

## **CASE NO. 895-AT-18**

*SUPPLEMENTAL MEMORANDUM #3*

*March 8, 2018*

**Petitioner:** Zoning Administrator

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

**Location:** Unincorporated Champaign County

**Time Schedule for Development:** As soon as possible

**Prepared by:** **Susan Burgstrom**  
Senior Planner

**John Hall**  
Zoning Administrator

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

(217) 384-3708

[zoningdept@co.champaign.il.us](mailto:zoningdept@co.champaign.il.us)

[www.co.champaign.il.us/zoning](http://www.co.champaign.il.us/zoning)

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### **STATUS**

The March 1, 2018 public hearing for this case was continued to March 15, 2018. Draft minutes from the March 1 meeting can be found in Attachment B. Testimony was given by Patrick Brown of BayWa-r.e renewable energy; Tim Montague with Continental Electrical Construction Company; Mark Wilkerson, project consultant for community solar; and Phil Fiscella, local land owner.

### **CORRECTION TO PROPOSED AMENDMENT**

Paragraph 6.1.5 D.3. regarding compliance with all applicable FAA requirements was inadvertently included in the draft proposed amendment dated February 22, 2018. Note that this paragraph should have been stricken from the draft.

### **PROPOSED FEE AMENDMENT**

Comments have been received about the \$1,800 per megawatt zoning use permit fee, which has been deemed excessive. Those who have spoken to reducing the fee want to find a better balance between what the County would actually spend on the permitting process and what the solar farm developers consider reasonable. John Hall revised the fee schedule in light of these concerns.

For zoning use permits, he proposes reducing the \$1,800 per megawatt fee to a 2-tier base fee, where a solar farm with no more than 7.5 megawatt nameplate rating would remain the same, but a solar farm with greater than 7.5 megawatts would pay \$1,260 per megawatt greater than 7.5 megawatts. Under the February 22, 2018 draft, the zoning use permit fee would be \$270,000; the new proposal would reduce that to \$193,050, a decrease of \$76,950, or 28.5%.

For Special Use Permits (required for all solar farms in Champaign County), the proposed fee for a 150 MW solar farm would be \$25,950. The new fee would be \$27,000, an increase of \$1,050, or 4%.

Staff has created a Fee Schedules Comparison Sheet (Attachment C) that shows the 2 different fee options for Champaign County, compared to select other counties in Illinois. Note that staff found the fees for McLean County and included that in the table along with their solar ordinance amendment.

### **IDAG AGRICULTURAL IMPACT MITIGATION AGREEMENT (AIMA)**

The Illinois Department of Agriculture Agricultural Impact Mitigation Agreement (AIMA) provided as Attachment H to the Preliminary Memo was discussed as part of Mark Wilkerson’s testimony at the March 1 hearing. He stated that he “knows some industry colleagues who have said that if this agricultural impact mitigation is required, they are out of the state, because they are already covering these things with the lease with the land owner.”

P&Z staff want to clarify that the second condition in the AIMA provides that “All mitigative actions are subject to modification through negotiation by Landowners and a representative of the Commercial Wind Energy Facility Owner, provided such changes are negotiated in advance of any respective Construction or Deconstruction activities.”

The Board may want to add limits to the flexibility provided by the second condition in the AIMA in regards to protection of tiles that serve properties under different ownership rather than trust that every landowner will in fact do the right thing in regards to protection of agricultural drainage tile. The appropriate location for the limit may be subparagraph 6.1.5 E.2.(h).

### **SCREENING**

The draft text amendment dated February 22, 2018, requires a 7 feet tall perimeter fence around the solar farm, and a visual screen for any part of the solar farm that is visible to and located within 1,000 feet of a dwelling or residential district. The visual screen can be either opaque fencing or a vegetated screen buffer.

P&Z Staff has begun to receive calls from residents in areas where solar farms have been proposed regarding potential screening requirements. It is possible that opaque fencing that could surround a residential property on all 4 sides would not be well received. Staff is inclined to require some amount of a vegetative buffer in certain instances, and we hope to have example diagrams at the meeting.

### **AIRPORTS AND RESTRICTED LANDING AREAS IN CHAMPAIGN COUNTY**

Staff created a map of airports and RLAs in Champaign County (Attachment D) based on concerns that glare could impact airplane and airport operations. Testimony has been received that the solar panels typically used today do not cause glare. The proposed amendment requires a glare assessment per FAA guidelines.

### **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

**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

## Excerpt of March 1, 2018 ZBA Meeting DRAFT Minutes

### 6. New Public Hearings

**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 the witness register for that public hearing. She reminded the audience that when they sign the witness register they are signing an oath.

Ms. Capel asked the audience if anyone desired to sign the witness register, and there was no one.

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

Mr. John Hall, Zoning Administrator, stated that this is a case that he has previously mentioned to the Board, and this case has been docketed for the next three Zoning Board of Appeals meetings. He said that staff hopes that this Board could take final action at the March 29<sup>th</sup> meeting, but the Board should not feel rushed and should take as much time that they need. He said that staff has docketed three solar farms for approval and have docketed those cases far out on the docket leaving time for County Board final action in May, but everyone understands that this is not a guaranteed approval date. He said that the ZBA should work through this at their own speed. He said that a lot of material was included with the Preliminary Memorandum and there is one large reference that was posted to the website, but copies were not provided to the Board, and it needs to be listed as a Document of Record. He said that there is not a promulgated model solar farm

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1 ordinance in the state of Illinois, although staff does have the recommendations of the Illinois Solar Energy  
2 Association, but it doesn't begin to be a model ordinance. He said that Champaign County is one of the last  
3 counties in Illinois with a zoning ordinance who have not adopted a solar farm ordinance and that it is  
4 simply because he naively hoped that staff would not have to spend time to do this. He said that 2017 was a  
5 busy year and staff was dealing with other issues, but the fact is that we currently have three applications for  
6 solar farms proposed to be located in Champaign County, so an ordinance is required.  
7

8 Mr. Hall stated that one of the attachments that was mailed with the Preliminary Memorandum was a short  
9 PowerPoint presentation of solar farms in Illinois and was provided courtesy of Kankakee County. He said  
10 that he has not seen a better introduction of solar farms, and staff has the presentation on a flash drive if the  
11 Board would like to review that presentation tonight, but there are several experienced solar farm developers  
12 present tonight who are desiring to present testimony. He said that, as the Board knows, receiving all of the  
13 testimony regarding a proposed text amendment becomes the major part of the text amendment. He said that  
14 the Board may want to begin with review of the PowerPoint presentation, or hear testimony from the  
15 witnesses you have signed the witness register.  
16

17 Mr. Hall noted that there is a new Supplemental Memorandum dated March 1, 2018, that was distributed to  
18 the Board for review. He said that the memorandum includes emails from Ted Hartke, which were the  
19 subject of Supplemental Memorandum#1. He said that there is also an email from Patrick Brown,  
20 representative for BayWa-r.e. Solar Projects, who is an applicant for one of the proposed solar farms in  
21 Champaign County, and Mr. Brown provided two attachments. He said that Mr. Brown's attachments are  
22 promulgated by the state of North Carolina for solar farms. Mr. Hall said that Mr. Brown's company has  
23 done a lot of solar farm development in North Carolina. Mr. Hall stated that Mr. Hartke's email also includes  
24 an attachment, "Example Template Solar Energy Facility Ordinance (North Carolina)" but it is not  
25 promulgated by the state of North Carolina and is only promulgated by another entity in North Carolina. Mr.  
26 Hall stated that also attached to the new memorandum is an email from Patrick Brown that includes Mr.  
27 Hall's responses.  
28

29 Mr. Hall stated that also as an attachment to the new memorandum is a Comparison Table of the proposed  
30 Champaign County ordinance versus six other solar ordinances in Illinois. He said that the comparison  
31 includes two North Carolina documents, one submitted by Ted Hartke, and the other from the North  
32 Carolina Sustainable Energy Center and North Carolina Clean Energy Technology Center. He said that there  
33 is also a column showing recommendations from the Illinois Solar Energy Association. He said that there is  
34 snapshot of bulleted comments which summarizes the comparison table and when the Board has time, he  
35 would recommend that the Board reviews the snapshot prior to the comparison table. He said that the  
36 Champaign County ordinance may not be the most restrictive solar ordinance, but it is probably the most  
37 comprehensive and he does not know why other counties do not include a plan for mitigating impacts to  
38 farmland. He said that farmland is a big concern in any county that has zoning, so the proposed Champaign  
39 County ordinance is the most comprehensive, but is not the most restrictive, but there has not been a final  
40 recommendation yet. He said that the Board can either take the time to review the snapshot with bulleted  
41 comments and the comparison table, or take testimony from the experienced developers.  
42

43 Mr. DiNovo requested a five-minute recess.  
44

45 **The Board recessed at 7:26 p.m.**

46 **The Board resumed at 7:34 p.m.**

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1 Ms. Capel called Patrick Brown to testify.

