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23-0930-EL-BGN

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I am writing to you today to request the Ohio Power siting board to deny the application of The Richwood Solar Project LLC whose parent company is Samsung Renewables for a solar project. I am requesting environmental compatibility and public need construct a Solar Powered electric generation facility in Union County, Ohio. As an adjoining property owner, my property and the properties of my neighbors will be directly impacted by the construction and operation of this project.

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I would like to start off by addressing many of the letters supporting this project. They have made many claims against those community members in opposition off the project stating that the anti-solar groups have harassed participating landowners. I have not seen one piece of evidence to support these claims but instead the claims have remained vague with no direct testimony. On the flip side of this I am an advocate against this solar project and I had my own personal experience of being harassed by a supporter at the first public informational meeting where I was having a conversation with Matt Butler that was interrupted by a supporter of these solar projects stating yelling at me telling me I was a "liar" and that I was trying to take away his property rights. To be clear this gentleman was not a participating property owner in this project. He told me I did not know what I was talking about and asked if I had read the constitution that protects his rights. I politely informed him that I had in fact read thru the constitution and started to tell him where his "property rights" are mentioned in the constitution to which he quickly told me that I didn't know what I was talking about and that I didn't even live in the property area to which I responded that I did in fact live on property that directly adjoined the project area. I politely informed him that I was there to talk to the people manning the booths and excused myself from the conversation. Following that interaction the gentleman I went back to continue my conversation with Matt and this gentleman went away and I noticed him standing over with two of the participating property owners having a conversation. Where was my protections of freedom of speech?

After my conversation with Matt, I was then approached by a few of my neighbors. We were discussing the project and what we had gotten from the public informational meeting thus far when the same gentleman approached the group I was in again and he started yelling at my neighbors stating I was a liar, and I didn't know what I was talking about again. He then proceeded to tell me that I had only lived in the project area for a few years. I once again politely informed him that I had lived in the project area for 15 years to which he called me a liar again. I stated I would be more than happy to show him the property record deed on my phone and when I started to pull my phone out, he ran off again. I notified Jennifer French who was at the nearest booth being operated by Samsung about both interactions and her response to me was that she would have to find out who he is as he was not one of their participating property owners.

Those individuals who support these solar facilities are quick to claim that denial of this project directly infringes upon their personal property rights and that they have the right to whatever they want with their property. Some of these same individuals have opposed other projects within our same area. It is clear that they only care about people's property rights when it is their own. While personal property rights give an owner the right to use their property as they see fit it does not allow them the right to use their property in a fashion that impacts surrounding landowners. A prime example of this is that a property owner cannot use their property in a way that will back up water onto other properties. I grew up in a farming community in Northwestern Ohio and we were required to maintain our field tiles as well as remove a large box culvert because a farmer upstream claimed that it caused water to backup onto his property. Furthermore, local zoning laws prohibit the building of industrial facilities near

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residential areas to protect property values. While the siting of a utility scale solar or wind facility does not fall under the purview of local zoning denial of this project would be nothing different than establishing solar and wind as industrial facilities under local zoning regulations which is permissible by law for projects under 50mW. Local zoning regulations should be fully considered when evaluating the nature of environmental compatibility of these projects to protect not only the property rights of the participating property but the rights of the surrounding properties who may be impacted by the project.

There have been a multitude of studies done over the last few years surrounding property value impacts of these studies however I would like to point out a major flaw in these studies. Solar facilities are still a relatively new variable in the study of housing markets with a major surge in the applications to build solar facilities over the last few years. At the same time, we have seen an unprecedented boom in the housing market with extremely low inventories for the past 5-10 years. When a consumer does not have a choice due to the lack of available inventory, they will still buy these homes but what happens when the market folds? I recently conducted a unscientific survey on Facebook asking members of three local Union County Groups if they had a choice with all other factors being equal (Size, relative location, price etc.) between a home near a solar field and a home that was not only 6.81% of the 455 respondents said they would pick the home located within 300 feet of a solar field which is the minimum setbacks the State has provided from residential homes. Value is driven by supply and demand and if these numbers indicate anything the demand for the homes surrounding these facilities definitely will drive the value of those homes down in a market where there is adequate inventory in areas not located near these facilities.

