

Kane County Zoning Board of Appeals  
c/o Keith Berkhout  
719 Batavia Ave – Building A, 4<sup>th</sup> Fl.  
Geneva IL 60134

*Via email*

January 2<sup>nd</sup>, 2024

Re: Updated Evidence in support of Petition 4616

Dear Zoning Board of Appeals,

In advance of tomorrow's ZBA meeting, we would like to address some of the new information that has been submitted to the County regarding Zoning Petition 4616, the Alexander-Johnson Farm Solar Project.

**Site Plan:**

We have made tweaks to our site plan to accommodate the Zoning Board of Appeals' concerns regarding specific findings of fact, as discussed in more detail below. The revised site plan is attached as **Attachment 1**.

**Setbacks:**

We resubmit Schain Banks' legal analysis regarding setbacks, refuting the claimed setback issues, as **Attachment 2** to this letter.

**EMF Claims:**

We resubmit our letter of December 11<sup>th</sup>, 2023, citing experts and studies refuting the claims of dangers of EMF from solar power, as **Attachment 3** to this letter.

**Fire/EMS access:**

We have spoken multiple times with Captain David Kovach of the Kaneville Volunteer Fire Department to discuss our site plan as it relates to emergency access. Once he was aware of the more detailed civil plans that we submitted as part of our original application material, he stated that many of his concerns had already been addressed. That is, the project already complied with his requests around fire access and site design. In addition, the existing Special Use Permit stipulation regarding the requirements to further coordinate fire and EMS access is all that is needed at this point in the process, and to establish findings of fact to support the issuance of the special use permit.

In addition, last week we received an updated correspondence from Captain Kovach, outlining how the project has indeed complied with many of his requests. Training, documentation, and other operational coordination will be appropriately addressed between the time of the issuance of the Special Use Permit and the commencement of construction of the facility.

**Grapes and Solar:**

Objectors have provided no evidence for their claims that solar could harm grapevines through some type of “heat effect”. Recently, a partial email has appeared in the County’s online file for this petition, allegedly from a Commercial Ag Extension Educator from the University of Illinois (not a grape or viticulture expert), which seems to be a copy-and-paste of an article summarizing an Arizona desert study that claims to have found increases in temperature underneath desert solar arrays. It is important to remember, as we mentioned last time, that this study is in a desert location, without vegetative screening or groundcover which act to reduce the temperature in the areas where they are present (see Petitioner’s slides from the November 14<sup>th</sup> meeting). The email has highlighted a section of the summary article, which states very clearly that, **“the added heat dissipates quickly and can’t be measured 100 feet away from the power plants.”** Thus, even the objectors’ own “information” establishes the fact that solar will not affect a grape crop offsite, even in desert areas, and especially not in temperate zones (Kane County) with vegetative groundcover and a thermal barrier from vegetative screening.

**Access:**

The claimed “easements” across the Alexander-Johnson’s property are not based in logic or law. Nevertheless, in order to accommodate some ZBA members’ concerns that the project could possibly block access to the neighbors’ land (if the easements were valid), we have moved the landscape screening trees and the project’s security fence away from the pertinent portions of the eastern property line, maintaining a minimum twenty-five foot access as shown on our updated site plan, and moved the access gate to the south of the sixty-foot-wide Alexander-Johnson access property. If those “easement” claims ever become legally established, as doubtful as that is, the project will not interfere with them.

**Screening Update:**

As discussed in our previous meetings, we have added screening to accommodate Mrs. Goodrich on the southwest side of the project. Since then, we have added additional screening along the north edge of the project, facing Gala Argent’s and James Light’s house.

