunction with Section 6.1.1. A.2.

The balance of any proceeds remaining after the site has been reclaimed shall be returned to the issuer of the letter of credit.

12. Upon transfer of any property subject to a letter of credit pursuant to this Section, the new owner or applicant of record shall submit a new irrevocable letter of credit of same or greater value to the Zoning Administrator, prior to legal transfer of title, and shall submit a new site reclamation plan, pursuant

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

to Section 6.1.1 A.4.a., and, for WIND FARMS, Section 6.1.4 P., and for PV SOLAR FARMS, 6.1.5 Q. Once the new owner or applicant of record has done so, the letter of credit posted by the previous owner or applicant shall be released, and the previous owner shall be released from any further obligations under the site reclamation plan.

13. The Applicant shall provide evidence of any new, additional, or substitute financial assurance to the Zoning Administrator throughout the operating lifetime of the NON-ADAPTABLE STRUCTURE.
14. Should the site reclamation plan, or any part of it, be deemed invalid by a court of competent jurisdiction, the associated SPECIAL USE permit shall be deemed void.

8. Add new subsection 6.1.5 as follows (NOTE: the following new subsection is based on the existing subsection 6.1.4 for “WIND FARM”):

6.1.5 PHOTOVOLTAIC (PV) SOLAR FARM County Board SPECIAL USE permit

A PHOTOVOLTAIC (PV) SOLAR FARM County Board SPECIAL USE permit may only be authorized in the AG-1 Zoning District or the AG-2 Agriculture Zoning District subject to the following standard conditions.

- A. In what follows, PV SOLAR FARM should be understood to include COMMUNITY PV SOLAR FARM unless specified otherwise in the relevant section or paragraph.
- B. General Standard Conditions
 - (1) The area of the PV SOLAR FARM County Board SPECIAL USE permit must include the following minimum areas:
 - a. All land that will be exposed to a noise level greater than that authorized to Class A land as established by 35 Ill. Admin. Code Parts 900, 901 and 910 under paragraph 6.1.5 I.
 - b. All necessary access lanes or driveways and any required new PRIVATE ACCESSWAYS. For purposes of determining the minimum area of the special use permit, access lanes or driveways shall be provided a minimum 40 feet wide area.
 - c. All necessary PV SOLAR FARM STRUCTURES and ACCESSORY STRUCTURES including electrical distribution lines, inverters, transformers, common switching stations, and substations not under the ownership of a PUBLICLY REGULATED UTILITY and all waterwells that will provide water for the PV SOLAR FARM. For purposes of determining the minimum area of the special use permit, underground cable installations shall be provided a minimum 40 feet wide area.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- d. All aboveground STRUCTURES and facilities shall be of a type and shall be located in a manner that is consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.
- (2) The PV SOLAR FARM County Board SPECIAL USE permit shall not be located in the following areas:
- a. Less than one-and-one-half miles from an incorporated municipality that has a zoning ordinance unless the following is provided:
 - (a) No part of a PV SOLAR FARM shall be located within a contiguous urban growth area (CUGA) as indicated in the most recent update of the CUGA in the Champaign County Land Resource Management Plan, and there shall be a separation of one-half mile from the proposed PV SOLAR FARM, to a municipal boundary at the time of application for the SPECIAL USE Permit, except for any power lines of 34.5 Kva or less and except for any proposed PV SOLAR FARM substation and related proposed connection to an existing substation.
 - (b) The PV SOLAR FARM SPECIAL USE permit application shall include documentation that the applicant has provided a complete copy of the SPECIAL USE permit application to any municipality within one-and-one-half miles of the proposed PV SOLAR FARM.
 - (c) A municipal resolution regarding the PV SOLAR FARM by any municipality located within one-and-one-half miles of the PV SOLAR FARM must be submitted to the ZONING ADMINISTRATOR prior to the consideration of the PV SOLAR FARM SPECIAL USE permit by the Champaign County Board or, in the absence of such a resolution, the ZONING ADMINISTRATOR shall provide documentation to the County Board that any municipality within one-and-one-half miles of the PV SOLAR FARM was provided notice of the meeting dates for consideration of the proposed PV SOLAR FARM SPECIAL USE Permit for both the Environment and Land Use Committee and the County Board.
 - b. Less than one-half mile from the CR Conservation Recreation Zoning District.
- (3) Interconnection to the power grid

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- a. The PV SOLAR FARM SPECIAL USE permit application shall include documentation that the applicant or PV SOLAR FARM is in the queue to acquire an interconnection agreement to the power grid.
 - b. Documentation of an executed interconnection agreement with the appropriate electric utility shall be provided prior to issuance of a Zoning Compliance Certificate to authorize operation of the PV SOLAR FARM.
- C. Minimum Lot Standards
- (1) There are no minimum LOT AREA, AVERAGE LOT WIDTH, SETBACK, YARD, or maximum LOT COVERAGE requirements for a PV SOLAR FARM or for LOTS for PV SOLAR FARM substations and/ or PV SOLAR FARM maintenance and management facilities.
 - (2) There is no maximum LOT AREA requirement on BEST PRIME FARMLAND.
- D. Minimum Standard Conditions for Separations for PV SOLAR FARM from adjacent USES and STRUCTURES

The location of each PV SOLAR FARM shall provide the following required separations as measured from the exterior of the above ground portion of the PV SOLAR FARM STRUCTURES and equipment including fencing:

- (1) PV SOLAR FARM fencing shall be set back from the street centerline a minimum of 40 feet from a MINOR STREET and a minimum of 55 feet from a COLLECTOR STREET and a minimum of 60 feet from a MAJOR STREET unless a greater separation is required for screening pursuant to Section 6.1.5 M.(2)a., but in no case shall the perimeter fencing be less than 10 feet from the RIGHT OF WAY of any STREET.
- (2) For properties participating in the solar farm: No required separation from any existing DWELLING or existing PRINCIPAL BUILDING except as required to ensure that a minimum zoning lot is provided for the existing DWELLING or PRINCIPAL BUILDING.
- (3) For properties not participating in the solar farm:
 - a. For any adjacent LOT that is five acres or less in area (not including the STREET RIGHT OF WAY):
 - (a) For any adjacent LOT that is bordered (directly abutting and/or across the STREET) on no more than two sides by the PV SOLAR FARM, the separation shall be no less than {200 / 240/ 260 / 300 / 330 feet} from the property line. This separation distance applies to properties that are adjacent to or across a STREET from a PV SOLAR FARM.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- (b) For any adjacent LOT that is bordered (directly abutting and/or across the STREET) on more than two sides by the PV SOLAR FARM, the separation shall exceed 200 feet as deemed necessary by the BOARD.
- b. For any adjacent LOT that is five acres or more in area (not including the STREET RIGHT OF WAY), the separation shall be no less than {250 / 290 / 310 / 350 / 380} feet and the perimeter fencing shall be a minimum of 10 feet from a SIDE or REAR LOT LINE but not less than 250 feet from any existing DWELLING or existing PRINCIPAL BUILDING provided that the noise level caused by the PV SOLAR FARM complies with the applicable Illinois Pollution Control Board regulations. This separation distance applies to properties that are adjacent to or across a STREET from a PV SOLAR FARM.
- c. Additional separation may be required to ensure that the noise level required by 35 Ill. Admin. Code Parts 900, 901 and 910 is not exceeded or for other purposes deemed necessary by the BOARD.
- (4) A separation of at least 500 feet from any of the following unless the SPECIAL USE permit application includes results provided from an analysis using 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 the most recent version adopted by the FAA, and the SGHAT results show no detrimental affect with less than a 500 feet separation from any of the following:
- a. any AIRPORT premises or any AIRPORT approach zone within five miles of the end of the AIRPORT runway; or
- b. any RESTRICTED LANDING AREA that is NONCONFORMING or which has been authorized by SPECIAL USE permit and that existed on or for which there had been a complete SPECIAL USE permit application received by April 22, 2010, or any approach zone for any such RESTRICTED LANDING AREA; or
- c. any RESIDENTIAL AIRPORT that existed on or for which there had been a complete SPECIAL USE permit application received by April 22, 2010, or any approach zone for any such RESIDENTIAL AIRPORT.
- (5) A separation of at least 500 feet between substations and transmission lines of greater than 34.5Kva to adjacent dwellings and residential DISTRICTS.
- (6) Electrical inverters shall be located as far as possible from property lines and adjacent DWELLINGS consistent with good engineering practice. Inverter locations that are less than 275 feet from the perimeter fence shall require

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

specific approval and may require special sound deadening construction and noise analysis.

- (7) Separation distances for any PV SOLAR FARM with solar equipment exceeding 8 feet in height, with the exception of transmission lines which may be taller, shall be determined by the BOARD on a case-by-case basis.
- (8) PV SOLAR FARM solar equipment shall be no less than 26 feet from the property line of any lot greater than 5 acres in area.

E. **Standard Conditions for Design and Installation of any PV SOLAR FARM.**

- (1) Any building that is part of a PV SOLAR FARM shall include as a requirement for a Zoning Compliance Certificate a certification by an Illinois Professional Engineer or Illinois Licensed Structural Engineer or other qualified professional that the constructed building conforms to Public Act 96-074 regarding building code compliance and conforms to the Illinois Accessibility Code.
- (2) **Electrical Components**
 - a. All electrical components of the PV SOLAR FARM shall conform to the National Electrical Code as amended and shall comply with Federal Communications Commission (FCC) requirements.
 - b. Burying power and communication wiring underground shall be minimized consistent with best management practice regarding PV solar farm construction and minimizing impacts on agricultural drainage tile.
- (3) **Maximum height.** The height limitation established in Section 5.3 shall not apply to a PV SOLAR FARM. The maximum height of all above ground STRUCTURES shall be identified in the application and as approved in the SPECIAL USE permit.
- (4) **Warnings**
 - a. A reasonably visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.
- (5) No construction may intrude on any easement or right of way for a GAS PIPELINE or HAZARDOUS LIQUID PIPELINE, an underground water main or sanitary sewer, a drainage district ditch or tile, or any other public utility facility unless specifically authorized by a crossing agreement that has been entered into with the relevant party.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

F. Standard Conditions to Mitigate Damage to Farmland

- (1) All underground wiring or cabling for the PV SOLAR FARM shall be at a minimum depth of 5 feet below grade or deeper if required to maintain a minimum one foot of clearance between the wire or cable and any agricultural drainage tile or a lesser depth if so authorized by the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.
- (2) Protection of agricultural drainage tile
 - a. The applicant shall endeavor to locate all existing agricultural drainage tile prior to establishing any construction staging areas, construction of any necessary PV SOLAR FARM access lanes or driveways, construction of any PV SOLAR FARM STRUCTURES, any common switching stations, substations, and installation of underground wiring or cabling. The applicant shall contact affected landowners and tenants and the Champaign County Soil and Water Conservation District and any relevant drainage district for their knowledge of tile line locations prior to the proposed construction. Drainage districts shall be notified at least two weeks prior to disruption of tile.
 - b. The location of drainage district tile lines shall be identified prior to any construction and drainage district tile lines shall be protected from disturbance as follows:
 - (a) All identified drainage district tile lines and any known existing drainage district tile easement shall be staked or flagged prior to construction to alert construction crews of the presence of drainage district tile and the related easement.
 - (b) Any drainage district tile for which there is no existing easement shall be protected from disturbance by a 30-foot wide no-construction buffer on either side of the drainage district tile. The no-construction buffer shall be staked or flagged prior to the start of construction and shall remain valid for the lifetime of the PV SOLAR FARM SPECIAL USE Permit and during any deconstruction activities that may occur pursuant to the PV SOLAR FARM SPECIAL USE Permit.
 - (c) Construction shall be prohibited within any existing drainage district easement and also prohibited within any 30-foot wide no-construction buffer on either side of drainage district tile that does not have an existing easement unless specific construction is authorized in writing by all commissioners of the relevant drainage district. A copy of the written

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

authorization shall be provided to the Zoning Administrator prior to the commencement of construction.

- c. Any agricultural drainage tile located underneath construction staging areas, access lanes, driveways, any common switching stations, and substations shall be replaced as required in Section 6.3 of the Champaign County Champaign County Storm Water Management and Erosion Control Ordinance.
- d. Any agricultural drainage tile that must be relocated shall be relocated as required in the Champaign County Champaign County Storm Water Management and Erosion Control Ordinance.
- e. Conformance of any relocation of drainage district tile with the Champaign County Champaign County Storm Water Management and Erosion Control Ordinance shall be certified by an Illinois Professional Engineer. Written approval by the drainage district shall be received prior to any backfilling of the relocated drain tile and a copy of the approval shall be submitted to the Zoning Administrator. As-built drawings shall be provided to both the relevant drainage district and the Zoning Administrator of any relocated drainage district tile.
- f. All tile lines that are damaged, cut, or removed shall be staked or flagged in such manner that they will remain visible until the permanent repairs are completed.
- g. All exposed tile lines shall be screened or otherwise protected to prevent the entry into the tile of foreign materials, loose soil, small mammals, etc.
- h. Permanent tile repairs shall be made within 14 days of the tile damage provided that weather and soil conditions are suitable or a temporary tile repair shall be made. Immediate temporary repair shall also be required if water is flowing through any damaged tile line. Temporary repairs are not needed if the tile lines are dry and water is not flowing in the tile provided the permanent repairs can be made within 14 days of the damage. All permanent and temporary tile repairs shall be made as detailed in the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R. and shall not be waived or modified except as authorized in the SPECIAL USE Permit.
- i. All damaged tile shall be repaired so as to operate as well after construction as before the construction began.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

j. Following completion of the PV SOLAR FARM construction, the applicant shall be responsible for correcting all tile line repairs that fail, provided that the failed repair was made by the Applicant.

(3) All soil conservation practices (such as terraces, grassed waterways, etc.) that are damaged by PV SOLAR FARM construction and/or decommissioning shall be restored by the applicant to the pre-PV SOLAR FARM construction condition in a manner consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.

(4) Topsoil replacement

For any open trenching required pursuant to PV SOLAR FARM construction, the topsoil shall be stripped and replaced as follows:

- a. The top 12 inches of topsoil shall first be stripped from the area to be trenched and from an adjacent area to be used for subsoil storage. The topsoil shall be stored in a windrow parallel to the trench in such a manner that it will not become intermixed with subsoil materials.
- b. All subsoil material that is removed from the trench shall be placed in the second adjacent stripped windrow parallel to the trench but separate from the topsoil windrow.
- c. In backfilling the trench, the stockpiled subsoil material shall be placed back into the trench before replacing the topsoil.
- d. The topsoil must be replaced such that after settling occurs, the topsoil's original depth and contour (with an allowance for settling) will be restored.
- e. All topsoil shall be placed in a manner consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.

(5) Mitigation of soil compaction and rutting

- a. The Applicant shall not be responsible for mitigation of soil compaction and rutting if exempted by the PV SOLAR FARM lease.
- b. Unless specifically provided for otherwise in the PV SOLAR FARM lease, the Applicant shall mitigate soil compaction and rutting for all areas of farmland that were traversed with vehicles and construction equipment or where topsoil is replaced in open trenches.
- c. All mitigation of soil compaction and rutting shall be consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- (6) Land leveling
- a. The Applicant shall not be responsible for leveling of disturbed land if exempted by the PV SOLAR FARM lease.
 - b. Unless specifically provided for otherwise in the PV SOLAR FARM lease, the Applicant shall level all disturbed land as follows:
 - (a) Following the completion of any open trenching, the applicant shall restore all land to its original pre-construction elevation and contour.
 - (b) Should uneven settling occur or surface drainage problems develop as a result of the trenching within the first year after completion, the applicant shall again restore the land to its original pre-construction elevation and contour.
 - c. All land leveling shall be consistent with the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R.
- (7) Permanent Erosion and Sedimentation Control Plan
- a. Prior to the approval of any Zoning Use Permit, the Applicant shall provide a permanent soil erosion and sedimentation plan for the PV SOLAR FARM including any access road that conforms to the relevant Natural Resources Conservation Service guidelines and that is prepared by an Illinois Licensed Professional Engineer.
 - b. As-built documentation of all permanent soil erosion and sedimentation improvements for the PV SOLAR FARM including any access road prepared by an Illinois Licensed Professional Engineer shall be submitted and accepted by the Zoning Administrator prior to approval of any Zoning Compliance Certificate.
- (8) Retention of all topsoil
- No topsoil may be removed, stripped, or sold from the proposed SPECIAL USE Permit site pursuant to or as part of the construction of the PV SOLAR FARM.
- (9) Minimizing disturbance to BEST PRIME FARMLAND
- a. Any PV SOLAR FARM to be located on BEST PRIME FARMLAND shall minimize the disturbance to BEST PRIME FARMLAND as follows:

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- (a) The disturbance to BEST PRIME FARMLAND caused by construction and operation of the PV SOLAR FARM shall be minimized at all times consistent with good engineering practice.
 - (b) Disturbance to BEST PRIME FARMLAND shall be offset by establishment of a vegetative ground cover within the PV SOLAR FARM that includes the following:
 - i. The vegetative ground cover shall use native plant species as much as possible and shall be based on a site assessment of the site geography and soil conditions.
 - ii. The species selected shall serve a secondary habitat purpose as much as possible.
 - iii. Maintenance of the vegetative ground cover shall use a combination of management approaches to ensure safe, cost-effective, reliable maintenance while minimizing environmental risks.
 - iv. The plan to establish and maintain a vegetative ground cover that includes native plant species as much as possible shall be detailed in a landscape plan included in the PV SOLAR FARM SPECIAL USE permit application. The landscape plan shall include the weed control plan required by Section 6.1.5 P.(3).

