

From: [Richard Pund](#)
To: [PLN-Planner on Duty](#)
Subject: Solar Utilities
Date: Friday, February 25, 2022 11:20:42 AM

You don't often get email from richard.pund@gmail.com. [Learn why this is important](#)

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Hello,

I saw the county is taking comments on solar power so I am writing in support of solar in Johnson County. Generally speaking I support efforts to increase the amount of renewable energy generated in our country so we can be less dependent on fossil fuels. I appreciate seeing windmills in our state since it shows we are making a visible commitment to renewable power, so I would have the same appreciation for a solar farm in our county. In my opinion a solar farm in an open field would be more visually appealing than, for example, the gas pipeline facility at 135th and Pflumm.

I hope the county decides to adopt regulations that will make solar farms an economically viable option for landowners.

Thanks,

Richard Pund
6824 W 100th Ter, Overland Park

From: [Thomas Arnhold](#)
To: [PLN-Planner on Duty](#)
Subject: Solar Farm
Date: Tuesday, March 1, 2022 4:29:20 PM

You don't often get email from arnholdtom@gmail.com. [Learn why this is important](#)

*****This message came from outside of Johnson County Government - please use caution when opening attachments or links.*****

Hello,

I wanted to voice my support for the Johnson County Commission to enact the amendments necessary to allow the proposed solar farm to be built. I support the solar farm for several reasons: 1. It will bring jobs to Johnson County; 2. the solar farm will help produce much needed energy for the are. That in turn will keep down prices of electricity and encourage more growth; 3. The solar farm will cause minimum impact on the environment compared to oil and gas weels, coral plants,etc. and 4. We need to start producing clean energy and reduce carbon pollution.

Thank you for your consideration

Tom Arnhold
21222 West 112th Terrace
Olathe, KS 66061
620-728-8573

From: [Leipzig, Jay, PLN](#)
To: [Hanzlick, Janee, BOC](#)
Cc: [Miller, Karen, PLN](#); [Pendley, Sean, PLN](#); [Davis, Leslie, PLN](#)
Subject: FW: Public comments re solar guidelines
Date: Tuesday, March 8, 2022 12:45:08 PM
Attachments: [Memo re Black Veatch Solar 3 8 2022.docx](#)
[Memo re KIFA CEP Solar 3 8 2022.docx](#)
[image001.png](#)
[image002.png](#)

Thank you for the information Commissioner Hanzlick! Great information, and will add this to the web page.

Jay

Jay C. Leipzig, AICP, CEcD
Director

[111 South Cherry, Suite 2000, Olathe, KS 66061](#)

☎ (913) 715-2200 | 📠 (913) 715-2222 Cell (816) 564-7744



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From: Hanzlick, Janee, BOC <Janee.Hanzlick@jocogov.org>

Sent: Tuesday, March 8, 2022 12:13 PM

To: Leipzig, Jay, PLN <Jay.Leipzig@jocogov.org>

Subject: Public comments re solar guidelines

Dear Jay,

I am providing the attached memos for inclusion with public comments re solar guidelines.

Sincerely,

Janee'

Janee' Hanzlick

County Commissioner, 4th District

Board of County Commissioners

111 S. Cherry Street, Suite 3300 Olathe, Kansas 66061

Direct 913-715-0434 | Cell 913-515-7125

Office 913-715-0430 | TDD 800-766-3777



MEMORANDUM

TO: Jay Leipzig, Director, Planning, Housing and Community Development
FROM: County Commissioner Janee' Hanzlick, District 4
DATE: March 8, 2022
RE: 11/5/21 Conversation with Black & Veatch re Utility Solar and Battery Storage

On November 5, 2021, I spoke via Zoom with Clint Robinson, Sean Tilley, and Casey Hicks, of the Black & Veatch engineering firm. The discussion was in response to my request to Black & Veatch for unbiased expert technical information regarding utility scale solar farms (USSF) and battery storage. The meeting was conversational in nature and no written documents were exchanged, nor did Black & Veatch offer an opinion on the Planning Commission's deliberations regarding solar guidelines.

It should be noted that Black & Veatch does not currently have a solar project for submission in Johnson County.

