

CASE NO. 895-AT-18

SUPPLEMENTAL MEMORANDUM #6

March 29, 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

STATUS

A table highlighting the source and/or justification of all proposed standard conditions for a solar farm development is included as Attachment B.

A revision to the March 22, 2018 revised amendment is proposed in section “Revision to 6.1.5 B.2.” below.

An analysis of Best Prime Farmland conversion for a solar farm and for by-right residential has been included in the Summary of Evidence as Item 9.A.(2)d. Please see the “Comparison of solar farm and by-right residential developments” below.

Two emails were received on March 28, 2018 from Patrick Brown, BayWa r.e. Solar Projects LLC. The first (Attachment C) offers a draft overview of how Letters of Credit work. The second (Attachment D) requests a revision to section 6.1.5 D.4. to read:

4. A separation of at least 500 feet between substations and transmission lines that are above 34.5kVA to adjacent dwellings and residential DISTRICTS.

The preliminary draft Finding of Fact dated March 29, 2018 is Attachment E to this memo.

The draft minutes from March 15, 2018 are for discussion only (Attachment F).

Frank DiNovo forwarded a document prepared for the Massachusetts Clean Energy Center, “Study of Acoustic and EMF Levels from Solar Photovoltaic Projects”, which has been posted on the ZBA meetings website: http://www.co.champaign.il.us/CountyBoard/meetings_ZBA.php.

COMPARISON OF SOLAR FARM AND BY-RIGHT RESIDENTIAL DEVELOPMENTS

Item 9.A.(2)d. states the following:

- d. The proposed amendment will *HELP* minimize the conversion of best prime farmland as follows:
 - (a) An analysis of the actual disturbance of best prime farmland for two proposed PV SOLAR FARMS in Champaign County revealed that actual land disturbance (not merely the conversion of use) that would result from the construction of the two PV SOLAR FARMS would be far less than the land disturbance that would result from by-right residential development 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.

PROPOSED REVISION TO 6.1.5 B.2.a.(2)

The current version of Section 6.1.5. B.2.a.(2) of the proposed solar farm text amendment requires that “a municipal Resolution of Non-opposition to the PV SOLAR FARM by any relevant municipality must be submitted to the ZONING ADMINISTRATOR prior to the consideration of the PV SOLAR FARM SPECIAL USE permit by the Champaign County Board.”

By including this statement as a Standard Condition, the language would allow a solar developer to seek a waiver from submitting information about whether an affected municipality supports or protests the proposed solar farm, which is not desirable.

The following revision would make it so that a waiver would not be an option:

- (2) A municipal Resolution of ~~Non-opposition to~~ 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.

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*

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

Case 895-AT-18 Source Or Brief Justification Of All Proposed Standard Conditions for Solar Farm**March 23, 2018**

Standard Condition	Brief Description of Condition	Source or Justification	Notes
-----	Limit applicability to “photovoltaic solar farm”	Complexities and challenges that would be present with other types of Solar Farms (primarily “concentrating solar farms”) would require different standards than are adequate for PV Solar Farms	Unlikely that any other solar energy technology will be proposed in Champaign County anytime soon and better to develop standards when there is interested developer
6.1.5B. 1.	Clarify the area of the special use permit	Best practice	
6.1.5B.2.a.	Require documentation of municipal notice and non-opposition when PV Solar Farm located within one-and one-half miles of municipality	Best practice	
6.1.5B.2.b.	One-half mile separation from CR District	The CR District is intended to conserve the natural and scenic areas, is the principal rural residential district, and is where the Forest Preserve Districts are located	One-half mile is somewhat arbitrary and a lesser separation could be allowed
6.1.5B.2.c.	Prohibit PV solar farm construction within easements unless crossing agreement	Best practice	
6.1.5B.3.	Documentation of being in queue to acquire interconnection agreement (B.3.a.) and documentation of executed agreement (B.3.b.)	Best practice	Also required by Kankakee and Tazewell Counties
6.1.5C.1.	Eliminate minimum lot requirements for PV Solar Farm	PV Solar Farm is a unique development with unique requirements	Kankakee, Knox, Tazewell, Whiteside, Christian Counties require 5 acre minimum lot size
6.1.5C.2.	Eliminate maximum lot area requirement	PV Solar Farm will require much more than three acres	
6.1.5D.1.	Street setbacks	The street setbacks are the minimum required in the Ordinance	Setbacks vary from county to county- Fulton and Knox do not require larger setbacks for solar farms; Kankakee County requires 100 feet setback

Case 895-AT-18 Source Or Brief Justification Of All Proposed Standard Conditions for Solar Farm**March 23, 2018**

Standard Condition	Brief Description of Condition	Source or Justification	Notes
6.1.5D.2.	Minimum 100 feet separation from adjacent dwelling and not less than 50 feet separation from adjacent lot of three acres or less in area	Best practice to ensure compatibility with residential uses; similar to Kankakee County Three-acre lot is the maximum lot area allowed on best prime farmland and larger lot sizes probably don't need this added protection	Knox, Tazewell, Whiteside counties require 500 feet separation from adjacent dwellings
6.1.5D.3.	Provide glare analysis if PV solar farm is less than 500 feet from aviation facilities or approach areas	Best practice; Champaign County has many Restricted Landing Areas	Similar to Tazewell and Whiteside counties
6.1.5D.4.	Minimum separations for PV solar farm electrical substations and PV solar farm transmission lines	Best practice to ensure compatibility with adjacent uses	Zoning Ordinance does not require minimum separation for other substations that are owned and operated by utilities or co-ops
6.1.5E.1.	Compliance with PA 96-074 regarding building code	State law	
6.1.5E.2.a.	Conformance with National Electrical Code	Best practice and consistent with state law	Similar to Kankakee County Ordinance and most other county ordinances
6.1.5E.2.b.	Underground wiring should be consistent with best practice regarding solar farm construction and to minimize impacts to farmland drainage	Best practice	Kankakee and Christian counties require underground wiring
6.1.5E.3.	Maximum height shall be as approved in Special Use Permit	PV Solar Farm is a unique development with unique requirements	
6.1.5E.4.	Warning signs for voltage	Best practice	Similar to Kankakee and Tazewell counties
6.1.5F.1.	Minimum depth for underground wiring	Illinois Department of Agriculture Agricultural Impact Mitigation Agreement	
6.1.5F.2.	Protection of agricultural drainage tile	Champaign County Storm Water Management and Erosion Control Ordinance and Illinois Department of Agriculture Agricultural Impact Mitigation Agreement	Sec. 6.1.5F.2.(h). requires that tile repairs cannot be waived or modified except as authorized in the Special Use Permit

Case 895-AT-18 Source Or Brief Justification Of All Proposed Standard Conditions for Solar Farm**March 23, 2018**

Standard Condition	Brief Description of Condition	Source or Justification	Notes
6.1.5F.3.	Restoration of soil conservation practices damaged during construction	Same as Champaign County wind farm requirements and Illinois Department of Agriculture Agricultural Impact Mitigation Agreement	
6.1.5F.4.	Topsoil replacement for trenching	Same as Champaign County wind farm requirements and Illinois Department of Agriculture Agricultural Impact Mitigation Agreement	
6.1.5F.5.	Mitigation of soil compacting and rutting	Same as Champaign County wind farm requirements and Illinois Department of Agriculture Agricultural Impact Mitigation Agreement	
6.1.5F.6.	Leveling of disturbed land	Same as Champaign County wind farm requirements and Illinois Department of Agriculture Agricultural Impact Mitigation Agreement	
6.1.5F.7.	Permanent Erosion and Sedimentation Control Plan	Same as Champaign County wind farm requirements and consistent with NPDES requirements	
6.1.5F.8.	Retention of topsoil	Best practice to prevent stripping and selling of best prime farmland soils	
6.1.5G.1., G.2.	Use of Public Streets (Roadway Upgrade and Maintenance Agreement)	Similar to Champaign County wind farm requirements except that Sec. G.1. provides exception for local highway authority to exempt "community" PV solar farm ($\leq 2\text{MW}$) from requirement for road use agreement	Similar to Kankakee, Tazewell, and Christian Counties
6.1.5H.	Coordination with fire protection district	Same as Champaign County wind farm requirements	Similar to Tazewell County
6.1.5I.	Allowable noise level	Similar to Champaign County wind farm requirements based on Illinois Pollution Control Board requirements but less documentation may be required	Noise should be less of a problem with a PV solar farm compared to a wind farm
6.1.5J.	Endangered Species Consultation	Statutory requirement and same as Champaign County wind farm requirements	Similar to Tazewell and Whiteside Counties

Case 895-AT-18 Source Or Brief Justification Of All Proposed Standard Conditions for Solar Farm**March 23, 2018**

Standard Condition	Brief Description of Condition	Source or Justification	Notes
6.1.5K.	Historic and Archaeological review	Statutory requirement and same as Champaign County wind farm requirements	
6.1.5L.	Wildlife impacts	Similar to Champaign County wind farm requirements but less documentation required	Wildlife impacts should be much less with a PV solar farm compared to a wind farm
6.1.5M.1.(a)	Perimeter fencing required to be 7 feet tall	National Electrical Code requires 7 feet tall fence	Many Illinois counties require 8 feet tall fencing
6.1.5M.1.(b)	Knox box required at entrance	Best practice	
6.1.5M.1.(c)	Perimeter fencing must have 10 feet separation to lot line except 25 feet separation to lot line of lot that is three acres or less in area	Separation to property line minimizes impact on adjacent agriculture and adjacent small-lot residential uses	Required separations are somewhat arbitrary
6.1.5M.1.(d)	Control of noxious weeds required around perimeter fence	Best practice and state law	Similar to requirements of Tazewell and Kankakee counties
6.1.5M.2.(a)(1)	Visual screen required for any part of PV solar farm visible within 1,000 feet of dwelling	Similar to required screening for outdoor storage in Sec. 7.6.2	1,000 feet is somewhat arbitrary; no other jurisdiction identifies when screening will be required
6.1.5M.2.(a)(2)	Visual screen may be waived in writing	Similar to waivers of required separations for wind farm (Sec. 6.1.4C.3.)	
6.1.5M.3.	Visual screen must be vegetative and must be detailed in a landscape plan (Sec. 6.1.5M3.(e))	Best practice	Some residential properties will be surrounded by a PV solar farm and vegetation mitigates the view of the required fencing and the PV solar farm equipment
6.1.5M.3.(a)	Visual screen may be evergreen foliage or existing wooded area or tallgrass prairie plantings (if PV modules \leq 8 feet tall)		Some PV module installations may be taller than 8 feet
6.1.5M.3.(c)	Minimum height of evergreen foliage at time of planting; 50% of required screen must be in place within 2 years of planting; must be replaced if foliage below 7 feet disappears over time	Best practice	