G. Standard Conditions for Use of Public Streets

Any PV SOLAR FARM Applicant proposing to use any County Highway or a township or municipal STREET for the purpose of transporting PV SOLAR FARM or Substation parts and/or equipment for construction, operation, or maintenance of the PV SOLAR FARM or Substations(s), shall identify all such public STREETS and pay the costs of any necessary permits and the costs to repair any damage to the STREETS caused by the PV SOLAR FARM construction, as follows:

- (1) Prior to the close of the public hearing before the BOARD, the Applicant shall enter into a Roadway Upgrade and Maintenance agreement approved by the County Engineer and State's Attorney; or Township Highway Commissioner; or municipality where relevant, except for any COMMUNITY PV SOLAR FARM for which the relevant highway authority has agreed in writing to waive the requirements of subparagraphs 6.1.5 G.(1), (2), and (3), and the signed and executed Roadway Upgrade and Maintenance agreements must provide for the following minimum conditions:

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- a. The applicant shall agree to conduct a pre-PV SOLAR FARM construction baseline survey to determine existing STREET conditions for assessing potential future damage including the following:
 - (a) A videotape of the affected length of each subject STREET supplemented by photographs if necessary.
 - (b) Pay for costs of the County to hire a consultant to make a study of any structure on the proposed route that the County Engineer feels may not carry the loads likely during the PV SOLAR FARM construction.
 - (c) Pay for any strengthening of STREET structures that may be necessary to accommodate the proposed traffic loads caused by the PV SOLAR FARM construction.
 - b. The Applicant shall agree to pay for costs of the County Engineer to hire a consultant to make a study of any structure on the proposed route that the County Engineer feels may not carry the loads likely during the PV SOLAR FARM construction and pay for any strengthening of structures that may be necessary to accommodate the proposed traffic loads caused by the PV SOLAR FARM construction.
 - c. The Applicant shall agree upon an estimate of costs for any other necessary roadway improvements prior to construction.
 - d. The Applicant shall obtain any necessary approvals for the STREET improvements from the relevant STREET maintenance authority.
 - e. The Applicant shall obtain any necessary Access Permits including any required plans.
 - f. The Applicant shall erect permanent markers indicating the presence of underground cables.
 - g. The Applicant shall install marker tape in any cable trench.
 - h. The Applicant shall become a member of the Illinois state wide One-Call Notice System (otherwise known as the Joint Utility Locating Information for Excavators or "JULIE") and provide JULIE with all of the information necessary to update its record with respect to the PV SOLAR FARM.
 - i. The Applicant shall use directional boring equipment to make all crossings of County Highways for the cable collection system.
 - j. The Applicant shall notify the STREET maintenance authority in advance of all oversize moves and crane crossings.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- k. The Applicant shall provide the County Engineer with a copy of each overweight and oversize permit issued by the Illinois Department of Transportation for PV SOLAR FARM construction.
 - l. The Applicant shall transport the PV SOLAR FARM loads so as to minimize adverse impact on the local traffic including farm traffic.
 - m. The Applicant shall schedule PV SOLAR FARM construction traffic in a way to minimize adverse impacts on emergency response vehicles, rural mail delivery, school bus traffic, and local agricultural traffic.
 - n. The Applicant shall provide as much advance notice as is commercially reasonable to obtain approval of the STREET maintenance authority when it is necessary for a STREET to be closed due to a crane crossing or for any other reason. Notwithstanding the generality of the aforementioned, the Applicant will provide 48 hours notice to the extent reasonably practicable.
 - o. The Applicant shall provide signs indicating all highway and STREET closures and work zones in accordance with the Illinois Department of Transportation Manual on Uniform Traffic Control Devices.
 - p. The Applicant shall establish a single escrow account and a single Irrevocable Letter of Credit for the cost of all STREET upgrades and repairs pursuant to the PV SOLAR FARM construction.
 - q. The Applicant shall notify all relevant parties of any temporary STREET closures.
 - r. The Applicant shall obtain easements and other land rights needed to fulfill the Applicant's obligations under this Agreement.
 - s. The Applicant shall agree that the County shall design all STREET upgrades in accordance with the most recent edition of the IDOT Bureau of Local Roads and Streets Manual.
 - t. The Applicant shall provide written Notice to Proceed to the relevant STREET maintenance authority by December 31 of each year that identifies the STREETS to be upgraded during the following year.
 - u. The Applicant shall provide dust control and grading work to the reasonable satisfaction of the County Engineer on STREETS that become aggregate surface STREETS.
 - v. The Applicant shall conduct a post- PV SOLAR FARM construction baseline survey similar to the pre- PV SOLAR FARM construction

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- baseline survey to identify the extent of repairs necessary to return the STREET to the pre- PV SOLAR FARM construction condition.
- w. The Applicant shall pay for the cost of all repairs to all STREETS that are damaged by the Applicant during the construction of the PV SOLAR FARM and restore such STREETS to the condition they were in at the time of the pre-PV SOLAR FARM construction inventory.
 - x. All PV SOLAR FARM construction traffic shall exclusively use routes designated in the approved Transportation Impact Analysis.
 - y. The Applicant shall provide liability insurance in an acceptable amount to cover the required STREET construction activities.
 - z. The Applicant shall pay for the present worth costs of life consumed by the construction traffic as determined by the pavement management surveys and reports on the roads which do not show significant enough deterioration to warrant immediate restoration.
 - aa. Provisions for expiration date on the agreement.
 - bb. Other conditions that may be required.
- (2) A condition of the County Board Special Use Permit approval shall be that the Zoning Administrator shall not authorize a Zoning Use Permit for the PV SOLAR FARM until the County Engineer and State's Attorney; or Township Highway Commissioner; or municipality where relevant, has approved a Transportation Impact Analysis provided by the Applicant and prepared by an independent engineer that is mutually acceptable to the Applicant and the County Engineer and State's Attorney; or Township Highway Commissioner; or municipality where relevant, that includes the following:
- a. Identify all such public STREETS or portions thereof that are intended to be used by the Applicant during construction of the PV SOLAR FARM as well as the number of loads, per axle weight of each load; and type of equipment that will be used to transport each load.
 - b. A schedule of the across road culverts and bridges affected by the project and the recommendations as to actions, if any, required with respect to such culverts and bridges and estimated of the cost to replace such culverts and bridges;
 - c. A schedule of the anticipated STREET repair costs to be made in advance of the PV SOLAR FARM construction and following construction of the PV SOLAR FARM.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- d. The Applicant shall reimburse the County Engineer; or Township Highway Commissioner; or municipality where relevant, for all reasonable engineering fees including the costs of a third party consultant, incurred in connection with the review and approval of the Transportation Impact Analysis.
- (3) At such time as decommissioning takes place the Applicant or its successors in interest shall enter into a Roadway use and Repair Agreement with the appropriate highway authority.
- H. Standard Conditions for Coordination with Local Fire Protection District
- (1) The Applicant shall submit to the local fire protection district a copy of the site plan.
- (2) Upon request by the local fire protection district, the Owner or Operator shall cooperate with the local fire protection district to develop the fire protection district's emergency response plan.
- (3) Nothing in this section shall alleviate the need to comply with all other applicable fire laws and regulations.
- I. Standard Conditions for Allowable Noise Level
- (1) Noise levels from any PV SOLAR FARM shall be in compliance with the applicable Illinois Pollution Control Board (IPCB) regulations (*35 Illinois Administrative Code* Subtitle H: Noise Parts 900, 901, 910).
- (2) The Applicant shall submit manufacturer's sound power level characteristics and other relevant data regarding noise characteristics of proposed PV SOLAR FARM equipment necessary for a competent noise analysis.
- (3) The Applicant, through the use of a qualified professional, as part of the siting approval application process, shall appropriately demonstrate compliance with the above noise requirements as follows:
- a. The SPECIAL USE permit application for other than a COMMUNITY PV SOLAR FARM shall include a noise analysis that includes the following:
- (a) The pre-development 24-hour ambient background sound level shall be identified at representative locations near the site of the proposed PV SOLAR FARM.
- (b) Computer modeling shall be used to generate the anticipated sound level resulting from the operation of the proposed PV SOLAR FARM within 1,500 feet of the proposed PV SOLAR FARM.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- (c) Results of the ambient background sound level monitoring and the modeling of anticipated sound levels shall be clearly stated in the application and the application shall include a map of the modeled noise contours within 1,500 feet of the proposed PV SOLAR FARM.
 - (d) The application shall also clearly state the assumptions of the computer model's construction and algorithms so that a competent and objective third party can as simply as possible verify the anticipated sound data and sound levels.
- b. For a COMMUNITY PV SOLAR FARM the Board may require submission of a noise analysis that meets the standard of paragraph 6.1.5 I.(3)a.
- (4) After construction of the PV SOLAR FARM, the Zoning Administrator shall take appropriate enforcement action as necessary to investigate noise complaints in order to determine the validity of the complaints and take any additional enforcement action as proves warranted to stop any violation that is occurring, including but not limited to the following:
 - a. The Zoning Administrator shall make the Environment and Land Use Committee aware of complaints about noise that have been received by the Complaint Hotline.
 - b. If the Environment and Land Use Committee determines that the noise is excessive, the Environment and Land Use Committee shall require the Owner or Operator to take reasonable steps to mitigate the excessive noise.
- J. Standard Conditions for Endangered Species Consultation
- The Applicant shall apply for consultation with the Endangered Species Program of the Illinois Department of Natural Resources. The Application shall include a copy of the Agency Action Report from the Endangered Species Program of the Illinois Department of Natural Resources or, if applicable, a copy of the Detailed Action Plan Report submitted to the Endangered Species Program of the Illinois Department of Natural Resources and a copy of the response from the Illinois Department of Natural Resources.
- K. Standard Conditions for Historic and Archaeological Resources Review
- The Applicant shall apply for consultation with the State Historic Preservation Officer of the Illinois Department of Natural Resources. The Application shall include a copy of the Agency Action Report from the State Historic Preservation Officer of the Illinois Department of Natural Resources.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

L. Standard Conditions for Acceptable Wildlife Impacts

The PV SOLAR FARM shall be located, designed, constructed, and operated so as to avoid and if necessary mitigate the impacts to wildlife to a sustainable level of mortality.

M. Screening and fencing**(1) Perimeter fencing**

- a. PV SOLAR FARM equipment and structures shall be fully enclosed and secured by a fence with a minimum height of 7 feet.
- b. Knox boxes and keys shall be provided at locked entrances for emergency personnel access.
- c. Vegetation between the fencing and the LOT LINE shall be maintained such that NOXIOUS WEEDS are controlled or eradicated consistent with the Illinois Noxious Weed Law (505 ILCS 100/1 et seq.). Management of the vegetation shall be explained in the application.

(2) Screening

- a. A visual screen shall be provided around the perimeter of the PV SOLAR FARM as follows:
 - (a) The visual screen shall be provided for any part of the PV SOLAR FARM that is visible to and located within {500 / 1,000} feet of a DWELLING or residential DISTRICT. However, the visual screen shall not be required if the PV SOLAR FARM is not visible to a DWELLING or residential DISTRICT by virtue of the existing topography.
 - (b) The visual screen shall be waived if the owner(s) of a relevant DWELLING(S) have agreed in writing to waive the screening requirement and a copy of the written waiver is submitted to the BOARD or GOVERNING BODY.
 - (c) The visual screen shall be a vegetated buffer as follows:
 - i. A vegetated visual screen buffer shall include a continuous line of native evergreen foliage and/or native shrubs and/or native trees and/or any existing wooded area and/ or plantings of tall native grasses and other native flowering plants and/or an area of agricultural crop production that will conceal the PV SOLAR FARM from view from adjacent abutting property may be authorized as an alternative visual screen subject to specific conditions.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- ii. Any vegetation that is part of the approved visual screen buffer shall be maintained in perpetuity of the PV SOLAR FARM. If the evergreen foliage below a height of 7 feet disappears over time, the screening shall be replaced.
 - iii. The continuous line of native evergreen foliage and/or native shrubs and/or native trees shall be planted at a minimum height of 5 feet tall and shall be planted in multiple rows as required to provide a 50% screen within 2 years of planting. The planting shall otherwise conform to Natural Resources Conservation Service Practice Standard 380 Windbreak/Shelterbreak Establishment except that the planting shall be located as close as possible to the PV SOLAR FARM fence while still providing adequate clearance for maintenance.
 - iv. A planting of tall native grasses and other native flowering plants may be used as a visual screen buffer for any PV module installation that is no more than 8 feet tall provided that the width of planting shall be as authorized by the BOARD and the planting shall otherwise be planted and maintained per the recommendations of the Natural Resources Conservation Service Practice Standard 327 Conservation Cover and further provided that the PV SOLAR FARM perimeter fence is opaque.
 - v. An area of agricultural crop production may also be authorized by the BOARD as an alternative visual screen buffer with a width of planting as authorized by the BOARD provided that the PV SOLAR FARM perimeter fence is opaque. Any area of crop production that is used as a vegetated visual screen shall be planted annually and shall be replanted as necessary to ensure a crop every year regardless of weather or market conditions.
 - vi. Any vegetated screen buffer shall be detailed in a landscape plan drawing that shall be included with the PV SOLAR FARM SPECIAL USE permit application.
- N. Standard Conditions to Minimize Glare
- (1) The design and construction of the PV SOLAR FARM shall minimize glare that may affect adjacent properties and the application shall include an explanation of how glare will be minimized.
 - (2) After construction of the PV SOLAR FARM, the Zoning Administrator shall take appropriate enforcement action as necessary to investigate

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

complaints of glare in order to determine the validity of the complaints and take any additional enforcement action as proves warranted to stop any significant glare that is occurring, including but not limited to the following:

- a. The Zoning Administrator shall make the Environment and Land Use Committee aware of complaints about glare that have been received by the Complaint Hotline.
- b. If the Environment and Land Use Committee determines that the glare is excessive, the Environment and Land Use Committee shall {require / consult with} the Owner or Operator to take reasonable steps to mitigate the excessive glare such as the installation of additional screening.

O. Standard Condition for Liability Insurance

- (1) The Owner or Operator of the PV SOLAR FARM shall maintain a current general liability policy covering bodily injury and property damage with minimum limits of a least \$5 million per occurrence and \$5 million in the aggregate.
- (2) The general liability policy shall identify landowners in the SPECIAL USE permit as additional insured.

P. Operational Standard Conditions**(1) Maintenance**

- a. The Owner or Operator of the PV SOLAR FARM must submit, on an annual basis, a summary of operation and maintenance reports to the Environment and Land Use Committee and any other operation and maintenance reports as the Environment and Land Use Committee reasonably requests.
- b. Any physical modification to the PV SOLAR FARM that increases the number of solar conversion devices or structures and/ or the land area occupied by the PV SOLAR FARM shall require a new County Board SPECIAL USE Permit. Like-kind replacements shall not require re-certification nor will replacement of transformers, cabling, etc. provided replacement is done in a fashion similar to the original installation.
- c. The Application shall explain methods and materials used to clean the PV SOLAR FARM equipment including an estimation of the daily and annual gallons of water used and the source of the water and the management of wastewater. The BOARD may request copies of well records from the Illinois State Water Survey and may

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

require an estimate by a qualified hydrogeologist of the likely impact on adjacent waterwells.

- (2) **Materials Handling, Storage and Disposal**
 - a. All solid wastes related to the construction, operation and maintenance of the PV SOLAR FARM shall be removed from the site promptly and disposed of in accordance with all federal, state and local laws.
 - b. All hazardous materials related to the construction, operation and maintenance of the PV SOLAR FARM shall be handled, stored, transported and disposed of in accordance with all applicable local, state and federal laws.
- (3) **Vegetation management**
 - a. The PV SOLAR FARM SPECIAL USE permit application shall include a weed control plan for the total area of the SPECIAL USE permit including areas both inside of and outside of the perimeter fencing.
 - b. The weed control plan shall ensure the control and/ or eradication of NOXIOUS WEEDS consistent with the Illinois Noxious Weed Law (505 ILCS 100/1 et seq.)
 - c. The weed control plan shall be explained in the application.

Q. Standard Condition for Decommissioning Plan and Site Reclamation Plan

- (1) The Applicant shall submit a signed site reclamation plan conforming to the requirements of paragraph 6.1.1 A.
- (2) In addition to the purposes listed in subparagraph 6.1.1 A.4. the reclamation plan shall also include provisions for anticipated repairs to any public STREET used for the purpose of reclamation of the PV SOLAR FARM and all costs related to removal of access driveways.
- (3) The site reclamation plan required in paragraph 6.1.1 A. shall also include the following:
 - a. A stipulation that the applicant or successor shall notify the GOVERNING BODY by certified mail of the commencement of voluntary or involuntary bankruptcy proceeding, naming the applicant as debtor, within ten days of commencement of the proceeding.
 - b. A stipulation that the applicant shall agree that the sale, assignment in fact or law, or such other transfer of applicant's financial interest in the PV SOLAR FARM shall in no way affect or change applicant's obligation to continue to comply with the terms of this plan. Any

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

successor in interest, assignee, and all parties to the decommissioning plan and site reclamation plan shall assume the terms, covenants, and obligations of this plan and agrees to assume all reclamation liability and responsibility for the PV SOLAR FARM.

- c. Authorization for the GOVERNING BODY and its authorized representatives for right of entry onto the PV SOLAR FARM premises for the purpose of inspecting the methods of reclamation or for performing actual reclamation if necessary.
- d. A stipulation that at such time as decommissioning takes place the applicant, its successors in interest, and all parties to the decommissioning plan and site reclamation plan are required to enter into a Roadway Use and Repair Agreement with the relevant highway authority.
- e. A stipulation that the Applicant, its successors in interest, and all parties to the decommissioning plan and site reclamation plan shall provide evidence of any new, additional, or substitute financing or security agreement to the Zoning Administrator throughout the operating lifetime of the project.
- f. A stipulation that the Applicant, its successors in interest, and all parties to the decommissioning plan and site reclamation plan shall be obliged to perform the work in the site reclamation plan before abandoning the PV SOLAR FARM or prior to ceasing production of electricity from the PV SOLAR FARM, after it has begun, other than in the ordinary course of business. This obligation shall be independent of the obligation to pay financial assurance, and shall not be limited by the amount of financial assurance. The obligation to perform the reclamation work shall constitute a covenant running with the land.
- g. The site reclamation plan shall provide for payment of any associated costs that Champaign County may incur in the event that decommissioning is actually required. Associated costs include all administrative and ancillary costs associated with drawing upon the financial assurance and performing the reclamation work and shall include but not be limited to attorney's fees; construction management and other professional service fees; and the costs of preparing request for proposals and bidding documents required to comply with state law or Champaign County purchasing policies.
- h. The depth of removal of foundation concrete below ground shall be a minimum of 54 inches. The depth of removal of foundation concrete shall be certified in writing by an Illinois Licensed Professional Engineer and the certification shall be submitted to the Zoning Administrator.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- i. Underground electrical cables at a depth of 5 feet or greater may be left in place.
 - j. The hole resulting from the removal of foundation concrete during decommissioning shall be backfilled as follows:
 - (a) The excavation resulting from the removal of foundation concrete shall only be backfilled with subsoil and topsoil in similar depths and similar types as existed at the time of the original PV SOLAR FARM construction except that a lesser quality topsoil or a combination of a lesser quality topsoil and a subsoil that is similar to the native subsoil may be used at depths corresponding to the native subsoil but not less than 12 inches below grade.
 - (b) The native soils excavated at the time of the original PV SOLAR FARM construction may be used to backfill the concrete foundation excavations at the time of decommissioning provided that the soils are adequately stored throughout the operating lifetime of the PV SOLAR FARM. The methods for storing the excavated native soils during the operating lifetime of the PV SOLAR FARM shall be included in the site reclamation plan.
 - (c) If the excavated native soils are not stored for use for backfilling the concrete foundation excavations, a qualified soil scientist or Illinois Licensed Professional Engineer shall certify that the actual soils used to backfill the concrete foundation excavations are of equal or greater quality than the native soils or that, in the case of subsoil, the backfill soil meets the requirements of this paragraph. The certification shall be submitted to the Zoning Administrator.
 - (d) An Illinois Licensed Professional Engineer shall certify in writing that the concrete foundation excavations have been backfilled with soil to such a depth and with a minimum of compaction that is consistent with the restoration of productive agricultural use such that the depth of soil is expected to be no less than 54 inches within one year after backfilling.
 - k. A stipulation that should the site reclamation plan be deemed invalid by a court of competent jurisdiction the PV SOLAR FARM SPECIAL USE permit shall be deemed void.
 - l. A stipulation that the Applicant's obligation to complete the site reclamation plan and to pay all associated costs shall be independent of the Applicant's obligation to provide financial assurance.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- m. A stipulation that the liability of the Applicant's failure to complete the site reclamation plan or any breach of the site reclamation plan requirement shall not be capped by the amount of the financial assurance.
- n. If the Applicant desires to remove equipment or property credited to the estimated salvage value without the concurrent replacement of the property with property of equal or greater salvage value or if the Applicant installs equipment or property increasing the cost of decommissioning after the PV SOLAR FARM begins to produce electricity, at any point, the Applicant shall first obtain the consent of the Zoning Administrator. If the Applicant's lien holders remove equipment or property credited to the salvage value the Applicant shall promptly notify the Zoning Administrator. In either of these events the total financial assurance shall be adjusted to reflect any change in total salvage value and total decommissioning costs resulting from any such removal or installation.
- (4) To comply with paragraph 6.1.1 A.5., the Applicant shall provide financial assurance in the form of an irrevocable letter of credit and an escrow account as follows:
- a. At the time of Special Use Permit approval, the amount of financial assurance to be provided for the site reclamation plan shall be 125% of the decommissioning cost as determined in the independent engineer's cost estimate to complete the decommissioning work described in Sections 6.1.1 A.4.a. and 6.1.1 A.4.b. and 6.1.1 A.4.c. and shall otherwise be compliant with Section 6.1.1.A.5. except that if the SOLAR PV modules have an unlimited warranty of at least 10 years and also have a limited power warranty to provide not less than 80% nominal power output up to 25 years and proof of that warranty is provided at the time of Zoning Use Permit approval, financial assurance may be provided for the site reclamation plan as follows:
- (a) No Zoning Use Permit to authorize construction of the SOLAR FARM shall be authorized by the Zoning Administrator until the SOLAR FARM owner shall provide the County with Financial Assurance to cover {12.5% / 25% / 50%} of the decommissioning cost as determined in the independent engineer's cost estimate to complete the decommissioning work described in Sections 6.1.1 A.4.a. and 6.1.1 A.4.b. and 6.1.1 A.4.c. and otherwise compliant with Section 6.1.1 A.5.
- (b) On or before the sixth anniversary of the Commercial Operation Date, the SOLAR FARM Owner shall provide the