Next, I would like to address the probable environmental impact of this utility scale solar facility. There are eagles that nest both within the project footprint (as indicated by the application from Richwood Solar LLC) as well as in areas surrounding the project area. Furthermore, northern Union County is home to countless species of wildlife including fox, squirrels, chipmunks, deer, skunk, opossum, raccoon, hawks, bats, and various songbirds. This wildlife uses the existing crops grown on this land for food and shelter. By removing this ground from agricultural production there will most definitely need to be a change in the feeding and bedding habits of the local wildlife. Furthermore, noise from the inverters will most definitely impact the surrounding wildlife. The state regulates that the inverters cannot increase ambient noise by no more than 5dB at the project boundaries. While this is a valiant effort to appease the humans that surround these projects variations in ambient noise levels (dB) as well as frequencies have been shown to have significant impacts on wildlife. This is evidenced in a study by the national institute of Health and the article can be found at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9819367/> This change in ambient noise and possible introduction of other frequencies can furthermore cause stress on the pets of people in homes surrounding the project area it is well know and documented that dogs for instance can hear sounds that humans cannot. What measures are being taken to protect those animals from the noise generated by these facilities?

Another major concern I have about the environmental impacts and potential health risks of this project is the five acres of Lithium-Ion Battery storage (henceforth referred to as the BESS). This BESS is located between two streams that feed directly into the Scioto River as well as within 3 miles of my personal well. Recently there have been fires at some of these BESS stations first one near Lyme, NY that took over three days to extinguish and now another fire in Otay Mesa, CA that took over 10 days to extinguish after reigniting itself multiple times. I have concerns that the smoke created by these fires

could contain hazardous elements. My house is directly east of this BESS and directly downstream of the major waterways and tile moving water towards the Scioto River. Just last year a farmer was spreading chicken manure fertilizer not far from this same area and the dust was seen (and smelled) as far away as the village of Richwood where the local Schools are located. I should not have to evacuate my home or be forced to shelter in place because of a potentially toxic fire breaks out at the BESS. Samsung has assured us that these batteries are in a container designed to contain any possible toxins or runoff however if tens of thousands of gallons (or more) of water are used to douse a lithium battery fire they cannot assure me that that water is not going to carry toxins away into our water supply. As I stated before that water will flow past my home and potentially reach the Scioto River thru either Bokes Creek or Fulton Creek.

Next, I would like to address the idea that the facility will serve the public interest, convenience, and necessity. The proposal of building this facility in our community has broken and divided a very close rural community. Many of the people who I talk to who are in opposition went to school with the participating property owners, were friends with them, have known them forever. Some of the participating property owners have resorted to smear campaigns against the "anti-solar" groups stating that the group I am part of and represent are harassing participating landowners and those that speak in support. I would like to state that I myself have not seen anything of the sort and I do not advocate or endorse that behavior. I can fully understand why a landowner would be seduced by the large payments being offered by these solar developers as three of the participating landowners have shared with you their financial hardships and health issues. I do not judge these landowners for wanting to protect their families by providing them with an income for years to come. I do not however see how dividing a community serves the public interest or convenience.

Another concern I have about serving the public convenience and interest is the loss in agricultural revenue for the surrounding businesses in the community. I heard a number recently that in Union County the average farmer spends about \$950/acre at local businesses in the process of farming. If that number is accurate that is a loss of approximately \$1,425,000 annually to the local businesses. Roughly the same amount of annual projected tax revenue. So instead of those businesses and employees being able to feed their families we will have money to spend on bridges and roads? And if the goal is to provide "high paying jobs" understand those jobs aren't going to be created locally but instead those people will need to commute to Marysville or Columbus or further if they even have the skills necessary for many of these data center jobs. The application even states they will create approximately 6 FTE jobs with an estimated annual earning of \$0.2 million for the operation and maintenance of this project. Which means each person is making roughly \$33,333 dollars/year. How is that a high paying job? Furthermore they are stating that restaurant, hospitality and tourism based local spending will add 15 FTE jobs with an average annual income of \$53,000. I will be blunt there are no tourism based dollars being spent to come see a solar field. And any of these jobs created during the construction of the project will only be temporary. Union County does not need temporary jobs. The numbers provided by the Richwood solar project just don't add up.