2  
3 Mr. Patrick Brown, Director of Development for BayWa-r.e. Solar Projects, whose address is 17901 Von  
4 Karman Avenue, Suite 1050, Irvine, California, stated that along with Mr. Hall, he has been putting in a lot  
5 of work regarding the proposed solar ordinance. He said that he attended the ELUC hearing in January when  
6 the temperature was seven degrees below zero, so the weather for tonight's meeting was much appreciated.  
7 He said that he also appreciates that Mr. Hall has put into this ordinance and Mr. Hall has been very  
8 responsive to all of Mr. Brown's comments. He said that the industry's position is that they understand why  
9 the County and its citizens require certainty on how solar development will occur, and as a developer, they  
10 require the same thing, and whether the ordinance is fair and consistent and that they know what they are  
11 getting themselves into. He said that currently the ordinance is developing very well and appears to be  
12 meeting the goals for both sides. He said that they want to extend their time, efforts and resources to provide  
13 information to the Board so that they also know what the County will be getting into and what they are  
14 approving. He said that he will be attending all of the meetings until the ordinance goes to the Board, so  
15 answers to questions or any information that the Board requires will be provided. He said that his original  
16 letter had 25 comments regarding the proposed solar ordinance, but since then he only has a few comments  
17 and concerns.

18  
19 Mr. Brown stated that Section 6.1.5.P.4.e is the decommissioning section, and they acknowledge that  
20 decommissioning is required and they make sure that the landowners understand that this is something that  
21 their company will take care of, and there is a decommissioning agreement with a letter of credit or bond or  
22 some sort of financial instrument to back up the financial responsibility of that decommissioning. He said  
23 that his company does this practice across the United States and it is a very common practice. He said that  
24 the main thing for them is to make sure that it is not financially burdensome for the project. He said that  
25 sometimes it sounds good to replace cash at year 13, but sometimes when you run an economic model on the  
26 pro forma, stuff like that can kill the models. He said that their goal is to work with the Board to come up  
27 with something reasonable and that the required amount of money to decommission the plant is available to  
28 the county for its comfort, but not be over onerous for the project to have a loss. He said that these projects  
29 are very competitive and solar energy is becoming equal with other types of energy on the market and to do  
30 that they must control all costs and not just agree to things that will hurt the project later. He said that they  
31 call it death by 1,000 cuts, so if you don't monitor the 1,000 cuts, eventually you do not have a project and  
32 overall, society does not have clean renewable energy. He said that they would like to have something more  
33 reasonable regarding the replacement of the security and they would recommend a letter of credit or bond for  
34 the duration, because these projects are not just 20-year projects, but 30 to 40-year projects. He said that the  
35 manufacturers of the modules provide a 20-year warranty, and these projects live way beyond that 20-year  
36 point. He said that these are very expensive projects even 20 years out, and to put a lot of money up front for  
37 the project hurts how the economic model treats cash. He said that cash money up front earlier in the project  
38 over a long duration of time actually costs a lot more money, and would be equivalent to you putting money  
39 into a retirement fund with zero interest; it would be a terrible loss to your retirement. He said that they want  
40 to provide the appropriate security, but the form of security that is appropriate for the project and can be  
41 updated periodically to assure that the costs are current.

42  
43 Mr. Brown referred to Section 9.3.1. J. regarding the fee for the County Board Special Use Permit fee. He  
44 said that for a very small project, this is not very much money, but for a large project, the fee could go into  
45 the hundreds of thousands of dollars. He said that they want to make sure that there is a nexus for the fee; if  
46 the County needs hundreds of thousands of dollars to perform inspections, etc. then they have no problem

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1 with the fee and they expect to pay their way and do not expect the citizens of the County to pay for their  
2 project, but at the same time they want the fee to be fair. He said that a sizable fee is needed for the size of  
3 project that they are proposing, but it should also reflect the smaller projects to assure that they are not  
4 overpaying as well.

5  
6 Mr. Passalacqua asked Mr. Brown if he has a problem with the decommissioning costs because they are  
7 building the array in an area that does not get enough sunlight, thus the reason for trying to carve costs.

8  
9 Mr. Brown stated that Mr. Passalacqua is partly correct, that is part of the competitive nature, the amount of  
10 solar energy in Illinois is not comparable to the desert area. He said that this is the same issue of whether the  
11 production was either really good or really bad, but it makes it even tighter and even worse the further north  
12 and east you go. He said that anywhere that they would do this, they would not want to put cash money  
13 down, but they do want to put up security by either a letter of credit or bond with a good bank, not a fly by  
14 night bank, in a manner that doesn't cost them six times as much to do the same time. He said that at the end  
15 of the day they strongly believe that the salvage value of the power plant will well more than take care of the  
16 cost of decommissioning, but no agency that he has worked at has ever indicated that they want cash. He  
17 said that they are willing to work with the County to accomplish this, but if you do not run economic models  
18 every day, you don't really realize what these types of things do. He said that he will present evidence of  
19 what this does to the model at the next meeting and they will give the County what is required, but they want  
20 to make sure that it is fair and not onerous to the point where it hurts the project.

21  
22 Ms. Capel asked Mr. Brown why they desire to build in Champaign County, especially if it isn't sufficient.

23  
24 Mr. Brown stated that they want to build in Champaign County because the citizens of the state of Illinois  
25 desire to have clean renewable energy in their state and the Illinois Power Authority is having renewable  
26 energy auctions for renewable energy credits for the state. He said that there is a market here and just like  
27 Baywa-r.e. other solar developers would not be in Illinois if it didn't pencil at the end of the day, but it is a  
28 very competitive market and it is always a race to the bottom as to how you sell the power, and it isn't very  
29 lucrative, so that you can sell the power at any rate you want. He said that they must compete with every  
30 other developer in and out of the state of Illinois. He said that the way the network is set up on the grid,  
31 power can be sold out of state and into the state. He said that at the end of the day they must manage costs.

32  
33 Mr. Hall asked Mr. Brown to indicate what the typical decommissioning requirements are in North Carolina  
34 and California, and do they follow a similar approach on financial assurance for decommissioning.

35  
36 Mr. Brown stated that each individual agency is different, and currently he is going through this same  
37 process in Kentucky, and every county and jurisdiction in California does it differently. He said that some of  
38 them give you a simple condition requiring a secured agreement, and some of them have very complicated  
39 language regarding formulas for how you treat salvage value. He said that letters of credit and bonds are  
40 typically the lowest cost for secured capital with a big operating bank where money is put aside in a letter of  
41 credit or bond and you pay a portion of that bond for a large portion of money and it is secured. He said that  
42 if the developer does not follow through with their obligation, the county can draw on that money. He said  
43 that letters of credit and performance bonds are very common in construction, especially for developers who  
44 build huge bridges or infrastructure projects that cost millions of dollars.

45  
46 Mr. Hall asked Mr. Brown if he has ever seen a requirement where a letter of credit must be converted to an



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1 escrow account within the first 12 years of life.

2  
3 Mr. Brown stated that he has not seen that before, and if he could indicate what he wants, it would be what  
4 the mining industry gets. He said that on day one, there can only be a small hole; therefore, the security is  
5 small, but as the hole gets bigger, more and more security is put up and as the hole is reclaimed and gets  
6 smaller and smaller, the security is reduced. He said that in twelve years, a one hundred million dollar power  
7 plant is worth eighty million dollars in year twelve, so having someone come in and take it away for free  
8 would be very popular and people would be standing in line to do it. He said that other jurisdictions want  
9 security up front, but the county has a lot of leverage, because they could pull that special use permit and the  
10 power plant could not operate and could not sell power. He said that when you get into the older part of the  
11 power plant it is very understandable why the security needs to be put into place and not have any looseness.  
12 He said that meeting somewhere in the middle is fair for the industry and the county, but replacing cash and  
13 placing it in an escrow account really hurts the bottom line of a project. He said that they look at these  
14 projects over a 40-year period; therefore, Champaign County will be saying that when the power plant is  
15 only 13 years into its life, depending upon the size of the project, the next 27 years should have two to three  
16 million dollars cash sitting in an escrow account, which is a real hurt.