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- County with Financial Assurance to cover 62.5% of the decommissioning cost as determined in the independent engineer's cost estimate to complete the decommissioning work described in Sections 6.1.1 A.4.a. and 6.1.1 A.4.b. and 6.1.1 A.4.c. and otherwise compliant with Section 6.1.1 A.5.
- (c) On or before the eleventh anniversary of the Commercial Operation Date, the SOLAR FARM Owner shall provide the County with Financial Assurance to cover 125% of the decommissioning cost as determined in the independent engineer's cost estimate to complete the decommissioning work described in Sections 6.1.1 A.4.a. and 6.1.1 A.4.b. and 6.1.1 A.4.c. and otherwise compliant with Section 6.1.1 A.5.
- b. Net salvage value may be deducted from decommissioning costs as follows:
- (a) One of the following standards shall be met:
- i. The Applicant shall maintain the PV SOLAR FARM free and clear of liens and encumbrances, including financing liens and shall provide proof of the same prior to issuance of the SPECIAL USE Permit; or
 - ii. The Applicant shall deduct from the salvage value credit the amount of any lien or encumbrance on the PV SOLAR FARM; or
 - iii. Any and all financing and/or financial security agreements entered into by the Applicant shall expressly provide that the agreements are subject to the covenant required by Section 6.1.1 A.2 that the reclamation work be done.
- (b) The Applicant shall provide proof of compliance with paragraph 6.1.5. Q.(4)b.(a) prior to issuance of any Zoning Use Permit and upon every renewal of the financial assurance and at any other time upon the request of the Zoning Administrator.
- (c) The Applicant shall provide in the site reclamation plan for legal transfer of the STRUCTURE to the demolisher to pay the costs of reclamation work, should the reclamation work be performed.
- (d) The net estimated salvage value that is deducted from the estimated decommissioning costs shall be the salvage value that results after all related costs for demolition and any

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- required preparation for transportation for reuse or recycling or for simple disposal and other similar costs including but not limited to the decommissioning of the PV SOLAR FARM STRUCTURES, equipment, and access roads.
- (e) Estimated salvage value shall be based on the average salvage price of the past five years as published in a reputable source for salvage values and shall reflect sound engineering judgment as to anticipated changes in salvage prices prior to the next update of estimated net salvage value.
 - (f) The deduction from the estimated decommissioning costs for net estimated salvage value shall be capped at 70% of the total net estimated salvage value even though the total actual salvage value shall be available in the event that decommissioning is actually required.
 - (g) The total financial assurance after deduction of the net estimated salvage value shall not {be less than \$1,000 per acre / exceed 150% of the decommissioning costs}.
 - (h) The credit for net estimated salvage value attributable to any PV SOLAR FARM may not exceed the estimated cost of removal of the above-ground portion of that PV SOLAR FARM on the subject site.
- c. The GOVERNING BODY has the right to require multiple letters of credit based on the regulations governing federal insurance for deposits.
 - d. The Applicant shall adjust the amount of the financial assurance to ensure that it reflects current and accurate information as follows:
 - (a) At least once every three years for the first 12 years of the financial assurance and at least once every two years thereafter or, if the SOLAR PV modules have an unlimited warranty of at least 10 years and also have a limited power warranty to provide not less not than 80% nominal power output up to 25 years and proof of that warranty is provided at the time of Zoning Use Permit approval, then at least once every five years for the first 25 years of the financial assurance and at least once every two years thereafter, the Applicant shall use an independent Illinois Licensed Professional Engineer to provide updated estimates of decommissioning costs and salvage value, by including any changes due to inflation and/or change in salvage price. The Applicant shall, upon receipt, provide a copy of the adjusted Professional Engineer's report to the Zoning Administrator.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- (b) At all times, the total combined value of the irrevocable letter of credit and the escrow account shall equal or exceed the amount of the independent engineer's cost estimate as increased by known and documented rates of inflation based on the Consumer Price Index since the PV SOLAR FARM was approved.
- e. The applicant or PV SOLAR FARM owner shall gradually pay down the value of the irrevocable letter of credit by placing cash deposits in an escrow account in equal annual installments over the first 13 years of the PV SOLAR FARM operation except that if the SOLAR PV modules have an unlimited warranty of at least 10 years and also have a limited power warranty to provide not less not than 80% nominal power output up to 25 years and proof of that warranty is provided at the time of Zoning Use Permit approval, the applicant or SOLAR FARM owner may gradually pay down the value of the irrevocable letter of credit by placing cash deposits in an escrow account in equal annual installments over the 20th through the 25th years of the SOLAR FARM operation, as follows:
- (a) The applicant or PV SOLAR FARM owner and the GOVERNING BODY shall agree on a mutually acceptable financial institution at which an escrow account shall be established.
- (b) The GOVERNING BODY shall be the beneficiary of the escrow account for the purpose of the reclamation of the PV SOLAR FARM in the event that the PV SOLAR FARM owner is incapable of decommissioning the PV SOLAR FARM.
- (c) The applicant or PV SOLAR FARM owner shall grant perfected security in the escrow account by use of a control agreement establishing the County as an owner of record, pursuant to the Secured Transactions Article of the Uniform Commercial Code, 810 ILCS 9/101 et seq.
- (d) The applicant or SOLAR FARM owner shall make equal annual deposits to the escrow account over a time period as required in Section 6.1.5 Q.(4)e. and shall simultaneously provide a replacement irrevocable letter of credit that is reduced accordingly.
- (e) At all times the total combined value of the irrevocable letter of credit and the escrow account shall be increased annually as necessary to reflect actual rates of inflation over the life span of the SOLAR FARM and the amount shall be equal to or exceed 125% of the amount of the independent engineer's cost estimate as increased by known and documented rates of inflation since the SOLAR FARM was approved.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- (f) Any interest accrued on the escrow account that is over and above the total value required by subparagraph 6.1.5 Q.(4)b. shall go to the PV SOLAR FARM owner.
 - (g) In order to provide funding for decommissioning at the time of decommissioning, the PV SOLAR FARM applicant or PV SOLAR FARM owner may exchange a new irrevocable letter of credit in an amount equal to the amount in the escrow account in exchange for the GOVERNING BODY agreeing to a release of the full amount of the escrow account.
- f. Should the salvage value of components be adjusted downward or the decommissioning costs adjusted upward pursuant to paragraph 6.1.5 Q.(4)d., the amount to be placed in the escrow account pursuant to this paragraph 6.1.5 Q.(4) shall be increased to reflect the adjustment, as if the adjusted estimate were the initial estimate.
 - g. Any financial assurance required per the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5 R. shall count towards the total financial assurance required for compliance with paragraph 6.1.1 A.5.
 - h. Unless the Governing Body approves otherwise, the Champaign County State's Attorney's Office shall review and approve every Letter of Credit and every agreement regarding the Escrow Account prior to acceptance by the Zoning Administrator.
- (5) In addition to the conditions listed in subparagraph 6.1.1 A.9. the Zoning Administrator may also draw on the funds for the following reasons:
- a. In the event that any PV SOLAR FARM or component thereof ceases to be functional for more than six consecutive months after it starts producing electricity and the Owner is not diligently repairing such PV SOLAR FARM or component.
 - b. In the event that the Owner declares the PV SOLAR FARM any PV SOLAR FARM component to be functionally obsolete for tax purposes.
 - c. There is a delay in the construction of any PV SOLAR FARM of more than 6 months after construction on that PV SOLAR FARM begins.
 - d. Any PV SOLAR FARM or component thereof that appears in a state of disrepair or imminent collapse and/or creates an imminent threat to the health or safety of the public or any person.
 - e. Any PV SOLAR FARM or component thereof that is otherwise derelict for a period of 6 months.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- f. The PV SOLAR FARM is in violation of the terms of the PV SOLAR FARM SPECIAL USE permit for a period exceeding ninety (90) days.
 - g. The Applicant has failed to maintain financial assurance in the form and amount required by the special use permit or compromised the COUNTY's interest in the site reclamation plan.
 - h. The COUNTY discovers any material misstatement of fact or misleading omission of fact made by the Applicant in the course of the special use permit zoning case.
 - i. The Applicant has either failed to receive a copy of the certification of design compliance required by paragraph 6.1.5 D. or failed to submit it to the County within 12 consecutive months of receiving a Zoning Use Permit regardless of the efforts of the Applicant to obtain such certification.
- (6) The Zoning Administrator may, but is not required to, deem the PV SOLAR FARM abandoned, or the standards set forth in Section 6.1.5 Q.(5) met, with respect to some, but not all, of the PV SOLAR FARM. In that event, the Zoning Administrator may draw upon the financial assurance to perform the reclamation work as to that portion of the PV SOLAR FARM only. Upon completion of that reclamation work, the salvage value and reclamation costs shall be recalculated as to the remaining PV SOLAR FARM.
 - (7) The Site Reclamation Plan shall be included as a condition of approval by the BOARD and the signed and executed irrevocable letter of credit and evidence of the escrow account must be submitted to the Zoning Administrator prior to any Zoning Use Permit approval.
- R. Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture.
- (1) If provided by state law, the Applicant shall enter into an Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture.
 - (2) The Applicant shall bear full responsibility for coordinating any special conditions required in the SPECIAL USE Permit in order to ensure compliance with the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture.
 - (3) All requirements of the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture shall become requirements of the County Board SPECIAL USE Permit.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- (4) Champaign County shall have the right to enforce all requirements of the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture.

S. Complaint Hotline

- (1) Prior to the commencement of construction on the PV SOLAR FARM and during the entire term of the County Board SPECIAL USE permit and any extension, the Applicant and Owner shall establish a telephone number hotline for the general public to call with any complaints or questions.
- (2) The telephone number hotline shall be publicized and posted at the operations and maintenance center and the construction marshalling yard.
- (3) The telephone number hotline shall be manned during usual business hours and shall be an answering recording service during other hours.
- (4) Each complaint call to the telephone number hotline shall be logged and identify the name and address of the caller and the reason for the call.
- (5) All calls shall be recorded and the recording shall be saved for transcription for a minimum of two years.
- (6) A copy of the telephone number hotline shall be provided to the Zoning Administrator on a monthly basis.
- (7) The Applicant and Owner shall take necessary actions to resolve all legitimate complaints.

T. Standard Condition for Expiration of PV SOLAR FARM County Board SPECIAL USE Permit

A PV SOLAR FARM County Board SPECIAL USE Permit designation shall expire in 10 years if no Zoning Use Permit is granted.

U. Application Requirements

- (1) In addition to all other information required on the SPECIAL USE Permit application and required by Section 9.1.11 A.2. the application shall contain or be accompanied by the following information:
- a. A PV SOLAR FARM Project Summary, including, to the extent available:
- (a) A general description of the project, including its approximate DC and AC generating capacity; the maximum number and type of solar devices; the potential equipment manufacturer(s).

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

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- (b) The specific proposed location of the PV SOLAR FARM including all tax parcels on which the PV SOLAR FARM will be constructed.
 - (c) The specific proposed location of all tax parcels required to be included in the PV SOLAR FARM County Board SPECIAL USE Permit.
 - (d) A description of the Applicant; Owner and Operator, including their respective business structures.
- b. The name(s), address(es), and phone number(s) of the Applicant(s), Owner and Operator, and all property owner(s) for the PV SOLAR FARM County Board SPECIAL USE permit.
 - c. A site plan for the SOLAR FARM indicating the following:
 - (a) The approximate planned location of all PV SOLAR FARM STRUCTURES, property lines (including identification of adjoining properties), required separations, public access roads and turnout locations, access driveways, solar devices, electrical inverter(s), electrical transformer(s), cabling, switching station, electrical cabling from the PV SOLAR FARM to the Substations(s), ancillary equipment, screening and fencing, third party transmission lines, meteorological station, maintenance and management facilities, and layout of all structures within the geographical boundaries of any applicable setback.
 - (b) The site plan shall clearly indicate the area of the proposed PV SOLAR FARM County Board SPECIAL USE Permit as required by subparagraph 6.1.5 A.(1).
 - (c) The location of all below-ground wiring.
 - (d) The location, height, and appearance of all above-ground wiring and wiring structures.
 - (e) The separation of all PV SOLAR FARM structures from adjacent DWELLINGS and/ or PRINCIPAL BUILDINGS or uses shall be dimensioned on the approved site plan and that dimension shall establish the effective minimum separation that shall be required for any Zoning Use Permit. Greater separation and somewhat different locations may be provided in the approved site plan for the Zoning Use Permit provided that that the greater separation does not increase the noise impacts and /or glare that were approved in the PV SOLAR FARM County Board SPECIAL USE Permit. PV SOLAR FARM structures

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

includes substations, third party transmission lines, maintenance and management facilities, or other significant structures.

- d. All other required studies, reports, certifications, and approvals demonstrating compliance with the provisions of this Ordinance.
 - e. The PV SOLAR FARM SPECIAL USE permit application shall include documentation that the applicant has provided a complete copy of the SPECIAL USE permit application to any municipality within one-and-one-half miles of the proposed PV SOLAR FARM as required by Section 6.1.5 B.(2)a.(b).
 - f. A municipal resolution regarding the PV SOLAR FARM by any municipality located within one-and-one-half miles of the PV SOLAR FARM must be submitted to the ZONING ADMINISTRATOR prior to the consideration of the PV SOLAR FARM SPECIAL USE permit by the Champaign County Board or, in the absence of such a resolution, the ZONING ADMINISTRATOR shall provide documentation to the County Board that any municipality within one-and-one-half miles of the PV SOLAR FARM was provided notice of the meeting dates for consideration of the proposed PV SOLAR FARM SPECIAL USE Permit for both the Environment and Land Use Committee and the County Board as required by Section 6.1.5 B.(2)a.(c).
 - g. Documentation of an executed interconnection agreement with the appropriate electric utility shall be provided prior to issuance of a Zoning Compliance Certificate to authorize operation of the PV SOLAR FARM as required by Section 6.1.5 B.(3)b.
- (2) The Applicant shall notify the COUNTY of any changes to the information provided above that occurs while the County Board SPECIAL USE permit application is pending.
 - (3) The Applicant shall include a copy of the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture with the Zoning Use Permit Application to authorize construction.

9. Add the following paragraph 9.3.1 J. for Zoning Use Permit fee:

- J. PV SOLAR FARM with not more than 7.5 megawatt nameplate rating..... \$1,800 per megawatt (includes COMMUNITY PV SOLAR FARM)
- PV SOLAR FARM with nameplate rating of more than 7.5 megawatts.... \$13,500 plus \$1,260 for each megawatt more than 7.5 megawatts

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

10. Revise subsection 9.3.3 as follows:**9.3.3 Zoning Case Filing Fees****A. General Provisions**

- (1) No zoning case filing shall be accepted until the filing fee has been paid.
- (2) No zoning case filing fee shall be waived unless the Zoning Administrator determines that the petition is the only means reasonably available to bring a property into compliance with the provisions of this ordinance and the non-compliance is due solely to staff error.
- (3) No zoning case filing fee shall be refunded after required legal notice has been made by mail or publication unless the Zoning Administrator determines such filing to have been based solely upon staff error.
- (4) No amendment to any petition which requires new legal notice shall be considered until an amended petition fee has been received unless the Zoning Administrator determines such amendment to be required due solely to staff error.
- (5) The fee for SPECIAL USE permits shall be determined based on the larger of the following (except for County Board WIND FARM or PV SOLAR FARM SPECIAL USE Permits):
 - a. the area of farmland taken out of production as a result of the SPECIAL USE; or
 - b. when farmland will not be taken out of production as a result of the SPECIAL USE, the land area taken up by the existing STRUCTURES and all proposed CONSTRUCTION proposed in the SPECIAL USE application.
- (6) When some combination of VARIANCE, SPECIAL USE and Map Amendment cases is required simultaneously for the same property, the total filing fee shall include the following (except for County Board WIND FARM or PV SOLAR FARM Special Use Permits):
 - a. The standard fee for the most expensive individual zoning case; and
 - b. one-half of the standard fee for any other required VARIANCE, SPECIAL USE, or Map Amendment provided that
 - c. no additional fees shall be included for multiple zoning cases of the same type that can be advertised in the same legal advertisement.

Attachment I. Revised Proposed Amendment - Clean

June 7, 2018

B. Fees

(1) VARIANCES

a. ADMINISTRATIVE VARIANCES..\$100

b. Minor or Major VARIANCES.....\$200

(2) SPECIAL USE permits and Map Amendments (except for County Board WIND FARM or PV SOLAR FARM Special Use Permit)

a. Two acres or less and Base Fee for larger areas\$400

b. More than two acres but no more than 12 acres add \$40 per acre to Base Fee for each acre over two acres

c. More than 12 acres add \$10 per acre for each acre over 12 acres and add to fees in a. and b. above

(3) Appeals and Interpretations.....\$200

(4) Change of Nonconforming Use.....\$100

(5) Amendment to Petitions (requiring new legal notice)\$100

(6) County Board WIND FARM Special Use Permit..... \$20,000 or \$440 per WIND FARM TURBINE TOWER, whichever is greater

(7) BIG WIND TURBINE TOWER SPECIAL USE Permit per BIG WIND TURBINE TOWER.....\$3,300

(8) County Board PV SOLAR FARM Special Use Permit

PV SOLAR FARM with not more than 7.5 megawatt nameplate rating.....\$1,320 per megawatt (includes COMMUNITY PV SOLAR FARM)

PV SOLAR FARM with nameplate rating of more than 7.5 megawatts to 112.5 megawatts.....\$9,240 plus \$102 for each megawatt more than 7.5 megawatts and up to 112.5 megawatts

PV SOLAR FARM with more than 112.5 megawatt nameplate rating..... \$180 per megawatt

REVISED DRAFT 06/14/18

895-AT-18

**FINDING OF FACT
AND FINAL DETERMINATION
of**

Champaign County Zoning Board of Appeals

Final Determination: ***{RECOMMEND ENACTMENT/RECOMMEND DENIAL}***

Date: ***{JUNE 14, 2018}***

Petitioner: **Zoning Administrator**

Request: **Part A: Amend Section 3 by adding definitions for “NOXIOUS WEEDS” and “PV SOLAR FARM.”**

Part B: Add paragraph 4.2.1 C.5. to indicate that PV SOLAR FARM may be authorized by County Board SPECIAL USE permit as a second PRINCIPAL USE on a LOT in the AG-1 DISTRICT or the AG-2 DISTRICT.

Part C: Amend Section 4.3.1 to exempt PV SOLAR FARM from the height regulations except as height regulations are required as a standard condition in new Section 6.1.5.

Part D. Amend subsection 4.3.4 A. to exempt WIND FARM LOT and PV SOLAR FARM LOT from the minimum LOT requirements of Section 5.3 and paragraph 4.3.4 B. except as minimum LOT requirements are required as a standard condition in Section 6.1.4 and new Section 6.1.5.

Part E. Amend subsection 4.3.4 H.4. to exempt PV SOLAR FARM from the Pipeline Impact Radius regulations except as Pipeline Impact Radius regulations are required as a standard condition in new Section 6.1.5.

Part F. Amend Section 5.2 by adding “PV SOLAR FARM” as a new PRINCIPAL USE under the category “Industrial Uses: Electric Power Generating Facilities” and indicate that PV SOLAR FARM may be authorized by a County Board SPECIAL USE Permit in the AG-1 Zoning DISTRICT and the AG-2 Zoning DISTRICT and add new footnote 15. to exempt a PV SOLAR FARM LOT from the minimum LOT requirements of Section 5.3 and paragraph 4.3.4 B. except as minimum LOT requirements are required as a standard condition in new Section 6.1.5.

Part G. Add new paragraph 5.4.3 F. that prohibits the Rural Residential OVERLAY DISTRICT from being established inside a PV SOLAR FARM County Board SPECIAL USE Permit.

REVISED DRAFT 06/14/18

Part H. Amend Subsection 6.1.1 A. as follows:

- 1. Add PV SOLAR FARM as a NON-ADAPTABLE STRUCTURE and add references to the new Section 6.1.5 where there are existing references to existing Section 6.1.4.**
- 2. Revise subparagraph 6.1.1 A.11.c. by deleting reference to Section 6.1.1 A. and add reference to Section 6.1.1 A.2.**

Part I. Add new subsection 6.1.5 PV SOLAR FARM County Board SPECIAL USE Permit with new standard conditions for PV SOLAR FARM.

Part J. Add new subsection 9.3.1 J. to add application fees for a PV SOLAR FARM zoning use permit.

Part K. Add new subparagraph 9.3.3 B.8. to add application fees for a PV SOLAR FARM County Board SPECIAL USE permit.

CONTENTS

Finding of Fact	2 - 40
Summary Finding of Fact	41
Documents of Record.....	42 - 48
Final Determination.....	49
Proposed Amendment	attachment

FINDING OF FACT

From the documents of record and the testimony and exhibits received at the public hearing conducted on **March 1, 2018, March 15, 2018, March 29, 2018, April 5, 2018, April 12, 2018, April 26, 2018, May 3, 2018, and June 14, 2018,** the Zoning Board of Appeals of Champaign County finds that:

1. The petitioner is the Zoning Administrator.
2. The proposed amendment is intended to establish the requirements for PV SOLAR FARMS in the Zoning Ordinance.
3. Municipalities with zoning and townships with planning commissions have protest rights on all text amendments and they are notified of such cases.