Case 895-AT-18 Source Or Brief Justification Of All Proposed Standard Conditions for Solar Farm**March 23, 2018**

Standard Condition	Brief Description of Condition	Source or Justification	Notes
6.1.5M.3.(d)	tallgrass prairie plantings may only be used for required screening if PV modules \leq 8 feet tall and planted and maintained per NRCS standards		Some PV module installations may be taller than 8 feet
6.1.5N.	Minimize glare	Minimal requirement in case glare becomes a problem	Also considered in Fulton County, Knox County, and Tazewell County
6.1.5O.	Liability insurance	Same as Champaign County wind farm requirements	Also required by Tazewell County
6.1.5P.1.(a) & (b)	Submittal of annual maintenance reports	Same as Champaign County wind farm requirements	Maintenance reports document whether PV solar farm is being adequately maintained
6.1.5P.1.(c)	Operational conditions for cleaning of PV solar farm equipment (PV modules)	Applicant must explain if (and how much) water will be used to clean PV modules	
6.1.5P.2.	Materials handling & disposal	Same as Champaign County wind farm requirements	
6.1.5P.3.	Vegetation management	Ensures compliance with Illinois Noxious Weed Law	Also required by Kankakee County, Christian County, Tazewell County
6.1.5Q.	Site Reclamation Plan and Decommissioning	<p>The basic proposal uses the same decommissioning requirements as the Champaign County wind farm requirements that requires the Letter of Credit to be converted to an Escrow Account in the first 12 years of operation.</p> <p>Alternative Decommissioning is proposed for PV SOLAR FARMS that use SOLAR PV modules that 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 that lowers the cost of the financial assurance by the following:</p> <ul style="list-style-type: none"> • The amount of the financial assurance is 125% of the decommissioning estimate as compared to 100% required by the AIMA and the 150% required by the previous proposed 	The basic decommissioning is somewhat similar to Kankakee, Tazewell, Christian, and Whiteside counties although none of those counties requires an escrow account and none of those counties provides such detailed explanation of what is actually required.

Case 895-AT-18 Source Or Brief Justification Of All Proposed Standard Conditions for Solar Farm March 23, 2018

Standard Condition	Brief Description of Condition	Source or Justification	Notes
		amendment. <ul style="list-style-type: none"> ● The same incremental approach to establishing the financial assurance in eleven years (same as AIMA) except that the first step is at the time of permitting, similar to the previous proposed amendment. ● The three increments are 12.5%, 62.5%, and 125%. ● 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. 	
6.1.5R.	An Illinois Department of Agriculture Agricultural Impact Mitigation Agreement is required	The Illinois Department of Agriculture Agricultural Impact Mitigation Agreement establishes the minimum requirements for protecting farmland and for decommissioning and counties can require more strict requirements.	
6.1.5S.	Complaint hotline	Same as Champaign County wind farm requirements	
6.1.5T.	Expiration of County Board Special Use Permit if no construction within 10 years	Same as Champaign County wind farm requirements	

Susan Burgstrom

From: John Hall
Sent: Tuesday, March 27, 2018 6:49 PM
To: Susan Burgstrom
Subject: FW: Letter Of Credit Information

RECEIVED

MAR 28 2018

CHAMPAIGN CO. P & Z DEPARTMENT

From: Patrick Brown [<mailto:Patrick.Brown@baywa-re.com>]
Sent: Tuesday, March 27, 2018 5:56 PM
To: John Hall <jhall@co.champaign.il.us>
Subject: FW: Letter Of Credit Information

Hello John,

Please find a first draft of an overview on how Letters of Credit (LCs) work. Let me know of any questions or aspects you want to emphasize:

- The LCs are issued by a bank, which guarantees a determined payment to a beneficiary (i.e County of Champaign) on behalf of a buyer (i.e BayWa) under certain terms and conditions. In the event that the buyer fails to perform under the terms of the LC, the seller can require the bank to cover that payment. Under a Letter of Credit, **the beneficiary relies upon the creditworthiness of the issuing bank instead of that of the buyer.**
- The terms of the LCs can be customized to the specific purpose and to the parties request.
- BayWa has a long term relationship with HSBC (A/S&P), one of the world largest banks, which will likely issue a LC to cover the decommissioning obligation.

Why an LC?

- An LC would substitute BayWa's credit for a top tier bank's credit, reducing counterparty risk for the beneficiary.
- LCs are cost efficient and widely accepted. There are no transactions costs for moving money around or negative carry for parking cash in an escrow account for years.
- LCs free up liquidity.

Here's a source that provides more details on the different type of LCs: (source: Uniform Customs & Practice For Documentary Credits-UCP600: <https://www.tradefinanceglobal.com/letters-of-credit/>)

Patrick Brown
Director of Development



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Susan Burgstrom

From: John Hall
Sent: Tuesday, March 27, 2018 6:49 PM
To: Susan Burgstrom
Subject: FW: Residential Separation from Transmission Lines

From: Patrick Brown [<mailto:Patrick.Brown@baywa-re.com>]
Sent: Tuesday, March 27, 2018 6:41 PM
To: John Hall <jhall@co.champaign.il.us>
Subject: Residential Separation from Transmission Lines

RECEIVED

MAR 28 2018

CHAMPAIGN CO. P & Z DEPARTMENT

Hello John,

I saw the provision below and I was hoping you can add a clarification to it. I agree with substation locations and higher voltage transmission to keep away from residential. I would like to propose a higher limit of this to apply to. Most projects have collector lines that run from one segment to another. These above ground "Trunk Lines" run a typical utility high voltage, but a lower high voltage 34.5kVA. These run throughout most neighborhoods in Illinois and the U.S. These would be the lower height lines you see that run from small community substations that utilities own to other small substations. Please add a provision that his only applies to above 34.5kVA. I can discuss at the meeting if you need me to.

4. A separation of at least 500 feet between substations and transmission lines that are above 34.5kVA to adjacent dwellings and residential DISTRICTS.

Patrick Brown
Director of Development



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PRELIMINARY DRAFT

895-AT-18

**FINDING OF FACT
AND FINAL DETERMINATION
of**

Champaign County Zoning Board of Appeals

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

Date: ***{March 29, 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.

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 6.1.1A. and add reference to Section 6.1.1A.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.

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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, and March 29, 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 6.1.1A. and adding reference to Section 6.1.1A.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 that 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. The proposed amendment will *NOT IMPEDE* the achievement of Goal 2.

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.

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- (h) Proposed Section 6.1.5P. requires operational standard conditions intended to ensure that nuisance conditions are not allowed to exist at a PV SOLAR FARM.
 - (i) Proposed Section 6.1.5Q. 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.
- 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** minimize the conversion of best prime farmland as follows:
- (a) An analysis of the actual disturbance of best prime farmland for two proposed PV SOLAR FARMS in Champaign County revealed that actual land disturbance (not merely the conversion of use) that would result from the construction of the two PV SOLAR FARMS would be far less than the land disturbance that would result from by-right residential development 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

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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, 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 E. 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 6.1.5M. 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.
- 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.”**

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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:
 - (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 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 L. requires that a visual screen shall be provided for any part of a PV SOLAR FARM that is visible to and located within 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 G. requires the applicant for any PV SOLAR FARM to submit a copy of the site plan to the relevant Fire Protection District and

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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 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. The proposed amendment is *NOT RELEVANT* to Goal 6 in general.

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:

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- a. Proposed Section 6.1.5 F.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) At the March 15, 2018 public hearing for this case, 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.
 - (2) No evidence has been provided that establishes a link between solar farm construction and surrounding property values.

- 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.
 - 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.

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- 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) Regarding screening and fencing, the proposed amendment includes required fencing around the entire solar farm development, and vegetative screening visible to and located within 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.
- (3) Regarding glare, the proposed amendment includes a standard condition to minimize glare that may affect adjacent properties. The application for a County Board Special Use Permit shall include an explanation of how glare will be minimized.
- 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.

PRELIMINARY DRAFT

- (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 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.

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, and March 29, 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 will ***HELP ACHIEVE*** LRMP Goals 4, 7, 8, and 9.
 - B. The proposed Zoning Ordinance text amendment will ***NOT IMPEDE*** the achievement of LRMP Goals 1, 2, and 3.
 - C. The proposed Zoning Ordinance text amendment is ***NOT RELEVANT*** to LRMP Goals 5, 6, 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).

PRELIMINARY DRAFT

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*

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>

MINUTES OF REGULAR MEETING – FOR DISCUSSION ONLY

CHAMPAIGN COUNTY ZONING BOARD OF APPEALS

**1776 E. Washington Street
Urbana, IL 61801**

**DATE: March 15, 2018 PLACE: Lyle Shields Meeting Room
1776 East Washington Street
TIME: 6:30 p.m. Urbana, IL 61802**

MEMBERS PRESENT: Catherine Capel, Frank DiNovo, Ryan Elwell, Debra Griest, Jim Randol, Brad Passalacqua

MEMBERS ABSENT: Marilyn Lee

STAFF PRESENT: Connie Berry, Susan Burgstrom, John Hall

OTHERS PRESENT: Tim Osterbur, Jim Nonman, Tannie Justus, Ann Ihrke, Cindy Ihrke, Ted Hartke, Jerry Perkins, Colleen Ruhter, Cindy Sheperd, Barton Pitts, Christine Walsh, Aaron Esry, Tim Montague, Patrick Brown, Phil Fiscella, Marcus Ricci, Andy Robinson, Elise Doody-Jones, Max Kummerow

1. Call to Order

The meeting was called to order at 6:30 P.M.

2. Roll Call and Declaration of Quorum

The roll was called and a quorum declared present with one member absent.

Ms. Capel informed the audience that anyone wishing to testify for any public hearing tonight must sign the witness register for that public hearing. She reminded the audience that when they sign the witness register they are signing an oath.