17  
18 Mr. Hall stated that Mr. Brown raised these same concerns at ELUC (Environment and Land Use  
19 Committee). He said that ELUC looked at this twice and it is fair to say that he was prodding to let this  
20 come to a public hearing soon so that it could go back to ELUC soon. He said that at the last ELUC  
21 meeting, the Board members realized that they were not ready to suggest any revisions to the financial  
22 assurance requirements, although it is fair to say that ELUC members were interested in Mr. Brown's  
23 testimony, but they could not make any decision at that point. He said that this issue is an issue that the  
24 County Board does need to consider, and if at the end of this hearing the ZBA is ready to recommend less  
25 than what is in the amendment currently, then the ZBA could certainly do that. He said that he does not  
26 want the ZBA to feel pressured into thinking that they need to change the financial assurance requirements,  
27 but if the ZBA believes that there is a cause to change it, then they should do that. He said that it is fine if  
28 the ZBA does not recommend a change to the financial assurance requirements, because it will be an issue  
29 when the case comes back to ELUC. He said that the ZBA has only done the one very small wind farm case,  
30 which was for 30 turbines, and wind farms seem to be going through a second phase right now and the  
31 statement was made to him that, due to the requirements, no one would propose a future wind farm in  
32 Champaign County. He said that he wants to make sure that the ZBA understands that Mr. Brown raised  
33 these same concerns at ELUC, ELUC discussed them, and realized that they did not have time to make any  
34 recommended changes, but they did listen to Mr. Brown's concerns.

35  
36 Ms. Capel asked the Board if there were any additional questions for Mr. Brown.

37  
38 Mr. DiNovo asked Mr. Brown to indicate the total investment for one of these projects.

39  
40 Mr. Brown stated that it is based on size. He said that it is in the millions when you start talking about  
41 megawatts (MW) and when you talk about hundreds of megawatts, the investment is hundreds of millions of  
42 dollars, because it is all sizeable and scalable.

43  
44 Mr. DiNovo asked Mr. Brown what the investment would be for a smaller scale solar project.

45  
46 Mr. Brown stated that a 2 MW project would be an investment of six to seven million dollars. He said that it





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1 Ms. Capel called Tim Montague to testify.

2  
3 Mr. Tim Montague, who resides at 2001 Park Ridge Drive, Urbana, stated that he is present tonight as a  
4 resident of Champaign County but also as an employee of Continental Electrical Construction Company  
5 which builds commercial and utility solar arrays of all sizes. He thanked Mr. Hall for his work on the  
6 solar ordinance. He said there is a huge need for education about solar energy in Illinois, because it is so  
7 new here in the Midwest. Unlike his peers from California who are present tonight are a good decade  
8 ahead of us, so we are playing catch-up. He said the foundation is solid here now due to the Future  
9 Energy Jobs Act (FEJA) that went into force on June 1, 2017, and that is the foundation for the industry,  
10 and that is why you are seeing so much economic activity. He said solar developers are moving into  
11 Illinois, and they are going to install 3,000 megawatts (MW) of solar in the next 10 years. He said we  
12 have to keep in mind that it sounds like a lot, but it is not a lot in the greater scheme of things. He said he  
13 wants to put some numbers on what 3,000 MW means for Illinois. He said we are talking about rooftop,  
14 parking lots, and at the larger scale, some farm ground and brownfields, and in total we are talking about  
15 15,000 acres of development. He said to keep that in perspective, we have 640,000 acres in Champaign  
16 County alone, so that would be 2.3% of Champaign County if all 3,000 MW went into Champaign  
17 County. He said the reality is that those 3,000 MW are going to be spread over the entire state; there will  
18 be a greater concentration in northern Illinois corresponding to the concentration of population and  
19 demand for electricity, among other reasons. He said we don't have to be afraid that we are going to  
20 pave over all our prime farmland with solar arrays; that just is not going to happen, and we would be  
21 lucky to have a handful of projects here in Champaign County. He said he wanted to note that he thinks  
22 it is a mistake to build off a wind ordinance for a solar ordinance. He said that wind farms are so  
23 different from solar farms that it will scare the solar developers away from Champaign County if we use  
24 the wind farm ordinance. He said he thinks Mr. Hall made the point that you notice that the wind  
25 developers are staying away from Champaign County, and that is because of the ordinance. He said that  
26 we have the same wind as they have in surrounding counties, but we have a restrictive ordinance. He  
27 said that solar farms are very low profile, and have very few moving parts, as they are fixed or single  
28 axis tracker, and that is something we really need to understand a little bit. He said the moving parts are  
29 just the arrays following the sun throughout the day. He said the typical array profile is 10 feet or shorter;  
30 most of the ordinances reference 20 feet or lower, but it would be unusual to have a 20 foot tall solar  
31 array. He said the biggest difference between solar farms and wind farms is the size of the asset. He  
32 said that wind farms require hundreds or thousands of acres, and solar farms are going to be the full  
33 spectrum from half an acre to hundreds of acres on the large end, such as the proposed BayWa-r.e.  
34 project. He said that at a utility scale, which is 2 MW and up, we are going to see perhaps 5,000 acres of  
35 development in the whole state. He said in Champaign County, we have the opportunity with the  
36 community solar arrays, which are 500 kilowatts (KW) up to 2,000 KW, equivalent to 2 MW AC  
37 (alternating current). He said that a 2,000 KW project is 20 acres at the high end and 10 acres at the low  
38 end. He said you could build a 2,000 KW project on 10 acres, but it would have to be the fixed type as  
39 opposed to trackers. He said that the trackers are bigger, and need to be spaced out a little more.

40  
41 Mr. Montague stated that he wanted to make a couple of points about airports. He said he is local and he  
42 really wants to spend some time with Mr. Hall especially, but he has been negligent. He apologized and  
43 stated that he is working statewide and he drove to and from Lake County just today, so he is on the road  
44 a lot. He said that with regard to airports, you don't really need to make any special arrangements,  
45 because all the projects near an airport must go through the Federal Aviation Administration (FAA) for  
46 approval. He said this is a common misperception, that there has to be some local ordinance about that,

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1 but you really don't have to since the FAA has it and the developers have to go through it, so there are  
2 plenty of requirements. He said the setback requirements should be as minimal as possible, whatever  
3 you require for a building. He said that a building is perhaps 20 feet tall, and that is the maximum height  
4 of a solar array, no bigger than a building. He said it is going to have fence around it, and it is no prettier  
5 or uglier than any building we see here in east central Illinois. He said that some people like solar arrays  
6 and some people don't; some people like barns, some people don't – it is a matter of taste. He said there  
7 is no technical reason why you have to set these facilities back from roads or buildings or people.

8  
9 Ms. Capel asked if all solar farms are fenced as a matter of course.

10  
11 Mr. Montague responded that they are, because the National Electric Code requires solar farms to be  
12 fenced. Regarding underground power lines, he said that he is not an expert, and encouraged the Board  
13 to do a little more research because the proposed ordinance seems a little onerous on this topic. He said  
14 that when you are building a solar farm, one of the things you do as a matter of course is that you trench  
15 and bury electric cables in conduit. He said that is a disturbance of the land, which causes potential  
16 environmental impacts, and the goal of the developer is to minimize environmental impacts on the  
17 ground. He said that if you insist burying the cable at 5 feet, for example, that would cause more  
18 environmental harm than a lesser requirement, in his opinion. He said that he would try to find some  
19 better resources on this subject, but it seems to be forcing more environmental damage than necessary.  
20 He said that he understands you want to avoid the drainage tile issue, which is really between the land  
21 owner and the developer. He said the developer is signing an agreement to build a facility on somebody  
22 else's land; they are leasing land for 20 years typically, with the option to extend the lease sometimes 5,  
23 10, or more years. He said that the land owner knows full well if there is an issue with drain tile or not,  
24 and they are going to be highly protective of that asset, so it seems somewhat onerous for the county to  
25 weigh in on that matter; it is really between the land owner and the developer. He said it is private  
26 property, and if the land owner wants special steps to be taken around tile, that's great, but it doesn't  
27 seem like something that local government really needs to get involved with.

28  
29 Ms. Capel asked what is customary if you don't bury the cabling.

30  
31 Mr. Montague said that the cabling could be run above ground. He said he is not a code expert, but there  
32 is nothing technically that prevents a cable from being run above ground in conduit. He said that people  
33 are not moving around in the facility unless they are highly qualified electricians, and the facility is gated  
34 and fenced. He said that if you are running cable outside the fence, between the equipment and the  
35 infrastructure like a substation or 3-phase power lines, then you have to take precautions, and  
36 underground would protect the cable from other damage from vehicles or whatever.

37  
38 Mr. DiNovo asked Mr. Montague if, for the utility connection, it was necessary to run a line to the  
39 utility, would that normally be the utility's line or would it be the developer's line and they have to  
40 acquire the right-of-way to make the connection.

41  
42 Mr. Montague stated that it is his understanding that it is generally the developer's responsibility to build  
43 that, but they are getting the permission of the utility and the utility is fully aware of the infrastructure  
44 that it is being added to. He said that getting the permit to build this asset is one small part; there are  
45 many other hurdles that a developer must get through, such as getting an interconnection agreement with  
46 the utility. He said there is a long queue of those, and you can't just put a solar farm anywhere; there has

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1 to be a grid with the capacity for all that power, and that is unknown until you go through an  
 2 interconnection study with the utility, which costs tens of thousands of dollars and has an unknown  
 3 outcome.