SUMMARY OF THE PROPOSED AMENDMENT

4. The proposed amendment is attached to this Finding of Fact as it will appear in the Zoning Ordinance. The proposed amendments have been included for the following reasons:
 - A. Regarding Part A, to amend Section 3 by adding definitions including but not limited to “NOXIOUS WEEDS” and “PV SOLAR FARM”, new definitions must be included to be as specific as possible in how the terms should be understood and applied in the Zoning Ordinance.
 - B. Regarding Part B, to add paragraph 4.2.1 C.5. indicating that a PV SOLAR FARM may be authorized by County Board SPECIAL USE permit as a second PRINCIPAL USE on a LOT in the AG-1 DISTRICT or the AG-2 DISTRICT, the Zoning Administrator has determined that PV SOLAR FARM property valuation is within the purview of the Champaign County Board, and it should thus be the County Board that approves or denies a Special Use Permit for a PV SOLAR FARM rather than the Zoning Board of Appeals.
 - C. Regarding Part C, to amend Section 4.3.1 to exempt PV SOLAR FARM from the height regulations except as height regulations are required as a standard condition in new Section 6.1.5., Section 6.1.5 establishes that PV SOLAR FARM height will be considered on a case by case basis as part of the permitting process.
 - D. Regarding Part D, to amend subsection 4.3.4 A. to exempt WIND FARM LOT and PV SOLAR FARM LOT from the minimum LOT requirements of Section 5.3 and paragraph 4.3.4 B. except as minimum LOT requirements are required as a standard condition in Section 6.1.4 and new Section 6.1.5., there are no septic systems on a PV SOLAR FARM that would require a minimum amount of land to install.
 - E. Regarding Part E, to amend subsection 4.3.4 H.4. to exempt PV SOLAR FARM from the Pipeline Impact Radius regulations except as Pipeline Impact Radius regulations are required as a standard condition in new Section 6.1.5., the proposed amendment is more specific in that it requires that no PV SOLAR FARM development take place within the Pipeline Impact Radius unless a crossing agreement has been entered into with the relevant party.

- F. Regarding Part F, to amend Section 5.2 by adding “PV SOLAR FARM” as a new PRINCIPAL USE under the category “Industrial Uses: Electric Power Generating Facilities” and indicate that PV SOLAR FARM may be authorized by a County Board SPECIAL USE Permit in the AG-1 Zoning DISTRICT and the AG-2 Zoning DISTRICT and add new footnote 15. to exempt a PV SOLAR FARM LOT from the minimum LOT requirements of Section 5.3 and paragraph 4.3.4 B. except as minimum LOT requirements are required as a standard condition in new Section 6.1.5., the proposed amendment establishes a PV SOLAR FARM as a unique use that does not exist in the Zoning Ordinance, and that has unique characteristics which require conditions specific to a PV SOLAR FARM development.
- G. Regarding Part G, to add new paragraph 5.4.3 F. that prohibits the Rural Residential OVERLAY DISTRICT from being established inside a PV SOLAR FARM County Board SPECIAL USE Permit, the proposed amendment reflects that Rural Residential Overlay Districts have specific requirements that differ greatly from what would be required for a PV SOLAR FARM and the two uses cannot exist simultaneously.
- H. Regarding Part H, to amend Subsection 6.1.1 A. by 1) adding a PV SOLAR FARM as a NON-ADAPTABLE STRUCTURE and add references to the new Section 6.1.5 where there are existing references to existing Section 6.1.4. and 2) revising subparagraph 6.1.1 A.11.c. by deleting reference to Section 6.1.1 A. and adding reference to Section 6.1.1 A.2., the proposed amendment cleans up the existing ordinance to ensure that the proper references are directed to WIND FARMS and PV SOLAR FARMS, as applicable.
- I. Regarding Part I, to add new subsection 6.1.5 PV SOLAR FARM County Board SPECIAL USE Permit with new standard conditions for PV SOLAR FARM, the proposed amendment gives this new land use a similar level of consideration as subsection 6.1.4 for WIND FARMS.
- J. Regarding Part J, to add new subsection 9.3.1 J. adding application fees for a PV SOLAR FARM zoning use permit, the proposed amendment reflects the unique characteristics of a PV SOLAR FARM in the proposed fees, and makes the Zoning Ordinance clear on the costs to developers for a Zoning Use Permit that differ from the standard Zoning Use Permit fees.
- K. Regarding Part K, to add new subparagraph 9.3.3 B.8. adding application fees for a PV SOLAR FARM County Board SPECIAL USE permit, the proposed amendment reflects the unique characteristics of a PV SOLAR FARM in the proposed fees, and makes the Zoning Ordinance clear on the costs to developers for this Special Use that differ from the standard Special Use Permit fees.
- L. Attachment B to Supplemental Memorandum #6 dated March 29, 2018, provides the source and/or justification for all proposed PV SOLAR FARM standard conditions.

GENERALLY REGARDING THE LRMP GOALS, OBJECTIVES, AND POLICIES

- 5. The *Champaign County Land Resource Management Plan* (LRMP) was adopted by the County Board on April 22, 2010. The LRMP Goals, Objectives, and Policies were drafted through an inclusive and public process that produced a set of ten goals, 42 objectives, and 100 policies, which are currently the only guidance for amendments to the *Champaign County Zoning Ordinance*, as follows:

- A. The Purpose Statement of the LRMP Goals, Objectives, and Policies is as follows:
 “It is the purpose of this plan to encourage municipalities and the County to protect the land, air, water, natural resources and environment of the County and to encourage the use of such resources in a manner which is socially and economically desirable. The Goals, Objectives and Policies necessary to achieve this purpose are as follows:”
- B. The LRMP defines Goals, Objectives, and Policies as follows:
- (1) Goal: an ideal future condition to which the community aspires
 - (2) Objective: a tangible, measurable outcome leading to the achievement of a goal
 - (3) Policy: a statement of actions or requirements judged to be necessary to achieve goals and objectives
- C. The Background given with the LRMP Goals, Objectives, and Policies further states, “Three documents, the *County Land Use Goals and Policies* adopted in 1977, and two sets of *Land Use Regulatory Policies*, dated 2001 and 2005, were built upon, updated, and consolidated into the LRMP Goals, Objectives and Policies.

REGARDING LRMP GOALS

6. LRMP Goal 1 is entitled “Planning and Public Involvement” and states as follows:
Champaign County will attain a system of land resource management planning built on broad public involvement that supports effective decision making by the County.

Goal 1 has 4 objectives and 4 policies. The proposed amendment will **NOT IMPEDE** the achievement of Goal 1.

7. LRMP Goal 2 is entitled “Governmental Coordination” and states as follows:

Champaign County will collaboratively formulate land resource and development policy with other units of government in areas of overlapping land use planning jurisdiction.

Goal 2 has two objectives and three policies. Objective 2.2 does not appear to be relevant to the proposed text amendment. The proposed amendment will **HELP ACHIEVE** Goal 2 for the following reasons:

- A. Objective 2.1 states: “**Champaign County will coordinate land resource management planning with all County jurisdictions and, to the extent possible, in the larger region.**”

The proposed amendment will **HELP ACHIEVE** Objective 2.1 for the following reasons:

- (1) The proposed amendment will **NOT IMPEDE** the achievement of Policy 2.1.1.
- (2) Policy 2.1.2 states: “**The County will continue to work to seek a county-wide arrangement that respects and coordinates the interests of all jurisdictions and that provides for the logical extension of municipal land use jurisdiction by annexation agreements.**”

The proposed amendment will **HELP ACHIEVE** Policy 2.1.2 for the following reasons:

REVISED DRAFT 06/14/18

- a. The following testimony is being taken into consideration as revisions are made to the proposed amendment:
- (a) No comments were received regarding this Objective at the March 1, 2018 public hearing for this case.
 - (b) At the March 15, 2018 public hearing for this case, testimony was received regarding coordination within overlapping jurisdictions:
 - i. Tim Osterbur, who resides at 302 Witt Park Road, Sidney, asked the Board if the Village of Sidney's one and one-half mile jurisdiction covers the solar farm or is it strictly the County's jurisdiction.
 - ii. In response to Mr. Osterbur's question, John Hall, Zoning Administrator, clarified that the County has the zoning jurisdiction up to the Village of Sidney's municipal boundary. He said that state law does not give municipalities or township plan commissions protest rights on special use permits, which is what the solar farm case will be, but the County has always asked municipalities if they have comments on a special use permit in their extra-territorial jurisdiction. He said that in this instance, staff has gone beyond that by writing in the standard conditions that when a special use permit is received for a solar farm that is within one and one-half mile of a municipality, it has to be documented that the municipality knows about it and before the County Board votes.
 - (c) At the March 29, 2018 public hearing for this case, testimony was received regarding coordination within overlapping jurisdictions:
 - i. Tim Osterbur, who resides at 302 Witt Park Road, Sidney, stated that the wind ordinance has a one and one-half mile jurisdiction requirement from incorporated municipalities, and he would hope that the Board would strongly consider making that same requirement for solar farms.
 - (d) At the April 5, 2018 public hearing for this case, testimony was received regarding concerns about solar companies developing too close to municipalities such that they cannot grow, limiting the enjoyment and use of individual properties, and solar companies not following through with decommissioning, testimony from the following witnesses can be found in the meeting minutes.
 - i. Cory Willard, 503 S. David, Sidney;
 - ii. Leroy Schluter, 8 Wesley Ct, Sidney;
 - iii. Charles White, Mayor of Sidney, 309 S Bryan, Sidney;
 - iv. Michael Bryant, 21 S. Scarborough Ct, Sidney;
 - v. Chris Bromley, 201 Austin Drive, Sidney;
 - vi. Rich Rutherford, 319 S. Scarborough, Sidney;
 - vii. Colleen Ruhter, 910 CR 2200 E, Sidney;
 - viii. Ted Hartke, 1183 CR 2300E, Sidney; and

ix. Kathy Schindler, 551 CR 2200E, Broadlands.

(e) At the April 12, 2018 public hearing for this case, testimony was received regarding concerns about solar companies developing too close to municipalities such that they cannot grow, limiting the enjoyment and use of individual properties, and solar companies not following through with decommissioning, testimony from the following witnesses can be found in the meeting minutes.

- i. Paul Lewis, 2 Stewart Ln, Sidney;
- ii. Patrick McIntosh, 204 N. Harrison, Sidney;
- iii. Vince Koers, 603 W. Woodlawn, Danville;
- iv. Jim Rector, 9 Dunlap Woods, Sidney;
- v. Chris Hitz, 204 E. Main, Sidney;
- vi. Rich Rutherford, 319 S. Scarborough, Sidney;
- vii. Tannie Justice, 2268 CR 900N, Homer;
- viii. Charles White, Mayor of Sidney, 309 S Bryan, Sidney;
- ix. Tim Osterbur, 302 Witt Park Rd, Sidney;
- x. Jeff Justus, 2155 CR 900N, Sidney;
- xi. Colleen Ruhter, 910 CR 2200 E, Sidney; and
- xii. Ted Hartke, 1183 CR 2300E, Sidney.

(f) No comments were received regarding this purpose as the April 26, 2018 ZBA meeting.

(g) At the May 3, 2018 public hearing for this case:

- i. Mr. Hall noted that Supplemental Memo #13 dated May 3, 2018, discussed that when staff proposed the one-half mile separation from a municipality, one of the solar farms that has been proposed is near a substation that is already much less than one-half mile from the municipality. He said that the solar farm has to do its own small substation to connect to the existing substation, and it looked like in that instance, some part of the solar substation would be less than one-half mile. He said that staff proposes that when there is already an existing substation less than one-half mile from the municipality, the solar farm substation would be exempt from that one-half mile separation. Mr. Hall said that the Board could approach that on a case-by-case basis; from a staff level, it would be better having it written into the ordinance so that everyone knows up front that there is at least that much that is not at issue. He said that he thinks you can trust that the solar farm developer is going to minimize how far his substation is from the existing substation because those are expensive connections to make and you want to keep that to the absolute minimum.

8. LRMP Goal 3 is entitled “Prosperity” and states as follows:

Champaign County will encourage economic growth and development to ensure prosperity for its residents and the region.

Goal 3 has three objectives and no policies. The proposed amendment will ***NOT IMPEDE*** the achievement of Goal 3.

9. LRMP Goal 4 is entitled “Agriculture” and states as follows:

Champaign County will protect the long term viability of agriculture in Champaign County and its land resource base.

Goal 4 has 9 objectives and 22 policies. Objectives 4.4, 4.5, 4.7, 4.8 and their policies do not appear to be relevant to the proposed text amendment. The proposed amendment will ***HELP ACHIEVE*** Goal 4 for the following reasons:

A. Objective 4.1 states as follows: **“Champaign County will strive to minimize the fragmentation of the County’s agricultural land base and conserve farmland, generally applying more stringent development standards on *best prime farmland*.”**

The proposed amendment will ***HELP ACHIEVE*** Objective 4.1 for the following reasons:

- (1) The proposed amendment ***WILL NOT IMPEDE*** the achievement of Policies 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.1.7, 4.1.8, and 4.1.9.
- (2) Policy 4.1.1 states: **“Commercial agriculture is the highest and best use of land in the areas of Champaign County that are by virtue of topography, soil and drainage, suited to its pursuit. The County will not accommodate other land uses except under very restricted conditions or in areas of less productive soils.”**

The proposed amendment will ***HELP ACHIEVE*** Policy 4.1.1 for the following reasons:

- a. The proposed standard conditions for a PV SOLAR FARM are very restrictive and will ensure the following:
 - (a) Proposed Section 6.1.5 D. requires minimum separations between any PV SOLAR FARM and existing adjacent use to minimize issues of land use compatibility.
 - (b) No PV SOLAR FARM shall interfere with agricultural operations (see Objective 4.2).
 - (c) No PV SOLAR FARM shall be located at any location that is not well-suited for that PV SOLAR FARM (see Objective 4.3).
 - (d) Proposed Section 6.1.5 E. requires minimum standard conditions for any PV SOLAR FARM related to building codes, electrical components, maximum height, and warning signs.
 - (e) Proposed Section 6.1.5 I. establishes standard conditions to ensure that the allowable noise level created by a PV SOLAR FARM is consistent with the Illinois Pollution Control Board regulations that are the same for all rural land uses including wind farms.
 - (f) Proposed Section 6.1.5 N. establishes minimum standard conditions to ensure that glare is minimized at any PV SOLAR FARM and to

establish a process to resolve any complaints about glare that may arise regarding a PV SOLAR FARM.

- (g) Proposed Section 6.1.5 O. requires a PV SOLAR FARM to carry minimum liability insurance to protect landowners.
 - (h) Proposed Section 6.1.5 P. requires operational standard conditions intended to ensure that nuisance conditions are not allowed to exist at a PV SOLAR FARM.
 - (i) Proposed Section 6.1.5 Q. requires any PV SOLAR FARM to have an approved Decommissioning and Site Reclamation Plan to ensure that funds will be available to remove a PV SOLAR FARM if the SOLAR FARM ever becomes non-functional.
- b. The proposed amendment will require any PV SOLAR FARM to be authorized by a County Board Special Use Permit (which is a discretionary development as defined in the Land Resource Management Plan) which will allow for site specific review for any proposed PV SOLAR FARM.
- (2) Policy 4.1.6 states: **“Provided that the use, design, site and location are consistent with County policies regarding:**
- i. Suitability of the site for the proposed use;**
 - ii. Adequacy of infrastructure and public services for the proposed use;**
 - iii. Minimizing conflict with agriculture;**
 - iv. Minimizing the conversion of farmland; and**
 - v. Minimizing the disturbance of natural areas; then**
- a) **On best prime farmland, the County may authorize discretionary residential development subject to a limit on total acres converted which is generally proportionate to tract size and is based on the January 1, 1998 configuration of tracts, with the total amount of acreage converted to residential use (inclusive of by-right development) not to exceed three acres plus three acres per each 40 acres (including any existing right-of-way), but not to exceed 12 acres in total; or**
 - b) **On best prime farmland, the County may authorize non-residential discretionary development; or**
 - c) **The County may authorize discretionary review development on tracts consisting of other than best prime farmland.”**

The proposed amendment will **HELP ACHIEVE** Policy 4.1.6 for the following reasons:

- a. The ZBA has recommended that the proposed amendment will **HELP ACHIEVE** Objective 4.3 regarding location at a suitable site and adequacy of infrastructure and public services.
- b. The ZBA has recommended that the proposed amendment will **HELP ACHIEVE** Objective 4.2 regarding no interference with agricultural operations.

REVISED DRAFT 06/14/18

- c. The ZBA has recommended that the proposed amendment will **HELP ACHIEVE** Goal 8 regarding conserving and enhancing the County's landscape and natural resources.
- d. The proposed amendment will **HELP ACHIEVE** the County's policies regarding minimizing the conversion of best prime farmland as follows:
 - (a) The only policy regarding conversion of best prime farmland by non-residential discretionary development is Policy 4.1.6b., which states, "On best prime farmland the County may authorize non-residential development." Policy 4.1.6b. has no limit on the conversion of best prime farmland for non-residential discretionary development and is merely a statement of fact and therefore, the proposed amendment does help achieve Policy 4.1.6.b.
 - (b) Best prime farmland to be developed as a PV SOLAR FARM will be 100% converted. However, there is a distinction between conversion of best prime farmland and actual disturbance of best prime farmland. An analysis of the actual disturbance of best prime farmland for two proposed PV SOLAR FARMS in Champaign County revealed that the actual land disturbance (not merely the conversion of use) that would result from the construction of the two PV SOLAR FARMS may be no more than the land disturbance that would result from by-right residential development and in some cases the disturbance may be far less, as follows:
 - i. The land disturbed by the construction of the PV SOLAR FARMS including by the installation of supports for the proposed single axis tracking PV arrays and the construction of the gravel and/or compacted earth access roads and the installation of underground trenching for medium-voltage underground wiring and the installation of electrical inverters and the construction of any required electrical substation, will total between 0.25 acres (0.44%) for a COMMUNITY PV SOLAR FARM proposed on a single 57.84 acre parcel and 37.7 acres (2.9%) of 1,299.1 acres for a utility scale PV SOLAR FARM proposed on 38 existing parcels.
 - ii. The amount of land that would be disturbed under "by-right" residential development on the same tracts would be about 1.00 acres (1.73%) for the COMMUNITY PV SOLAR FARM proposed on the single 57.84-acre parcel and 28.4 acres (2.2%) of the 1,299.1 acres for the utility scale PV SOLAR FARM proposed on 38 existing parcels.
- e. PV SOLAR FARMS do not require the permanent conversion of farmland; solar arrays can be removed at the owner's choosing and the land can be put back into agricultural production.
- f. There are also practical limits to how much PV SOLAR FARM development will occur in Champaign County, as follows:

- (a) A utility scale PV solar farm must be located near an electrical substation with adequate electrical capacity, and in Champaign County there are only two such locations which are the Ameren Illinois substations near Rising and near Sidney. However, it is not clear what the capacity limits are at those two substations but there is only so much land that is located relatively close to each substation.
- (b) A “community renewable generation project” type PV solar farm is a SOLAR FARM of not more than 2,000-kilowatt (2 megawatt) nameplate capacity that meets the requirements of Public Act 99-0906 for a “community renewable generation project”. This is also referred to as “the distributed model” type of solar farm. Solar farm developers state that the principal locational requirement is short and easy access to a three-phase electrical power line. The location of three-phase lines has not been mapped by Planning & Zoning staff or by the Champaign County GIS Consortium, but three phase lines likely occur anywhere in the rural area where there are large grain elevators and therefore COMMUNITY PV SOLAR FARMS may be located throughout Champaign County. However, Public Act 99-0906 (the Future Energy Jobs Act) only calls for 400 megawatts of community solar projects to be developed in the entire State of Illinois by 2030.

- B. Objective 4.2 is entitled “Development Conflicts with Agricultural Operations” and states, “Champaign County will require that each *discretionary review* development will not interfere with agricultural operations.”