Objectors have tried to claim that the soil type on parts of the solar site is not suitable for mature trees. This is obviously false, as mature trees exist in several locations with the same soil type surrounding the solar project, including a large part of the Pine Tree Subdivision to the southeast. Please see the marked-up USGS Web Soils Survey soils map of the area soils, attached as **Attachment 4**. The project has and will continue to commit to maintaining the landscape

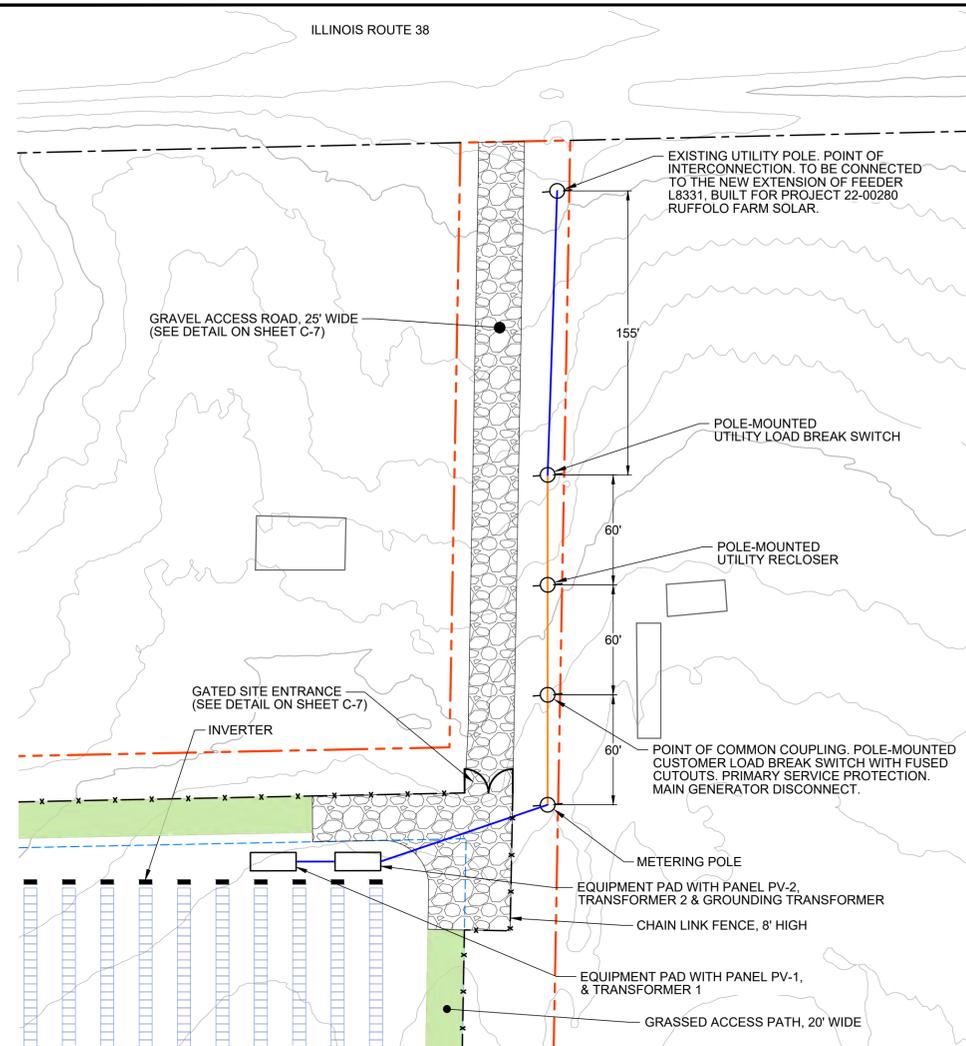
screening for the life of the project, or else it would be in violation of the Special Use Permit and subject to enforcement or revocation of said permit.