Topics discussed (per my notes):

1. Solar panel manufacturing
 - Raw materials for solar panel - silica (sand) main component
 - Many panels are made in Asian countries (Vietnam). Recent government ruling prohibits importing of items made with child labor.
 - Biggest challenge right now is shipping.
2. Solar panel longevity and disposal
 - Life expectancy of USSF is continuing to increase - may be up to 40-50 years (none have been out there that long yet)
 - There is currently nothing hazardous in the panels, but that had been an issue in the past. There is a second end use market to buy used, secondhand panels. Racking is steel - can be recycled.
3. Best practices in decommissioning a utility scale solar farm
 - USSF will be paid off long before decommissioned - developers required to put money into escrow for maintenance and decommissioning plan.
4. Average amount of land needed for a viable USSF
 - 8.5 - 10 acres per megawatt
 - Preferable to be near transmission lines with available capacity
5. Impacts to community and surrounding land
 - Have to have stormwater protection plans
 - Permeable land stays nearly the same
 - Grass - sheep grazing or mowed
 - Fires - gates, coordinate with fire depts Panels don't catch on fire
 - Fencing
6. Ongoing maintenance needs
 - Usually don't require staffing, except for on-call maintenance person
 - Automated control system provides alerts
 - Panels don't need to be cleaned

Should you need further information, please communicate with Clint Robinson, Associate VP, Director of State & Local Government Affairs for Black & Veatch Corporation.

MEMORANDUM

TO: Jay Leipzig, Director, Planning, Housing, and Community Development
FROM: County Commissioner Janee' Hanzlick, District 4
DATE: March 8, 2022
RE: 2/11/22 Conversation with KIFA and Climate + Energy Project re Utility Solar

In early February, a District 4 constituent, Rabbi Moti Rieber, Executive Director of Kansas Interfaith Action (KIFA), asked for a meeting to speak with me about wind and solar energy issues. On February 11, 2022, I spoke via Zoom with Rabbi Moti and his invited guest, Dorothy Barnett, Director of the Climate + Energy Project (CEP), a statewide nonpartisan non-profit agency whose mission is to “build resilience in Kansas through equitable clean energy solutions and climate action”.

Our meeting was conversational in nature and no written documents were exchanged.

Topics discussed (per my notes):

1. Wind energy will help Evergy retire their coal plants
2. They encourage the county to consider a CUP term of at least 25 years with an auto-extension
3. Acreage caps aren't needed if you have good regulations
4. Developers should be allowed and encouraged to work within the natural topography of the land to avoid cutting down trees and maintaining the natural aspects of the land. The ability to work with natural topography is impacted if the acreage is limited.
5. Difference between acreage of panels (“under glass”) and acreage of project

I told them I appreciated hearing their thoughts and info, and I will bear them in mind as the BOCC considers these issues.

Information about Kansas Interfaith Action (KIFA) can be found at <https://kansasinterfaithaction.org/>. Climate + Energy Project information can be found at <https://climateandenergy.org/>.

From: [Fast, Becky, BOC](#)
To: [PLN-Planner on Duty](#)
Subject: FW: Corrections to Information Provided by JOCO Planning Commission Staff and Solar Zoning Consultant: BOCC Meeting Feb. 24, 2022
Date: Sunday, February 27, 2022 12:26:53 PM
Attachments: [PastedGraphic-1.tiff](#)

From: Fast, Becky <bfast.naswks@socialworkers.org>
Sent: Sunday, February 27, 2022 12:26:39 PM (UTC-06:00) Central Time (US & Canada)
To: Fast, Becky, BOC <Becky.Fast@jocogov.org>
Subject: Fwd: Corrections to Information Provided by JOCO Planning Commission Staff and Solar Zoning Consultant: BOCC Meeting Feb. 24, 2022

This message came from outside of Johnson County Government - please use caution when opening attachments or links.

Begin forwarded message:

From: Steven Clark <clarkville80@sbcglobal.net>
Subject: Corrections to Information Provided by JOCO Planning Commission Staff and Solar Zoning Consultant: BOCC Meeting Feb. 24, 2022
Date: February 27, 2022 at 2:29:34 AM CST
To: "ed.eilert@jocogov.org" <ed.eilert@jocogov.org>, Allenbrand Shirley BOC <shirley.allenbrand@jocogov.org>, Becky Fast <beckyforjohnsoncounty@gmail.com>, Hanzlick Janee BOC <jane.hanzlick@jocogov.org>, "jeff.meyers@jocogov.org" <jeff.meyers@jocogov.org>, "michael.ashcraft@jocogov.org" <michael.ashcraft@jocogov.org>, O'Hara Charlotte BOC <charlotte.ohara@jocogov.org>, BOCC-Clerk <bocc-clerk@jocogov.org>

Honorable County Commissioners,

Thank you for allowing public to view your recent Committee of the Whole (COW) meeting regarding zoning regulations for utility-scale solar facilities (aka Solar Farms). I thought the meeting was productive and that the County Commissioners asked a number of excellent questions. You are rightfully considering public concerns and potential risks of solar farms, which Johnson County has no prior experience with. However, when finalizing solar zoning regulations, I believe those regulations should be based on validated facts, realistic risks, and real-world experience instead of unsubstantiated fears or misinformation. With over 1,000 solar farms in operation nationwide with very minimal impact to neighbors, the environment, and the electrical grid, there's a sound factual basis for determining appropriate regulations for solar farms.