4  
 5 Mr. Montague stated that, regarding decommissioning, a solar farm is an asset that has intrinsic value; it  
 6 is made of steel, copper, glass, silicon, and a few precious metals like silver. He said you take a solar  
 7 array, age it 25 years, which is generally the end of life of a solar array, someone will pay you to come  
 8 take it out of the ground. He said there is very little concrete; it is literally raw steel being driven into the  
 9 ground that is the main structure of a solar farm. He said that steel is highly recyclable and worth money,  
 10 because it takes a lot of energy to make steel out of raw materials. He encouraged the Board to minimize  
 11 the decommissioning requirements; bonding seems like a reasonable approach, and as BayWa-r.e.  
 12 indicated, the harder you make it for a project to get off the ground, the less likely it is to happen. He  
 13 said that there are all kinds of hoops that developers have to jump through, and so you just don't want to  
 14 scare them away. He is not saying that solar farms should just go anywhere; they need to go through a  
 15 permit process, absolutely, but we don't want to make it too onerous. He said that Illinois is a huge  
 16 state, and there are \$200 million in subsidies that are raining down on the state now. He said it is those  
 17 counties that are more forward, or progressive, toward renewable energy that are going to capture those  
 18 resources. He said that is money that is going into the pockets of farmers in the form of lease payments;  
 19 a farmer is getting 2-3 times in renting their ground for solar farms as they would versus crop farming.  
 20 He said it is real income for farmers. He said for large facility owners, if they are leasing their roof, that  
 21 is another group that benefits.

22  
 23 Mr. DiNovo asked if the \$200 million Mr. Montague mentioned was from the state.

24  
 25 Mr. Montague responded yes, it is from FEJA – Future Energy Jobs Act. He said that FEJA fuels the  
 26 renewable portfolio standard (RPS); we have had a portfolio standard since 2008 or 2009, which says we  
 27 are to achieve 25% green power by 2025. When Mr. Brown from BayWa-r.e. said that the citizens of  
 28 Illinois have decided, this is what he was referring to. Mr. Montague said we have a RPS and now we  
 29 need to fulfill that RPS; we fell off track for a while when the RPS was broken, and FEJA puts it back  
 30 on track to achieve this. He said that many states are considering 50% green power, much greater  
 31 aspirations than 25%, but 25% is a good initial goal for Illinois. He said it puts us on the map with  
 32 regards to renewable energy; the Midwest has been lagging behind many other places, and there are  
 33 some good reasons for that. He said that Illinois is now a top 5 solar development state, so it is lucrative  
 34 for builders to build assets here and it is lucrative for the local economy – it's a win-win. He said that  
 35 one could estimate that the \$200 million could translate into \$12 billion of construction projects, just to  
 36 put it into perspective. He said that the subsidies are just a small portion of the actual asset that will get  
 37 built. He said there are many long-term benefits – tax benefits and clean energy benefits. He said if he  
 38 were a business owner, and he built a solar array, he could reduce his power bill by 75%. He said that if  
 39 he is spending tens of thousands of dollars a month, and he works with many industrial clients that spend  
 40 that amount, he is saving them tens of thousands of dollars a year. He said he has a client that is saving  
 41 \$250,000 per year on their power. He asked what do you think they are going to do if they have an extra  
 42 \$250,000 in their coffers at the end of the year. He said they are going to use that for economic  
 43 development – hire more people, do more research and development, build more facilities – it's an  
 44 engine. He said renewable energy is a very positive force when it comes to economic development.

45  
 46 Mr. Passalacqua asked Mr. Montague if that is a net savings after the costs of the infrastructure.

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1 Mr. Montague replied no, that is the energy savings on an annual basis. He said the project would be in  
2 the red for the first 4 or 5 years.

3  
4 Mr. Passalacqua said that you thus have about 20 to 21 years of savings.

5  
6 Mr. Montague said it is well over \$1 million, closer to \$4 to \$5 million, return on investment for a large  
7 industrial solar array.

8  
9 Mr. Passalacqua said that Mr. Montague is referring to a building the size of Kraft that has photovoltaic  
10 solar on its roof.

11  
12 Mr. Montague said that was correct.

13  
14 Mr. Hall stated that he would like to use some of Mr. Montague's points as they relate to the ordinance.  
15 He said that one change he made to the ordinance since the ELUC meetings – was requiring all wiring to  
16 be underground that was feasible. He said the change he made since then, in Section 6.1.5 d.2.b, talks  
17 about how burying communication lines underground shall be minimized, consistent with best  
18 management practices regarding solar farm construction and minimizing impacts on agricultural  
19 drainage tile. He said there may be a better way to word that, but the point is that this amendment does  
20 not require any wiring to be underground unless the solar farm developer thinks that is the better route.  
21 He said it is true that the farm owner needs to come to terms with the solar farm developer regarding  
22 tiles, but in Champaign County, proper functioning of agricultural tiles is so important that we cannot  
23 leave that up to private entities. He said he is sure that Board members noticed that we are requiring a  
24 signed agreement with the Department of Agriculture, an Agriculture Impact Mitigation form. He said in  
25 fact, so far, the Department of Agriculture does not have an Agriculture Impact Mitigation form for solar  
26 farm; frankly, he does not think it is going to look any different from the one for a wind farm. He said  
27 they are working on one for solar farms, and there is a bill in both the senate and the house to make that  
28 agreement a requirement for county approvals of solar farms. He said that the 5 foot depth requirement  
29 for buried wiring comes from the Department of Agriculture mitigation standards, and they in fact do not  
30 require for it to be 5 feet in all instances, but this amendment proposes to adopt their standards for the  
31 depth of burial, but again, this doesn't require any wiring to be buried. Mr. Hall asked Mr. Montague if  
32 the FAA looks out for Restricted Landing Areas (RLAs), because we have a lot of RLAs in Champaign  
33 County. He said that if a solar farm were proposed in the RLA's approach area, then this ordinance  
34 would require an analysis using the FAA tool for analyzing glare. He said that probably at the next  
35 meeting, staff would have a map showing the locations of all the approved RLAs in the county; he does  
36 not want anyone to think that is all the RLAs in the county, but it is all of them that have been duly  
37 approved or are non-conforming.

38  
39 Mr. Montague stated that he did not know.

40  
41 Mr. Hall said that he knows RLAs are listed on the flight maps that IDOT Division of Aviation puts out,  
42 but he does not think the FAA actually regulates RLAs. He said that given the number of RLAs in  
43 Champaign County, he thinks that is something we have to be careful of and we don't want to create  
44 problems unnecessarily. He recommends that the Board consider an addition to this amendment, which  
45 he has not had a chance to add yet, is something about the solar farm operator being required to  
46 cooperate, assist, or somehow work with aerial applicators on adjacent farmland. He said particularly for

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1 those solar arrays that have rotating panels, maybe there needs to be some accommodation for aerial  
2 application, which is important for a lot of farmland in Champaign County. He said he thinks it is going  
3 to grow in importance over the years, and we don't have that in the ordinance yet. He said that certainly  
4 the aerial applicators have to likewise cooperate with the solar farms; good luck with that. He said that  
5 the complaint hotline is a process going into the future whereby ELUC might well hear complaints about  
6 an aerial applicator not being able to applicate because a solar farm won't cooperate; that will be up to  
7 ELUC to figure out.

8  
9 Mr. Passalacqua asked Mr. Hall if he was referring to glare, because everything he is reading in  
10 testimony is that the solar panels do not glare, because then they wouldn't absorb the light.

11  
12 Mr. Hall said that is true most of the time, but it is not true all of the time. He said there will be glare if  
13 you're positioned in the right location, and glare is bound to happen to some aerial applicators.

14  
15 Mr. Passalacqua asked that, speaking of aerial application of herbicide, if the ordinance addresses  
16 vegetation control if you lay conduit for the wiring on the ground, which would force someone to use  
17 chemical vegetation control, and if you bury it, then we have the possibility of mechanical vegetation  
18 control.

19  
20 Mr. Hall responded that we would leave that up to the solar farm developer, who can propose what is  
21 going to work best for them, and it is going to be the Board's job to ensure that their decision is not  
22 going to result in other problems.

23  
24 Mr. Passalacqua asked if we would default to the IEPA.

25  
26 Mr. Hall stated that we would default to the Department of Agriculture.

27  
28 Mr. Elwell stated that he is a private pilot, but he has not flown over a solar farm before. He asked if  
29 there is a problem with flying over solar farms, other than glare; in other words, what would stop us  
30 from having a solar farm close to a RLA.

31  
32 Mr. Montague stated that he believes there are some solar farms in Illinois that are adjacent to airports; it  
33 is in the popular media, so you can find these stories online. He encouraged staff to contact those  
34 counties and see how they have dealt with those issues, but he is not aware of solar being a problem for  
35 pilots today. He said historically, it may have been, but the panels are rigorously designed to avoid glare  
36 and absorb as much light as possible, and that has improved over time. He said he thinks we need to  
37 make sure we are looking at the modern era and not 10 or 20 years back; it is an evolving industry, and  
38 we are only installing brand new, state-of-the-art equipment. He said that is what is getting installed in  
39 Illinois.