Sincerely,



Andy Melka  
Director, Development  
312-972-5055  
[andy@horizonpow.com](mailto:andy@horizonpow.com)

**Attachment 1 – Updated Site Plan**



**EQUIPMENT DETAIL AT SITE ENTRANCE**

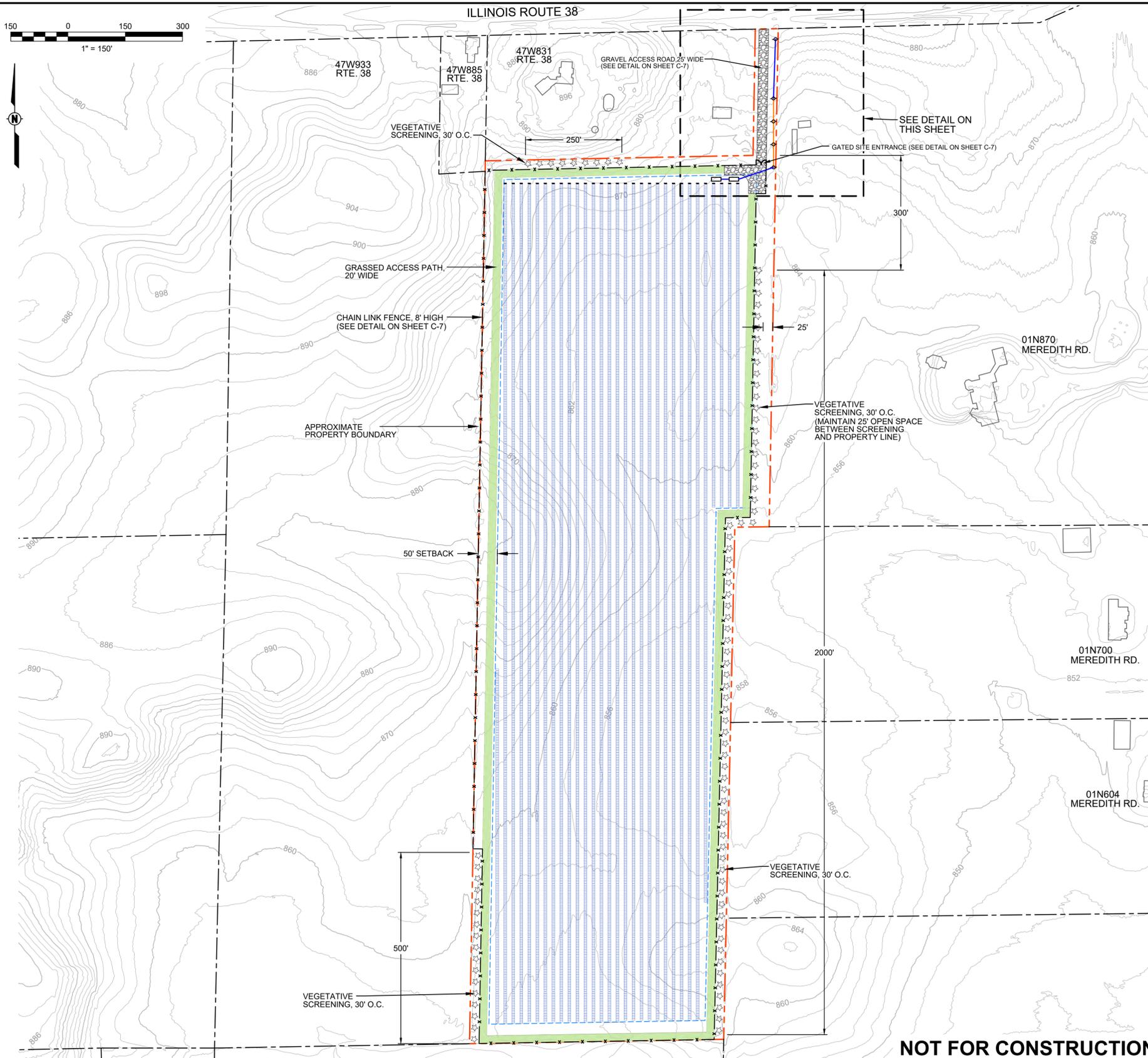
SCALE: 1" = 50'

**NOTES**

- 1) ELECTRICAL COMPONENTS SHOWN ARE SCHEMATIC. FINAL ELECTRICAL DESIGN AND LAYOUT WILL BE COMPLETED BY OTHERS.

