

**COMMONWEALTH OF KENTUCKY
BEFORE THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING**

IN THE MATTER OF:

THE ELECTRONIC APPLICATION OF McCracken)	
COUNTY SOLAR LLC FOR A CERTIFICATE TO)	
CONSTRUCT AN APPROXIMATELY 60 MEGAWATT)	CASE NO.
MERCHANT SOLAR ELECTRIC GENERATING)	2020-00392
FACILITY IN McCracken County, Kentucky)	
PURSUANT TO KRS 278.700, ET SEQ.,)	
AND 807 KAR 5:110)	

**McCracken County Solar LLC's Response to
Siting Board Staff's First Request for Information**

Filed: July 9, 2021

**COMMONWEALTH OF KENTUCKY
BEFORE THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING**


IN THE MATTER OF:

THE ELECTRONIC APPLICATION OF McCRACKEN)
COUNTY SOLAR LLC FOR A CERTIFICATE TO)
CONSTRUCT AN APPROXIMATELY 60 MEGAWATT) CASE NO.
MERCHANT SOLAR ELECTRIC GENERATING) 2020-00392
FACILITY IN McCRACKEN COUNTY, KENTUCKY)
PURSUANT TO KRS 278.700, ET SEQ.,)
AND 807 KAR 5:110)

VERIFICATION OF CHIRS KILLENBERG

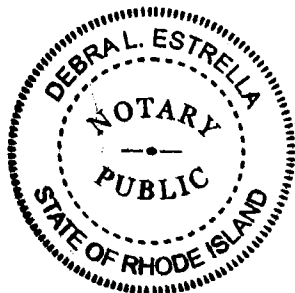
STATE OF Ri)
)
COUNTY OF Newport)

Chris Killenberg, Regional Development Director for Community Energy, Inc., on behalf of McCracken County Solar, LLC, being duly sworn, states that he has supervised the preparation of certain responses to Requests for Information in the above-referenced case and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.



Chris Killenberg

The foregoing Verification was signed, acknowledged and sworn to before me this 7th day of July 2021, by Chris Killenberg.





Notary Commission Number: 766165

Commission expiration: 11/23/24

**COMMONWEALTH OF KENTUCKY
BEFORE THE KENTUCKY STATE BOARD ON
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THE ELECTRONIC APPLICATION OF McCracken)
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FACILITY IN McCracken COUNTY, KENTUCKY)
PURSUANT TO KRS 278.700, ET SEQ.,)
AND 807 KAR 5:110)

VERIFICATION OF TIMOTHY CHOATE

COMMONWEALTH OF KENTUCKY)
COUNTY OF McCracken)

Timothy B. Choate, PE, PLS, Transportation Engineer and Project Manager for Bacon, Farmer, Workman Engineering & Testing, Inc., on behalf of McCracken County Solar LLC, being duly sworn, states that he has supervised the preparation of certain responses to Requests for Information in the above-referenced case and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.



Timothy B. Choate

The foregoing Verification was signed, acknowledged and sworn to before me this 17th day of July 2021, by Timothy B. Choate.





Notary Commission Number: 635192

Commission expiration: 12/09/2023

**COMMONWEALTH OF KENTUCKY
BEFORE THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING**

IN THE MATTER OF:

THE ELECTRONIC APPLICATION OF McCracken)
 COUNTY SOLAR LLC FOR A CERTIFICATE TO)
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 FACILITY IN McCracken County, Kentucky)
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 AND 807 KAR 5:110)

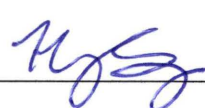
VERIFICATION OF MICHAEL CLARK

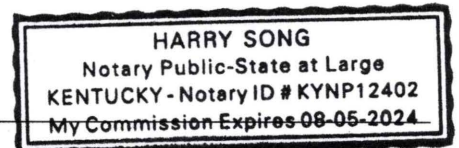
COMMONWEALTH OF KENTUCKY)
)
 COUNTY OF FAYETTE)

Michael Clark, PhD., Director of the Center for Business and Economics Research, University of Kentucky on behalf of McCracken County Solar LLC, being duly sworn, states that he has supervised the preparation of certain responses to Requests for Information in the above-referenced case and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.


 Michael Clark

The foregoing Verification was signed, acknowledged and sworn to before me this 7th day of July 2021, by Michael Clark.