The proposed amendment will **HELP ACHIEVE** Objective 4.2 because of the following:

- (1) **Policy 4.2.1 states, “The County may authorize a proposed business or other non-residential *discretionary review* development in a rural area if the proposed development supports agriculture or involves a product or service that is better provided in a *rural* area than in an urban area.”**

The proposed amendment will **HELP ACHIEVE** Policy 4.2.1 for the following reasons:

- a. The Land Resource Management Plan (LRMP) provides no guidance regarding what products or services are better provided in a rural area and therefore that determination must be made in each zoning case.
- b. A PV SOLAR FARM **IS** a service better provided in a rural area as evidenced by the following:
 - (a) A PV SOLAR FARM requires a large land area that generally makes it uneconomical for a PV SOLAR FARM to be located inside a municipality.
 - (b) A PV SOLAR FARM serves an important public need for renewable energy because of the following:
 - i. The Future Energy Jobs Act was passed by the Illinois General Assembly in December 2016, and went into effect on June 1,

REVISED DRAFT 06/14/18

2017. The law creates more favorable conditions to develop renewable energy in Illinois for solar developers and consumers.

- ii. “The Illinois Renewable Portfolio Standard requires large investor-owned electric utilities (EUs) and alternative retail electric supplies (ARES) to source 25% of eligible retail electricity sales from renewable energy by 2025. Electric cooperatives and municipal utilities are exempt from renewable portfolio standard (RPS) requirements” (*Source: dsireusa.org*).
- (c) A PV SOLAR FARM must be located where there is an adequate and proper connection to the electrical distribution grid, which generally will be either near an electrical substation with adequate capacity (which is generally near to but outside of a municipality) or near a three-phase electrical distribution line with adequate capacity.
- c. Even though a PV SOLAR FARM does not serve the surrounding agricultural uses directly, the land owner receives an annual payment from the PV SOLAR FARM operator far in excess of the value of a crop from that land.
- d. The proposed amendment will require any PV SOLAR FARM to be authorized by a County Board Special Use Permit, which will allow for site specific review for any proposed PV SOLAR FARM.
- (2) **Policy 4.2.2 states, “The County may authorize *discretionary review* development in a rural area if the proposed development:**
 - a) **is a type that does not negatively affect agricultural activities; or**
 - b) **is located and designed to minimize exposure to any negative affect caused by agricultural activities; and**
 - c) **will not interfere with agricultural activities or damage or negatively affect the operation of agricultural drainage systems, *rural* roads, or other agriculture-related infrastructure.”**

The proposed amendment will **HELP ACHIEVE** Policy 4.2.2 for the following reasons:

- a. Proposed Section 6.1.5 ~~FE~~. details standard conditions to mitigate damage to farmland, including agricultural drainage tile and soil disturbance.
- b. Proposed Section 6.1.5 G. requires a Roadway Upgrade and Maintenance agreement with the relevant local authority, but provides for a waiver of that requirement for a “community” PV solar farm (a solar farm of not more than 2,000 kilowatt nameplate capacity that meets the requirements of Public Act 99-0906 for a “community renewable generation project”) when authorized by the relevant highway authority.

- c. Proposed Section 6.1.5 **DM**. requires the perimeter fencing to be a minimum of 10 feet from the lot line. This minimum separation is intended to minimize interference with adjacent agricultural operations.
 - d. Proposed Section 6.1.5 R. requires that a PV SOLAR FARM applicant shall enter into an Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture, including the following:
 - (a) The Applicant shall bear full responsibility for coordinating any special conditions required in the SPECIAL USE Permit in order to ensure compliance with the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture.
 - (b) All requirements of the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture shall become requirements of the County Board SPECIAL USE Permit.
 - (c) Champaign County shall have the right to enforce all requirements of the signed Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture.
- C. Objective 4.3 is entitled “Site Suitability for Discretionary Review Development” and states: “Champaign County will require that each discretionary review development is located on a suitable site.”

The proposed amendment will **HELP ACHIEVE** Objective 4.3 because of the following:

- (1) **Policy 4.3.1 states “On other than best prime farmland, the County may authorize a discretionary review development provided that the site with proposed improvements is suited overall for the proposed land use.”**

The proposed amendment will **HELP ACHIEVE** Policy 4.3.1 for the following reasons:

- a. See the discussion under Policy 4.3.2 regarding achievement of Policy 4.3.2. If the proposed amendment achieves Policy 4.3.2, it will also achieve Policy 4.3.1.
- (2) **Policy 4.3.2 states, “On best prime farmland, the County may authorize a discretionary review development provided the site with proposed improvements is well-suited overall for the proposed land use.**

The proposed amendment will **HELP ACHIEVE** Policy 4.3.2 for the following reasons:

- a. Because so much of Champaign County consists of best prime farmland soils, any development of a PV solar farm is likely to be on best prime farmland.
- b. PV solar farm development will either be development of a utility scale PV solar farm or a “community renewable generation project” type PV solar farm that meets the requirements of Public Act 99-0906 (the Illinois Future Energy Jobs Act). Regarding those two types of PV solar farms:

REVISED DRAFT 06/14/18

- (a) A utility scale PV solar farm must be located near an electrical substation with adequate electrical capacity and in Champaign County there are only two such locations which are the Ameren Illinois substations near Rising and near Sidney and the soils in the vicinity of both of those locations meet the Zoning Ordinance definition of “best prime farmland”.
- (b) A “community renewable generation project” type PV solar farm is a SOLAR FARM of not more than 2,000 kilowatt (2 megawatt) nameplate capacity that meets the requirements of Public Act 99-0906 for a “community renewable generation project”. This is also referred to as “the distributed model” type of solar farm. Solar farm developers state that the principal locational requirement is short and easy access to a three-phase electrical power line. The location of three-phase lines has not been mapped by Planning & Zoning staff or by the Champaign County GIS Consortium but three phase lines likely occur anywhere in the rural area where there are large grain elevators and therefore COMMUNITY PV SOLAR FARMS may be located throughout Champaign County. And again, because so much of Champaign County consists of best prime farmland soils, any development of a COMMUNITY PV SOLAR FARM is likely to be on best prime farmland.
- c. Proposed Section 6.1.5 C.(2) exempts a PV SOLAR FARM from the maximum lot area requirement on best prime farmland. This exemption means that the presence of best prime farmland should not be the cause for denial of any proposed PV SOLAR FARM. Other proposed standard conditions for a PV SOLAR FARM will ensure that a PV SOLAR FARM shall not be approved on any location that is not well-suited for a PV SOLAR FARM as follows:
 - (a) Proposed Section 6.1.5 B.(2) identifies areas where a PV SOLAR FARM should not be located.
 - (b) Proposed Section 6.1.5 F. details standard conditions to mitigate damage to farmland including underground agricultural drainage tile.
 - (c) Proposed Section 6.1.5 G. requires a Roadway Upgrade and Maintenance agreement with the relevant highway authority but provides for a waiver of that requirement for a **COMMUNITY PV SOLAR FARM** (a solar farm of not more than 2,000 kilowatt nameplate capacity that meets the requirements of **ILCS, 20 ILCS 3855/1-10 ~~Public Act 99-0906~~** for a “community renewable generation project”) when authorized by the relevant highway authority.”
 - (d) Proposed Section 6.1.5 J. requires and Endangered Species Consultation with the IDNR and IDNR recommendations will be included in the Agency Action Report submitted with the Special Use Permit Application.

- (e) Proposed Section 6.1.5 K. requires consultation with the State Historic Preservation Officer of IDNR and IDNR recommendations will be included in the Agency Action Report submitted with the Special Use Permit Application.
 - (f) Proposed Section 6.1.5 L. requires that the PV SOLAR FARM shall be located, designed, constructed, and operated so as to avoid and, if necessary, mitigate impacts to wildlife.
 - (g) Proposed Section 6.1.5 M. requires that a visual screen shall be provided for any part of a PV SOLAR FARM that is visible to and located within {500 / 1,000} feet of a dwelling.
- d. The proposed amendment will require any PV SOLAR FARM to be authorized by a County Board Special Use Permit (which is a discretionary development as defined in the Land Resource Management Plan) which will allow for site specific review for any proposed PV solar farm including the determination of whether a proposed site is well suited overall for a proposed PV SOLAR FARM.
- (3) **Policy 4.3.3 states, “The County may authorize a discretionary review development provided that existing public services are adequate to support to the proposed development effectively and safely without undue public expense.”**

The proposed amendment will *HELP ACHIEVE* Policy 4.3.3 for the following reasons:

- a. Proposed Section 6.1.5 H. requires the applicant for any PV SOLAR FARM to submit a copy of the site plan to the relevant Fire Protection District and to cooperate with the Fire Protection District to develop the Fire Protection District’s emergency response plan for the proposed PV SOLAR FARM.
 - b. The proposed amendment will require any PV SOLAR FARM to be authorized by a County Board Special Use Permit (which is a discretionary development as defined in the Land Resource Management Plan) which will allow for site specific review for any proposed PV SOLAR FARM.
- (4) **Policy 4.3.4 states, “The County may authorize a discretionary review development provided that existing public infrastructure, together with proposed improvements, is adequate to support the proposed development effectively and safely without undue public expense.”**

The proposed amendment will *HELP ACHIEVE* Policy 4.3.4 for the following reasons:

- a. Proposed Section 6.1.5 G. requires a Roadway Upgrade and Maintenance agreement with the relevant highway authority but provides for a waiver of that requirement for a COMMUNITY PV SOLAR FARM (a solar farm of not more than 2,000 kilowatt nameplate capacity that meets the requirements of ILCS, 20 ILCS 3855/1-10 Public Act 99-0906 for a “community

renewable generation project”) when authorized by the relevant highway authority.”

- b. The proposed amendment will require any PV SOLAR FARM to be authorized by a County Board Special Use Permit (which is a discretionary development as defined in the Land Resource Management Plan) which will allow for site specific review for any proposed PV SOLAR FARM.
- (5) **Policy 4.3.5 states, “On best prime farmland, the County will authorize a business or other non-residential use only if:**
- a. **It also serves surrounding agricultural uses or an important public need; and cannot be located in an urban area or on a less productive site; or**
 - b. **the use is otherwise appropriate in a rural area and the site is very well suited to it.”**

The proposed amendment will **HELP ACHIEVE** Policy 4.3.5 for the following reasons:

- a. As reviewed for Policy 4.2.1 in this Finding of Fact:
 - (a) A PV SOLAR FARM **IS** a service better provided and therefore **IS** appropriate in a rural area.
 - (b) A PV SOLAR FARM serves an important public need for renewable energy.
 - (c) A PV SOLAR FARM requires a large land area that generally makes it uneconomic for a solar farm to be located inside a municipality.
 - b. Regarding location of a PV SOLAR FARM on a less productive site, the following is reviewed under Policy 4.3.2 in this Finding of Fact:
 - (a) A utility scale PV SOLAR FARM in Champaign County cannot be located on less than best prime farmland.
 - (b) It is unlikely that a COMMUNITY PV SOLAR FARM in Champaign County will be located on less than best prime farmland.
 - (c) Proposed Section 6.1.5 C.(2) exempts a PV SOLAR FARM from the maximum lot area requirement on best prime farmland. This exemption means that the presence of best prime farmland should not be the cause for denial of any proposed PV SOLAR FARM.
 - c. The proposed amendment will require any PV SOLAR FARM to be authorized by a County Board Special Use Permit, which will allow for site specific review for any proposed PV SOLAR FARM.
10. LRMP Goal 5 is entitled “Urban Land Use” and states as follows:
Champaign County will encourage urban development that is compact and contiguous to existing cities, villages, and existing unincorporated settlements.

Goal 5 has 3 objectives and 15 policies. The proposed amendment is **NOT RELEVANT** to Goal 5 in general.

11. LRMP Goal 6 is entitled “Public Health and Safety” and states as follows:

Champaign County will ensure protection of the public health and public safety in land resource management decisions.

Goal 6 has 4 objectives and 7 policies. Objectives 6.2, 6.3, and 6.4 are not relevant to the proposed amendment. The proposed amendment will **HELP ACHIEVE** Goal 6 for the following reasons:

- A. Objective 6.1 states, “**Champaign County will seek to ensure that development in unincorporated areas of the County does not endanger public health or safety.**”

Objective 6.1 has four subsidiary policies; policy 6.1.3 is the only relevant policy, and it states the following:

- (1) Policy 6.1.3 states, “**The County will seek to prevent nuisances created by light and glare and will endeavor to limit excessive night lighting, and to preserve clear views of the night sky throughout as much of the County as possible.**”

The proposed amendment will **HELP ACHIEVE** Objective 6.1.3 as follows:

- a. PV SOLAR modules are made with non-reflective glass so there should be minimum glare.
- b. Existing Section 6.1.2 A. of the Zoning Ordinance requires that any SPECIAL USE Permit with exterior lighting shall be required to minimize glare onto adjacent properties by the use of full-cutoff type lighting fixtures with maximum lamp wattages.
- c. Section 6.1.5 N. of the proposed amendment requires the following:
 - (a) The design and construction of the PV SOLAR FARM shall minimize glare that may affect adjacent properties and the application shall include an explanation of how glare will be minimized.
 - (b) After construction of the PV SOLAR FARM, the Zoning Administrator shall take appropriate enforcement action as necessary to investigate complaints of glare in order to determine the validity of the complaints and take any additional enforcement action as proves warranted to stop any significant glare that is occurring, including but not limited to the following:
 - i. The Zoning Administrator shall make the Environment and Land Use Committee aware of complaints about glare that have been received by the Complaint Hotline, and
 - ii. If the Environment and Land Use Committee determines that the glare is excessive, the Environment and Land Use Committee shall **[require / consult with]** the Owner or Operator to take reasonable steps to mitigate the excessive glare such as the installation of additional screening.

12. LRMP Goal 7 is entitled “Transportation” and states as follows:

Champaign County will coordinate land use decisions in the unincorporated area with the existing and planned transportation infrastructure and services.

Goal 7 has 2 objectives and 7 policies. Objective 7.2 and its policies do not appear to be relevant to the proposed text amendment. The proposed amendment will *HELP ACHIEVE* Goal 7 for the following reasons:

- A. Objective 7.1 states, “**Champaign County will consider traffic impact in all land use decisions and coordinate efforts with other agencies when warranted.**”

The proposed amendment will *HELP ACHIEVE* Objective 7.1 for the following reasons:

- (1) Policy 7.1.1 states, “**The County will include traffic impact analyses in discretionary review development proposals with significant traffic generation.**”

The proposed amendment will *HELP ACHIEVE* Policy 7.1.1 for the following reasons:

- a. Proposed Section 6.1.5 ~~GF~~(2) requires the applicant to provide a Transportation Impact Analysis prepared by an independent engineer.

13. LRMP Goal 8 is entitled “Natural Resources” and states as follows:

Champaign County will strive to conserve and enhance the County’s landscape and natural resources and ensure their sustainable use.

Goal 8 has 9 objectives and 36 policies. Objectives 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9 and their policies do not appear to be relevant to the proposed text amendment. The proposed amendment will *HELP ACHIEVE* Goal 8 for the following reasons:

- A. Objective 8.2 states, “**Champaign County will strive to conserve its soil resources to provide the greatest benefit to current and future generations.**”

The proposed amendment will *HELP ACHIEVE* Objective 8.2 for the following reasons:

- (1) PV SOLAR FARMS do not require the permanent conversion of farmland; solar arrays can be removed at the owner’s choosing and the land can be put back into agricultural production.
- (2) Proposed Section 6.1.5 Q. requires the applicant to submit a Decommissioning Plan, which includes protections for soil resources and ensures that the land will be returned to its original condition.

14. LRMP Goal 9 is entitled “Energy Conservation” and states as follows:

Champaign County will encourage energy conservation, efficiency, and the use of renewable energy sources.

Goal 9 has 5 objectives and 5 policies. Objectives 9.1, 9.2, 9.3, and 9.4 and their policies do not appear to be relevant to the proposed text amendment. The proposed amendment will *HELP ACHIEVE* Goal 9 for the following reasons:

- A. Objective 9.5 states, “**Champaign County will encourage the development and use of renewable energy sources where appropriate and compatible with existing land uses.**”

The proposed amendment will **HELP ACHIEVE** Objective 9.5 for the following reasons:

- (1) Solar power is a renewable energy source.
- (2) Compatibility with existing land uses will be determined as part of the proposed Special Use Permit process for PV SOLAR FARMS.

15. LRMP Goal 10 is entitled “Cultural Amenities” and states as follows:

Champaign County will promote the development and preservation of cultural amenities that contribute to a high quality of life for its citizens.

Goal 10 has 1 objective and 1 policy. Goal 10 is **NOT RELEVANT** to the proposed amendment in general.

REGARDING THE PURPOSE OF THE ZONING ORDINANCE

16. The proposed amendment will **HELP ACHIEVE** the purpose of the Zoning Ordinance as established in Section 2 of the Ordinance for the following reasons:

- A. Paragraph 2.0 (a) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to secure adequate light, pure air, and safety from fire and other dangers.

The proposed amendment is consistent with this purpose.

- B. Paragraph 2.0 (b) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to conserve the value of land, BUILDINGS, and STRUCTURES throughout the COUNTY.

(1) Public testimony regarding property value impacts was as follows:

- a. At the March 15, 2018 public hearing for this case, the following testimony was received regarding this purpose:
 - (a) Ms. Tannie Justus, 2268 CR 900 N, Homer, testified that if her property were to be surrounded by a solar farm, their property values would likely decrease, which would affect their ability to use their home as collateral on loans for their trucking business.
 - (b) Ms. Ann Ihrke, 1440 N 1800 East Road, Buckley, stated that the Board’s job as a member of the zoning board is to promote the public health, safety, comfort and general welfare, along with conserving the values of properties throughout the County.
 - (c) Ms. Cindy Ihrke, 1458 N 1700E Road, Roberts, stated that property values and the right of its enjoyment should be protected for each landowner. She provided several articles regarding impacts of zoning decisions on property values, which were distributed in Supplemental Memorandum #5, dated March 22, 2018.
 - (d) Mr. Patrick Brown, BayWa r.e., stated that there is so much review that goes into land prices that you cannot pick one variable and determine that this is the reason why a land’s value has gone up or down. He said that if a peer review journal article can be found

REVISED DRAFT 06/14/18

regarding property values and wind and solar farms, he would like to read it, but it doesn't exist.

- b. At the March 29, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- (a) Ms. Colleen Ruhter, who resides at 910 CR 2200E, Sidney, stated that she and her husband worked really hard to afford their dream homestead property. She said that they have been told that property values won't drop, but we all know better. She asked how the ordinance would protect the property values for all the adjacent and nearby properties. She asked if there is some sort of property value guarantee provided. She said that one means of directly ensuring that property values don't drastically drop on any home directly affected by a large solar farm, within the same 1,000 feet setback as the fencing, would be to have the ordinance require a home solar system be installed on these properties. She said that if they are going to install 1,299 acres of solar panels around her home, what's another extra 2,000 square feet. She said that at least if she is going to have to look at solar panels, basically in her front yard, they could get the benefits of solar with a reduced electric bill, and it would be a prop up on their property value in case they ever decided to sell it.
 - (b) Mr. Tim Osterbur, who resides at 302 Witt Park Road, Sidney, stated that the wind ordinance has a one and one-half mile jurisdiction requirement from incorporated municipalities, and he would hope that the Board would strongly consider making that same requirement for solar farms, as it will lower property values.
- c. At the April 5, 2018 public hearing for this case, the following people testified that they have concerns about decreasing property values due to solar farms; their full testimony can be found in the meeting minutes:
- (a) Leroy Schluter, 8 Wesley Court, Sidney;
 - (b) Chris Bromley, 201 Austin Drive, Sidney; and
 - (c) Rich Ruthorford, 319 S. Scarborough, Sidney.
- d. No comments were received regarding property values at the April 12, 2018 public hearing for this case.
- e. At the April 26, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- (a) Mr. Wood, who resides at 2655 CR 550E, Mahomet, stated that he has an agricultural background, as he grew up on a farm in upstate New York raising fruits and vegetables, and after attending the University of Illinois, he was employed by the Andersons for 34 years, and the last 13 years of that he was the General Manager for the facility that is located on the west side of Champaign. He said that after his retirement in 2008, he has been teaching agriculture classes at Parkland relating to marketing and involved with a number of sustainability issues around Champaign and have has been for a

number of years, agricultural issues specifically. He said that he is on the Board for the Land Connection, which is involved in sustainability with agriculture. He said that 2:09:53 with respect to the issue regarding farmland preservation, he would definitely agree with the comments that were made earlier indicating that the farmland, other than from the compaction from the installation or deinstallation process of the solar equipment, will cause limited damage to the underlying soil. He said that the soil laying fallow or with some sort of cover crop could potentially in three years gain an organic certification, which would make the land two or three times more valuable to the farmer once it is returned to agriculture than it was before. He said that the land is not going to be taken completely out of agricultural production, because in this area, we primarily think of corn and beans, but with the right kind of low growth cover crop underneath, it would be a huge refuge for pollinators. He said that intensive honey production could yield approximately 400 to 500 pounds per acre, and with this type of installation, there could be a good revenue stream. He said that whether this is something that the solar company or the farmer decides to take advantage of is completely up to them, but if they do, the neighbors could also set up their own apiary generating their own significant revenue stream, as bees do not care about property lines.