**LEGEND**

- SITE PROPERTY BOUNDARY (APPROXIMATE)
- PROPERTY BOUNDARY SETBACK, 50'
- ADJACENT PARCEL LINES
- 47W831 PROPERTY ADDRESS
- 860 GROUND SURFACE CONTOUR
- BUILDING
- X X PERIMETER FENCE
- GRAVEL ACCESS ROAD
- SOLAR PANEL
- INVERTER
- POWER POLE
- EQUIPMENT PAD & TRANSFORMER
- ★ TREE PLANTING, 30' O.C.



<p>Attention:</p> <p>If this scale bar does not measure 1" then drawing is not original scale.</p>	<p>Designed: FZW</p>	<p>GEI CONSULTANTS, INC. 8615 W. BRYAN MAWR AVE. SUITE 406 CHICAGO, IL 60631 (312)985-0365</p>	<p><b>5.0 MW AC GROUND MOUNTED SOLAR FARM</b></p> <p>KANESOLAR02 LLC ALEXANDER-JOHNSON SOLAR FACILITY ILLINOIS ROUTE 38 MAPLE PARK, IL 60151</p>	<table border="1"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>ISSUE/REVISION</th> <th>APP</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12/18/2023</td> <td>SPECIAL USE APPLICATION</td> <td>KAP</td> </tr> <tr> <td>0</td> <td>8/30/2023</td> <td>SPECIAL USE APPLICATION</td> <td>KAP</td> </tr> <tr> <td>NO</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	NO	DATE	ISSUE/REVISION	APP	1	12/18/2023	SPECIAL USE APPLICATION	KAP	0	8/30/2023	SPECIAL USE APPLICATION	KAP	NO				<p>SHEET NAME</p>	<p>DRAWING NO.</p>
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	<p>Drawn: KJC</p>			<p><b>SOLAR PANEL LAYOUT PLAN</b></p>	<p><b>C-6</b></p>																	
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	<p>P.E. No: 062.072571</p>																					
	<p>GEI Project 2303049</p>																					

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**Attachment 2 – Letter Regarding Setbacks**

December 11, 2023

**VIA EMAIL**

Kane County Board  
719 S. Batavia Ave, Bldg A  
Geneva, IL 60134

**RE: Applicant's Response to Written Protest and Objectors' Setback Claim**

To Whom It May Concern,

The undersigned firm represents KaneSolar02 LLC (the "Applicant") regarding Petition 4616, which is for a proposed Commercial Solar Energy Facility at 47W829 Route 38, Maple Park, IL 60151. We write to the Kane County Board for two reasons:

**1. Purported Written Protest**

Last week, we received a "Written Protest to the Proposed Zoning Map Amendment & Special Use In Connection with Petition 4616..." The purported protest contends that the Applicant seeks a map amendment and special use in Petition 4616 and that "such amendment shall not be passed without a favorable vote of 3/4 of all the members of the county board under the provisions of Kane County Code 25-4-7-3." The purported protest is baseless.

The Kane County Zoning Code at Section 25-4-7-3(B) states as follows:

- B. Map Amendments: Map amendments may be passed at a county board meeting by a simple majority of the elected county board members, except that in case of written protest against any proposed map amendment that is either:
1. Signed by the owner or owners of at least twenty percent (20%) of the perimeter of the land to be rezoned, or
  2. Signed by the owner or owners of land immediately touching, or immediately across a street, alley, or public right of way from at least twenty percent (20%) of the perimeter of the land to be rezoned, or . . .

After receiving the purported protest, we explained that the Applicant is *not* seeking a map amendment (also known as a "rezoning") and, therefore, the purported protest was invalid and should be withdrawn. In the event that the purported protest is not withdrawn prior to the County Board meeting, request is hereby made that the Kane County State's Attorney's Office explain that only a simple majority vote is required in this matter, as no map amendment is being sought by the Applicant.