40  
41 Mr. Hall stated that he appreciated Mr. Montague's point about making a solar ordinance that looks like  
42 a wind ordinance. He said that the issues, by and large, seem to be the same, though flicker is not a  
43 problem with solar, so there is nothing in the ordinance about flicker. He said that glare is not a problem  
44 with the wind farm, and glare probably won't be a problem with a solar farm, but he knows that at  
45 ELUC, there was a concern that ELUC members wanted something to hang a hat on in the case that  
46 glare was a problem. He said they did not want to require a bunch of studies up front, and they were



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1 willing to take the developer's word for glare not being a problem, but they did want something to go to  
2 in case there is a problem. Regarding road agreements, Mr. Hall said that just on the face of it, the issues  
3 with regard to impacts on roads for a wind farm are much different than those for a solar farm, but most  
4 solar farm developers will say they are fine with a road agreement for a large solar farm. He said we  
5 have a good road agreement model in our wind farm section, so it has been copied, but we have deleted  
6 everything we can that's not necessary because we are dealing with a solar farm. He said that at first  
7 glance, it may look similar, but the point is, in fact, many of the issues are similar to begin with, but if  
8 you have any experience at all, you soon find out that they are somewhat different. He said yes, the solar  
9 farm ordinance looks like our wind farm ordinance, but we have good procedures already in our  
10 ordinance.

11  
12 Mr. Montague stated, with regards to the roads, there is a difference between a 2 MW project and a 150  
13 MW project. He said you could think of a megawatt as a 40 foot shipping container; that is the amount  
14 of panels for a megawatt of solar. He said you could build a 2 MW project with 4 or 5 shipping  
15 containers worth of material. He said that 150 MW would obviously be more; is there a way to scale that  
16 requirement based on the size of the project.

17  
18 Mr. Hall said that this is another change that ZBA is looking at, compared to what ELUC saw. He said  
19 that the amendment in front of the ZBA provides that for Community Solar Farms, 2 MW or less, the  
20 highway authority can waive the requirement for a road use agreement. He added that if they don't think  
21 it's worth their time, they could waive it, or waive only parts of it; it's up to them.

22  
23 Mr. Passalacqua stated that earlier in the process, there was a plan in the pipeline for a 1,200-acre solar  
24 farm. He asked if we know how long it takes to construct a 1,200-acre solar farm.

25  
26 Mr. Hall asked the solar farm representatives at the meeting to provide an estimate.

27  
28 Mr. Montague stated that it depends on the circumstances; a rough estimate would be six months to a  
29 year. He said it would depend on how big the construction crew is.

30  
31 Mr. Passalacqua stated that with the wind farms, we had a lot of information about the manufacturer's  
32 criteria, warranty, and data on the turbines. He asked Mr. Hall if there would be similar information in  
33 the ordinance regarding the solar equipment from the manufacturer.

34  
35 Mr. Hall responded that the only thing he has found necessary to specify is that it be compliant with the  
36 National Electrical Code. He said we are not building foundations, so we don't need any foundation  
37 engineering; we are not building a 350 foot tall tower that we need to make sure is going to stand; he is  
38 not aware of any other codifying body that we would need to worry about.

39  
40 Mr. Passalacqua said that with the tornadoes we have around here, does that equipment immediately  
41 become flying debris. He said there is no footing, so that basically makes it like a fencepost.

42  
43 Mr. Hall said that it is like a very good fencepost.

44  
45 Ms. Capel called Mark Wilkerson to testify.

46

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1 Mr. Mark Wilkerson, who resides in Steele, Illinois, stated that he has been in the solar industry for 34  
2 years; he was selling solar electricity in 1983, and there are not that many folks that have been doing it  
3 that long that are still doing it. He said he moved to Stelle in 1993, and up until a couple of years ago, he  
4 was traveling coast to coast just to do his job, because there was no solar business here. He said that  
5 now there is. He said that all that time he was working on the equipment side, so he knows every  
6 photovoltaic technology there is, and he could talk all night about any of them you want to. He said he is  
7 available; he'll give the Board his card, in case they have questions about any of the technologies. He  
8 said that he now represents a company that is only doing community solar – 2 megawatts, 12 to 15 acres,  
9 that's all they are looking for. He referred to an artist's rendering that he brought showing the typical  
10 layout of what his company does.

11

12 Ms. Capel requested a digital copy of the image as a document of record.

13

14 Mr. Wilkerson said he would send one to staff. He said the main points he wants to make have already  
15 been covered by his colleagues. He said that community solar is the perfect way to cap his career; it  
16 enables the 80% or so of people to get access to solar who cannot get it from their own roof. He said  
17 with the big wind and big solar you have to pump that right into the transmission line and get a long-  
18 term buyer who is not a typical person who owns a house. He said with community solar, you could buy  
19 a subscription to just a couple of panels. He said the only problem he saw in reading through the  
20 documents was the 5 foot underground line depth. He said there is a fixed bucket of money; either the  
21 project will pencil or it will not. He said the more it will cost, the less likely it is to pencil. He said that if  
22 you require some elaborate landscaping, that lessens the cost, lessens the lease payments. He said that  
23 burying the cable at 5 feet, which he understands is now not an issue, will add costs, which will make the  
24 project less likely to happen. He said that he knows some industry colleagues who have said that if this  
25 agricultural impact mitigation is required, they are out of the state, because they are already covering  
26 these things with the lease with the land owner. He said the legislation that is in Springfield right now  
27 does not account for all the things that have already happened. He said there is enough paper for projects  
28 in the state right now that there will not need to be any more after this mitigation impact thing is  
29 required. He said that right now, for instance, ComEd has 800 MW of applications in the queue, and the  
30 state only has room for 3000 MW. He said that Ameren is in the same situation. He said he hears  
31 ComEd is getting 20 applications a day, which could be between community, utility, and residential. He  
32 said there are about 30 developers from out of state that are flooding the area. He said again, the harder it  
33 is to do business in a county, the less likely it is that a developer will do business in the county. He said  
34 that can be good or bad, depending on what the local folks want. He said he wanted to stress Mr.  
35 Montague's point, that if you did all 3,000 MW that are slated under this legislation, it is less than 3% of  
36 the land in one county. He said that they try to take great pains to only use the least attractive, least  
37 productive farmland. He said that Midcreek Organic Farm is behind his house, and it is owned by a  
38 neighbor. He said he wasn't even going to approach his neighbor; he did not think his neighbor would  
39 want to do solar on his organic farm. He said that his neighbor explained to him that it is going to make  
40 his organic farm more economically viable. His neighbor told him that he if he could take 12 to 15 acres  
41 and know that he would have this income stream, it will help him be more viable. Mr. Wilkerson said  
42 that he is going to have 2 MW literally in his back yard, and he doesn't mind.

43

44 Ms. Capel asked if his neighbor is going to graze the solar acreage.

45

46 Mr. Wilkerson said that his neighbor has insisted that in the least, they do not cut with fossil fuel, so they

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1 cannot mow this area like they normally would. He said they would normally plant a fescue that would  
2 grow a maximum of 18 inches high to minimize the need for cutting, but his neighbor wants to use his  
3 sheep. Mr. Wilkerson said they went to the long-term owner and asked if they would allow grazing. He  
4 said the long-term owner said yes, but the neighbor had to start a company and get insurance; he can't  
5 just do it whenever he feels like grazing his sheep among the array. He said that yes, they will let the  
6 neighbor do that.

7  
8 Ms. Capel asked the Board and staff if there were any questions for Mr. Wilkerson.

9  
10 Mr. DiNovo asked for verification that Mr. Wilkerson said that we are going to reach the 3,000 MW  
11 with the existing applications in the pipeline.

12  
13 Mr. Wilkerson responded yes. He said that the problem with saying we have 800 MW in the pipeline  
14 today is that a lot of them will fall out. He said that in his experience, he has had land owners who want  
15 to do it, with perfect land, perfect 3-phase interconnection, but the grid was already at 120% capacity  
16 with solar projects already in the queue ahead of us. He said that there are so many hurdles that have to  
17 happen to make everything work, and right now, we are running into lines that are already at capacity.  
18 He said that in the case of the 300 MW of wind energy, EDF Energy Renewables had to spend over \$10  
19 million to transport this high voltage electricity into a substation they had to rebuild. He said that with a  
20 small 2 MW solar farm, there is not that kind of money to build that kind of thing, but with a large-scale  
21 utility size, yes, you can build that kind of thing. He said that we have to look for 3-phase that has  
22 capacity.

23  
24 Mr. Elwell asked if there is capacity in Champaign County.