 Notary Commission Number: KYNP12402
 Commission expiration: 08/05/2024



**COMMONWEALTH OF KENTUCKY
BEFORE THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING**

IN THE MATTER OF:

THE ELECTRONIC APPLICATION OF McCracken)	
COUNTY SOLAR LLC FOR A CERTIFICATE TO)	
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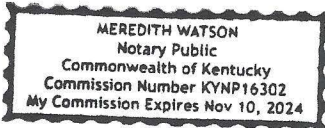
VERIFICATION OF MARTY MARCHATERRE

STATE OF KENTUCKY)
)
 COUNTY OF FAYETTE)

Marty Marchaterre, P.E., Senior Environmental Planner for Copperhead Environmental Consulting, Inc., on behalf of McCracken County Solar LLC, being duly sworn, states that he has supervised the preparation of certain responses to Requests for Information in the above-referenced case and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Marty Marchaterre
 Marty Marchaterre

The foregoing Verification was signed, acknowledged and sworn to before me this 6th day of July 2021, by Marty Marchaterre.



Meredith Watson
 Notary Commission Number: KYNP16302
 Commission expiration: Nov. 10, 2024

McCracken County Solar LLC
Case No. 2020-00392
Siting Board Staff's First Request for Information

1. Provide a description of any construction method that will suppress the noise generated during the pile driving process (i.e., semi-tractor and canvas method; sound blankets on fencing surrounding the solar site; or any other comparable method) that McCracken Solar plans to employ and the associated reduction in noise that each method produces.
 - a. Provide McCracken Solar's planned level of construction using methods that suppress noise during the pile driving process.
 - b. Provide the estimated additional cost the use of noise suppression methods McCracken Solar will incur.

Response:

- a. The Applicant proposes to mitigate the adverse effects of noise associated with pile driving by observing restricted hours for pile driving in close proximity to neighboring residences. The Applicant proposes the creation of 'Neighbor Zones' within which pile driving may only be conducted Monday through Friday from 9am to 5pm. Accordingly, the maximum sound level at the nearest neighboring residences associated with pile driving will occur during hours when residents are more likely to be away from home for work or errands, and less likely to be at home, in the yard, etc.

The proposed Neighbor Zones will be all areas of the project site within 800 feet of an adjacent public road right-of-way. This will be easy to delineate and enforce.

The distance of 800 feet was selected because, at that distance, the sound level created by pile driving will have attenuated to just below 60 dBA. This is just below the range of 60 dBA – 70 dBA, generally described as "Normal speech at a distance of 3 feet." The Applicant submits that a sound level below 60 dBA is neither un-safe nor an undue burden on neighbors, and pile driving outside of the Neighbor Zones may occur outside of the hours of Mon-Fri 9am-5pm without posing a nuisance.

Even the sound levels associated with pile driving conducted within the Neighbor Zones will be modest. At the closest neighboring residence, 515 feet from the nearest pile driving location, the sound created by pile driving will have attenuated to a level of 63.74 dBA. Accordingly, the sound level resulting

from pile driving within Neighbor Zones, will range from 60 dBA – 63.74 dBA, at the low end of the sound range described as “Normal speech at a distance of 3 feet.”

The Applicant submits that this planned approach to mitigating noise associated with pile driving is safe and sufficient. The Applicant proposes no additional noise suppression methods.