- (b) Mr. Jonah Messinger, who resides at 204 East Peabody Drive, Champaign, stated that he believes that another sentence could be added to the language regarding property values which indicates that studies have been completed showing that property values will not be affected, and recognizing their potential flaws in comparisons, rather than saying that there is nothing to suggest that it does.
- (c) Mr. Rod Schweighart, who resides at 307 Emerald Lane, Philo, stated that he is a real estate agent from the Philo-Sidney area. He said that prior to being a real estate agent, he was a banker in the Philo-Tolono area. He said that he did a small personal survey of his clients and other people, and two people did not care if a solar plant was across the street from them with no buffer or setback requirement, and the rest indicated that they would prefer not to have a solar farm across the street from their homes. He said that for a small town it is his opinion that a buffer is a good idea, and if a majority of buyers were asked they would indicate that they would not want to look for a home near a solar farm, so it will affect a property's value. He said that an appraiser will run comparisons during an appraisal, although there is no comparable to use, so that too will affect the property value of a home which is for sale near a solar farm. He said that as a small town, longtime advocate of his small town, and knowing most of the farmers between Philo and Sidney, it would be a neighboring thing in requiring a buffer. He said that he is not present to argue whether or not a solar farm is good or bad, but he is present to

REVISED DRAFT 06/14/18

provide his professional opinion that there does need to be at least 500 feet separation.

(d) Mr. Ted Hartke, who resides at 1183 CR 2300E, Sidney, stated that the ZBA recently received a property value analysis for a home located in LaSalle County, Illinois. He said that the LaSalle County homes near the solar farm are also across the street from the nearest wind turbines in LaSalle County, and next to the wind farm in LaSalle County is a nuclear solar plant. He said that he does not believe that the LaSalle County property value analysis indicating that the residential property next to the solar farm did not lose value would be valid if it was also next to a nuclear power plant and the wind farm, and that analysis should not be considered any longer by this Board. He said that there was discussion about how the LaSalle County solar farm was taxed and how much revenue was received. He said that the Board should plan on and bet that as soon as the local assessor places a value on the solar farm, without any sort of State statute backup, he would assure the Board that the assessment will be appealed. He said that the solar company will file an appeal based on the lack of comparisons, and they will provide a different assessment for comparison.

(f) At the May 3, 2018 public hearing for this case, the following testimony was received regarding this purpose:

a. Matthew Herriott, 1815 CR 900N, Philo, said that the setbacks need to be increased to 1,000 feet to protect property values. He said we don't need Champaign County to be a case study for the future of his children and why their house is not worth what it should be.

(g) Numerous comments regarding this purpose were received via e-mail during the public hearing process, and were distributed for review by ZBA members in the Preliminary Memorandum and all subsequent Supplemental Memorandums upon receipt. The Documents of Record list all emails received.

(2) The ZBA reviewed two property value impact studies for photovoltaic solar farms and both studies found no impact to home values due to adjacency to a photovoltaic solar farm. The ZBA has concluded that the Board has no direct evidence indicating a negative effect to property values, in general, a photovoltaic solar farm will not harm the value of adjacent or nearby property. The studies are summarized as follows:

a. *The Adjacent Property Value Impact Study: A Study of Nine Existing Solar Farms* dated March 20, 2018, was prepared by CohnReznick LLP, 200 South Wacker Drive, Suite 2600, Chicago IL 60606-5829, for Cypress Creek Renewables, solar farm developer with applications pending for development of PV SOLAR FARMS in Champaign County. Regarding this property value impact study:

(a) The study included nine existing solar farms but sufficient data was available for only seven of the solar farms. The study analyzed the

property value trends of adjacent land uses and reviewed similar published studies and interviewed market participants.

- (b) The seven existing solar panel farms analyzed were as follows:
- i. Grand Ridge Solar Farm is a 20 megawatt photovoltaic solar farm located on 11.90 acres outside of Streator, Illinois in LaSalle County, Illinois.
 - ii. IMPA Frankton Solar Farm is a 1 megawatt photovoltaic solar farm located on 13 acres outside of Frankton, Indiana in Madison County, Indiana.
 - iii. Dominion Indy Solar III is a 8.6 megawatt photovoltaic solar farm located on 134 acres outside of Indianapolis, Indiana in Marion County, Indiana.
 - iv. Portage Solar Farm is a 1.5 megawatt photovoltaic solar farm located on 56 acres just outside of Portage, Indiana in Porter County, Indiana.
 - v. Valparaiso Solar LLC is a 1.3 megawatt photovoltaic solar farm located on 27.9 acres in Porter County, Indiana.
 - vi. Middlebury Solar Farm Valparaiso Solar LLC is a 1.5 megawatt photovoltaic solar farm located on 33.86 acres in Elkhart County, Indiana.
 - vii. Rockford Solar Farm is a 3.06 megawatt (Phase 1) photovoltaic solar farm located on 15 acres at the Chicago-Rockford International Airport in Winnebago County, Illinois. The solar farm is anticipated to be a total of 62 megawatts on 70 acres after three phases are completed.
- (c) The analysis consisted of paired sales analysis for sales adjacent to the solar farms, the Test Areas, compared to sales of similar properties not adjacent to solar farms, the Control Areas. The analysis included 16 adjoining property sales in Test Areas and 72 comparable sales in Control areas.
- (d) The study concludes, “there was no demonstrated impact on adjacent property values that was associated with proximity to solar farms.”
- (e) Note that a few of the Test Area properties were bordered by a solar farm on two sides but in the analysis of the Dominion Indy Solar III solar farm the Test Area properties were all across the street from the solar farm. Also note that none of the solar farms studied were larger than 20 megawatts.
- b. The *Oakwood Solar Impact Study* dated February 12, 2016, was prepared by Kirkland Appraisals, LLC, 9408 Northfield Court, Raleigh, North Carolina

REVISED DRAFT 06/14/18

Case 895-AT-18
Page 24 of 49

27603 for a proposed 53.74 acre photovoltaic solar farm to be located outside of Mebane, North Carolina. Regarding this property value impact study:

- (a) The study analyzed four existing solar panel farms and the property value trends of adjacent land uses and reviewed similar published studies and interviewed market participants.
 - (b) The four existing solar panel farms analyzed were as follows:
 - i. AM Best Solar Farm is adjacent to Spring Garden Subdivision near Goldsboro, North Carolina.
 - ii. White Cross Solar Farm was built in 2013 in Chapel Hill, North Carolina.
 - iii. Wagstaff Farm Solar Farm is approximately 30 acres in area and was constructed in 2013 near Roxboro, North Carolina.
 - iv. Mulberry Solar Farm near Selmer, Tennessee.
 - (c) The analysis consisted of matched pair analysis for sales of properties adjoining the solar farms compared to sales of similar properties that were nearby but not adjoining to the solar farm. The analysis included 16 adjoining property sales in Test Areas and 19 comparable sales in Control areas.
 - (d) Note that not much information was provided regarding the solar farms and it is not clear whether any of the solar farms bordered any residential property on more than one side.
- (3) There will be positive effects on Equalized Assess Valuation that will benefit taxing districts as follows:
- a. Under current law, a solar farm may be subject to assessment like any other real property, provided that the solar farm developer does not challenge the assessment, and the assessment would be based on the stated economic value of the solar farm and subject to the standard 33-1/3% assessed valuation. As an example, the 20-megawatt Grand Ridge Solar Farm that is situated on 160 acres near Streator, Illinois in LaSalle County has a current assessed valuation of \$5,673,979 which is about \$283,698 per megawatt or \$35,462 per acre.
 - b. At least two bills have been proposed in the state legislature (Senate Bill 486 and House Bill 5284) to establish standard assessment guidelines for “commercial solar energy systems” which is generally defined as “any device or assembly of devices for generating electricity for the primary purpose of wholesale or retail sale and not primarily for consumption on the property on which the device(s) reside”. Both bills establish a standard “commercial solar energy system real property cost basis” (\$199,000 per megawatt in SB486 and \$446,000 per megawatt in HB5284) for assessment of real estate taxes. Both bills also establish standard depreciation rates and adjustments for inflation. For the example 20-megawatt Grand Ridge Solar

Farm that is situated on 160 acres near Streator, Illinois in LaSalle County, the current assessed valuation of about \$283,698 per megawatt or \$35,462 per acre would be reduced by about 30% under SB486 (down to \$199,000 per megawatt and about \$24,875 per acre) and possibly increased to as much as \$446,000 per megawatt or \$55,750 per acre under HB5284.

- c. The highest assessed valuation for farmland in Champaign County is \$707 per acre.
 - d. Solar farm development will have positive effects on Equalized Assess Valuation that should benefit any taxing district in which a solar farm is located. The larger the solar farm, the greater the positive effects on Equalized Assess Valuation. For a solar farm the same size as the example 20-megawatt Grand Ridge Solar Farm that is situated on 160 acres near Streator, Illinois in LaSalle County, under SB486 the solar farm would be assessed at \$3,980,000, and \$8,920,000 under HB5284. If the same 160 acres were the highest quality Champaign County best prime farmland, it would be assessed at \$113,120. The real estate taxes due just to Champaign County (using the current Champaign County real estate tax extension of 0.008481) and no other taxing body under these scenarios are as follows:
 - (a) 160 acres of the best quality Champaign County farm ground would owe real estate taxes to Champaign County in the amount of \$953.37. The total real estate tax bill would be higher but that is the portion that would go directly to Champaign County.
 - (b) If those 160 acres were the site of a 20-megawatt solar farm, the tax bill to Champaign County would increase to \$11,250.33 under SB486 or \$25,214.32 under HB5284. The total real estate tax bill would be higher but that is the portion that would go directly to Champaign County. The relative increase in real estate taxes owed to other taxing bodies (such as townships) would be increased similarly as for Champaign County.
- (4) Section 6.1.5 Q. of the proposed amendment includes a standard condition requiring a Decommissioning Plan and Site Reclamation Plan that is intended to ensure there is adequate financial assurance for removal of a PV SOLAR FARM at the end of its useful life. Ensuring adequate site reclamation is one method of protecting surrounding property values. Regarding Section 6.1.5 Q.:
- a. The proposed Decommissioning Plan and Site Reclamation Plan requirements for a PV SOLAR FARM are like the existing Decommissioning Plan and Site Reclamation Plan requirements for a wind farm in Section 6.1.4 P. except for the following:
 - (a) Paragraph 6.1.5 Q.(3)i. allows that underground electrical cables at a depth of 5 feet or greater may be left in place. This requirement is consistent with paragraph 21.B.5. of the Illinois Department of Agriculture's Agriculture Impact Mitigation Agreement.
 - (b) Paragraph 6.1.5 Q.(4)a. of the amendment requires the amount of financial assurance provided for the site reclamation plan of a PV

REVISED DRAFT 06/14/18

SOLAR FARM to be 125% of the independent engineer's estimated decommissioning cost instead of the 210% required for a wind farm by paragraph 6.1.4 P.4.(a). The change to 125% is recommended based on an assumed inflation of 3% for five consecutive years (based on proposed updating of the financial assurance) and a minimum 10% contingency cost added to the estimated cost of decommissioning and then rounding that total to 125%.

- (c) Paragraph 6.1.5 Q.(4)b.(g) requires that the total financial assurance after deduction of the net estimated salvage value shall not {be less than \$1,000 per acre / exceed 150% of the decommissioning costs} ~~be a minimum of \$1,000 per acre, which is the same as required by Kankakee County.~~
 - (d) Paragraph 6.1.5 Q.(4)g. provides that any financial assurance required by the Illinois Department of Agriculture's Agriculture Impact Mitigation Agreement shall count towards the total financial assurance required by Champaign County so there is no double coverage.
 - (e) Paragraph 6.1.5 Q.(4)h. requires the State's Attorney's Office to review and approve the Letter of Credit and Escrow Account, which is consistent with County practice.
- b. Both an Escrow Account and a Letter of Credit may be used to upgrade a PV SOLAR FARM at the end of the useful life of the SOLAR PV modules, instead of decommissioning.
 - c. The cost of an Escrow Account is higher than the cost of a Letter of Credit, but the Escrow Account is the only form of financial assurance that can be guaranteed to be available even if the PV SOLAR FARM owner goes bankrupt.
- (5) Attachment K to Supplemental Memorandum #5 dated March 22, 2018, was an alternative decommissioning standard for PV SOLAR FARMS that use SOLAR PV modules that have an unlimited warranty of at least 10 years and have a limited power warranty to provide not less not than 80% nominal power output up to 25 years and proof of that warranty is provided at the time of Zoning Use Permit approval. Regarding the alternative decommissioning standards:
- a. The alternative decommissioning standard is based on a modification of the decommissioning requirements in the Illinois Department of Agriculture Agricultural Impact Mitigation Agreement (AIMA).
 - b. Attachment K to the Supplemental Memorandum #5 dated March 22, 2018, is a table comparing the REVISED (Alternative) Champaign County Solar Farm decommissioning requirement to the decommissioning requirements in the Illinois Department of Agriculture's Agriculture Impact Mitigation Agreement and the requirements proposed by BayWa r.e.

- c. The alternative decommissioning uses the same amount of financial assurance (125% of the decommissioning estimate) as the basic version of the proposed amendment.
 - d. The alternative decommissioning uses an incremental approach in establishing the financial assurance in eleven years, which is the same as Illinois Department of Agriculture's Agriculture Impact Mitigation Agreement except that the first step is at the time of permitting, like the proposed amendment.
 - e. The three increments are 12.5%, 62.5%, and 125%, which are somewhat greater than used in the Illinois Department of Agriculture's Agriculture Impact Mitigation Agreement.
 - f. The conversion to an escrow account is not required until years 20 through 25, so that the escrow account will be in place by the end of the limited power warranty.
 - (a) The Board discussed the value of the warranty at the May 3, 2018 public hearing. Mr. Passalacqua suggested that the warranty should be carefully considered in terms of its value. He noted that many warranties for building materials, and that most often a warranty settlement is almost an insult. He said if that were the case here, there really is not a lot of weight in honoring the warranty instead of an escrow account.
 - g. The alternative decommissioning should protect County interests without unduly burdening the solar farm developer with unnecessary costs.
 - h. If the County Board adopts the alternative decommissioning, it should also consider revising the existing decommissioning requirements for a wind farm using a similar approach, although warranties provided for wind farm turbines are nothing like the warranties available for this better class of PV modules.
 - i. OPTION 1: The Zoning Board of Appeals hereby recommends the Alternative Decommissioning standard that was included as Attachment K to Supplemental Memorandum #5 dated March 22, 2018.
- OR**
- i. OPTION 2: The Zoning Board of Appeals hereby does not recommend the Alternative Decommissioning standard that was included as Attachment K to Supplemental Memorandum #5 dated March 22, 2018 because:
 - (a) _____
- (6) At the March 1, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- a. Patrick Brown with BayWa r.e. located at 17901 Von Karment Avenue, Irvine, California, testified that his company believes decommissioning should be a requirement but that the proposed decommissioning

REVISED DRAFT 06/14/18

requirements are unreasonable. He recommended that a Letter of Credit or a performance bond should be required rather than an Escrow Account.

- (7) At the March 15, 2018 public hearing for this case, the following testimony was received regarding this purpose:
 - a. Patrick Brown with BayWa r.e. that is located at 17901 Von Karment Avenue, Irvine, California, testified that his company is still concerned about the proposed decommissioning requirements and still suggest that a Letter of Credit should still be the only required financial assurance.
 - b. Tim Montague who resides at 2001 Park Ridge, Urbana, and is an employee of Continental Electrical Construction Company, a company that builds solar arrays of all sizes, testified that if the decommissioning requirements are too onerous then solar farm developers will go elsewhere in the State of Illinois to develop solar farms.
- (8) At the March 29, 2018 public hearing for this case, the following testimony was received regarding this purpose:
 - a. Patrick Brown with BayWa r.e. that is located at 17901 Von Karment Avenue, Irvine, California, testified that his company still believed that a Letter of Credit should be acceptable in lieu of an Escrow Account for the financial assurance for decommissioning.
 - b. Daniel Herriott who lives at 30 Dunlap Woods, Sidney, testified that he was concerned about what happens if the solar farm lease is for 40 years but the solar panels are only good for 25 years and he was concerned about decommissioning.
- (9) At the April 5, 2018 public hearing for this case, the following testimony was received regarding this purpose:
 - a. Cory Willard, 503 S. David, Sidney, was concerned that solar farm developers were opposed to having an escrow account for the decommissioning financial assurance. He said that a bond is useless if the bonding company goes bankrupt and he wanted the Board to consider that.
 - b. Jason Arrasmith, a Sidney resident and Trustee, sent an email dated April 3, 2018, in which he stated that it is very important that these companies be held responsible for the cleanup and return of the land to its natural state when the leasing is complete and a line of credit is not good enough and the County should insist on an escrow account that will cover all costs for restoration of the land.
- (10) At the April 12, 2018 public hearing for this case, the following testimony was received regarding this purpose:
 - a. Michael Crosby of 512 South Edwin Street, Champaign, urged the Board to avoid excessive decommissioning requirements.

- b. Chuck White, Mayor of Sidney, 309 S Bryan, Sidney, asked what happens after the 20 to 30-year life of the solar panels- are the panels recycled or just staked in a building somewhere?
- c. Jeff Justus, 2155 CR 900N, Sidney, asked if decommissioning had been thought out- how deep do the footings go and can they be removed?

(11) At the April 26, 2018 public hearing for this case, the following testimony was received regarding this purpose:

- a. Mr. Jonah Messinger, who resides at 204 East Peabody Drive, Champaign, stated that he believes it is important to create a new land designation for solar farms, because they are quite different from a wind farm or utility scale Peaker plant. He said that a Peaker plant will put out more toxins than a solar farm and it would create a more obstructive view, and the decommissioning costs for both are a lot different than for a solar farm. He said that utilities and the solar company would sign a power purchase agreement which would standardize the price that the energy is sold at or it would be adjusted by the state; therefore, he does not see bankruptcy being an issue.

(12) No public comments were received regarding this purpose at the May 3, 2018 public hearing.

(13) Numerous comments regarding this purpose were received via e-mail during the public hearing process, and were distributed for review by ZBA members in the Preliminary Memorandum and all subsequent Supplemental Memorandums upon receipt. The Documents of Record list all emails received.

- C. Paragraph 2.0 (c) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to lessen and avoid congestion in the public STREETS.

The proposed amendment is consistent with this purpose.

- D. Paragraph 2.0 (d) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to lessen and avoid hazards to persons and damage to property resulting from the accumulation of runoff of storm or flood waters.

The proposed amendment is consistent with this purpose.

- E. Paragraph 2.0 (e) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to promote the public health, safety, comfort, morals, and general welfare.

(1) At the March 15, 2018 public hearing for this case, the following testimony was received regarding this purpose:

- a. Ted Hartke, 1183 CR 2300E, Sidney, stated that noise impacts should be 39 decibels or less, which is below what the Illinois Pollution Control Board and the proposed amendment to the Champaign County Zoning Ordinance require.