25  
26 Mr. Wilkerson said that they have not looked here yet, but he intends to. He said he understands that  
27 Ameren is a little bit different than ComEd; he has 1 lease signed in Ameren territory, in Iroquois  
28 County, and so far, the experience has been good.

29  
30 Mr. Hall asked Mr. Wilkerson how the subscription for solar works; more specifically, is that going to  
31 have to be local people that subscribe.

32  
33 Mr. Wilkerson replied that the way the law is written, anyone in Ameren territory can subscribe to any  
34 solar farm in Ameren territory.

35  
36 Mr. Hall asked Mr. Wilkerson how that is marketed.

37  
38 Mr. Wilkerson said that is another part of the equation that can be very tricky. He said it is up to the  
39 long-term owner and the developer to sell that electricity. He said to go out and sell a subscription to  
40 individual homeowners is going to be very expensive. He said that the law says that one owner can only  
41 own up to 40% of the output from any one 2 MW array. He said that means you have 1 anchor tenant at  
42 40%, so the remaining 60% has to be individual subscribers. He said he thinks that the minimum  
43 subscription is 200 watts.

44  
45 Mr. Hall stated that it is all written in the Future Energy Jobs Act. He asked Mr. Wilkerson if he thinks  
46 that if someone applies for a Special Use Permit for a Community Solar Farm, would they already have

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1 those subscribers lined up, or is that something they would do once they get the approval.

2  
3 Mr. Wilkerson said to make the project pencil, the Renewable Energy Credits (RECs) have to be  
4 included in the deal, and to get the RECs, he believes you have to have your subscribers. He said that all  
5 those things have to happen at the same time.

6  
7 Mr. Elwell asked Mr. Wilkerson if he, living in Champaign County, could have a subscription to a solar  
8 array in Iroquois County.

9  
10 Mr. Wilkerson said yes, if it is in Ameren territory, if they drop the moratorium, which is just until they  
11 finish a solar farm ordinance. He said he was in Paxton yesterday; they combined their solar with their  
12 wind ordinance, and he had to go make sure they knew the difference.

13  
14 Ms. Capel asked Mr. Wilkerson if Eastern Illini Cooperative participates.

15  
16 He said he has tried working with electric cooperatives, but they are not compelled by the law to do this,  
17 and so they are not doing this.

18  
19 Ms. Capel said that the co-ops even make it difficult to do home size projects.

20  
21 Mr. Wilkerson said that the co-op world is democratic, one member, one vote; if they have enough  
22 votes, then they will have it, but they have to be reminded of that.

23  
24 Ms. Capel asked the Board and staff if there were any additional questions for Mr. Wilkerson, and there  
25 were none.

26  
27 Ms. Capel called Phil Fiscella to testify.

28  
29 Mr. Phil Fiscella, whose address is 505 West Green, Champaign, stated that he is leasing 20 acres on his  
30 farm in Vermilion County to a developer, and was curious about what the rules are in Champaign  
31 County. He said he feels like this is a really great opportunity for the county; from what he has seen,  
32 especially with his more marginal land in Vermilion County, it is an order of magnitude in income above  
33 what he would get by farming the land. He said environmentally, especially with the Class B land, this is  
34 a much better use of the land as far as erosion, pollution, and soil loss. He said he feels that it will be  
35 good for taxing districts; right now, his farm pays less than \$1,000 per year in taxes. He said he thinks  
36 the payment in lieu of taxes will be substantially more. He said it is good to be concerned about potential  
37 impacts, but he would like to see more of this happening in Champaign County because he feels that the  
38 farmers who are getting the rent payments are predominantly going to be spending the money locally. He  
39 feels that it would create more jobs than farming would, especially in the short term, but even in the  
40 longer term as far as maintenance. He said there would certainly be more tax payments with less demand  
41 for services. He feels like this could be a real boon to rural communities especially. He said it seems to  
42 him that there is a lot of competition; the proposed solar farm near Sidney would potentially consume  
43 one-quarter to one-third of the utility scale capacity of projects in the state. He said this is huge, and it  
44 would be a considerable amount of money for the county, a few million dollars at least. He said his  
45 feelings about landowners negotiating with solar companies are as follows: working with Nexamp  
46 talking about their construction projects, most of what they are doing is vibrating I-beams into the

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*DRAFT SUBJECT TO APPROVAL DRAFT*

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1 ground. He said he has talked with his attorneys and his tenant farmer, and various other people about  
2 what do you do if these guys disappear, and his feeling is there is substantial salvage value. He said that  
3 if they do disappear, he thinks he would stand to make a substantial profit by selling or scrapping the  
4 equipment himself. He said farmers are pretty good at figuring out how to do that kind of thing. He said  
5 a lot of us have a great deal of junk and old buildings and stuff sitting around, and we find ways to  
6 monetize that when the price is right. He said as far as farm tile goes, he agrees that is a valid point. He  
7 said he has neighbors' tile running across his property, but there are legal mechanisms in place to make  
8 sure that we maintain tile that runs across our property. He said that thus far, his experience has been that  
9 his neighbors have been extremely conscientious about mapping those tiles, and most farmers have a  
10 pretty good idea of where those tiles are on their properties. He said that when you have any topography  
11 at all and have a tile burst up, it's kind of a mess; you'll have a lot of water coming out on the ground  
12 and gullies. He said it is his understanding that these companies do not want substantial surface erosion  
13 under their solar arrays since they have to run equipment back there such as mowers. He said he thinks  
14 it is in their best interest as well to make sure the tiles are functioning. He said there is also liability if  
15 you impact somebody else upstream. He said overall, he thinks the County should see this as more of an  
16 opportunity and maybe less of an inconvenience if at all possible. He said we want to be sensible, but we  
17 should bear in mind that most farmers are accredited investors; these are people with substantial  
18 experience and assets who can negotiate on pretty equal terms with these companies for the most part.  
19

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

22 Ms. Capel asked the audience if anyone desired to sign the witness register and present testimony  
23 regarding this case, and there was no one.  
24

25 Mr. DiNovo, referring to Section 5.2, asked Mr. Hall how he would treat one of these applications in the  
26 absence of the proposed text amendment.  
27

28 Mr. Hall stated that he told the first applicant that if they wanted to proceed under the wind farm  
29 requirements, requesting whatever waivers they think are necessary, they could do that, or they could  
30 wait for the solar farm amendment. He said that prior to that, Invenergy, the company that did the 30  
31 wind towers we have, called last January trying to line up properties for solar farm development and they  
32 are very familiar with our wind farm requirements, and they said they did not want to develop under our  
33 wind farm requirements; they wanted to wait for development of the solar amendment. He said that  
34 apparently, we were not attractive enough, because he never heard from them again. He said that the  
35 group that submitted the Community Solar Farm applications that we have are also content to wait for a  
36 solar ordinance amendment, although they seem to be somewhat more anxious about timeline and they  
37 are really hoping that we can get this amendment done in time.  
38

39 Mr. DiNovo asked if Mr. Hall had ever considered an alternative such as a steam turbine peaker plant.  
40

41 Mr. Hall responded that he had considered doing it just as a substation, when the U of I project was  
42 being discussed and it wasn't clear if they were exempt from zoning or not. He said that the U of I  
43 project turned out to be exempt from zoning, so he did not need to proceed with that. He said that in his  
44 view, doing it as a peaker plant would be even more problematic than doing it as a wind farm. He said  
45 when it comes right down to it, it's only going to be a solar farm, so he didn't really consider that.  
46

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1 Mr. DiNovo said that he understands, given the nature of the impacts, and the multiple separate parcels  
2 that are included in wind farms, why that would be necessary – they affect such a large area – why they  
3 should be treated as a County Board Special Use. He said that these are single, compact locations and he  
4 knows that this Board is competent to make decisions about gas turbine peaker plants, gravel pits, and  
5 sewage treatment plants. He said that unless this is coming from the County Board, he does not  
6 understand why this would need to be a County Board Special Use Permit instead of a regular Special  
7 Use Permit.

8  
9 Mr. Hall said he appreciates Mr. DiNovo mentioning that. He said he thinks it should be a County Board  
10 Special Use Permit because of the need for a reclamation plan with decommissioning makes  
11 determination of value critical, and he thinks that should be left up to the County Board. He said that  
12 peaker plants, for some reason we did not include decommissioning; he thinks a peaker plant would be  
13 the easiest of these three different things to decommission, and so maybe that is why we did not have the  
14 need of a decommissioning plan and financial assurance. He said when you start dealing with financial  
15 assurance and the County is going to be responsible for those large amounts, even though we take into  
16 account the recycle value, it is still a lot of financial value, and for that reason he thinks it should be the  
17 County Board.

18  
19 Mr. Elwell asked Mr. Hall if he could give an idea of the property tax, or the fees solar array companies  
20 would be paying to Champaign County; for example, if they cross over to Vermilion County instead of  
21 developing in Champaign County. He asked if the farmer is still going to pay his same property tax  
22 when this is going to be an improvement to the land.