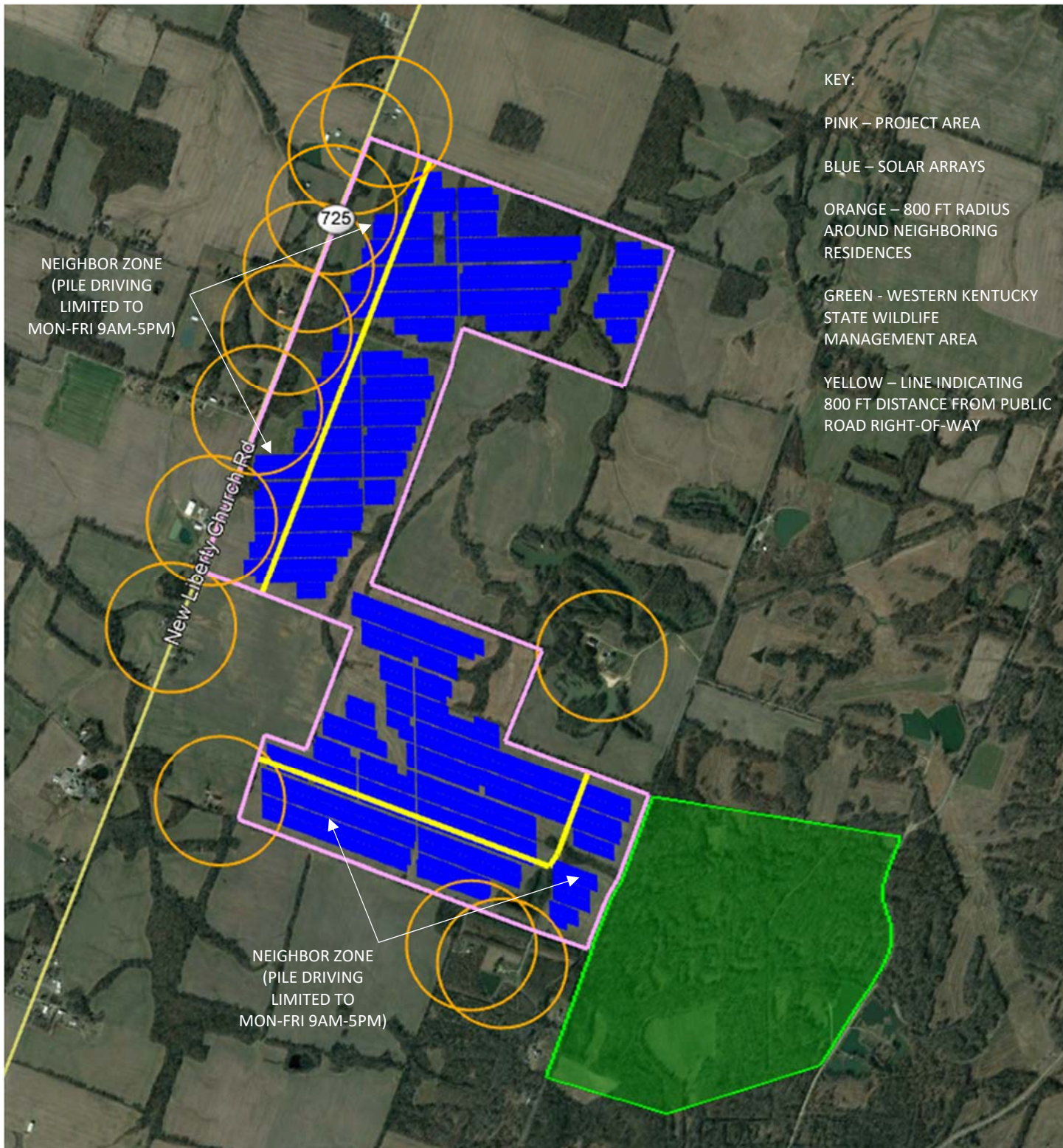
- b. The Applicant believes the observance of Neighbor Zone restrictions can be managed within the normal course of construction, and any related additional cost will be minimal.

McCracken County Solar LLC
Case No. 2020-00392
Siting Board Staff's First Request for Information

2. Refer to the Application, Exhibit 12, page 13, Construction Neighbor Zones.
 - a. Provide a site map designating the areas that will be “Neighbor Zones”.
 - b. Provide McCracken Solar’s additional planned construction noise mitigation for these areas other than restricting time of construction.

Response:

- a. Please see attached ‘McCracken County Solar Map of Neighbor Zones’, page 2 of 2 of this response.
- b. The Applicant submits that no additional planned construction noise mitigation is necessary other than restricting time of construction.