Additionally, in terms of serving the public interest. It has been mentioned multiple times the amount of tax revenue that these projects provide to the surrounding communities however we already have two other utility scale projects located within 15 miles of our project that are projected to supply nearly 6 million dollars annually (\$177 million over the life of the projects) in revenue to the county, schools and other public services over the next 40 years. The simple fact is that the taxes generated by

this project are NOT needed by the county. Additionally, those interested in the project talk about reduced electrical rates when in reality Samsung has stated that they will be entering into a power purchase agreement (PPA) prior to construction of this project. Many of the PPAs being established are with large companies like META, Amazon, Google, Intel and the reality is that even though we may use the energy from this project locally, the cost of the energy for this project will be provided outside of the county and possibly even outside of the State. Meaning we will not see a drop in electrical rates. Instead due to lower demand for electricity from current sources we in fact may see an increase in our rates. The fact is that these PPAs should be regulated to sell power to the local community first supplying the needs of the community but because they are not the Richwood Solar project has failed to demonstrate how this electricity WILL (not maybe but WILL) benefit the local community.

Public interest should also take into consideration the views of the surrounding community. There are currently 430 letters of opposition to this project that were collected in and around the local community either at the public informational meetings, the local fair or from other various events as well as individual letters written in by people from within our community. Where as for the letters of support, the majority have been collected via an online form which does not verify the identity of the individual meaning that there is no way to authenticate the signer. Even the form letters submitted in opposition all contain wet signatures that are verifiable. Furthermore during our tri county meeting where Samsung presented we had over 300 local individuals come with the majority of speakers speaking against the project. The Ohio power siting board was present at that meeting and Matt Butler should be able to attest to the overwhelming public outcry against this project.

Finally in terms of public interest it has been stated that Samsung wants to be a good neighbor. They have scheduled one on one meetings with adjoining landowners on two separate occasions. The first said meeting the notification stated we would have 30 minutes to talk to them. When I arrived there was a family that told me that the meetings were cut back to 15-minute meetings which I addressed with Kevin Dewine who stated this was an error by his office and was assured I would get ample time with Samsung. I will be fair that they did allow me ample time to discuss my concerns with them. The second time I met with Chis Simmons and Dansol Woo at my home so that I could show them the concerns myself and my neighbors have about this project backing water up onto our properties. In both instances I asked several questions and was given many responses that they would have to get back with me on those concerns and they would be reaching out. In both instances I have never received any follow-up from Samsung on those concerns. Samsung clearly doesn't care about being a good neighbor and is only doing the bare minimum required to obtain approval from the OPSB.

I have also asked Samsung about their intentions with this project as they had recently sold the construction of a 3GW solar facility and storage to Sunraycer in Texas. Samsung will partner with Sunraycer but is no longer going to be the owner/operator of those solar fields. Samsung has also sold its interests in at least four other renewable energy projects in the last several years. This creates major concerns for me that Samsung C&T which is a construction company will do the bare minimum on this project and anything that fails after will be someone else's problem.

This takes me to the necessity of this project to be placed in Northern Union County. We currently have two other projects that have been approved by the Ohio power siting board. Cadence and AEUG Union Solar. These two projects consist of approximately 8500 acres of land. If approved this would put close to 10,000 acres of land in Northern Union County into solar fields. To put this in

perspective this is roughly the size of the City of Marysville. The existing two facilities would generate enough power to power almost four times the number of housing units in Union County Ohio. This statement is made with the following assumptions and data.