23  
24 Mr. Hall stated that the solar farm developers who have so far talked to our Supervisor of Assessments  
25 have said that they want the solar farm developer to be responsible for the real estate tax on the solar  
26 farm, not the land owner. He said that these are going to be leased lands, so there should not be any real  
27 estate tax impact on the land owner except they will no longer pay any real estate tax on the land as far  
28 as he knows, but he is not an expert on that.

29  
30 Mr. Passalacqua stated that he thinks what Mr. Elwell is angling at is what Mr. Fiscella mentioned – a  
31 farmer may be paying \$1,000 on a whole parcel, but the revenue to the County is going to be much  
32 greater under this plan.

33  
34 Mr. Hall said until the legislature makes an amendment to the tax law to reduce that, like they did for  
35 wind farms; he is assuming that will happen, but maybe it won't. He said those things might be  
36 considered as part of the reason why solar farms might be good, but we still have to deal with the  
37 impacts. He said that the principal thing this Board would deal with is making sure we have addressed  
38 the impacts.

39  
40 Ms. Capel asked Mr. Hall to indicate how many big substations are in Champaign County.

41  
42 Mr. Hall responded that we have two: one at Sidney and one at Rising. He said he fully expects to get  
43 some proposal for something near Rising; he has had some inquiries, but nothing has developed. He  
44 said that one of the solar farm developers have been interested in Rising, and he suggested the Sidney  
45 substation, and Sidney won out. He said we still have another opportunity at Rising, but the task is  
46 assembling enough land owners who are interested.

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*DRAFT SUBJECT TO APPROVAL DRAFT*

3/1/18

1 Ms. Capel asked Mr. Hall to indicate the LESA scores are around those substations.

2  
3 Mr. Hall stated that they are both almost all best prime farmland. He said he does not know how close  
4 the development would need to be to the Rising substation, but when you get about a mile away from it,  
5 you start getting into significant amounts of non-best prime farmland there on the moraine. He said one  
6 inquiry he had was on the moraine that might not have been best prime farmland, but that has not  
7 developed into anything concrete.

8  
9 Ms. Capel said that one of the things she noticed from reading the email from Ted Hartke was about fire,  
10 and another issue she has kind of picked up on is there is a certain amount of water use.

11  
12 Mr. Hall stated that he does not know about water use and we still require some further explanation of  
13 that. He said in his further readings, he does not know that they would use that much water; they might  
14 just be able to rely on rain except in dry conditions. He said that in regards to fire, he has read that also,  
15 that depending on which photovoltaic (PV) technology they have used, fire can release some  
16 undesirable, hazardous materials. He said that he heard a discussion today with a local Fire Protection  
17 District that if there is ever a fire at a solar farm, the fire will go its own course and they will make sure  
18 it doesn't get outside the solar farm. He said he does not know how likely it is for a fire to happen, but he  
19 has read there can be some significant cleanup after a fire.

20  
21 Mr. Hall stated that one thing he would like to get clear on tonight is if the Board has any assignments  
22 for staff for the next hearing. He asked if there are any things that the Board wants more information on,  
23 so we can try to find it.

24  
25 Mr. DiNovo stated that, reading the definition in the amendment, it did not provide a minimum for a  
26 community solar project, including minimum number of subscribers. He said you could theoretically  
27 argue that an individual residential installation would fall under that. He said he cannot believe that is  
28 intended.

29  
30 Mr. Hall stated that the definition of community solar farm incorporates the definition of solar farm; it is  
31 inconceivable to him that the term can be applied to a residence wherein you are selling the excess  
32 energy.

33  
34 Mr. DiNovo said he went back and looked at the definition of a community solar farm in the Future  
35 Energy Jobs Act, and he did not see where it said more than one. He said, no subscriber can have more  
36 than 40%, which means there has to be at least two.

37  
38 Mr. Hall asked Mr. DiNovo if he was suggesting making the definition of community solar farm a little  
39 more robust; adding that requirement would make it clear to a future Zoning Administrator.

40  
41 Mr. DiNovo said it makes him wonder if glare and other subjects of concern would be an issue for  
42 something like arrays. He said he could imagine things that did not qualify as solar arrays that were  
43 designed simply to serve single installations. He said you might want to tie in to the utility, but you  
44 might not, under the terms of the law. He said that he is wondering if there is some category of these  
45 things that is not categorized under the law.

46

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*DRAFT SUBJECT TO APPROVAL DRAFT*

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1 Mr. Hall said there might be, and he would be happy to follow up with another amendment after this  
2 dealing with smaller scale solar installations, just like we did for wind farms. He said that we got the big  
3 wind farms amendment in place, so we could deal with wind farms, and then we followed it up with  
4 smaller wind turbines. He said he does not really want to spend time on it now, on the smaller things, but  
5 he would be happy follow up with another amendment dealing with small scale solar installations. He  
6 said that right now, we are approving these small things, and we have not had any complaints.  
7

8 Mr. DiNovo said that he put a solar array on his garage and he does not need a County permit for that.  
9 He said if you put it on the ground, you need a permit.  
10

11 Mr. Hall said that if you place a solar array on your roof, you do not need a permit, but if you place a  
12 solar array on the ground you do need a permit, and staff has processed those permits.  
13

14 Ms. Capel closed the witness register for tonight.  
15

16 Ms. Capel stated that if there is no more discussion, we should continue this case. She entertained a  
17 motion to continue this case to March 15, 2018.  
18

19 **Mr. Passalacqua moved, seconded by Mr. Randol, to continue Case 895-AT-18 to the March 15,**  
20 **2018 ZBA meeting. The motion carried by voice vote.**  
21

22 Ms. Capel stated that our March 15<sup>th</sup> meeting technically starts at 7:00 p.m. rather than 6:30. She said  
23 that if we start earlier, then we would have more time for discussion.  
24

25 Mr. Passalacqua said that 6:30 p.m. would be fine for the March 15<sup>th</sup> meeting, but beginning at 6:30 p.m.  
26 would start to get tight for him after that.  
27

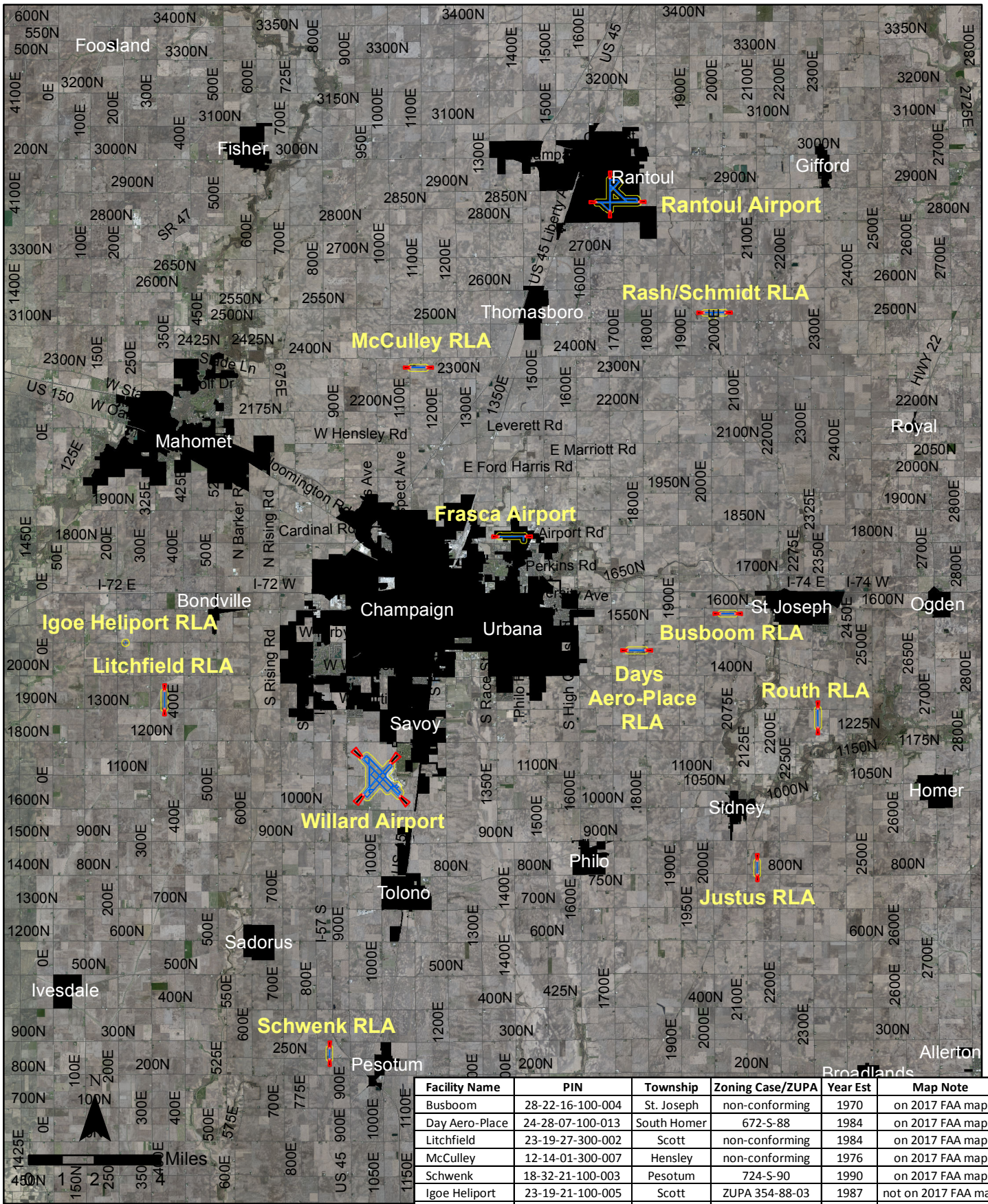
28 Mr. DiNovo said that he would prefer to start at 6:30 p.m.  
29