3. Correspondence

None

4. Approval of Minutes (September 14, 2017, and February 15, 2018)

Ms. Capel asked the Board if there were any corrections or additions to the September 14, 2017, and February 15, 2018, minutes.

Ms. Burgstrom stated that Mr. DiNovo has provided edits to the February 15, 2018, minutes via an email dated March 15, 2018. Ms. Burgstrom read Mr. DiNovo’s edits as follows: page 4, line 24, insert “it” between “and” and “is”; and page 6, line 33, delete “and not such”; and page 11, line 33: delete the first “existing”; and page 12, line 10 insert “or anywhere else” between “ditches” and “except”; and page 19, line

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23, change “pile” to “pond”; and page 19, line 31, change “enforce” to “force”; and page 20, line 35, change “of” to “over”; and page 21, line 1, change “Mr. DiNovo closed” to “he would close”; and page 21, line 20, Delete “for” and “he”; and page 21, line 35, change “saying” to “say”; and page 23, line 30, insert “without the petitioner’s agreement” after “Board does not normally proceed”; and page 24, line 2, change “in” to “to”; and page 24, line 20, insert “to believe” between “inclined” and “that”.

Ms. Capel asked the Board if there were any additional corrections or additions to the September 14, 2017, and February 15, 2018, minutes, and there were none.

Ms. Capel entertained a motion to approve the September 14, 2017, and February 15, 2018, minutes, as amended.

Mr. DiNovo moved, seconded by Mr. Passalacqua, to approve the September 14, 2017, and February 15, 2018, minutes, as amended. The motion carried by voice vote.

5. Continued Public Hearing

895-AT-18 Petitioner: Champaign County Zoning Administrator Request 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 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 references to the new Section 6.1.5 where there are existing references to existing Section 6.1.4; and 2. Revise subparagraph 6.1.1 A. 11c. 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; and Part K: Add new subparagraph 9.3.3 B.8. to add application fees for a SOLAR FARM County Board SPECIAL USE permit.

Ms. Capel informed the audience that anyone wishing to testify for any public hearing tonight must sign

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1 the witness register for that public hearing. She reminded the audience that when they sign the witness
2 register they are signing an oath. She asked the audience if anyone desired to sign the witness register
3 and there was no one.

4
5 Ms. Capel asked the petitioner if he would like to make a statement regarding the case.
6

7 Mr. John Hall, Zoning Administrator, distributed new Supplemental Memorandum #4, dated March 15,
8 2018, to the Board for review. He said that attached to the memorandum is an email from Patrick Brown
9 of BayWa-re Solar Projects LLC, providing input on the proposed reclamation plan and
10 decommissioning requirements. He said that also attached to the memorandum is a comparison table for
11 decommissioning requirements dated March 14, 2018. He said that table compares the site reclamation
12 and decommissioning requirements with the State of Illinois Department of Agriculture Agricultural
13 Impact Mitigation Agreement (AIMA) for Commercial Wind Energy Facility, and the BayWa r.e. Solar
14 Projects, LLC, proposal. He said that also attached to the new memorandum is a letter received on
15 March 14, 2018, from Anne Bjornson-Parkinson indicating that she supports a solar farm in Champaign
16 County and notes that quality of life is an issue. Mr. Hall said that the letter was sent to the County
17 Board and forwarded to the Zoning Administrator. He said that public comments that are received
18 during the time that the public hearings for Case 895-AT-18 are occurring shall become part of the
19 public hearing and will be included as a Document of Record.
20

21 Mr. Hall stated that the last attachments are three different diagrams of the screening requirements based
22 on the concerns mentioned in Supplemental Memorandum #3. He said that staff proposes to change the
23 screening requirements that were included in the February 22, 2018, version of the amendment. He said
24 that staff has been doing an analysis of conditions for the Sidney Solar Farm, and staff believes that the
25 February 22, 2018, screening requirements were not adequate. He said that the Board does not have the
26 screening requirement language in front of them yet, but the diagrams explain what staff is going to
27 propose and the Board will have the revised language well before the March 29, 2018, public hearing.
28

29 Mr. Hall stated that the staff distributed an email from Peter Schmitt, Project Developer with United
30 States Solar Corporation, indicating that his company agrees with the decommissioning language
31 discussed by BayWa r.e.
32

33 Ms. Capel asked the Board if there were any questions for Mr. Hall.
34

35 Mr. DiNovo stated that at some point he would like to go through the text amendment provisions one by
36 one, so that there is documentation of the reasoning for each provision. He said that this procedure
37 would provide clarification for any future zoning administrator.
38

39 Mr. Hall stated that, outside of the public hearing, he has been trying to do this as well and documenting
40 every requirement, but he has not gotten to it. He said that he hopes to have this information in the
41 Summary of Evidence, and he wished that he could say that he has committed this to memory and that
42 he could recite it, but he is sorry to say that he cannot. He said that a review of the provisions for the
43 text amendment is a large part of this case, and when the Board is ready to have that discussion, we can.
44

45 Ms. Capel informed the audience that anyone wishing to testify for any public hearing tonight must sign the
46 witness register for that public hearing. She reminded the audience that when they sign the witness register

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1 they are signing an oath. She asked the audience if anyone else desired to sign the witness register, and there
2 was no one.

3
4 Ms. Capel called Theodore P. Hartke to testify.

5
6 Mr. Theodore P. Hartke, who resides at 1183 CR 2300 East, Sidney, stated that he would mainly like to
7 review the last 10 pages of Supplemental Memorandum #1, dated February 23, 2018, with the Board.
8 He said that an email dated September 17, 2017, from himself to Mr. Hall, was his first email to staff
9 after he learned that Champaign County was proposing to amend its ordinance to allow the construction
10 of solar farms in the unincorporated areas of the County. He said that the purpose of his email to John
11 Hall was to make him aware that there were some moratoriums in place in different areas to assure that
12 everyone slows down and carefully thinks about things.

13
14 Mr. Hartke stated that in another email to John Hall dated January 2, 2018, was immediately after he saw
15 a Champaign County packet with an example ordinance for solar farms that was copied from an
16 Ordinance from Kankakee County. He said that when he saw this packet of information, his attention
17 was drawn to the part where they allowed a maximum noise level. He said that he and his family used to
18 live in Vermilion County and wind turbines were constructed around their home. He said that they
19 thought that the turbines would be quiet, as advertised, but once the turbines were started, his family
20 suffered from severe sleep deprivation. He said that they got the wind turbine company to shut the
21 turbines off for 51 nights for the first five months so that they could sleep in their house, but once they
22 went public with their complaint regarding the fact that they were not getting sleep in their own home, the
23 wind company refused to shut off the wind turbines. He said that the wind company eventually decided
24 to complete a wind study at his home and the results indicated that the noise level was the very highest
25 level allowable per the Illinois Pollution Control Board (IPCB) noise limits. He said that the wind
26 company adjusted the maximum noise limit and did a surrogate study that would approximate that noise
27 where it was measured at his house, but the IPCB noise levels, in regard to measuring, should be at the
28 property line. He said that the noise level at his house was 45 to 46 dBA. He said that they abandoned
29 their home in Vermilion County and moved to a double wide home where they lived for one and one-half
30 years until they could afford to buy their new home. He said that their new home happens to be a few
31 miles north of the proposed solar farm. He said that when he looks at the email that he sent to Mr. Hall,
32 he noticed that Kankakee County had a maximum noise level of 50 dBA, and he is here to tell the Board
33 that 50 dBA is extremely noisy for a noise source that will be on constantly when the sun shines. He said
34 that he does believe that the solar panels are going to have inverters and transformers amongst the panels
35 in the field, and he believes that it would be a travesty in having that noise interrupt or come into the
36 backyards of the neighbors. He said that the neighbors probably have children, farm animals or pets, and
37 a constant humming tonal type of noise wouldn't be bad for 20 minutes, but it would be terrible if it
38 continues for 10 hours per day in the middle of summer when the wind is calm and there is no other noise
39 to mask it. He said that in his time from going around and testifying about the noise levels at his previous
40 home that he left behind, he has found that there are things that can be done to make it more tolerable and
41 one of the most important things to do is to create a setback from the noise causing item, wind turbine or
42 transformer, and keep that distance far enough away from the neighbors so that noise has an opportunity
43 to dissipate, and at the property line have it at safe level that people can tolerate. He said that the World
44 Health Organization has a noise level of no more than 40 dBA, and Dr. Paul Schomer, from Champaign,
45 Illinois, has testified at many wind turbine hearings and he calls for a 39 dBA maximum noise limit. Mr.
46 Hartke said that Dr. Schomer indicates that in order to achieve a maximum 39 dBA noise level, you must

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1 design for a 34 dBA to take care of some of the times when there is no wind to mask the noise or other
2 atmospheric conditions exist. Mr. Hartke stated that while the ordinance is open for amendment, it is
3 very important to put in a safe noise limit so that neighbors can use their backyards the way that they
4 always have for a long time. He said that it is not appropriate to suddenly intrude or interrupt, all day and
5 night, into the confines of people's private property who are not leaseholders or party to any of the
6 negotiations and take away use of their land. He said that the solar companies can place the transformers
7 and inverters in the middle of their project and away from the fringes where homes may be located. He
8 said that the transformers and inverters are on the ground and could have walls, sheds, or bushes placed
9 around them to make the noise more tolerable or go away.

10
11 Mr. Hartke stated that the same memorandum has a copy of the PowerPoint presentation titled Effects of
12 Wind Turbine Acoustic Emissions. He said that in the summer of 2015, this presentation was provided
13 in Boone County, Illinois, by Dr. Schomer. Mr. Hartke stated that Boone County, Illinois, put in one-
14 half mile setbacks to protect their citizens from wind turbines. He said that the slides of the presentation
15 are numbered, and if the Board will review slide #22, Converting criterion (including tolerance) to
16 distance, the noise from any machine, turbine or inverter for a solar panel, creates 72 dBA at the source,
17 and for every doubling of the distance, the noise goes down 6dB. He said that this chart is a very easy
18 way to determine how far away a noisy item needs to be from a property line to keep it from impacting
19 the neighbors. He said that slide #13, Annoyance-the criterion, discusses how noise is in a quiet rural
20 setting, and the Board may hear that people believe that 45 dBA is acceptable, but that is where there is
21 other ambient noise, such as traffic, home air conditioners, etc. He said that he would like to make it
22 clear that in the middle of the summer in the area of this solar farm, there is no traffic, no neighbors, or
23 anything else other than a passing train, which only last 5 to 10 minutes, and during those times when
24 there is no wind, no noise exists at the neighbors' homes. He said that if the County wants to be fair to
25 the residents in the area of the proposed solar farm, a noise study would be required before the project
26 begins and the County would only allow an increase of noise level at 5dB for the amount of humming
27 and buzzing that the inverters and transformers will make near these homes. He said that slide #13
28 states that a quiet rural setting requires a 5 to 10 dB adjustment from a normal IPCB noise limit, which is
29 where they came up with the not to exceed 39 dBA noise limit.