KEY:

PINK – PROJECT AREA

BLUE – SOLAR ARRAYS

ORANGE – 800 FT RADIUS AROUND NEIGHBORING RESIDENCES

GREEN - WESTERN KENTUCKY STATE WILDLIFE MANAGEMENT AREA

YELLOW – LINE INDICATING 800 FT DISTANCE FROM PUBLIC ROAD RIGHT-OF-WAY

NEIGHBOR ZONE
(PILE DRIVING LIMITED TO MON-FRI 9AM-5PM)

NEIGHBOR ZONE
(PILE DRIVING LIMITED TO MON-FRI 9AM-5PM)



COMMUNITY ENERGY

COMMUNITY ENERGY SOLAR, LLC

3 RADNOR CORP CENTER, SUITE 300
100 MATSONFORD RD.
RADNOR, PA 19087
(866) 946-3123

MCCRACKEN COUNTY SOLAR - 60MW SOLAR PROJECT
MCCRACKEN COUNTY, KY



NEW LIBERTY CHURCH RD, KEVIL, KY 42053

LAT/LONG: 37.12 N / 88.86 W

DATE: 7.1.2021

MAP SHOWING THE 'NEIGHBOR ZONES' – AREAS OF THE PROJECT SITE WITHIN 800 FT OF PUBLIC ROADS, WITHIN WHICH PILE DRIVING WILL BE RESTRICTED TO MON-FRI 9AM-5PM

**McCracken County Solar LLC
Case No. 2020-00392
Siting Board Staff's First Request for Information**

3. Refer to Application, Exhibit 12, page 2, Surrounding Land Use identifies a recreational area known as West Kentucky State Wildlife Management Area (WMA). Provide a description of McCracken Solar's planned construction noise mitigation efforts for the portion of the site near the WMA.

Response:

The Applicant submits that the only construction noise of significant level and frequency to pose a potential impact on the public's enjoyment of the West Kentucky State Wildlife Management Area (WMA) is the noise associated with pile driving.

The Applicant proposes to mitigate the adverse effects of noise associated with pile driving by observing restricted hours for pile driving in close proximity to the WMA. The Applicant proposes the creation of 'Neighbor Zones' within which pile driving may only be conducted Monday through Friday from 9am to 5pm. Accordingly, the maximum sound level at the WMA associated with pile driving will occur during hours when the public is less likely to be hiking, hunting, etc. in the WMA.

The proposed Neighbor Zones will be all areas of the project site within 800 feet of an adjacent public road right-of-way. This will be easy to delineate and enforce. While the WMA itself is not a Neighbor Zone it is in very close to two Neighbor Zones and from a noise perspective will benefit from that proximity.

The distance of 800 feet was selected because, at that distance, the sound level created by pile driving will have attenuated to just below 60 dBA. This is just below the range of 60 dBA – 70 dBA, generally described as "Normal speech at a distance of 3 feet." The Applicant submits that a sound level below 60 dBA is neither un-safe nor an undue burden on persons utilizing the WMA, and pile driving outside of the Neighbor Zones may occur outside of the hours of Mon-Fri 9am-5pm without posing a nuisance.

Even the sound levels associated with pile driving conducted within the Neighbor Zones will be modest. At the periphery of the WMA, approximately 175 feet from the nearest pile driving location, the sound created by pile driving at the nearest location will have attenuated to a level of 73 dBA – slightly above the range of 60 dBA – 70 dBA, generally described as "Normal speech at a distance of 3 feet." As the WMA is completely forested at that location, sound levels will attenuate very quickly as the sound travels inward into the WMA. Accordingly, the sound level resulting from pile

driving within Neighbor Zone immediately adjacent to the WMA can be expected to be in the range of “Normal speech at a distance of 3 feet.”

The Applicant submits that this planned approach to mitigating any potential impact on the public’s enjoyment of the WMA from the noise associated with pile driving is sufficient. The Applicant proposes no additional noise suppression methods.

Please refer to ‘McCracken County Solar Map of Neighbor Zones’ previously provided above in Applicant’s Response, Item 2, page 2 of 2.

McCracken County Solar LLC
Case No. 2020-00392
Siting Board Staff's First Request for Information

4. Refer to Application, Exhibit 12, Attachment 12.7, The Traffic Study, page 12 of the Site Assessment Report (SAR) notes that construction will take approximately 6-9 months and will produce an increase in traffic of up to 150 trips a day from construction worker/employee passenger vehicles, as well as five heavy-duty trucks and four water trucks handling delivery of equipment and material. In Exhibit 12, Attachment 12.7, the SAR provides a chart of the number of vehicle trips during construction, but does not provide all necessary information regarding the anticipated workers vehicles. Provide answers to the following requests for information below regarding the workers and their vehicles for the proposed site.
- a. Provide the number of anticipated workers, and indicate the average and peak numbers of anticipated workers.
 - b. You advise five heavy-duty trucks a day are expected, but Commission requires you to specifically advise what the heaviest vehicle is and what is the expected maximum weight of the largest vehicles (including any materials or equipment that the truck is hauling).
 - c. Provide an approximate percentage breakdown of where the construction workers will commute from each day, if possible.
 - d. Are all workers anticipated to commute from their homes daily, or will any temporary housing be developed on-site?