## 2. Setbacks from Access Road and Transmission Lines

On Sunday, December 10, 2023, we received information that certain objectors believe that the project should not be approved because the proposed access road and transmission lines are within 50 feet of the boundary line of non-participating residences. The objectors are incorrect.

The Kane County Zoning Ordinance at Section 25-5-4-9(A) contains the following definitions:

- **Commercial Solar Energy Facilities:** Any device or assembly of devices that is ground installed and uses solar energy from the sun for generating electricity for the primary purpose of wholesale or retail sale and not primarily for consumption on the property.
- **Supporting Facilities:** The transmission lines, substations, access roads, storage containers, and equipment associated with the generation and storage of electricity by the Commercial Solar Energy Facility.

The Kane County Zoning Ordinance at Section 25-5-4-9(E)(7)(a) (the “Setback Section”) contains the following setback requirements for Commercial Solar Energy Facilities:

The Commercial Solar Energy Facility shall be sited as follows, with setback distances measured from the nearest edge of any component of the facility:

- (1) Occupied Community Buildings and Dwellings on Nonparticipating Properties: one hundred fifty (150) feet to the nearest point on the outside wall of the structure.
- (2) Boundary Lines of Participating Property: None.
- (3) Boundary Lines of Nonparticipating Property: fifty (50) feet to the nearest point on the property line of the nonparticipating property.
- (4) Public Road Rights-of-Way: fifty (50) feet to the nearest edge of the public road right-of-way.

The Setback Section does not contain any distance restrictions for “Supporting Facilities” such as access roads or transmission lines. Clearly, access roads or transmission lines cannot be construed as “components” because they are always adjacent to public road rights-of-way. To adopt the objectors’ interpretation would be incongruent with the setback requirements under the Statewide Siting Act (55 ILCS 5/5-12020) and would constitute a moratorium on solar projects.

Sincerely,

SCHAIN, BANKS, KENNY & SCHWARTZ, LTD.



Nicholas D. Standiford

**Attachment 3 – Letter Regarding EMF**

Kane County Zoning Board of Appeals, Development Committee, and County Board  
c/o Mark VanKerkhoff  
719 Batavia Ave – Building A, 4<sup>th</sup> Fl  
Geneva IL 60134

Via email

December 11<sup>th</sup>, 2023

Re: Claims of EMF issues from solar projects

Dear Kane County,

At various recent County meetings, we have observed public testimony and one Board member stating false claims about potential dangers of electro-magnetic fields (EMF) associated with solar arrays. Basic physics, and studies specific to solar power facilities, fully refute this claim.

EMF requires multiple tens of thousands of volts to get to a measurable level that would even possibly be a concern for human health (would need to be hundreds of thousands of volts at distances as little as the Kane County 50-foot setback). No such voltages exist within the solar facility being contemplated under this ordinance. Note that the highest DC voltages in these contemplated solar facilities is below 2000 volts, and normal operating voltage below 1500 volts.

Our everyday world around us contains voltages much higher than the 1500 volts of a solar project. The lowest voltages in community distribution overhead powerlines is approximately three times that of a solar project (4,200 volts) and most roadside community distribution powerlines are between 12,400 volts and 34,500 volts. There are not concerns from credible health authorities about EMF from even those power lines carrying 34,500 volts. Note that at 345,000 volts (10 times normal distribution power lines, and more than 200 times the 1500 volts in our proposed facility), a common voltage for high-tension powerlines crossing our farm fields, there is some measurable EMF, and yet scientific studies has been unable to substantiate health risks from such exposure at 50 feet (again, at 345,000 volts).