30
31 Mr. Hartke stated that his email to John Hall, dated January 2, 2018, discusses Dr. Schomer's
32 presentation, and requests a setback that will achieve a maximum noise level not to exceed 39 dBA. He
33 said that in his email, he discusses the HDR Engineering noise analysis for Invenergy's project in
34 Champaign-Vermilion County, Illinois, which indicates that 40 dBA is sufficiently low to minimize or
35 eliminate sleep interference. He said that page 2 of 3 of Attachment G to Supplemental Memorandum
36 #1, titled HDR CLAIMS, indicates an area circled in red. He said that when Invenergy constructed the
37 wind turbines near his previous home, HDR Engineering prepared an application for the County Board
38 to approve and HDR stated the following in their sound analysis report: "with the conservative additions,
39 the analysis indicates that the majority of locations would experience turbine sound levels of less than 40
40 dBA (outdoors). This level is sufficiently low to minimize or eliminate any potential for sleep
41 interference or indoor/outdoor speech interference, as defined by the US Environmental Protection
42 Agency." He said that 40 dBA is also the maximum noise limit from the World Health Organization
43 before adverse health effects begin. He said that the color chart on the same page is titled "Community
44 Response Prediction" and was created by Steven Ambrose, who is an acoustician and an Institute of
45 Noise Control Engineer's member, and all of the black dots on the chart represent a study that was done
46 by the EPA in the 1970's comparing the noise and frequency level of community complaints. He said

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1 that the chart has dBA on the bottom row and the first red arrow which points up is the first noise level
2 where complaints begin. Mr. Hartke stated that at 33.5 dBA widespread complaints begin, and the black
3 arrow pointing at the box titled "LOAEL" (lowest observed adverse effect level) the 40 dBA
4 corresponds with HDR's claims, and Dr. Schomer's 39 maximum decibel limit that he proposed for
5 wind turbines, and the 40 dBA is where the beginning of adverse maximum effects begin. He said that
6 the reason why it starts at 40 dBA is because it is constant noise that does not go away. He said that as
7 long as the sun is shining, there will be noise from the solar farm, and as long as the wind is blowing,
8 there will be noise from the wind turbines, which is day and night.

9
10 Mr. Hartke stated that the Kankakee ordinance allows a noise level of 50 dBA, which causes vigorous
11 community action levels. He said that vigorous community action levels causes people to attack each
12 other with knives, guns, and other types of violence, and this is because the noise is annoying and
13 pestering the neighbors and it never goes away, which is similar to this. He said that if a husband was at
14 a party with his wife and a stranger came up to the wife and continuously tapped her on the shoulder, not
15 hurting her, just annoying her, and the wife finally says something to her husband, the husband would
16 tell the stranger to stop doing it. He said that if the stranger continues to tap the wife's shoulder, but
17 claims that he is not hurting her just annoying her, the husband will grow tired of it and there will be an
18 argument and fight between the stranger and the husband. Mr. Hartke stated that this is the same
19 scenario with this type of noise generated by the wind and solar farms, the buzzing and humming noise
20 at night time will wear you down and finally get to you.

21
22 Mr. Hartke stated that he does not have the words to adequately explain what he and his wife went
23 through before they finally decided to abandon their home due to the noise. He said that they would pull
24 their kids out of bed, put on their clothes, and shove them out the door to go to school where they would
25 flunk math tests, and he is embarrassed and ashamed to say that he was unable to protect them. He said
26 that he was naïve and silly in believing that the wind company was going to be a good neighbor, and that
27 is not something that he wants to see anyone else go through. He said that he and his wife purchased a
28 home northeast of Sidney on CR 2300E, which is a few miles away from the proposed solar complex,
29 and it worries him that the neighbors are going to go through the same thing that his family went
30 through, just because someone thought that is was a good ideal to put a solar farm in that location that
31 happens to have a huge upgraded substation. He said that at this moment in time, the Board can save
32 those neighbors by making sure that those noise making items are far away from them and they can have
33 their home and yard in peace and quiet. He said that this Board's only job is to protect health, safety and
34 welfare, and it is not this Board's job to make solar or wind energy companies prosperous or farmers
35 allowed to receive their \$800 or \$1,000 per acre income from their farm fields. He said that this Board's
36 job is to protect the landowner's health, safety, and welfare and protect their use of their homes on
37 property that they own, and that they can keep the enjoyment of their property. He said that if the
38 neighbors are injured or hurt, this is not the last time that this Board will hear from him and he will find
39 a way to make sure that the Board knows how good or bad of a decision was determined. He said that if
40 this Board makes this a great decision and they can see the possibility that he is right about the noise
41 issue, he will forever be in their favor and he will work hard to support the Board. He said that if the
42 Board's decision is a disservice to his neighbors, he will follow through with the opposite. He said that
43 he is a licensed surveyor and many people hire him to divide property to house their animals/livestock
44 and their homes and the zoning regulations have limited their lot size to three acres, and the reason for
45 that lot size limitation is to preserve the best prime farmland, and not allow a lot of sprawl and
46 uncontrolled development. He said that it is very inappropriate to have one project to come in, while the

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1 residence.

2

3 Mr. Hartke stated no.

4

5 Mr. DiNovo stated that his residence is approximately six miles northeast of the substation. He asked
6 Mr. Hartke if he can hear the grain dryers running at Frito-Lay.

7

8 Mr. Hartke stated yes.

9

10 Mr. DiNovo stated that when he sits on his back porch, he can clearly hear the grain dryers running at
11 Frito-Lay.

12

13 Mr. Hartke stated that they can hear the grain dryers, but they are not at a level that has caused him to be
14 annoyed by them. He said that it would be appropriate for the Board to require that the applicant provide
15 the data sheets for the transformers and inverters. He said that the applicant could provide the data sheet
16 on the exact type of equipment that they will be installing in this solar farm, or a like kind similar in
17 noise level, and the Board could review that noise level with the noise distance chart.

18

19 Mr. Passalacqua stated that the wind farm provided those data sheets and their product's noise level still
20 made Mr. Hartke's family abandon their home.

21

22 Mr. Hartke stated that the wind company and the ordinance indicate that the wind turbine was not to
23 exceed the IPCB noise standards. He said that the reason why they have an upper limit of the 45 to 46
24 dBA which ran his family out of their home, is because agricultural land is classified as Class C land, but
25 his residential property is classified as Class A land. He said that there is a very high noise threshold
26 allowance in IPCB rules that allows a certain amount of noise for Class C down to Class A, and it is
27 inappropriate. He said that the IPCB noise limits only cover the octave band limits that are audible. He
28 said that the wind turbines rumble and thump because the blades flex in and out of the wind. He said that
29 every time the blades flex forward or backwards, they create an air pressure pulse, and air pressure
30 pulses are noise and are more like a vibration level, and that low frequency noise turns into a thump or
31 rumble noise that could be heard in his bedroom.

32

33 Mr. Passalacqua stated that rumbling and thumping noise was not measured.

34

35 Mr. Hartke stated that the rumbling and thumping noise is not subject to any laws whatsoever, if you are
36 using IPCB limits. He said that Dr. Schomer, who is 90 years old, lives in Champaign and was a
37 graduate student and one of the four people who established the noise levels for IPCB in the 1960's or
38 1970's before any wind turbines were ever dreamed of. He said that the noise standards were never
39 considered to be applicable to things like wind turbines or anything that is highly impulsive, and the
40 closest thing that they had at the time was forging operations where they had heavy metal stamping. He
41 said that forging operations will vibrate and have a pounding sound and they are classified as highly
42 impulsive and have a 5 dBA penalty. He said that somehow wind turbines are not classified as being
43 highly impulsive, and he does not mean to imply that solar panels will cause thumping or rumbling,
44 because they are two separate items. He said that while the Board is working on the solar ordinance,
45 since it is with the wind turbine language, he would like to see the noise limit apply to the wind turbines,
46 inverters for solar panels, and anything industrial that will be next to residential homes. He said that

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2 Ms. Capel asked the Board if there were any questions for Ms. Ihrke, and there were none.

3

4 Ms. Capel called Cindy Ihrke to testify.

5

6 Ms. Cindy Ihrke, who resides at 1458 N 1700E Road, Roberts, stated that owning property is one of the
7 most important rights we have in this country; therefore, property values and the right of its enjoyment
8 should be protected for each landowner. She said that she would like to present the Board with several
9 articles and studies pertaining to zoning effects on property values. She said that since wind and solar
10 projects are both industrial scale entities, she would ask the Board to consider them as equally impactful
11 on property values. She said that zoning offers property owners stability and certainty in land values
12 over time, and in giving agriculturally zoned land special permits to build industrial scale electrical
13 generating projects, you are changing the entire area. She said that this affects property taxes, view shed,
14 property enjoyment and general harmony within the area. She said that this issue is becoming more and
15 more concerning and now we are beginning to see a variety of court cases against counties "taking"
16 property without compensation.

17

18 Ms. Ihrke stated that she is submitting a few sample articles that can be placed on the record. She said
19 that the first article is about citizens in Cass County, Indiana, where they are suing Cass County over
20 unreasonable setbacks of wind turbines, 1,000 feet from homes, which she believes is similar to
21 Champaign County's current wind ordinance. She said that in their suit, they stated that measuring
22 setbacks from homes and not their property lines is unreasonable and interferes with the enjoyment of
23 their property, and their Fifth Amendment right.