REVISED DRAFT 06/14/18

- b. Ann Ihrke, 1441 N CR 1800E, Buckley, stated that any noise greater than 39 decibels does not comply with the purpose of the Zoning Ordinance to promote public health, safety, comfort, and general welfare.
 - c. Tannie Justus, 2268 CR 900 N, Homer, asked about electromagnetic field impacts of the solar farm on a nearby residence; overspray damage due to weed control under the solar panels; and noise, glare, and obstructed views created by the solar farms.
 - d. Tim Montague, 2001 Park Ridge Drive, Urbana, urged the ZBA to not lose sight of the State of Illinois goal to have 25% renewable energy by 2025.
 - e. Max Kummerow, Urbana, asked that the ZBA maximize the global impacts of renewable energy, while minimizing its local impacts on nearby residents such as the concerns addressed by other witnesses.
 - f. Elise Doody-Jones, 2025 Burlison, Urbana, testified that solar development creates huge job creation that benefits local communities, and it is a means to save soil.
- (2) At the March 29, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- a. Cindy Shepherd, Central Illinois Outreach Director for Faith in Place, provided a handout of her presentation. She said that her organization supports the Future Energy Jobs Act and the opportunities it creates for solar energy. She said that Faith in Action believes that one way to support our neighbors who are economically challenged is lowering energy costs and providing good jobs, and the clean energy sector is poised to do that in Illinois. She said that community solar projects can be especially beneficial to those who would like to reduce their energy costs.
 - b. Colleen Ruhter, 910 CR 2200E, Sidney, wants to preserve the rural character that they sought when buying their 5 acre farm a few years ago. She is also concerned about the environmental impact of the fencing around solar farms, wildlife habitats, and ecosystems. She wants weeds on the solar farms to be maintained, and she is in favor of pollinator plants under the solar panels. She believes that a noise study should be required for solar farm developments.
 - c. Ted Hartke, 1183 CR 2300E, Sidney, testified that he thinks that solar farm developments should be required to produce less noise than what the proposed amendment stipulates. He said that solar energy is not needed, there is plenty of energy already produced in other forms, and that solar would steal from landowners' enjoyment of their land and surroundings.
- (3) At the April 5, 2018 public hearing for this case, testimony was received regarding this purpose:
- a. Regarding how solar energy benefits general welfare, testimony from the following witnesses can be found in the meeting minutes:

- (a) Elise Doody-Jones, Urbana;
 - (b) Max Kummerow, Urbana; and
 - (c) Mike Wishall, Tolono.
- (4) At the April 12, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- a. Regarding how solar energy benefits general welfare, testimony from the following witnesses can be found in the meeting minutes:
 - (a) Stuart Levy, 1108 Foley, Champaign;
 - (b) Michael Crosby, 512 S. Edwin, Champaign;
 - (c) Margo Chaney, 1602 Kingston Dr, Urbana;
 - (d) Jennifer Hixson, 209 W. Indiana, Urbana;
 - (e) Ron Becker, IBEW, from Livingston County;
 - (f) Harry Ohde, 9318 S. Longwood Drive, Chicago;
 - (g) Laura Schultz, 510 E. John St., Champaign;
 - (h) Anna Mae Dziallo, 403 S Coler Ave, Urbana;
 - (i) Dan Maloney, 1008 W. William, Champaign;
 - (j) Rebecca Laurent, 1005 W. Gregory, Urbana;
 - (k) Jason Lindsey, 606 Deer Run Drive, Mahomet;
 - (l) Cindy Shepherd, 2010 Burlison, Urbana; and
 - (m) Patrick Brown, BayWa r.e.
- (5) At the May 3, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- a. Mr. Vince Koers, 603 West Woodlawn, Danville, stated that panels in place in farm fields are particularly subject to long-term undetected leaching of toxics, as the panels are frequently in remote locations and not necessarily well-tended. He said that Champaign County regulations need to address the recording of, the tracking and the correction of any land contamination caused by panel degradation and any leakage, toxic or not, until it can be determined that such leakage does not constitute degradation of the farmland under the panels. Such records should be reported within the County organization, and become a permanent part of the record should future problems emerge. He said that regulations adopted in Champaign County need to recognize are that the proposal before them contains little or nothing about the chemistry of the panels that are in use; the content of commercial panels is a constantly moving target, and not necessarily beneficial to the environment. Rules should be implemented to insure that these panels used locally meet the U.S. Environmental Protection Agency (EPA) Toxicity Characteristic Leaching Procedure (TCLP) standards. TCLP is intended to ensure that potentially toxic materials do not leach into groundwater. He said that while green energy is a "community good" that deserves the attention of the community at large, the rush to implement the green energy it can easily trample the basic community rights of the citizens at large.
 - b. Mr. John Dorsey, 301 West Locust, Urbana, stated that does share concern about taking good farmland out of production, but he thinks in the big scheme of things, solar farms are not the big culprit there; it's urban sprawl that in many cases he thinks is needless and unchecked. He said he thinks

REVISED DRAFT 06/14/18

about Carle Clinic in that new development by Curtis Road; decentralizing population, where people have to rely more on cars; and more and more farmland will be taken up out there as a result of that. He said that with the solar farm, there is a positive payback that he sees in giving up that farmland, and it is for the good of our environment. He said he thinks the majority of people have come to the overwhelming conclusion that our planet is in trouble, and he thinks we need to do what we can as individuals and as government entities to try to turn this around for future generations.

c. Mr. Ted Hartke, 1183 CR 2300E, Sidney, requested several changes to the proposed amendment to help ensure that neighbors would be protected from the ill effects of noise that are known to start at 40 dBA.

d. Ms. Terry McFall, 306 Shamrock Drive, Philo, stated that she too would like to ask for a 1,000 foot setback, and she just wants the Board to remember that when they are making these ordinances, they are talking about peoples' lives and their everyday quality of life. She said that for a small couple of acres, if they are surrounded, there is no way that anybody could think there is going to be any kind of quality of life there.

(6) Numerous comments regarding this purpose were received via e-mail during the public hearing process, and were distributed for review by ZBA members in the Preliminary Memorandum and all subsequent Supplemental Memorandums upon receipt. The Documents of Record list all emails received.

(7) Regarding screening and fencing, the proposed amendment includes required fencing around the entire solar farm development, and vegetative screening for any part of a solar farm that is visible to and located within {500/1,000} feet of a dwelling or residential district. A landscape plan will be required as part of the County Board Special Use Permit application so that any vegetative screening will be reviewed prior to approval.

(8) Regarding glare, the proposed amendment includes a standard condition to minimize glare that may affect adjacent properties. Photovoltaic modules utilize non-glare glass so there should not be much glare. The application for a County Board Special Use Permit shall include an explanation of how glare will be minimized.

(9) Regarding noise:

- a. The sources of noise in a solar farm are the electrical inverter(s) that convert DC current to AC and related transformers.
- b. Based on comments from PV SOLAR FARM developers, standard engineering practice is to have one inverter per approximately 15 acres of photovoltaic array. A review of various PV SOLAR FARM plans found that inverters are generally located approximately 263 feet to 282 feet from a property line.

- c. The ZBA reviewed the report *Study of Acoustic and EMF Levels from Solar Photovoltaic Projects* published by the Massachusetts Clean Energy Center and dated December 17, 2012. Regarding this study:
- (a) The study analyzed sound levels at three non-residential solar installations that varied in size from 1 megawatt to 3.5 megawatts. All solar installations were bordered by open areas without buildings.
 - (b) The study analyzed sound at set distances from the inverters and at the perimeter of each solar farm and at 50 feet, 100 feet, and 150 feet from the boundary of each solar farm. Background noise levels were also measured. The noise levels were measured the time of peak solar azimuth and only on days for which clear skies were forecast so as to ensure that the inverters would be operating at peak output.
 - (c) The study included the following noise findings:
 - i. “sound levels along the fenced boundary of the PV arrays were generally at background noise levels although a faint inverter hum could be heard at some locations.”
 - ii. “Any sound from the PV array and equipment was inaudible and sound levels are at background levels at distances of 50 to 150 feet from the boundary.”
- d. The proposed amendment includes the following requirements to ensure acceptable levels of sound from any PV SOLAR FARM:
- (a) Paragraph 6.1.5 D.(3) requires a minimum ~~200~~ 200 / 240 / 260 / 300 / 330 feet separation distance from the perimeter fence of a PV SOLAR FARM to any adjacent LOT that is five acres or less in area (not including the STREET RIGHT OF WAY) that is bordered by the PV SOLAR FARM on no more than two sides and a ~~250~~ 250 / 290 / 310 / 350 / 380 feet separation to any existing DWELLING or existing PRINCIPAL BUILDING on any adjacent LOT that is five acres or more in area. These required separations are for properties that are not participating in the lease for the solar farm. The ZBA may also require a greater separation for any adjacent LOT that is bordered (directly abutting and/or across the STREET) on more than two sides by the PV SOLAR FARM.
 - (b) Paragraph 6.1.5 D.(6) requires electrical inverters to be located as far as possible from property lines and adjacent DWELLINGS consistent with good engineering practice and inverter locations that are less than 275 feet from the perimeter fence shall require specific approval and may require special sound deadening construction and noise analysis.
 - (c) Section 6.1.5 I. of the proposed amendment requires a noise analysis for any proposed PV SOLAR FARM that is not a COMMUNITY PV SOLAR FARM and allows that ZBA may require a noise analysis for any COMMUNITY PV SOLAR FARM. The noise analysis must

REVISED DRAFT 06/14/18

document that the sound level from the proposed PV SOLAR FARM will not exceed the Illinois Pollution Control Board noise standard.

- e. The combination of the minimum required separation from an inverter to the perimeter fence and from the perimeter fence to adjacent properties results in the following minimum total separations:
- (a) The combination of the minimum required ~~{200 / 240 / 260 / 300 / 330 feet}~~ 200 feet from the PV SOLAR FARM perimeter fence to any adjacent LOT that is five acres or less in area (not including the STREET RIGHT OF WAY) and bordered on more than two sides by the PV SOLAR FARM and the minimum separation of 275 feet from an inverter to the perimeter fence results in a total minimum required separation of ~~{475 / 515 / 535 / 575 / 605 feet}~~ 475 feet from any inverter to any adjacent LOT that is five acres or less in area (not including the STREET RIGHT OF WAY). A greater separation may be required for any adjacent LOT that is bordered (directly abutting and/or across the STREET) on more than two sides by the PV SOLAR FARM.
 - (b) The combination of the minimum required ~~{250 / 290 / 310 / 350 / 380}~~ 250 feet separation to any existing DWELLING or existing PRINCIPAL BUILDING on any adjacent LOT that that is five acres or more in area results in a total minimum required separation of ~~{525 / 565 / 585 / 625 / 655}~~ 525 feet from any inverter to any adjacent existing DWELLING or existing PRINCIPAL BUILDING on any adjacent LOT that that is five acres or more in area.
- f. The combination of minimum required separations will prevent any obvious noise impact from a PV SOLAR FARM and the noise study requirement will verify that there are no noise impacts.
- g. Public testimony regarding noise impacts can be summarized as follows:
- (a) No comments were received at the March 1, 2018 public hearing for this case.
 - (b) At the March 15, 2018 public hearing for this case, the following testimony was received regarding this purpose:
 - i. Ted Hartke, 1183 CR 2300E, Sidney, testified about his of abandoning his home due to noise from a wind turbine. He reviewed noise studies which showed that tolerable noise should be no higher than 39 dBA. He expressed that he opposes the proposed amendment that only limits noise to Illinois Pollution Control Board standards, which are insufficient.
 - ii. Ann Ihrke, 1440 N 1800 East Road, Buckley, stated that any decibel levels over 39 dBA would not meet the criteria for health, safety and general welfare; therefore, the ordinance should put restrictions on the decibel levels for both solar and wind at 39 dBA.

- iii. Cindy Ihrke, 1458 N 1700E Road, Roberts, stated that when the Board writes the language in to their ordinance, they will be protecting the people who are not signing contracts and who do not have a vested interest.
 - iv. Tannie Justus, 2268 CR 900N, Homer, requested more information on noise and other construction impacts. She said that she would like assurances that they will be shielded in all directions from noise, glare, or view of the panels.
 - v. Cindy Shepherd, 2010 Burlison, Urbana, stated that while visiting the University of Illinois solar farm you can hear the kind of noise that is generated, and she does not feel like it is at a level of mildly annoying. She said that inverters and transformers do not operate during the night, so the idea that neighbors would be robbed of sleep due to the solar plant is not something that needs to be included in the ordinance, but she encourages the Board to find out about those things.
 - vi. Patrick Brown, BayWa r.e., stated that he has done a lot of technical noise studies. He said that he comes from a county where the rural dBA noise limit, per the ordinance, is 45 dBA at night and 50 dBA during the day, which is very low, at least from his experience as a land use planner and developer who has prepared and paid for these noise studies. He said that he is going to do a noise study and acoustical analysis for his proposed solar farm. He said that he will get the spec sheets from the manufacturer and crunch it into a scientific model that spits out exactly what the dBA is, and it is not hard to do, but he has to say that the noise is not as doom and gloom as what is being told tonight.
- (c) At the March 29, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- i. Colleen Ruhter, 910 CR 2200E, Sidney, believes that a noise study should be required for solar farm developments.
 - ii. Ted Hartke, 1183 CR 2300E, Sidney, testified that solar farm developments should be required to produce less noise than what the proposed amendment stipulates.
- (d) At the April 5, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- i. The following people requested that noise level requirements be 39 dBA or lower:
 - a. Leroy Schluter, 8 Wesley Ct, Sidney;
 - b. Rich Rutherford, 319 S. Scarborough, Sidney;
 - c. Colleen Ruhter, 910 CR 2200E, Sidney; and
 - d. Ted Hartke, 1183 CR 2300E, Sidney.

REVISED DRAFT 06/14/18

- ii. Jeremy Ruhter, 910 CR 2200E, Sidney, stated that noise can be mitigated in many different ways. He asked that the Board make a decision based on best public health, not what is economically feasible for a company. He asked that any solar development applicant prove that they have a FCC license for their inverters. He said that multiple inverters will create unexpected impacts that might not be seen with just one inverter.
- (e) At the April 12, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- i. Vince Koers, 603 W. Woodlawn, Danville, requested that the requirements for noise not exceed 39 dBA.
 - ii. Tannie Justus, 2268 CR 900N, Homer, suggested that a noise demo could be provided because charts of numbers don't help explain what the inverters really sound like. She said that she would like to hear from someone who lives in the panels.
 - iii. Tim Osterbur, 302 Witt Park Road, Sidney, stated that a good inverter will make less noise, and companies will build as cheap a system as possible. He said that someone told him that the inverters proposed for the potential Sidney solar farm are loud and dirty.
- (f) At the April 26, 2018 public hearing for this case, the following testimony was received regarding this purpose:
- i. Mr. Larry Wood, who resides at 2655 CR 550E, Mahomet, that the system that he has, where you convert electricity from DC to AC, is in his pole barn and it only generates a faint humming noise, and 10 feet outside of his barn he cannot hear it. He said that in terms of a setback, he does not know that he would necessarily suggest a setback, which may not work in all cases depending on the configuration and size of the property, but to simply require that noise be mitigated through the use of a baffle or inside a temporary structure would take care of the problem.
 - ii. Mr. Jonah Messinger, who resides at 204 East Peabody Drive, Champaign, stated that the way that sound travels, it is a logarithmic function with respect to distance, so as you go away from the source of the sound, an inverter, the sound decibel reduces by a factor of 10. He said that it is standard to have an inverter decibel rating of 61.43 at 32.8 feet, but depending on what kind of scheme a company would use for their inverter style, whether it be a three-phase, string, or centralized inverter, it is an outrageous claim that you could hear the inverters off the site, and it is not accurate. He said that many people were making the assertion that they would

be able to hear the inverter off the site, although they had no backing for their belief. He said that even a setback would not change it, because with a setback the inverter location does not change, so for example, if you have an allotment of property and the solar panels are setback 200 feet the inverter location will not change. He said that a standard air condition has a decibel rating of 50 decibels, so the noise from an inverter is not an issue.

iii. Mr. Ted Hartke, who resides at 1183 CR 2300E, Sidney, stated that he believes that the basis for limiting the size of a solar farm should be the same basis as limiting a lot on best prime farmland to three acres. He said that if the property lines should be adhered to, then the noise limit trespassing the property line should also be adhered to, because people own their properties up to the property line, straight up into the air and down into the ground. He said that noise encroachment is an encroachment on the neighbor. He said that during a meeting last night at the Village of Sidney, a solar developer claimed that no one would ever hear the noise. Mr. Hartke stated that if the solar developer's statement is true, then all solar developers should be held to a 39-dBA maximum, because at 40-dBA health effects begin.

(g) At the May 3, 2018 public hearing for this case, the following testimony was received regarding this purpose:

a. Vince Koers, 603 W. Woodlawn, Danville, stated that sworn testimony before the Board has touched on the noise from components, to the effect that there are cheap and noisy inverter components, and there are more expensive, quieter versions, and that you can get what you pay for, or better put, what your regulations require. He stated that inverters in particular, in solar arrays, do produce noise that some say is inconsequential, yet industrial interests apparently balk at allowing the County to set the noise limit for solar arrays, said to be quiet, at a quieter 39 dB. The point has been made here tonight that some of the test information presented to you is based on one inverter, not a bank of inverters, and there is no information included about what happens when you have a whole bank of inverters making noise. If solar arrays are quiet, they should be regulated by Champaign County at "not to exceed 39 dBA" instead of the higher possible statewide noise allowable, or whatever, just to justify equalization with wind turbines. He said that it is still a fact that the US EPA and the World Health Organization recognize that adverse health effects begin at 40 dBA, and that is the best reason for limiting to 39 dBA.

(h) Numerous comments regarding this purpose were received via e-mail during the public hearing process, and were distributed for review by

ZBA members in the Preliminary Memorandum and all subsequent Supplemental Memorandums upon receipt. The Documents of Record list all emails received.

- F. Paragraph 2.0 (f) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to regulate and limit the height and bulk of BUILDINGS and STRUCTURES hereafter to be erected.

The proposed amendment is not directly related to this purpose.

- G. Paragraph 2.0 (g) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to establish, regulate, and limit the building or setback lines on or along any street, trafficway, drive or parkway.

The proposed amendment is not directly related to this purpose.

- H. Paragraph 2.0 (h) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to regulate and limit the intensity of the use of LOT areas, and regulating and determining the area of open spaces within and surrounding BUILDINGS and STRUCTURES.

The proposed amendment is not directly related to this purpose.

- I. Paragraph 2.0 (i) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to classify, regulate, and restrict the location of trades and industries and the location of BUILDINGS, STRUCTURES, and land designed for specified industrial, residential, and other land USES.

The proposed amendment is consistent with this purpose.

- J. Paragraph 2.0 (j) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to divide the entire County into DISTRICTS of such number, shape, area, and such different classes according to the USE of land, BUILDINGS, and STRUCTURES, intensity of the USE of LOT area, area of open spaces, and other classification as may be deemed best suited to carry out the purpose of the ordinance.

The proposed amendment is not directly related to this purpose.

- K. Paragraph 2.0 (k) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to fix regulations and standards to which BUILDINGS, STRUCTURES, or USES therein shall conform.

The proposed amendment is consistent with this purpose.

- L. Paragraph 2.0 (l) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to prohibit USES, BUILDINGS, or STRUCTURES incompatible with the character of such DISTRICTS.

- (1) Item 9.C. lists how a solar farm will be reviewed for its suitability to surrounding areas.
- (2) The proposed amendment will require any PV SOLAR FARM to be authorized by a County Board Special Use Permit (which is a discretionary development as defined in the Land Resource Management Plan) which will allow for site specific review for any proposed PV SOLAR FARM.

M. Paragraph 2.0 (m) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to prevent additions to and alteration or remodeling of existing BUILDINGS, STRUCTURES, or USES in such a way as to avoid the restrictions and limitations lawfully imposed under this ordinance.

The proposed amendment is consistent with this purpose.

N. Paragraph 2.0 (n) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to protect the most productive agricultural lands from haphazard and unplanned intrusions of urban USES.

- (1) Item 9.B. reviews why utility-scale PV SOLAR FARMS are not urban uses.
- (2) PV SOLAR FARMS do not require the permanent conversion of farmland; solar arrays can be removed at the owner's choosing and the land can be put back into agricultural production, so the agricultural nature of the County still exists.

O. Paragraph 2.0 (o) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to protect natural features such as forested areas and watercourses.

- (1) PV SOLAR FARMS do not require the permanent conversion of farmland; solar arrays can be removed at the owner's choosing and the land can be put back into agricultural production.
- (2) Proposed Section 6.1.5 Q. requires the applicant to submit a Decommissioning Plan, which includes protections for soil resources and ensures that the land will be returned to its original condition.

P. Paragraph 2.0 (p) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to encourage the compact development of urban areas to minimize the cost of development of public utilities and public transportation facilities.

The proposed amendment is not directly related to this purpose.

Q. Paragraph 2.0 (q) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to encourage the preservation of agricultural belts surrounding urban areas, to retain the agricultural nature of the County, and the individual character of existing communities.

- (1) The proposed text amendment limits PV SOLAR FARM development to areas outside 1.5 miles of the extraterritorial jurisdiction of an incorporated municipality unless the municipality signs a Resolution regarding PV SOLAR FARM development of Non-opposition for a development in that area.

- (2) PV SOLAR FARMS do not require the permanent conversion of farmland; solar arrays can be removed at the owner's choosing and the land can be put back into agricultural production, so the agricultural nature of the County still exists.
- (3) However, a solar farm is not an agricultural use; until the solar farm is decommissioned, it is not fostering or retaining agricultural uses and characteristics.
- (4) Numerous comments regarding this purpose were received via e-mail during the public hearing process, and were distributed for review by ZBA members in the Preliminary Memorandum and all subsequent Supplemental Memorandums upon receipt. The Documents of Record list all emails received.