1. How many homes are in Union County Ohio?

26,133 Housing units recorded by Census in July 2023

Source:

<https://www.census.gov/quickfacts/fact/table/unioncountyohio/HSG010221#HSG010221>

2. What is the average household usage of electricity per month in Ohio?

750 kWh This is the average rate used by the PUCO for calculations.

Source: <https://puco.ohio.gov/utilities/electricity/resources/ohio-utility-rate-survey>

Number of Homes	kWh/Month/Home	kWh/Year/Home	kWh/Year Union County
26,133	750	9000	235,197,000

3. How many kWh is generated by Each solar Facility Union County Ohio

- This was made with the assumption this was on a single axis tracking array using Premium Solar panels (Crystalline Silicone with a anti reflective coating 19% Nominal Efficiency). For geographical data an address located within each project was used

Source: <https://pvwatts.nrel.gov/pvwatts.php>

Name	Size of Facility in MW	kWh/Year
AEUG Union Solar	325	471,976,065
Cadence Solar Energy Project	275	396,803,749
Total	600	868,779,814

868,779,814kWh(Total Produced by these two projects)

÷ 9,000kWh(Yearly need per home)

= 96531 Homes (this is almost 4 times the number of homes listed for Union County)

This image contains the data utilized to calculate the power generation by the Cadence Project as calculated by the National Renewable Energy Laboratory based on the location of the project with a single axis tracking module and premium PV modules with an efficiency of 17.3%

9/1/22, 7:48 AM

PVWatts Calculator



Caution: Photovoltaic system performance predictions calculated by PVWatts[®] include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts[®] inputs. For example, PV modules with better performance are not differentiated across PVWatts[®] from lower performing modules. NREL and other companies provide more sophisticated PV modeling tools (such as the System Advisor Model at <https://www.nrel.gov>) that allow for more precise and controls modeling of PV systems.

The estimated range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to the NREL report, The Error Report.

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The energy output range is based on analysis of 30 years of historical weather data, and is intended to provide an indication of the possible non-annual variability in generation for a fixed (open rack) PV system at this location.

RESULTS

417,161,216 kWh/Year*

System output may range from 396,803,748 to 432,804,762 kWh per year near this location

Month	Solar Radiation (kWh / m ² / day)	AC Energy (kWh)
January	2.27	18,944,182
February	3.57	23,891,868
March	4.35	30,850,984
April	6.12	40,831,548
May	7.18	48,653,550
June	8.14	51,971,772
July	8.53	55,104,540
August	7.38	47,317,776
September	6.07	39,189,492
October	4.30	29,401,308
November	2.74	18,006,936
December	1.90	13,795,193
Annual	5.21	417,161,155

Location and Station Identification

Requested Location	26020 OH-739 Raymond, OH 43087
Weather Data Source	Lat, Lng: 40.37, -83.46 0.7 mi
Latitude	40.37° N
Longitude	83.46° W

PV System Specifications

DC System Size	275000 kW
Module Type	Premium
Array Type	1-Axis Tracking
Array Tilt	0°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	98%
DC to AC Size Ratio	1.2
Ground Coverage Ratio	0.4

Performance Metrics

Capacity Factor	17.3%
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This image contains the data utilized to calculate the power generation by the AEUG Union Solar Project as calculated by the National Renewable Energy Laboratory based on the location of the project with a single axis tracking module and premium PV modules with an efficiency of 17.4%

9/1/22, 8:00 AM

PVWatts Calculator



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The selected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to the NREL report: The Error Report.

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The energy output range is based on analysis of 30 years of historical weather data, and is intended to provide an indication of the possible interannual variability in generation for a fixed (non-tracking) PV system at this location.