24

25 Ms. Ihrke stated that the second article talks about how Shelby County in North Carolina in 2015
26 changed their zoning ordinance to no longer allow permit solar facilities in residential and rural zones as
27 a special use. She said that the council and residents were concerned that solar projects would harm the
28 value of surrounding properties. She said that before the council voted in favor of the amendment to
29 change their zoning, one of the board members stated that it sets people up for failure to tell them that it
30 is an allowable use in R-20, rural zoning, and when they use the Findings of Fact they will have to
31 indicate that it will harm the value and it is not in harmony, which hurts a potential customer who would
32 have located in a place where the Findings of Fact would not have been negatively answered. She said
33 that they are basically saying that if they would allow solar companies to stay away from residential
34 areas and rural residential areas, it would be beneficial to the solar company and also protect homes.

35

36 Ms. Ihrke stated that she is also submitting 3 additional sources on how industrial scale energy projects
37 negatively affect property values, one of which is from Eon Energy Research Center, that there are
38 indeed significant negative impacts on surrounding property values. She said that she marked the points
39 of interest in these sources and would hope that the Board would take the time to look into these further.
40 She said that lastly, she does have samples of real property value guarantees for wind and solar for the
41 Board's consideration to add to their current zoning. She said that if anything, this will allow non-
42 participating landowners protection for their lifetime investments. She said that she has not looked at
43 many solar contracts, but has looked at many wind contracts, and typically many of the people who are
44 signing the contract for the wind turbines on their property end up waiving their zoning rights, setbacks,
45 noise and shadow flicker limits. She said that when the Board writes the language in to their ordinance,
46 they will be protecting the people who are not signing contracts and who do not have a vested interest.

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1
2 Ms. Capel asked the Board if there were any questions for Ms. Cindy Ihrke, and there were none.

3
4 Ms. Capel stated that in order to assure accurate transcription, she requested that Ms. Cindy Ihrke submit
5 a copy of her written statement to staff, and Ms. Ihrke agreed.

6
7 Ms. Capel called Tannie Justus to testify.

8
9 Ms. Tannie Justus, who resides at 2268 CR 900N, Homer, stated that she is sure that the Board has seen
10 a map of the proposed solar farm in rural Sidney.

11
12 Ms. Capel clarified that the Board is currently working on a text amendment for the Zoning Ordinance,
13 and not a Special Use Permit case for a solar farm; therefore, the site map is not available for the Board
14 at this hearing.

15
16 Ms. Justus stated that she has a copy of a map indicating the proposed solar farm near Sidney and she
17 indicated the location of her property.

18
19 Ms. Capel requested Ms. Justus to pass the map to the Board for review.

20
21 Ms. Justus stated that she would like to thank the Board for the time given to discuss the proposed solar
22 farm around the southern Sidney area. She said that to begin with, at this time she is not against the use
23 of solar energy. She said that she believes that with such a world in turmoil, having multiple sources of
24 energy, independent of other countries, is a good thing, as is not placing our entire source of energy in
25 one or two baskets. She said that in time, solar may well prove it can help, possibly offering a cleaner
26 footprint, and she feels that it deserves a chance. She said that she would be a hypocrite to denounce the
27 project, just because it is coming to her back door, front door, side door and yes, the other side too. She
28 said that a chance to be heard, understood, and made all right in the end is what she seeks, because she
29 has put 35 years of blood, sweat and tears into her property, her piece of heaven, as she likes to say. She
30 said that she needs to know that they and the property are afforded certain protections before she can
31 totally can be on board. She will admit that her first response was to beat the drums and jump on the
32 shut it down band wagon, but then a cooler head prevailed and fairness means facts, so that is what she
33 is after. She said that she is very concerned about her property value going down. She said that all her
34 family and friends are sorry for them and think that it is awful, but no one has said that they wished that
35 it was their place that they chose to surround. She said that they use the equity in the property for loan
36 purposes for their trucking business, and do not want to suffer a loss of that ability.

37 Ms. Justus stated that she has questions, such as, will their satellite television, phones, radio, or Wi-Fi be
38 adversely affected. She said that water is a concern, and asked if wells will be drilled. She asked if a
39 field tile is broken or any land contour changed, would that bring damaging water in their direction
40 during the construction and life of the project, and how will those issues be handled. She asked if the
41 temperature would raise on their ground once the panels were constructed, and what weed control
42 measures will be used. She asked if chemicals are used for weed control, what kind of assurances will
43 they have to cover over spray damage on their property. She asked if from start to finish, what is the
44 expected time frame to deal with the construction noise, dirt, and extra traffic. She said that she would
45 like assurances that they will be shielded in all directions from noise, glare, or view of the panels. She
46 said that they would like screening to be a plant screen, as they do not want to see the fencing around the

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1
2 Ms. Shepherd stated that the decommissioning cost for a wind farm is different than the decommissioning
3 cost for a solar farm, because a solar farm is basically steel poles screwed into the ground with glass
4 panels on top of them. She said that to decommission a solar farm, the glass panels must be recycled and
5 the steel poles pulled up and recycled as well. She said that the ground that has laid fallow for 20 years
6 may have been planted with native plants that are low profile, but beautiful. She said that the land is in
7 better condition than it was prior to the installation of the solar farm. She said that the loss of farmland is
8 also something that can be addressed by making sure that the ground underneath is not paved or graveled
9 over. She said that Minnesota has solar ordinances that require that the plantings underneath be
10 pollinator friendly and attractive. She said that she personally believes that solar farms are great looking
11 and might be something that could grow on people after a while. She said that when she sees a solar
12 panel, it is not spewing carbon or other contaminants into the air causing asthma or illnesses that will
13 compromise the health of her children or grandchildren, not now or 20 years from now. She encouraged
14 the Board to write the best solar ordinance that they can based on the scientific information and the
15 experience of other areas in our country who have brought renewable energy into their portfolios, because
16 this is the best way to protect the health, safety, comfort and general welfare of all our residents and put
17 Champaign County on the forefront of being a leader for clean renewable energy.

18
19 Ms. Shepherd noted that she does not have any financial stake in any solar farms.

20
21 Ms. Capel asked the Board and staff if there were any questions for Ms. Shepherd.

22
23 Mr. Passalacqua asked Ms. Shepherd if she had solar panels on her home.

24
25 Ms. Shepherd stated yes.

26
27 Ms. Capel called Tim Montague to testify.

28
29 Mr. Montague deferred his testimony at this time, and requested the opportunity to speak after Mr.
30 Patrick Brown.

31
32 Ms. Capel called Patrick Brown to testify.

33
34 Mr. Patrick Brown, Director of Development for BayWa-r.e. Solar Projects, whose address is 17901
35 Von Karman Avenue, Suite 1050, Irvine, California, thanked the Board and staff for their time and
36 research regarding this project. He said that he feels bad that Mr. Hartke and his family had the terrible
37 experience that they did regarding a wind farm near their previous home. He said that he worked on his
38 agency's wind farm projects previously and he has done a lot of research and understands the concerns
39 and issues that a lot of people present tonight have regarding wind farm development. He noted that this
40 is not a wind farm ordinance and anything that is being brought up about wind and how it is like solar is
41 not correct. He said that the development of wind farms versus solar farms is totally different and any
42 suggestions about the noise ordinance remedies are great, but he would ask staff and the Board to
43 perhaps table that in the parking lot and pick it up in a different ordinance amendment, because the
44 world cannot be fixed with one ordinance. He said that that the mission before the Board currently is to
45 draft the first solar ordinance for Champaign County and do the best job that the Board can do so that it
46 protects the community and the best interests of the County. He said that Champaign County wants

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1 industry to come in and do projects, but if the Board wants to put something in place for Champaign
2 County that is so onerous that no developer wants to come here, then go ahead and make the ordinance
3 as hard as possible so that the Board never has to deal with anything like this again. He commended
4 staff regarding all the changes that have been made to the solar ordinance so that it meets the goals of
5 serving everyone and not just one side versus another. He said that he originally came tonight thinking
6 that he would only be addressing decommissioning, but he would like to address a few things that were
7 mentioned by the witnesses. He thanked Ms. Capel for noting to the audience that the proposed BayWa-
8 r.e. solar project is not part of this public hearing tonight and that the Board is only reviewing the solar
9 ordinance itself. He said that he has not had a chance to meet with many of the community members,
10 although he did speak to a few tonight, but there is still a lot of work to do on that project and it would
11 be unfair to start cooking it before it is out of the package, so to speak.
12

13 Mr. Brown stated that according to data from the Solar Energy Industries Association (SEIA), the trade
14 organization for solar across the United States, indicates that there have been 53.1 gigawatts of
15 community solar installed across the United States, which is a tremendous amount of data that is out
16 there. He said that he does not want to sit here and have a big discussion about noise and all these
17 different other things, because that time will come later with additional facts, but it is good for the
18 community to come forward with issues that need to be discussed. He said that Mr. Hartke is very
19 concerned about the noise generated by the solar farm, because he had a bad experience and wants to
20 make sure that it doesn't happen to others. Mr. Brown stated that he does not want to come before the
21 Board and tell them that all these people are wrong, because he does not have any facts or studies in
22 front of him, but there is a lot of information out there and he knows exactly where it is. He said that he
23 did not bring any of this information with him because he didn't believe that this topic would be
24 discussed, but he will follow up with it and send the technical information to staff. He said that it would
25 be good for staff to look at the information for the 53.1 gigawatts that are out there in Virginia, North
26 Carolina and California, because there are solar projects everywhere in communities. He said that
27 perhaps staff could call some of the counties in these states and discuss the number and type of
28 complaints that they receive regarding the solar farms, because this is staff's best metric rather than
29 taking his word for it. He said that he does have more of a social science background, but he has done a
30 lot of technical noise studies. He said that he comes from a county where the rural dBA noise limit, per
31 the ordinance, is 45 dBA at night and 50 dBA during the day, which is very low, at least from his
32 experience as a land use planner and developer who has prepared and paid for these noise studies. He
33 said that the County should take a break and do some research prior to the next public hearing and come
34 back with the results. He said that he is going to do a noise study and acoustical analysis on the subject
35 property. He said that he will get the spec sheets from the manufacturer and crunch it into a scientific
36 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
37 not as doom and gloom as what is being told tonight.
38