I'm certain the Johnson County Planning Commission has done their best to understand solar farms and their potential impacts over the past year, however, we can't expect them to become experts and their knowledge is fairly limited. They've relied

substantially on a solar zoning consultant, who's not an engineer and with incomplete knowledge of solar equipment, solar facilities, and their environmental impacts. Neither the Planning Commission or their consultant surveyed zoning regulations and CUP requirements enacted by the many other counties and cities across the U.S. that host solar farms. Nor did they request meetings or information from local solar energy experts at Black & Veatch, Kiewit, or Burns & McDonnell.

Here are examples of the Planning Commission and Consultant's limited solar knowledge: Based on the Consultant's input, the draft zoning regulations use the term "pod" to describe a collection of solar panels within a discrete area, whereas that term isn't used in the solar industry; "solar array" is the proper term. Several other terms and definitions are incorrect in the draft regulations. The consultant was also unaware that solar modules are proven to last an average of 30 to 35 years instead of the 20 to 25 years he stated: a significant misunderstanding. He wasn't aware that virtually all large solar farms mount their solar panels on trackers instead of fixed tilt mounts, which makes his understanding of land covered by "impervious" panels incorrect. He also wasn't aware that battery energy storage systems have been integrated with solar farms for several years. And he is unfamiliar with other trends in the solar industry regarding technology developments, project sizes, and project locations. I say this not to discredit him, but to emphasize the limits of his knowledge and experience.

I closely watched your COW meeting on February 24, 2022, and noted several instances of incorrect or incomplete information provided to the BOCC by the Planning Commission staff and their consultant. Here's a summary of the most important topics.

Length of CUP Term

The draft regulations include a maximum 20-year term, which was reduced from 25-years at the November 2021 Board meeting. No valid reasons were provided by the Planning Commissioners for changing their prior vote. However, during the prior public hearings, solar developers and experts provided clear testimony that solar farms require 25-year or longer CUP terms to a) enable power produced to be sold at competitive rates and b) to receive project financing. The Planning Commission's explanation that the 20-year CUP term is based on "the typical 20-year planning period" doesn't make sense since the Planning Commission clearly expects solar farms to operate for 30 years or more, likely via extensions to the original CUP. Solar and financial experts agree that a 20-year CUP with the possibility or even the likelihood of extensions is simply inadequate. This is not unique to solar farms; it would apply the same to any long lasting infrastructure project.

The price that solar farm owner's can sell their electricity for is extremely sensitive to the number of years the facility is permitted to operate. If the CUP term is only 20 years, the solar farm's capital cost would be spread over 20 years electrical production instead of 30 to 35 years, as it is for most solar farms nationwide. For a short 20-year CUP, the electricity power sales price must be increased by 60 to 70% compared to projects with typical CUP's. Solar farm developers work in a very competitive world to sell their facility's electricity to buyers such as Evergy. A developer in a county with a short CUP term will be at such an pricing disadvantage to solar projects located elsewhere, that they would very likely not win any power sales contracts. No power sales contracts,

then no financing and no project. I suspect the Planning Commissioners fully realized this.

If you approve solar zoning regulations with a 20-year CUP term, that would be tantamount to a ban on solar farms. Going to the trouble of developing all of the other detailed zoning regulations would be a waste of time. No solar farms would be built in Johnson County; they would be built in other counties who would receive the significant economic benefits.

I don't believe a single solar farm has been built in the U.S. with a CUP term shorter than 25 years. I personally know of only one operating solar farm with a 25-year CUP. The vast majority of country regulations and CUP's for solar farms specify no CUP term limit. Since this point is so critical, I recommend that you confirm this with industry experts.