Tech Environmental, Inc., performed a study of EMF at a solar project in Massachusetts<sup>1</sup>, due to solar opponents raising EMF as a health issue. As expected from basic physics, no dangerous levels of EMF were measured on the solar project site, let alone outside the fence:

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[https://www.co.champaign.il.us/CountyBoard/ZBA/2018/180329\\_Meeting/180329\\_\\_Massachusetts%20Acoustic%20Study%20for%20PV%20Solar%20Projects.pdf](https://www.co.champaign.il.us/CountyBoard/ZBA/2018/180329_Meeting/180329__Massachusetts%20Acoustic%20Study%20for%20PV%20Solar%20Projects.pdf)

*The International Commission on Non-Ionizing Radiation Protection (ICNIRP) has a recommended electric field level exposure limit of 4,200 Volts/meter (V/m) for the general public. At the utility scale sites, electric field levels along the fenced PV array boundary, and at the locations set back 50 to 150 feet from the boundary, were not elevated above background levels (< 5 V/m). Electric fields near the inverters were also not elevated above background levels (< 5 V/m). At the residential site, indoor electric fields in the rooms closest to the roof-mounted panels and at locations near the inverters were not elevated above background levels (< 5 V/m).*

*The International Commission on Non-Ionizing Radiation Protection has a recommended magnetic field level exposure limit of 833 milli-Gauss (mG) for the general public. At the utility scale sites, magnetic field levels along the fenced PV array boundary were in the very low range of 0.2 to 0.4 mG. Magnetic field levels at the locations 50 to 150 feet from the fenced array boundary were not elevated above background levels (<0.2 mG). There are significant magnetic fields at locations a few feet from these utility-scale inverters, in the range of 150 to 500 mG. At a distance of 150 feet from the inverters, these fields drop back to very low levels of 0.5 mG or less, and in many cases to background levels (<0.2 mG). The variation of magnetic field with distance generally shows the field strength is proportional to the inverse cube of the distance from equipment.*

Tell, Hooper, et al, performed a similar study in California, and found that, “The fields measured complied in every case with IEEE controlled and ICNIRP occupational exposure limits. In all cases, electric fields were negligible compared to IEEE and ICNIRP limits across the spectrum measured and when compared to the FCC limits ( $\geq 0.3$  MHz).”<sup>2</sup>

EMF is not a human health or welfare concern at solar energy facilities. No further credence should be given to any claims otherwise.

Further, we have heard one Board member claim during County Board meetings that the World Health Organization (W.H.O.) has guidance stating that the safe distance for how close people should live next to solar projects is 1.2 miles. We have not heard anyone cite any credible source for these statements nor provide any credible evidence to back up these allegations. We spent time researching the assertion and cannot find any guidance from W.H.O. stating there are *any* dangers of solar projects, let alone the ridiculous claim of not living within 1.2 miles of solar projects. We have found a few anti-solar blogs posts that allege the “safe distance is at least 1.2 miles”, but those blogs have zero

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<sup>2</sup> Tell RA, Hooper HC, Sias GG, Mezei G, Hung P, Kavet R. Electromagnetic Fields Associated with Commercial Solar Photovoltaic Electric Power Generating Facilities. J Occup Environ Hyg. 2015;12(11):795-803. doi: 10.1080/15459624.2015.1047021. PMID: 26023811, summary available here: <https://pubmed.ncbi.nlm.nih.gov/26023811/>

citations to anything, let alone any actual authority or “experts”, and thus the Board should not consider them credible.

Sincerely,



Andy Melka  
Director, Development  
312-972-5055

Additional Resources:

1. NC Clean Energy Center White Paper, “Health and Safety Impacts of Solar Photovoltaics.”  
<https://nccleantech.ncsu.edu/wp-content/uploads/2019/10/Health-and-Safety-Impacts-of-Solar-Photovoltaics-PV.pdf>
2. World Health Organization website regarding electromagnetic fields:  
<https://www.who.int/news-room/questions-and-answers/item/radiation-electromagnetic-fields>

**Attachment 4 – Soils Map**