39 Mr. Brown stated that there was some concern mentioned about property values, and he would punt this
40 subject to staff and request that they speak to other county tax assessors across the United States who
41 have solar projects. He said that this subject comes up all the time, but no one can present a peer review
42 journal article with facts, but if one is discovered he would like to see it. He said that there is so much
43 review that goes into land prices that you cannot pick one variable and determine that this is the reason
44 why a land's value has gone up or down. He said that if a peer review journal article can be found
45 regarding property values and wind and solar farms, he would like to read it, but it doesn't exist.
46

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1 Mr. Brown stated that they understand that decommissioning is required, and they are not backing away
2 from it, but engaging in it. He said that the landowners that they currently have under contract also want
3 decommissioning security so that they have a guarantee that BayWa-r.e. will not leave their property in a
4 way that they cannot live with. He said that the issue for BayWa-r.e. is the funding. He said that these
5 projects are very competitive and they are not just competing against other solar projects, but against
6 other types of renewable energy that is out there, such as coal, nuclear and wind projects, so everything
7 that they do has to be ultra-competitive. He said that our government is currently putting a tariff on
8 steel, aluminum, solar modules, etc., so everything that they do is always going against them, so to
9 manage costs he had to mention this. He said that the way that the ordinance is currently written, it
10 states that a letter of credit is required on day one and in the next twelve years the letter of credit will be
11 replaced with cash, and by year twelve, if it is \$2 million dollars, there will be \$2 million dollars in cash
12 for the next 25 years that the power plant is operating. He said that this process severely hinders the
13 financial economics of the project and it would be the equivalent of someone taking their money out of
14 their 401K for retirement and putting it in a coffee can in the backyard and earning no interest on it. He
15 said that they must borrow the capital and lock it in place, and it costs money to borrow that money and
16 do absolutely nothing with it.

17
18 Mr. Brown stated that he has been doing this for a while and he has always been focused on the salvage
19 value of these projects, but it dawned on him that he should focus on the actual value of the project. He
20 said that the proposed project that we are not supposed to talk about tonight is approximately \$185
21 million, and in year 15 it is not going to be worth \$0, but at least \$100 million in actual value, not
22 salvage value. He said that we are always talking about the salvage value at the end of life for the solar
23 farm when nobody wants to operate, but then there is the actual value, which is at the beginning of life.
24 He said that at year 15, if Champaign County sees the proposed project is not operating, he should be
25 called and he will gladly take over the \$100 million project himself, because it is a gold mine. He said
26 that even if it is a 2 megawatt project, it has a lot of value because it is an operating solar plant. He said
27 that he knows that the ZBA is going to make a recommendation to the Environment and Land Use
28 Committee (ELUC) and then to the County Board for a final decision, but there really is a lot of value to
29 this and to hinder a project based on what is going to happen 40 years from now is not fair, and it will
30 hurt the economics of the project and that is one of the main reasons why we are doing the project, other
31 than the intrinsic values.

32
33 Ms. Capel asked the Board and staff if there were any questions for Mr. Brown.

34
35 Mr. Passalacqua asked Mr. Brown if the solar plant generates noise.

36
37 Mr. Brown stated that the solar plant does generate noise.

38
39 Mr. Passalacqua asked Mr. Brown if the noise exceeds 39 dBA.

40
41 Mr. Brown stated that he is not going to get into a discussion regarding 39 dBA, because he believes that
42 it is ludicrous and he can present evidence of this. He said that if you go outside at night, you will not
43 find anywhere that is 34 or 39 dBA. He said that ambient noise is pretty high already due to wind, so he
44 would like staff to do the research. He said that he has done a lot of projects where it meets the 45 dBA
45 early in the morning and the noise making sources can be moved or mitigated, but to put an arbitrary
46 number, based upon no personal experience from being an actual acoustician, would be foul in this case.

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1 He said that the County needs to do the research and an acoustical analysis of the proposed project,
2 where it is going to placed. He said it should be allowed by the applicant, and the discretion of the Board
3 approving the permit should have the authority to say, yes, this works in this case. He said that he has
4 seen situations where they had to mitigate a mountain, because the ordinance stated that there had to be a
5 45 dBA at night, so if you shoot a gun at night you would have to install a 100-foot fence to protect a
6 mountain that nobody lives on. He said that there is a lot that goes into noise ordinances, and he means
7 this from both sides of the fence, as staff trying to figure out how to mitigate things that do not exist, and
8 as a developer trying to do what is actually feasible. He said that the project does make noise and there
9 are data sheets to prove it and he is not running from it, but a noise study will be provided to show what
10 it will be in this location. He said that the Board can go down to the solar farm at the University of
11 Illinois and listen to it; it is not doom and gloom, it is not wind turbines and they do not put out dBC low
12 frequency noise that runs people out of their homes. He said that these are dBA rated and it is direct
13 sound pressure and he is sure that the Zoning Administrator will have more information on that at the
14 next meeting.

15
16 Ms. Griest stated that she is a big stickler for the decommissioning. She said that she heard Mr. Brown's
17 sales pitch and perspective as he believes the Board should see it, but she has a couple of questions for
18 Mr. Brown. She asked Mr. Brown to indicate who owns the solar panels and the equipment that he is
19 talking about decommissioning at the end of the 20 or 40 years.

20
21 Mr. Brown stated that at the end of the day there would be an equity investor or owner.

22
23 Ms. Griest stated that there will be debt leveraged against it, so it is not free and clear and available for
24 the decommissioning costs.

25
26 Mr. Brown stated that each deal is structured differently, but there is a point in the deal where it is paid
27 off.

28
29 Ms. Griest stated that in the first 12 years, if the life expectancy is 20 to 40 years, it is unrealistic to
30 expect that it would be paid off, especially if the business deal is structured as most are structured, which
31 is to maximize the return every year that they can and as early as they can. She asked Mr. Brown if he
32 can say that this equity, that he claims to be available for the decommissioning, is actually free and clear
33 to be utilized for that purpose.

34
35 Mr. Brown stated that he cannot speak to that because every deal is structured differently.

36
37 Ms. Griest stated that she will take that as Mr. Brown cannot comment, but her interpretation is probably
38 not.

39
40 Mr. Brown stated that it depends on every deal and the revenue stream of the contract. He said that
41 some of the contracts are only for 10 years; therefore, the debt is structured on 10-year basis, but the
42 value of the project is still the same.

43
44 Ms. Griest stated that if BayWa-r.e. files for bankruptcy, the County doesn't own that value, but the
45 creditors do own that value and if BayWa r.e. and their creditor walks away, the County is stuck with a
46 facility that must be reclaimed, thus the whole purpose and her rationale for the decommissioning

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1 agreement. She said that unless Mr. Brown can address this issue satisfactorily for her, she is strongly
2 opposed to any type of failure to include a decommissioning component to where BayWa-r.e. is at
3 financial risk just like the County, and that BayWa-r.e. is mitigating that financial risk to Champaign
4 County and its taxpayers. She said that she just wants Mr. Brown to know how she feels about salvage
5 value and actual value, because it all may be true but it is not accessible to the County because the
6 County doesn't own it and if BayWay r.e. filed bankruptcy the court would own it and not the County.
7 She said that this did not work for her, and that is her point. She said that Mr. Brown referred to the 51.3
8 gigawatts nationally. She asked Mr. Brown if he had a breakdown by state as to where those gigawatts
9 are and how many of them are in Illinois and on best prime farmland.

10
11 Mr. Brown stated that SEIA has a breakdown on their website indicating where the 51.3 gigawatts are by
12 state, which would include Illinois. He said that there would have to be an analysis based upon where
13 they are in Illinois and if they are located on best prime farmland. He said that the analysis could be
14 broken down to indicate which counties in Illinois are part of the 51.3 gigawatts.

15
16 Ms. Griest stated that if Mr. Brown could provide this documentation by state and the counties in
17 Illinois, she would be interested in reviewing that data.

18
19 Mr. DiNovo asked Mr. Brown to indicate the typical contract language with the landowners regarding
20 decommissioning.

21
22 Mr. Brown stated that, as a developer, they try to push the county, if they do not have an existing
23 ordinance, to have a decommissioning requirement. He said that they do not want to get into a case
24 where he has to do a decommissioning agreement with the county and one with 13 different landowners.
25 He said that a decommissioning agreement in the ordinance is cleaner and everyone is taken care of, so
26 they try to push it to some sort of an authority to basically be in charge of it and they will fund it and
27 make the agreement with the authority. He said that some landowners do not ask for a decommissioning
28 agreement, and others do ask for it and other things. He said that each negotiation is different, because
29 some landowners want a guarantee that all the tiles at the end will be inspected with a survey and the
30 next landowner won't even mention the tiles. He said that every landowner agreement is different and
31 generally, every landowner wants to make sure that it doesn't get left on their property at the end of the
32 day.

33
34 Mr. DiNovo asked Mr. Brown if they would prefer having decommissioning framework in place by the
35 local government as a benchmark that they can use with the landowners.

36
37 Mr. Brown stated yes. He said that most landowners are not set up to pull on a bond or hold a letter of
38 credit, because it is not practical. He said that having a local government agency issuing the permit and
39 being responsible for holding that letter of credit makes it easier for the landowner to know that they are
40 covered.

41
42 Mr. Elwell asked Mr. Brown to indicate the projected cost of decommissioning for future solar farms,
43 would it be the \$2 million dollars that he previously mentioned. He said that he comes from a life in real
44 estate, and when you foreclose on a property, there is an inherent value to that property.

45
46 Mr. Brown stated that he cannot give Mr. Elwell a basic number or metric to use, because every project

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1 other types of solar energy and so unlike wind farms. He said that it takes a lot to break out of that mold
2 of thinking that when we did the wind farm, we had 500-foot tall towers with mechanical devices that
3 did not have a very long warranty, were susceptible to a lot of natural damage, and were capital
4 intensive. He said that the County Board decided that eventually, when it came down to it, an escrow
5 account is the most reliable way to make sure that there is money for decommissioning that project,
6 when and if it ever becomes necessary. He said that the County Board also allowed the escrow account
7 to be converted back to a letter of credit for refurbishing that plant when those very expensive turbines
8 need to be replaced. He said that the escrow account has that arguing for it, that it can be drawn against
9 in 40 to 50 years in the future, and it should be there to be drawn against if and when the plant needs
10 refurbished. He said that if there is no other way that is as reliable as an escrow account, he could draft
11 changes that would put off the date that the escrow account has to be there, maybe to year 20, but he
12 cannot see any way that at some point there is not going to have to be an escrow account for
13 decommissioning a solar farm in Champaign County. He said that in going back to actual value versus
14 salvage value, he is guessing that Mr. Brown is indicating that if they need to decommission the solar
15 farm at year 10, the solar panels are resalable. He asked Mr. Brown if anyone is willing to buy a 10-year
16 old solar panel, if it has a 20-year warranty to begin with.