R. Paragraph 2.0 (r) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to provide for the safe and efficient development of renewable energy sources in those parts of the COUNTY that are most suited to their development.

The proposed amendment establishes the regulations under which PV SOLAR FARMS can be constructed, taking into account safe and efficient development, and compatibility with neighboring land uses.

17. The proposed text amendment **WILL** improve the text of the Zoning Ordinance because it **WILL** provide:
- A. A classification under which PV SOLAR FARMS can occur while establishing minimum requirements that ensure the purposes of the Zoning Ordinance will be met.
 - B. A means to regulate an activity for which there is a demand by several solar farm companies to build in Champaign County's jurisdiction.

SUMMARY FINDING OF FACT

From the documents of record and the testimony and exhibits received at the public hearing conducted on **March 1, 2018, March 15, 2018, March 29, 2018, April 5, 2018, April 12, 2018, April 26, 2018, May 3, 2018, and June 14, 2018**, the Zoning Board of Appeals of Champaign County finds that:

1. The proposed Zoning Ordinance text amendment ***IS NECESSARY TO ACHIEVE*** the Land Resource Management Plan because:
 - A. The proposed Zoning Ordinance text amendment ***IS NECESSARY TO ACHIEVE*** LRMP Goal 9.
 - B. The proposed Zoning Ordinance text amendment will ***HELP ACHIEVE*** LRMP Goals 2, 4, 6, 7, and 8.
 - C. The proposed Zoning Ordinance text amendment will ***NOT IMPEDE*** the achievement of LRMP Goals 1 and 3.
 - D. The proposed Zoning Ordinance text amendment is ***NOT RELEVANT*** to LRMP Goals 5 and 10.
2. The proposed text amendment ***WILL*** improve the Zoning Ordinance because it will:
 - A. ***HELP ACHIEVE*** the purpose of the Zoning Ordinance (see Item 16).
 - B. ***IMPROVE*** the text of the Zoning Ordinance (see Item 17).

DOCUMENTS OF RECORD

1. Memo to the Environment and Land Use Committee dated December 27, 2017, with attachments:
 - A Outline of Proposed Solar Farm Amendment
 - B Illinois Solar Energy Association Recommendations
 - C Kankakee County Solar Farm Amendment (more or less adopted as proposed)
 - D Champaign County Wind Farm Requirements (Zoning Ordinance Section 6.1.4)

2. Memo to the Environment and Land Use Committee dated January 31, 2018 with attachment:
 - A Proposed Amendment dated January 31, 2018

3. Preliminary Memorandum dated February 22, 2018, with attachments:
 - A Legal advertisement
 - B ELUC Memorandum dated December 27, 2017, with attachments:
 - 1 Outline of Proposed Solar Farm Amendment
 - 2 Illinois Solar Energy Association Recommendations
 - 3 Kankakee County Solar Farm Amendment (more or less adopted as proposed)
 - 4 Champaign County Wind Farm Requirements (Zoning Ordinance Section 6.1.4)
 - C ELUC Memorandum dated January 31, 2018, with attachment:
 - 1 Proposed amendment
 - D February 8, 2018, Comments on proposed amendment by Patrick Brown, Director of Development, BayWa-re Solar Projects, LLC
 - E Comments on proposed amendment by Professor Scott Willenbrock, University of Illinois Department of Physics
 - F Solar Farms In Illinois PowerPoint presentation courtesy of Delbert Skimmerhorn, Kankakee County Planning Director
 - G Typical Solar Fields for Various Technology Types: Solar Parabolic Trough, Solar Power Tower, Dish Engine, and PV from An Overview of Potential Environmental, Cultural, and Socioeconomic Impacts and Mitigation Measures for Utility-Scale Solar Energy Development, Argonne National Laboratory ANL/EVS/R-13/5, June 2013 (*posted online*)
 - H Agriculture Impact Mitigation Agreement (standard form) with Appendices A & B and standard details, Illinois Department of Agriculture
 - I Agricultural Good Practice Guidance for Solar Farms by Ed J Scurlock, BRE National Solar Centre, 2014
 - J Top Five Large-Scale Solar Myths by Megan Day, National Renewable Energy Laboratory (NREL), February 3, 2016
 - K In Clash of Greens, a Case for Large-Scale U.S. Solar Projects by Philip Warburg, Yale Environment 360 (online magazine), August 24, 2015
 - L Environmental impacts from the solar energy technologies, Theocharis Tsoutsos, Niki Frantzeskaki, Vassilis Gekas, Centre for Renewable Energy Sources (CRES) and Technical University of Crete, Greece, 2003.
 - M Proposed amendment (annotated) dated February 22, 2018
 - N Proposed amendment dated February 22, 2018

4. Supplemental Memorandum #1 dated February 23, 2018, with attachments:
 - A Legal advertisement
 - B Email from Ted Hartke dated 6/3/17 RE: solar project problems pointed out in Huron County, Michigan...moratorium enacted

- C Email from Ted Hartke dated 6/13/17 RE: solar panel weed growth and fires during dry conditions
 - D Email from Ted Hartke dated 9/17/17 RE: Solar project moratorium and info about a New York project
 - E Email from Ted Hartke dated 1/2/18 at 12:02 p.m. RE: proposed Champaign County solar farm amendment
 - F Email from Ted Hartke dated 1/2/18 at 12:17 p.m. RE: Fwd: Dr. Schomer's Boone County testimony
 - G Email from Ted Hartke dated 1/2/18 at 12:51 p.m. RE: Fwd: Hartke pointers for establishing noise limits
 - H Email from Ted Hartke dated 2/22/18 at 2:59 p.m. RE: FW: Proposed Solar Farm Requirements
 - I Email from Ted Hartke dated 2/22/18 at 5:14 p.m. RE: FW: Proposed Solar Farm Requirements
5. Supplemental Memorandum #2 dated March 1, 2018, with attachments:
- A Legal advertisement
 - B Email from Ted Hartke received May 9, 2017, with attachment: "Example Template Solar Energy Facility Ordinance (North Carolina)" by the Alliance for Wise Energy Decisions
 - C Email from Patrick Brown received February 26, 2018, with attachments:
 - "Health and Safety Impacts of Solar Photovoltaics" by the NC Clean Energy Technology Center and NC State University
 - Presentation: "Solar Photovoltaic (PV) Health & Safety" by the NC Clean Energy Technology Center
 - D Email from Patrick Brown received February 27, 2018 with comments on proposed text amendment
 - E Ordinances Comparison Table created by P&Z Staff dated March 1, 2018
6. Supplemental Memorandum #3 dated March 8, 2018, with attachments:
- A Legal advertisement
 - B Excerpt of DRAFT minutes from March 1, 2018 ZBA meeting (*for discussion only*)
 - C Fee Schedules Comparison Sheet created by staff on March 8, 2018, with attachment: McLean County solar ordinance amendment
 - D Draft Map of Airports and RLAs in Champaign County created by staff on March 8, 2018
7. Supplemental Memorandum #4 dated March 15, 2018, with attachments:
- A Legal advertisement
 - B Letter from Patrick Brown of BayWa-re Solar Projects LLC received on March 14, 2018
 - C Comparison table for decommissioning requirements dated March 14, 2018
 - D Letter from Anne Bjornson Parkinson received on March 14, 2018
 - E Plan views depicting required solar farm screening adjacent to a residential property created by staff on March 15, 2018
8. Supplemental Memorandum #5 dated March 22, 2018, with attachments:
- A Legal advertisement
 - B Fact Sheet: Decommissioning solar panel systems, New York State Research and Development Authority (NYSERDA), received from Tim Montague on March 15, 2018
 - C Cindy Ihrke's articles received during March 15, 2018 ZBA public hearing

- D Article: Considerations for Transferring Agricultural Land to Solar Panel Energy Production, NC Cooperative Extension, received from Patti Petrie on March 19, 2018
 - E Example Specifications Sheets and Warranties for two Tier 1 solar modules, received from Patrick Brown on March 20, 2018
 - F Typical Solar Farm Layout received for 3 completed BayWa-re projects – 3 MW, 5 MW, and 20 MW, received March 21, 2018 from Patrick Brown, BayWa-re Solar Projects LLC
 - G Solar Spotlight: Illinois, Solar Energy Industries Association, received from Patrick Brown on March 20, 2018
 - H LRMP Land Use Goals, Objectives, and Policies
 - I Revised Proposed amendment (annotated) dated March 22, 2018
 - J Revised Proposed amendment (clean) dated March 22, 2018
 - K Alternative Decommissioning Requirements for Solar PV Farm and comparative table, dated March 22, 2018
9. Supplemental Memorandum #6 dated March 29, 2018, with attachments:
- A Legal advertisement
 - B Source or Brief Justification of All Proposed Standard Conditions for Solar Farm dated March 23, 2018
 - C Email regarding Letters of Credit from Patrick Brown, BayWa r.e. Solar Projects LLC, received March 28, 2018
 - D Email regarding proposed amendment revision from Patrick Brown, BayWa r.e. Solar Projects LLC, received March 28, 2018
 - E Preliminary Draft Finding of Fact for Case 895-AT-18 dated March 29, 2018
 - F Draft minutes from March 15, 2018 ZBA meeting (*for discussion only*)
 - G “Study of Acoustic and EMF Levels from Solar Photovoltaic Projects”, Massachusetts Clean Energy Center, December 17, 2012 – *provided on ZBA meetings website*
10. Supplemental Memorandum #7 dated April 5, 2018, with attachments:
- A Legal advertisement
 - B Email from Patrick Brown, BayWa-r.e. Solar Projects LLC, received April 2, 2018, with attachment: White Paper BU-U-019: Sunny Central
 - C Email from Ted Hartke received April 2, 2018 (includes article – *Green Energy Poverty: Are Low Income Americans Impoverished by Alternative Energy?*)
 - D Email from Jason Arrasmith, Village of Sidney Trustee, received April 3, 2018
 - E Email from Valerie Hopkins Bernard received April 3, 2018
 - F Comparison of separation distances by land use in Champaign County Zoning Ordinance dated April 3, 2018
 - G *County ZBA to meet about solar farm on Thursday* by Christine Walsh, the News Gazette County Star, April 5, 2018
 - H Email from Jonathon Manuel, Resource Conservationist with the Champaign County Soil and Water Conservation District received April 5, 2018
 - I “Illinois Soil Conservation and Revitalization Using Native Vegetation” by Tim O’Connor, provided by Professor Scott Willenbrock, UIUC, received April 5, 2018
 - J Photos of the University of Illinois Solar Farm taken by Susan Burgstrom on April 5, 2018

11. Supplemental Memorandum #8 dated April 9, 2018, with attachments:
- A Legal advertisement
 - B *On ZBA meetings website only* - “Adjacent Property Values Solar Impact Study: A Study of Nine Existing Solar Farms”, prepared by CohnReznick for Cypress Creek Renewables, dated March 20, 2018 and received April 9, 2018
12. Supplemental Memorandum #9 dated April 11, 2018, with attachments:
- A Legal advertisement
 - B Email from Patrick Brown received April 5, 2018, with attachment: Dudek Noise Data memorandum dated April 5, 2018
 - C Email from Mallory Seidlitz received April 6, 2018
 - D Email from Jeremy Ruhter received April 6, 2018
 - E Email from Patrick Brown received April 6, 2018
 - F Email from Tim Montague received April 9, 2018, with attachments: pictures with measurements
 - G Email from Patti Petrie received April 9, 2018
 - H Email from Nick Mento received April 9, 2018, with attachment posted online: Property Value Impact Study for Grundy County solar farm by Cohn Reznick
 - I Email from Patti Petrie regarding Alice Englebretsen Facebook post received April 11, 2018
 - J Email from Scott Willenbrock received April 10, 2018
 - K Email from Bruce Hannon received April 10, 2018
 - L Email string between Andy Robinson and John Hall dated April 9-11, 2018
 - M Email from Amanda Pankau received April 11, 2018
 - N Email from Patrick Brown received April 11, 2018
 - O Email from Nancy Holm received April 11, 2018
 - P Email from Eileen Borgia received April 11, 2018
 - Q Email from Rebecca McBride received April 11, 2018
 - R Email from Rebecca Sinkes received April 11, 2018
 - S Email from Dave Thornton received April 11, 2018
 - T Email from Elizabeth Kirby received April 11, 2018
 - U Email from Mark Ballard received April 11, 2018
 - V Email from Steve Errede received April 11, 2018
 - W Email from Marian Huhman received April 11, 2018
 - X Email from Staci Bromley received April 11, 2018
 - Y Email from Shannon Kurtenbach received April 11, 2018
 - Z Email from George Cruickshank received April 11, 2018
 - AA Email from Raymond Norton received April 11, 2018
 - AB Email from Valerie Bernard received April 11, 2018
 - AC Recommended noise level design goals and limits at residential receptors or wind turbine developments in the United States, by David M. Hessler and George F. Hessler, June 21, 2010, received from Frank DiNovo on April 11, 2018
- Studies posted online:
- Property Taxes and Solar PV Systems: Policies, Practices, and Issues, by Justin Barnes, Chad Laurent, Jayson Uppal, Chelsea Barnes & Amy Heinemann, July 2013
 - Oakland NC Property Values Impact Study, Kirkland Appraisals LLC, February 12, 2016
 - Noise in Figures, European Agency for Safety and Health and Work, 2005, submitted by Rebecca Sinkes, received April 11, 2018

13. Supplemental Memorandum #10 dated April 12, 2018, with attachments:
- A Legal advertisement
 - B Email from Joyce Mast received April 12, 2018
 - C Email from Mary Tiefenbrunn received April 12, 2018
 - D Email from Chris Bromley received April 12, 2018
 - E Email from Phillip Geil received April 12, 2018
 - F Email from Cloydia Larimore received April 12, 2018
 - G Email from Nancy Dietrich received April 12, 2018
 - H Email from William Brooks received April 12, 2018
 - I Email from Geraldine Theobald received April 12, 2018
 - J Email from Michael Bryant received April 12, 2018
 - K Email from Anna Keck received April 12, 2018
 - L Email from Terry McFall received April 12, 2018
 - M Email from Lois Cain received April 12, 2018, with attachment:
 - Fact sheet on benefits of solar in your community by Sierra Club Illinois Chapter
 - N Email from Penny Sigler received April 12, 2018
 - O Email from Jason Arrasmith received April 12, 2018
 - P “Solar farms are cropping up in Will County”, Susan DeMar Lafferty in the Chicago Tribune, September 5, 2017 and received from Patsi Petrie on April 12, 2018
 - Q UI Solar Farm pictures with measurements taken by P&Z Staff, dated April 11, 2018
 - R Email from Randy Pankau received April 12, 2018
14. Supplemental Memorandum #11 dated April 20, 2018, with attachments:
- A Legal advertisement
 - B Noise Table created by P&Z Staff on April 16, 2018; includes data from “Table of Various Indoor and Outdoor Sound Levels” from the *Study of Acoustic and EMF Levels from Solar Photovoltaic Projects* by the Massachusetts Clean Energy Center, 2012.
 - C Email from Chris Hitz (series of tables) received April 12, 2018
 - D Email from Curtis Frazier received April 12, 2018
 - E Email from Ming Kuo received April 12, 2018
 - F Email from Mona Jawad received April 12, 2018
 - G Email from Ron Becker received April 13, 2018
 - H Email from Nathaniel Forsythe received April 13, 2018
 - I Email from Daniel Maloney received April 13, 2018
 - J Email from Phillip Geil received April 13, 2018
 - K Email from Kathy Shannon received April 16, 2018
 - L Email from Marya Ryan received April 17, 2018
 - M Email from Suzanne Smith received April 18, 2018
 - N Email from Jonathan Livingood received April 18, 2018
 - O *Illinois Biology Technical Note No. 22: Planning Tree and Shrub Plantings for Wildlife*, Natural Resources Conservation Service, May 2007
 - P *Conservation Practice Standard 327: Conservation Cover*, Natural Resources Conservation Service, January 2017
 - Q *Conservation Practice Standard 380: Windbreak/Shelterbelt Establishment*, Natural Resources Conservation Service, October 2012
 - R Updated Revised Text Amendment dated April 26, 2018 – annotated
 - S Updated Revised Text Amendment dated April 26, 2018 – clean
 - T Revised Finding of Fact dated April 26, 2018

15. Supplemental Memorandum #12 dated April 26, 2018, with attachments:
- A Legal advertisement
 - B Email from Kerrith Livengood received April 23, 2018
 - C Letter from Vern Zehr received April 23, 2018
 - D Email from Phillip Geil received April 24, 2018
 - E Email from Jason Lindsey received April 24, 2018
 - F Email from Ron Becker received April 24, 2018, with attachment: presentation by Kankakee County
 - G Email 1 from Ted Hartke received April 25, 2018, with attachment: On-Farm Solar Energy Generation presentation by Susan Craft, New Jersey State Agriculture Development Committee
 - H Email 2 from Ted Hartke received April 25, 2018
 - I LRMP Contiguous Urban Growth Area map updated February 25, 2015
 - J Draft Revised Decommissioning Standards, same as Attachment K to Supplemental Memo #5 dated March 22, 2018
 - K Basi, Mindy. "Sidney residents to Champaign County ZBA: 'Have Compassion on Us'." *The County Star*, April 12, 2018
 - L Basi, Mindy. "ZBA Amends Proposed Ordinance, Public Testimony Continues." *The County Star*, April 19, 2018
16. Plat book pages submitted by Marilyn Lee at the April 26, 2018 ZBA meeting
17. Supplemental Memorandum #13 dated May 3, 2018, with attachments:
- A Legal advertisement
 - B Email from Ted Hartke received April 28, 2018, with attachment:
 - Dr. Schomer testimony before the Illinois Pollution Control Board dated October 3, 2005
 - C Email from Tom Sinder received May 1, 2018
 - D Email from Scott Willenbrock received May 1, 2018
 - E Emails from Terry McFall received April 12, April 26, and May 2, 2018
 - F Email #1 from Ted Hartke received May 3, 2018
 - G Email #2 from Ted Hartke received May 3, 2018
 - H Email from Jonathan Livengood received May 3, 2018
 - I Basi, Mindy. "Solar Developer: We Listened." *The County Star*, May 3, 2018
 - J Basi, Mindy. "Champaign County Zoning Board of Appeals Continues Solar Energy Ordinance Debate." *The County Star*, May 3, 2018
 - K Sound level estimates by P&Z Staff using online tool, "Estimating Sound Levels with the Inverse Square Law", found at <http://hyperphysics.phy-astr.gsu.edu/hbase/Acoustic/isprob2.html>
 - L Same as Attachment E to Supplemental Memo #5 dated March 22, 2018: Example Specifications Sheets and Warranties for two Tier 1 solar modules, received from Patrick Brown on March 20, 2018
18. Supplemental Memorandum #14 dated June 7, 2018, with attachments:
- A Legal advertisement
 - B Email from Laurel Bergren received May 7, 2018, with attachment: Advantages of Letters of Credit dated April 8, 2015 by Carter H. Klein, retrieved from Lorman Educational Services on May 3, 2018
 - C Theobald, Ben. "Champaign County ZBA: No decisions on solar farm ordinance." *The County Star*, May 10, 2018
 - D Email from Andy Robinson received May 17, 2018

- E Minnesota Solar Energy Standards for Counties dated February 2014, submitted by Patti Petrie on May 18, 2018
- F Email from Phillip Geil received June 1, 2018
- G Final Order 17-0838 by the Illinois Commerce Commission dated April 3, 2018 (online only)
- H Updated Revised Text Amendment dated June 7, 2018 – annotated
- I Updated Revised Text Amendment dated June 7, 2018 – clean
- J Revised Finding of Fact dated June 14, 2018

FINAL DETERMINATION

Pursuant to the authority granted by Section 9.2 of the Champaign County Zoning Ordinance, the Zoning Board of Appeals of Champaign County determines that:

The Zoning Ordinance Amendment requested in **Case 895-AT-18** should ***{BE ENACTED / NOT BE ENACTED}*** by the County Board in the form attached hereto.

The foregoing is an accurate and complete record of the Findings and Determination of the Zoning Board of Appeals of Champaign County.

SIGNED:

Catherine Capel, Chair
Champaign County Zoning Board of Appeals

ATTEST:

Secretary to the Zoning Board of Appeals

Date

PROPOSED AMENDMENT

<To be added in final form upon approval>