Property Taxes and Other County Revenues

While Kansas has a tax regulation that excludes solar farms from paying property taxes for the first 10 years of operation, the exclusion doesn't include the underlying land. Property tax payments would continue for the land. And the property tax exclusion applies to a large number of other facility types that Johnson County hosts and encourages. Regardless, it's very misleading to oppose solar farms because of the 10-year property tax exemption since that ignores the totality of a solar farm's economic contribution to county government and the local economy. This topic is addressed in detail in a letter submitted to you on or about January 20. Taxes paid locally would include substantial property taxes after year 10 of operation; local sales taxes for construction and O&M; payments for county permitting, permit compliance, and emergency services; and payments in lieu of taxes (PILOT) agreed to by individual project developers/owners. The County's economic boost would also be substantial for construction contracts, labor, and material: ongoing O&M jobs, services and supplies; and lease income to participating landowners. Please do not focus solely on the 10-year property tax exemption that solar opponents would have you do.

Destination of Power Generated and Benefits to Local Residents

Neither the Planning Commission or their consultant could answer the question about where the power would go from a solar farm in JOCO and whether local residents would benefit. Physically, the power generated by the West Gardner Solar Farm would be injected into the West Gardner Substation, owned and operated by Evergy, and it would be consumed locally. Some solar opponents have claimed, without evidence, that the power would be transmitted to NextEra's home state of Florida; that idea is simply ludicrous from a technical and financial perspective. Financially, the power from the West Gardner Solar Farm would most likely be sold to Evergy or another local electric utility. Solar farms currently produce and sell power at very low rates, in the range of \$25 to \$30 per MWH, which is typically cheaper than conventional power plants. Additionally, solar farm power pricing rates usually do not escalate for the length of their 25 to 30 year long power sales contract. Therefore, the electric utility customers would benefit from solar farm's low pricing for decades. The power produced by gas-fired power plants, by comparison, is subject to large price increases due to the volatility of natural gas pricing.

Minimum Distance From Current City Limits

Neither the Planning Commission or their Consultant clearly told you their proposed minimum distance regulation would **uniquely** restrict any solar farm from being within 2.0 miles of any city limit. There is no other county in the US that is known to have imposed this type of restriction on solar farms. And Johnson County has not placed such a restriction on any other type of facility or development. I previously provided written evidence to the Planning Commission of multiple operating solar farms within or just outside city limits.

Regardless, the Planning Commission and their Consultant decided on a minimum distance from cities of 1.5 miles at their October, 2021 meeting. At the controversial November Planning Commission meeting, the commissioners voted, without discussion, to arbitrarily increase this restriction to 2.0 miles. The Planning Commission's map illustrating the 2.0 mile minimum distance restriction shows that about 98% of Johnson County would be "off limits" to solar farms. This restriction, combined with the separate restriction that solar farms must be at least 2.0 miles apart, would mean that Johnson County might be able to host a maximum of one or two solar farms (if the 20-year CUP term issue was resolved).

1,000 Acre Limit on Solar Farm Site

Neither the Planning Commission or their Consultant clearly told you there's no known zoning regulation outside of Johnson County that sets an acreage limit on solar farm size. No other regulatory body has found the need to arbitrarily limit solar farm acreage, just as Johnson County currently does not limit the acreage of any other proposed facility in your zoning regulations.

To make this issue worse, Johnson County's draft solar regulations define the site area acreage limit to include all of the project features beyond the solar arrays, such as all access roads, the exterior buffer width, the plant substation, wildlife corridors, etc. This artificial and arbitrary acreage limit will effectively limit the solar array acreage to perhaps 750 acres, which limits the power and energy production of the solar farm. Douglas County's draft solar zoning regs, by comparison, define their acreage limit to apply to only the solar arrays themselves, which would allow more solar power generation.

50 Foot Setback Along Solar Farm Boundaries

The Planning Commission told you that the proposed 50 foot setback for solar farms is the same as the minimum setback regulation for rural buildings and structures. However, the Planning Commission did NOT tell you that for Solar Farms only, they would consider a solar farm's perimeter security fence to be a "structure" that the setback applies to. The actual solar equipment and structures would be another 30 feet or so beyond the fence, creating an effective 80 foot setback. However, when applied to rural homes or structures, the 50 foot setback applies directly to their distance from the property line; fencing may be closer to the property line. Many other solar farms have been built to a 25 to 30 foot wide buffer outside the perimeter fence line.

Battery Energy Storage Systems (BESS)

Neither the Consultant or Planning Commission told you that control systems and fire detection and protection systems for BESS have advanced dramatically in recent years through the active involvement of battery suppliers, the solar industry and the National Fire Protection Association (NFPA), who has developed standards for BESS. The NFPA updates their standards routinely based on lessons learned and technology development to further reduce risks. Though solar opponents claim BESS fires could endanger the public, there have been no exposures or injuries to the public from a solar farm BESS fire. The BESS design includes a control system which prevents so called "run away" events, detects any battery problems, immediately stops further battery charging, detects a fire should one occur, and activates a fire protection system to put out the fire if a fire is detected. The BESS batteries are enclosed within containers as a further protective measure and the solar farm owner should be required to provide any specialized training and equipment to emergency responders before the solar farm is placed in operation.