17
18 Mr. Brown stated yes, they have a 20-year warranty that is backed by a big company that actually has to
19 have the money to back the warranty. He said that manufacturing warranties is a big deal; he worked for
20 a company before which had a hard time backing warranties because they didn't have the capital in the
21 bank. He said that having a warranty with a Tier 1 module manufacturer is worth something. He said that
22 these projects, in his case, are almost \$200 million, and the financing that goes in place is checked,
23 double-checked, and triple-checked on these projects. He said that these are invested over a long period
24 of time; they are not just a short-term investment where they are going to dump it and go bankrupt. He
25 said that the revenue stream and the merchant future curve prices have to be there in place for these
26 power plants to even get the initial day one financing. He said he hears the comments from the Board
27 tonight and he respects them; he'll have to come back on those. He said he has to ask, if the project has a
28 red line through it – it's not going to happen – then allow the solar project to put in a financial
29 instrument that is used in every other type of development that is used across the United States and the
30 world, to secure that future action. He said that a bond or a letter of credit are very common instruments.
31 He said that asking for cash halfway hurts the model really bad as well. He said that if they request not to
32 put the money up, give them a certain amount of time, maybe that is not going to work. He asked that
33 they be allowed to use a letter of credit for the entire time; otherwise, it's the same thing – you're taking
34 the money out of your bank account, putting it in a coffee can, and at year one, instead of paying a low
35 rate of return for a financial instrument from a major financial institution, he thinks that should at least
36 be allowable. He said that a county can call on a letter of credit or performance bond; any agency in the
37 state that does a major freeway project, bridge, or major capital improvement project requires a bond
38 from the contractor to ensure that they are going to get it done. He said it is done in every capital
39 improvement project, so he thinks it is reasonable to say that the county should trust a letter of credit or
40 some financial instrument, that the county might name, such as requiring an A+ credit rated, however
41 you want to do it, there are a lot of big banks out there that are willing to float these letters of credit and
42 the county will have their assurance that they can pull them.

43
44 John Hall stated that he admits not knowing much about this stuff, but he believes a letter of credit is
45 only as sound as your company is sound, and a bond is only as sound as the bonding company is. He said
46 that he believes that is why an escrow account is so firm; it is a perfected account, so that no one else has

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1 any claims on it; it is for Champaign County's use in case they need to. He said that maybe Champaign
2 County is not big enough to accept anything less than that, then that might be to Champaign County's
3 detriment; but that is why we have it the way we have it. He said he would be happy to try to work with
4 Mr. Brown to come up with an alternative, but he cannot, in good faith, recommend that this Board send
5 anything less than an escrow account at some point in time. He said that Mr. Brown might convince the
6 County Board that their company just isn't big enough to do this project if the Board does not accept
7 anything less than an escrow account. He said that the decision to have an escrow account was a decision
8 made by the County Board; the members that drove that decision are no longer on the County Board. He
9 said that is sort of our situation in a nutshell; the county in the past has wanted almost absolute
10 reliability. He asked Mr. Brown if the definition of "Tier 1" could be documented.

11
12 Mr. Brown stated that Bloomberg sends out a list of Tier 1 module manufacturers and that list is updated
13 quarterly. He said that he would be happy to send a copy of that list to the Board for review.

14
15 Mr. Hall asked Mr. Brown if he would normally submit the warranty information on the solar panels as
16 part of an application, just to prove that the panels are warrantied.

17
18 Mr. Brown stated that he could provide those warranty sheets from the manufacturer.

19
20 Mr. Hall stated that the more we can document these things which may be useful in proving that we
21 don't need an escrow account set up at year 12, maybe it can be pushed off, and perhaps not even require
22 a 100% letter of credit in the beginning. He said that the State of Illinois has set a much lower standard
23 and perhaps Champaign County would be willing to go along with the structure of the Agriculture
24 Impact Mitigation Agreements, but that is so different than what we currently have and he would never
25 recommend a structure like that for a wind farm. He said that for a solar photovoltaic farm, where there
26 are panels that are not mechanical but have chemical reactions occurring, maybe there is good
27 justification to require something less than what we require for a wind farm, but his concern is that
28 ultimately we are going to want an escrow account at some point.

29
30 Mr. Brown stated that perhaps a letter of credit up to a certain point in time and then conversion to
31 whatever time period this Board feels is necessary. He said that anything helps, but his company has
32 modeled this, and every other agency just requires a letter of credit. He said that it was about 20 basis
33 points, or \$1 million difference, which isn't a little bit of money. He said that it still achieves the same
34 thing and you have the money at the end, so if we can agree on some period in time where it flips, then
35 that would be amenable to them.

36
37 Mr. Randol asked Mr. Brown if the ILEPA has any requirements that Baywa r.e. must follow.

38
39 Mr. Brown stated that he has never had anything to do with the EPA.

40
41 Ms. Capel asked the Board and staff if there were any additional questions for Mr. Brown, and there
42 were none.

43
44 Ms. Capel called Tim Montague to testify.

45
46 Mr. Tim Montague, Commercial Solar Developer for Continental Electrical Company, whose office is

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1 Manager for the City of Urbana, and the ordinance is too onerous on the developers, they have the rest of
2 the state of Illinois to pursue, as we have seen with the wind farm developers. He said that if you talk to
3 wind farm developers they will tell you point blank that the Champaign County Wind Farm Ordinance is
4 too prohibitive so they went elsewhere. He said that the Ordinance is a failed ordinance and it isn't just
5 due to one clause, or the decommissioning requirements, or the setback requirements, but it is a failed
6 ordinance unless the intent was not to have renewable energy in Champaign County. He said if that is the
7 case, then the ordinance is a tremendous success. He invited the Board to review a document titled,
8 "Decommissioning Solar Panel Systems" prepared by New York State Research and Development
9 Authority (NYSERDA), which reviews the different strategies and financial tools that states can use in
10 working with developers, but this document will not provide a model ordinance. He thanked staff for
11 the table of fee schedules from different counties, but it appears to be all over the place, which indicates
12 that every county is making this up as they go. He said that unfortunately, Illinois does not have a good
13 model ordinance, but it will eventually happen, although it may be too late, and the decision to use the
14 wind ordinance instead of creating an ordinance from scratch makes it difficult to adopt a model
15 ordinance. He said that he does not know what the tactics are for identifying the exact language that
16 protects the citizens of Champaign County from negative impacts from renewable energy projects and
17 that also doesn't shut out development. He said that the reason why this is so important is because we
18 are all paying into FEJA, which accumulates to \$200 million dollars per year in cash subsidies that are
19 paid out to project owners; therefore, as citizens of Illinois we are getting short changed from the system
20 if we cannot benefit.

21
22 Ms. Capel asked the Board and staff if there were any questions for Mr. Montague, and there were none.

23
24 Mr. Hall asked Mr. Montague to submit a copy of the NYSERDA fact sheet to staff.

25
26 Mr. Montague agreed.

27
28 Mr. Hartke requested the opportunity to ask Mr. Montague questions.

29
30 Mr. Hall informed Mr. Hartke that he could propose the questions to the Board and request Mr.
31 Montague's response to those questions.

32
33 Mr. Hartke requested the opportunity to re-address the Board.

34
35 Ms. Capel informed Mr. Hartke that she will call him back to the witness microphone after all the other
36 witnesses have been called.

37
38 Ms. Capel called Phil Fiscella to testify.

39
40 Mr. Phil Fiscella, whose address is 505 West Green Street, Champaign, stated that if anyone is interested
41 in taking a tour for the University of Illinois Solar Plant, they should contact Morgan White, University
42 of Illinois Director of Sustainability, at 217-333-2668 or at mbwhite@illinois.edu. He said that since he
43 does purchase debt that ends up in bankruptcy court, and the Board expressed concern about that
44 occurring, bankruptcy court is not a black hole and if a solar company goes bankrupt, the court
45 administers the asset and would probably try to keep it running as a solar farm and would auction it off
46 as a solar farm. He said that another solar company would probably come in and continue to operate it

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1 He said that the U of I Solar Farm only has a chain link fence and you can see the panels on a rolling
2 hillside and if they were on flat ground, you wouldn't see them at all. He said that he wonders if a solid
3 wall or fence would be overkill and added expense to these projects, because currently utility projects
4 that are in rural areas do not require anything other than a chain link fence. He said that he wonders why
5 sight lines are such a big deal for solar farms when it doesn't seem to be for other industries that are
6 already out there. He noted that he appreciates all the work that the Board is doing on this project.

7
8 Ms. Capel asked the Board and staff if there were any questions for Mr. Robinson, and there were none.

9
10 Ms. Capel called Theodore Hartke to the witness microphone.

11
12 Mr. Theodore P. Hartke stated that he had a hard time sitting quietly in the audience, and wanted to point
13 out a few things that were stated. He said that Mr. Brown indicated that wind is bad, but don't change
14 your wind ordinance. Mr. Hartke stated that he believes that Mr. Brown is trying to make sure that the
15 changes that are occurring to the ordinance are solar related only. Mr. Hartke stated that he believes that
16 the Board has the ordinance open and the Board is talking about land use and renewable energy, which is
17 all under the same category in the ordinance.

18
19 Ms. Capel informed Mr. Hartke the specific request is to amend the ordinance for solar only.

20
21 Mr. Hartke stated that if the solar ordinance is amended, and a safe noise limit is established from his
22 input and what his experience has been, then that noise limit should be blanket for any noise producing
23 item that is all day.

24
25 Ms. Capel informed Mr. Hartke that this would be under a different amendment.