30 Ms. Capel entertained a motion to approve the 6:30 p.m. start time for the March 15<sup>th</sup> meeting.  
31

32 **Mr. Randol moved, seconded by Mr. DiNovo, that the March 15<sup>th</sup> meeting begin at 6:30 p.m. The**  
33 **motion carried by voice vote.**  
34  
35  
36  
37  
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42  
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45  
46



# Airports and RLAs in Champaign County



Facility Name	PIN	Township	Zoning Case/ZUPA	Year Est	Map Note
Busboom	28-22-16-100-004	St. Joseph	non-conforming	1970	on 2017 FAA map
Day Aero-Place	24-28-07-100-013	South Homer	672-S-88	1984	on 2017 FAA map
Litchfield	23-19-27-300-002	Scott	non-conforming	1984	on 2017 FAA map
McCulley	12-14-01-300-007	Hensley	non-conforming	1976	on 2017 FAA map
Schwenk	18-32-21-100-003	Pesotum	724-S-90	1990	on 2017 FAA map
Igoe Heliport	23-19-21-100-005	Scott	ZUPA 354-88-03	1987	not on 2017 FAA map
Jones	08-33-27-200-024	Crittenden	705-S-12	2012	not on 2017 FAA map
Justus Airport	24-28-22-300-003	Sidney	non-conforming	?	not on 2017 FAA map
Rash (Schmidt)	20-10-29-400-009	Compromise	non-conforming	1987	not on 2017 FAA map
Routh	28-22-36-100-001	St. Joseph	750-S-91	1991	not on 2017 FAA map

*RLA Text Amendment Case 642-AT-88 adopted 8/23/88*

## Legend

- Airports and RLAs
- Municipality
- 500' runway buffer
- Runway Protection Zones

Approach Area for Willard and Rantoul yet to be verified (relates to amendment part 6.1.5 C.3.)

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### Solar Farm Fee Schedules Comparison

County	Construction Cost (if applicable)	Size (kW or MW) (if applicable)	Building Permit Fee	Special/Cond. Use Fee (if applicable)	Other fees	Estimated Cost of 2 MW Solar Farm	Est. Cost of 150 MW Solar Farm*
Champaign (2/22/18 draft)			\$1,800 per MW	\$1,320 per MW up to 7 MW		\$3,600 + \$2,640 = \$6,240	\$270,000 + \$25,950 = \$295,950
				\$9,240 plus \$102 for each MW over 7 MW to 112 MW			
				\$173 per MW over 112 MW			
Champaign (3/08/18 revision)			\$1,800 per MW	\$1,320 per MW up to 7.5 MW		\$3,600 + \$2,640 = \$6,240	\$193,050 + \$27,000 = \$219,000
			\$13,500 plus \$1,260 per MW greater than 7.5 MW	\$9,240 plus \$102 for each MW over 7.5 MW and up to 112.5 MW			
				\$180 per MW over 112.5 MW			
Christian		up to 2 MW additional MW	\$10,000 \$1,000 per MW	\$1,000 for hearing		\$11,000	\$168,000
DeKalb		0-10 kW	\$150	no fee specified		\$6,000	\$302,000
		11-50 kW	\$300				
		51-100 kW	\$600				
		101-500 kW	\$1,200				
		501-1000kW	\$2,750				
		1001-2000 kW	\$6,000				
		over 2000 kW (2 MW)	\$6000 plus \$200 each additional 100 kw or \$2,000 per MW				
Kankakee	\$1 million		\$6,520	\$5000 per application		\$6,529 + \$5,000 = 11,529	\$7,417 + \$5,000 = \$12,417
	each add'l \$1 million		\$3				
Knox		0-10 kW	\$100	no fee specified		\$5,000	\$153,000
		11-50 kW	\$250				
		51-100 kW	\$500				
		101-500 kW	\$1,000				
		501-1000kW	\$2,500				
		1001-2000 kW	\$5,000				
		over 2000 kW	\$5,000 plus \$100 each add'l 100 kW				
McLean	up to \$5 million		\$100 min fee	15 acres: \$450**		\$100 + \$450 = \$550	\$162,500 + \$8,400 = \$170,900
	each add'l \$1,000		\$3	100 acres: \$700 + \$7 each acre over 100 acres**			
	> \$5 million		\$15,000 + \$0.50 for each add'l \$1,000 project cost				
Peoria		0-10 kW	\$250	no fee specified		\$5,000	\$153,000
		11-50 kW	\$350				
		51-100 kW	\$500				
		101-500 kW	\$1,000				
		501-1000kW	\$2,500				
		1001-2000 kW	\$5,000				
		over 2000 kW	\$5,000 plus \$100 each add'l 100 kW				
Sangamon			\$7 per \$1,000 construction value (not solar specific)	up to 5 acres: \$250, plus \$5 each add'l acre**		\$28,000 + \$250	\$2,100,000 + \$6,225 = 2,106,225
Tazewell		0-4 kW	\$75	no fee specified		\$5,000	presumably not within limits of their fee schedule
		5-10 kW	\$150				
		11-50 kW	\$300				
		51-100 kW	\$500				
		101-500 kW	\$1,000				
		501-1000 kW	\$3,000				
		1001-2000 kW	\$5,000				
Whiteside			\$500 per MW, \$5,000 max limit	\$750 for hearing	court stenographer and \$75 LESA evaluation	\$1,000 + other fees	presumably not within limits of their fee schedule

\* estimated cost per MW is \$2 million

\*\* 1 MW covers 7-8 acres; proposed 150 MW farm thus covers 1200 acres

# McLean County Solar Ordinance Amendment

## Utility Major – Text Amendment proposal

**§ 350-26      DEFINITIONS.**

Utility, Major	Generating plants; electrical switching facilities and primary substations; water and wastewater treatment plants; water tanks; and radio, television and microwave transmission towers; and similar facilities of agencies that are under public franchise or ownership to provide the public with electricity, gas, heat, steam, communication, rail transportation, water, sewage collection or other similar service, wind <u>and solar</u> power generating facilities including wholesale generators and or qualifying facilities. (6-18-02) The term “utility” shall not be construed to include corporate or general offices; gas or oil processing; manufacturing facilities; postal facilities; or other uses defined herein. In addition, utilities that are exempt as specified in Article 1 of these regulations shall not be considered to be major utilities as defined herein.
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**§ 350-43      USE STANDARDS.**

OO. Utility, Major (if not a regional pollution control facility or otherwise exempted in Article 1 of these regulations): Major utilities, that are not regional pollution control facilities or otherwise exempted in Article 1 of these regulations, shall not be located within 200 feet of a boundary line of an R-1 or R-2 district.

\*\*\*

- (3)      The following standards shall apply to Solar Farms:
  - (a)      Setbacks: The facility shall be set back 50 feet from the front and rear property lines and 30 feet from the side property lines.
  - (b)      Lighting shall be installed for security and safety purposes only. Except with respect to lighting required by the FCC or FAA, all lighting shall be shielded so that no glare extends substantially beyond the boundaries of a facility.
  - (c)      An erosion control plan shall be provided.
  - (d)      A storm water management plan shall be provided.
  - (e)      All areas occupied by the facility that are not utilized for access to operate and maintain the installation shall be planted and maintained with a native shade tolerant grass or other vegetation for the purpose

of soil stabilization or other methods approved by the Director of Building and Zoning.

- (f) Solar panels shall require construction permits from the Department of Building and Zoning. Solar panels that are part of a solar power generating facility shall require engineering certified by a registered engineer or other certified professional before an occupancy permit will be issued.
- (g) If a facility ceases to produce electricity on a continuous basis for 24 months, the equipment must be removed, and the site restored to original condition.
- (h) Facility shall provide approval for access points and change in access use from the road authority.