Galvanized Steel Piers Used to Support Solar Panels

The Planning Commission's Consultant stated the galvanized steel support posts used to support solar panel mounting systems could result in some potentially toxic chemicals leaching into the soil. He said the chemical would only be a problem if the land is used later for peanut farming. This was an odd discussion by the Consultant and is very questionable. The actual purpose of galvanizing steel posts, which are driven into the ground, is to provide corrosion protection for the steel posts. The galvanization process places a fairly thin layer of zinc material onto the surface of the steel. The thickness of zinc galvanization varies, depending on the corrosivity of the soil, but is usually 5 mils, and is designed to last 30 to 35 years. The zinc coating corrodes very slowly in the buried part of the post, and the amount of zinc oxide added to the soil is tiny. However, zinc is actually considered a soil fertilizer. Galvanized steel posts are commonly used in many applications, such as the supports used on road barriers across the country. An internet search showed no pollution concerns for these applications.

Before you make any final decisions, I strongly encourage you to direct the Planning Commission to obtain expert testimony from qualified experts in solar farm technology, including engineers, constructors, environmental scientists, and financial experts. I also strongly encourage you to direct the Planning Commission to survey a number of counties and cities that host operating solar farms to learn from their experience and to consider their zoning regulations before finalizing your regulations. The current set of draft solar zoning regulations have largely been drafted without this key information, and would easily be the most restrictive in the nation, for all the wrong reasons. I am hopeful that a proper vetting will lead you to eliminate the overly restrictive regulations currently drafted for CUP term, maximum project acreage, minimum distance from city limits, minimum distance between solar farms, and setbacks.

Thank you for your kind attention.

Steven M. Clark, P.E.
3422 Kensington Court
El Dorado Hills, CA 95762
916-705-3232

clarkville80@sbcglobal.net

p.s. disclosure. My wife's family has signed a land lease agreement with a solar project developer. For this reason, you may believe I have a conflict of interest and am providing biased information. However, again, I encourage you to confirm the information I've provided with qualified and independent subject matter experts.

Becky Fast -
Executive Director
NASW - KS Chapter
420 SE 6th Avenue
Topeka, KS 66607
bfast.naswks@socialworkers.org
785-550-4891 - Cell



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From: [O'Hara, Charlotte, BOC](#)
To: [PLN-Planner on Duty](#)
Subject: FW: Public Hearing on Solar Panels
Date: Wednesday, March 2, 2022 8:47:52 AM

From: Linda Stainbrook <lindastainbrook@gmail.com>
Sent: Wednesday, March 2, 2022 8:47:46 AM (UTC-06:00) Central Time (US & Canada)
To: O'Hara, Charlotte, BOC
Cc: Linda Stainbrook
Subject: Re: Public Hearing on Solar Panels

Why would where our tax dollars are being spent be outside the Commissions focus? In addition to the effectiveness of Solar Panels, of course.

Linda

Sent from my iPhone

> On Mar 2, 2022, at 8:34 AM, O'Hara, Charlotte, BOC <Charlotte.OHara@jocogov.org> wrote:

>
> Linda,
>
> Where the solar panels are made are outside of our focus. But, it does appear the majority of solar panels used in the U.S. are manufactured in China. We must focus on land use issues.....or we should focus on land use issues. Highest and best use and adherence to comprehensive plan.

>
> Charlotte
>
> Charlotte O'Hara
> County Commissioner, 3rd District
> Board of County Commissioners

>
> -----Original Message-----
> From: Linda Stainbrook <lindastainbrook@gmail.com>
> Sent: Wednesday, March 2, 2022 6:52 AM
> To: O'Hara, Charlotte, BOC <Charlotte.OHara@jocogov.org>
> Subject: Public Hearing on Solar Panels

>
> ***This message came from outside of Johnson County Government - please use caution when opening attachments or links.***

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>
>
> Good morning Charlotte! I hope things are going well for you. I have the April 4th Public Hearing on my calendars and have read a couple of the Public comments on this issue. My question is where are these panels made, e.g., China?

> Thanks again for all your do Charlotte!

> Linda Stainbrook
> Precinct Committeewomen
> Olathe, Kansas

>
> Sent from my iPhone