26
27 Mr. Hartke stated that Mr. Brown stated that a huge company backed the warranty for the solar panels.
28 He reminded the Board that Solyndra was a huge company that went bankrupt and went out of business
29 very quickly; TerraForm Power now owns the Invenergy Wind Farm located in Champaign County and
30 TerraForm Power's parent company is called SunEdison, which is completely bankrupt and all
31 TerraForm Power assets are not owned by another investment company. He said that Mr. Brown stated
32 that early in the morning, the solar farm will produce 45 dBA and then Mr. Montague indicated that the
33 solar farm does not make noise, and somewhere in between is perhaps the truth. He said that Mr. Brown
34 and Mr. Montague discussed background noise and how the ambient noise is already noisier than the
35 noise that the solar panels will make, but Mr. Hartke has heard all of these things before and he does not
36 live in a house next to the wind turbines any more. He said that he is here to testify that near his home
37 when the turbines were not running, his ambient noise was in the magnitude of 25 dBA, and when we
38 have a 25 dBA measurement in a rural area it is because it is absent of dogs barking, traffic, home air
39 conditioners, grain bin dryers, etc. He said that in the morning when the sun comes up and it hits the
40 solar panels making a noise of 45 dBA, they will wake you up inside your home and that will be a
41 problem. He said that he will guarantee that 45 dBA at sunrise in the morning will wake these people up
42 out of bed and they will not be able to sleep in on Saturday morning or any other morning during the
43 summer time. He said that as a way to keep the solar farm company from declaring that the County is
44 unfairly making an ordinance that excludes solar panels, he suggested that the Board allow a maximum
45 of 5 dBA increase in the noise compared to the ambient levels. He said that Richard James, an engineer
46 and acoustician from Michigan, and other acousticians agree that typically you will not have complaints

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1 if a new noise source does not increase the ambient noise level by more than 5 dBA, and this would be a
2 fair way to treat all citizens in Champaign County.

3
4 Mr. Hartke stated that he would like to come clean about a few things; he owns an engineering and
5 surveying company and all of his engineers and surveyors did all of the surveying and construction
6 layout for the entire University of Illinois Solar Farm. He said that it was a good money making
7 endeavor and his company established the GPS machine control points and data that allowed the
8 installers to use their tractors with the auger bits for every single panel on that entire project. He said
9 that his surveyors laid out the access roads and all of the transformer inverters at the ends of those rows
10 and some of the cables that are underground, and he is very familiar with the entire project. He said that
11 his company could have potential in doing surveying for this particular solar project, but his first
12 responsibility as a licensed engineer and land surveyor in the state of Illinois is to protect the health,
13 safety, and welfare of the public and this is what his license is for. He said that if he thought that
14 something is going to harm people, whether it is a flaw on a bridge construction project or the State
15 Farm Center that they surveyed, if he sees something he will say something, because he takes his license
16 and his livelihood seriously and he takes it to heart. He said that at his office in Ogden, he has 7.98 kW
17 on the rooftop of his office and he is not an anti-solar person. He said that the inverter is located in the
18 warehouse behind his office and is indoors and it makes a humming noise when it runs. He said that the
19 noise from the inverter does not bother him because there are only 8 kW of power feeding that small
20 inverter, which is twice the size of a computer pc. He said that he feels that there are at least two or
21 three sales people who are trying to sell the Board something, and he would like the Board to create a
22 situation where what they are selling does not cause the Board to give away the use and enjoyment of an
23 unsuspecting neighbor. He said that he was one of those neighbors in 2009 and he would not want
24 anyone to go through what he and his family had to go through, and he would feel like a failure if he
25 could not convince this group to stop this from continuing. He thanked the Board for their time, but he
26 does not envy their jobs at all because the Board has some very hard decisions to make.

27
28 Ms. Capel asked the Board and staff if there were any questions for Mr. Hartke, and there were none.

29
30 Ms. Capel asked the audience if anyone else desired to sign the witness register to present testimony
31 regarding this case.

32
33 Ms. Capel called Tim Osterbur to testify.

34
35 Mr. Tim Osterbur, who resides at 302 Witt Park Road, Sidney, asked the Board if the Village of
36 Sidney's one and one-half mile jurisdiction covers the solar farm or is it strictly the County's
37 jurisdiction.

38
39 Mr. Hall stated that the County has the zoning jurisdiction up to the Village of Sidney's municipal
40 boundary. He said that state law does not give municipalities or township plan commissions protest
41 rights on special use permits, which is what the solar farm case will be, but the County has always asked
42 municipalities if they have comments on a special use permit in their extra-territorial jurisdiction. He
43 said that in this instance, staff has gone beyond that by writing in the standard conditions that when a
44 special use permit is received for a solar farm that is within one and one-half mile of a municipality, it
45 has to be documented that the municipality knows about it and before the County Board votes; the
46 standard condition is to receive a non-opposition letter from that municipality. He said that even if the

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1 closer than 50 feet to the property line. He said that version of the amendment was faulty because we are
2 not intending to require it to be 50 feet from the property line in all places. He said that we are going to
3 revise that to specify that it be no closer than 50 feet to an adjacent lot that is 3 acres or less in area. He
4 said that we are not intending that standard to apply to agricultural areas, but to lots that are 3 acres or
5 less in area. He said that there is a lot of information in these illustrations and Ms. Burgstrom has done a
6 great job in placing a lot of information on these illustrations, but sometimes there is so much
7 information that it is sometimes very subtle. He said that if the solar farm is across from a dwelling,
8 1,000 feet in either direction, it should be screened with vegetation, and around the property with the
9 dwelling the required fence shall be 25 feet from the property line and then vegetative screen would be
10 within that 25 feet. He said that the vegetative screen, regarding prairie grass, only has to be 10 feet
11 deep, but they could choose to do the 25 feet or even grow crops in that area, but that is up to the ZBA.
12 He said that he does not believe that growing crops in this area would be desired because it would be
13 terrifically inefficient, but the point is that we are trying to establish a minimum amount of screening that
14 will sufficiently minimize the visual impact, and at this point he is prepared to define that screen for a
15 photovoltaic solar farm. He said that the proposed screening is not proposed to be adequate for any
16 other type of solar farm, and frankly he does not believe that we will see any other type of solar farm in
17 east central Illinois, but a solar photovoltaic solar farm is so unlike the other types of solar farms that we
18 want to specify when a standard is sufficient for solar photovoltaic solar farm but perhaps not sufficient
19 for other types of solar farms. He stated that the third drawing shows a home surrounded by a solar farm
20 on all 4 sides.

21
22 Mr. DiNovo stated that at a sufficiently acute angle, a chain link fence is going to go a long way towards
23 obscuring what is behind it. He said that when you are going out 1,000 feet and across a 60 foot road
24 right-of-way, at some point that angle is getting to be so acute.

25
26 Mr. Hall stated that you can still see that it is a chain link fence.

27
28 Mr. DiNovo stated that you can still see that it is a chain link fence, but you can't see what is behind it.
29 He said that people may have different feelings about how solar panels look, and so we need to screen
30 the fence.

31
32 Mr. Hall stated that the fence is necessary for security, and no one that he knows wants to live
33 surrounded by chain link fence.

34
35 Mr. DiNovo stated that there is a balance to be struck here as well, in particular to the fence setbacks,
36 because this does require more land consumption for the same amount of energy generation, and every
37 step that we take in this direction comes at the cost of less efficient use of the land. He said that
38 evergreen plantings will complicate the ability to control weeds, and if noxious weeds are to be kept
39 under control, someone is going to have to go out there and spray.

40
41 Ms. Capel stated that they could plant clover.

42
43 Mr. DiNovo asked Ms. Capel if clover would keep out the noxious weeds.

44
45 Ms. Capel stated that it would have to be sprayed and monitored.

46

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1 Mr. DiNovo stated that the worst-case scenario is that for some reason one of these solar farms becomes
2 uneconomic to operate and no one wants to run it anymore. He said that he is not worried about
3 bankruptcy, because if the facility is economic someone will step up to acquire it as the creditors are not
4 going to want it to sit there and they will find someone to sell it to. He said that the solar farm might
5 become uneconomic for some reason, because they are obsolete, because the nature of the electricity
6 market changes, etc., so in that event, in the absence of any other provision for decommissioning, the
7 economics of the situation is that there is 40 acres of best prime farmland with junk sitting on top of it.
8 He said that there is certain amount of salvage value and there is a certain value in recovering the ground
9 so that it could be put back into production, so that people will want to farm that land again. He said
10 that there is a residual value in the land itself and there is salvage value, but is that enough to satisfy the
11 Board's concerns regarding decommissioning or not.

12
13 Mr. Passalacqua stated that he cannot see how putting the land back into row crops is going to give the
14 County a dime towards decommissioning.

15
16 Mr. DiNovo stated that it doesn't matter. He said that if a private party is willing to go on the land and
17 take off the solar panels so that the ground could be put back into production, then the County should be
18 cool with that.

19
20 Mr. Hall stated sure the County would be cool with that, and if they wanted to go in a remove all the 500
21 feet tall wind farm towers and their concrete foundations, the County would be cool with that too.

22
23 Mr. DiNovo stated that no one is likely to go to the expense to remove the wind farm towers to farm the
24 small patch of ground that they sit on, but given the way that the solar photovoltaic arrays are
25 constructed and given the fact that there is salvage value in the materials, he could see someone coming
26 in there and removing them.

27
28 Mr. Hall stated that Mr. DiNovo is really asking why is requiring a decommissioning plan so expensive,
29 because you are just removing some photovoltaic panels and pulling up posts up out of the ground; what
30 is the big deal.

31
32 Mr. DiNovo stated exactly.

33
34 Mr. Hall stated that a decommissioning plan should be required to ensure that the decommissioning gets
35 done.

36
37 Mr. DiNovo stated that we need to take in account the residual value of the underlying land and he
38 thinks this notion that somehow people are going to walk away from these solar panels and let them sit
39 there is crazy. He said that a landowner is not going to let 40 acres of good farmland just sit there if they
40 can recover it inexpensively enough.

41
42 Mr. Randol stated that it doesn't have to be a 40-acre parcel, because he can tell this Board where a cell
43 tower was abandoned and sat on the property for over 15 years or more before anything was done with it.

44
45 Mr. DiNovo stated that a cell tower is a much bigger thing to remove; there is a huge difference.

46

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1 **Ms. Griest moved, seconded by Mr. Randol, to adjourn the meeting. The motion carried by voice**
2 **vote.**

3
4 The meeting adjourned at 9:50 p.m.

5
6 Respectfully submitted

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10
11 Secretary of Zoning Board of Appeals

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