RESULTS

496,190,144 kWh/Year*

System output may range from 471,976,065 to 514,797,274 kWh per year near this location

Month	Solar Radiation (kWh / m ² / day)	AC Energy (kWh)
January	2.30	20,277,820
February	3.55	28,128,788
March	4.59	38,261,852
April	6.16	48,471,836
May	7.36	58,370,182
June	8.06	60,820,592
July	8.31	62,752,068
August	7.42	66,357,148
September	6.13	48,692,628
October	4.33	35,463,200
November	2.94	23,545,788
December	1.88	17,039,324
Annual	5.26	496,190,116

Location and Station Identification

Requested Location	31101 OH-31 Richwood, OH 43344
Weather Data Source	Lat, Lng: 40.45, -83.46 0.5 mi
Latitude	40.45° N
Longitude	83.46° W

PV System Specifications

DC System Size	325000 kW
Module Type	Premium
Array Type	1-Axis Tracking
Array Tilt	0°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	96%
DC to AC Size Ratio	1.2
Ground Coverage Ratio	0.4

Performance Metrics

Capacity Factor	17.4%
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Given the findings above the two existing approved projects far exceeds the public energy needs of Union County, Ohio with plenty of room for growth in the future. This coupled with the increased tax revenue generated by those two projects the public necessity of this project should be deemed unnecessary for Union County Ohio.

I would also like to address , what its impact will be on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929 of the Revised Code that is located within the site and alternative site of the proposed major utility facility. To begin I think it is important to note that Union County has a strong Agricultural history, and this is a statement taken directly from the Union County Comprehensive plan "Agriculture is a very important component of Union County. Approximately 93% of the county's land is used for crop production, pasture or forest. Over 990 farms on 241,000 acres contribute about \$87.5 million to the county's economy. As the county's leading economic industry, agriculture is vital to the economic health of Union County. Agriculture's value extends beyond its economic contributions, however. It is also the basis of the county's heritage and rural character. Agriculture provides historical, natural resource, open space and quality of life amenities for our residents. For these reasons, planning must give attention to the long-term viability of agriculture in Union County." For this reason alone, this project should be denied as it does not fit within the agricultural aesthetic of our community.

We have been told that this land will be able to go back to farmland in 40 years and will be better than it was before solar came in. I don't believe this for several reasons. First, many of the individuals that currently own this ground won't be around in 40 years or if they are, they will be well past the age to start farming again. Secondly, farming by nature tends to be a generational profession. It is very difficult to be a first-generation farmer with the cost of ground, equipment and seed. Farming is not an easy profession and there are a lot of uncertainties that come with being a farmer. But taking available acreage out of availability for those farmers will just drive up the costs of ground rental for those farmers who are just scraping by trying to make it as the availability of ground to farm will be diminished.

These farmers also speak of keeping the farmland in the family. This would be great; however, these same farmers don't even have their own family farming their land they are renting it out to people outside of their family. Let's just be honest that the goal here is not to keep this ground in agriculture. This is a major concern for me as American farmland is disappearing at an alarming rate. Yes, this ground does not produce crops that go from the field to my table, but the corn and soybeans raised on these farms does feed the chickens, cows and pigs that I purchase from the grocery store. The corn is sold to become ethanol or other by products that are part of the products I buy every day. And soybeans are a primary component in many of the food products we eat today. I want to be clear that the concern lies beyond just the vast amount of ground required for a utility scale solar farm. Urban sprawl, topsoil erosion and the sale of American farmland to foreign entities continues to make this a much larger problem than solar farms and if one of the participating property owners wanted to start a petition against those things I would be more than happy to sign it but that is not part of the purview of the Ohio Power Siting Board.

Furthermore, the need to build a new substation that will permanently impact a portion of the project area is indicative of plan that implies this land will NOT be returned to farmland at the end of life

for this project but instead this project is planned to be maintained in perpetuity. Approval of this project will forever change the landscape of a historically rural community.

For all of the reasons above I believe that the Ohio Power Siting board should deny this project based upon the Ohio Administrative rules governing the decision to approve a certificate of environmental compatibility and public need.

Sincerely,

Keith Engel

Resident Union County Ohio