Response:

- a. The Applicant anticipates a maximum peak of 150 employees on the site at any given time. Choosing to model the worst-case scenario for maximum commuting vehicles, the traffic study assumes that employees would commute to the site each workday in individual vehicles (1 passenger per vehicle). This assumes no ride sharing or mass transit to the site. Although it will vary substantially depending on current project stage the Applicant anticipates that at any given time there will be an average of 120 workers on the site.
- b. It is anticipated that the maximum gross weight of the largest vehicles delivering to the site will be no more than 80,000 lbs. (interstate and national highway limits). Local deliveries are allowed under state law on lower-rated roads within 5 miles. It must be noted that there is an 11-ton bridge load limit on KY 725 near Helm Road over Newton Creek. This bridge restriction will be strictly observed.

- c. The traffic study assumes 90% of construction workers commute from the east via US 60, and ten percent commute from the west via US 60.
- d. Construction workers are anticipated to commute from their respective homes or other temporary off-site residences on a daily basis. Administrative personnel will be housed at local hotels/lodging facilities near the Paducah area.

McCracken County Solar LLC
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5. Refer to Application, Exhibit 12, Attachment 12.7, page 17 regarding Impact on Road Infrastructure. You have advised that access drives and internal roads will be constructed or improved as needed to accommodate appropriate vehicles and equipment, but are there any improvement plans for the existing roads used to access the site?

Response:

No, considering the temporary nature of construction activities, the modest number of daily trips to and from the site and the reasonable vehicle sizes and weights the Applicant does not believe that any improvement plans for existing roads are necessary.

McCracken County Solar LLC
Case No. 2020-00392
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6. Refer to Application, Exhibit 12, Attachment 12.7, page 18 regarding the Fugitive Dust Impact, additional information is needed beyond what is provided in the Traffic Study. You indicate internal roads will be constructed of compacted gravel and that what will be applied to reduce dust generation; what will be the protocol or frequency spraying down compacted gravel roads?

Response:

The Applicant proposes to control fugitive dust from internal roads by spraying them with water every eight (8) hours during use, or as needed according to weather conditions existing at the time.

McCracken County Solar LLC
Case No. 2020-00392
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7. Refer to the Application, Exhibit 10, Attachment 10.1, page 2.
- a. Explain how the effective state income tax rate of 4.2 percent was estimated.
 - b. Explain where the approximate 20 percent of the full time equivalent workforce that will come from outside the area are assumed to stay.

Response:

- a. Kentucky currently applies a flat tax rate of 5% to taxable income. One option for calculating the additional state taxes associated with the labor income from the project would be to assume all of the income would be taxed at 5%. However, it is likely that some portion of total income would not be taxable income because Kentucky allows several deductions. A report from the Institute of Taxation and Economic Policy estimated the effective tax rates for families at various income levels. The effective tax rate was estimated to be 5% for Kentucky families in middle income quintile (\$32,800 to \$51,000) and 3.4% for Kentucky families in the second lowest income quintile (\$17,600 to \$32,800). For this analysis, we have assumed that most workers would likely fall in these two categories and used the average of these two effective tax rates to measure the potential income tax collected from the proposed project.
- b. In discussions about the potential economic impact the Project could have on McCracken County, the Applicant indicated that a portion of the construction work would require skills that might not be available in or near the county. The Applicant's experience on past projects suggested that approximately 20% of the project's workforce would come from outside the area. These workers would likely stay in or near McCracken County but would likely have minimal impact on the amount of total spending in the area.

**McCracken County Solar LLC
Case No. 2020-00392
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8. Refer to the Application, Exhibit 10, Attachment 10.1, page 4.
- a. Explain whether the total estimated labor income and the various tax revenues from the project construction phase are premised on the six or the nine month time period.
 - b. Explain how the IMPLAN model distinguishes short term effects and long term effects.
 - c. Explain what fractional employment (ex: 4.8, 7.1, 0.7) functionally represents from the model.
 - d. Explain why was a discount rate of 2 percent assumed.

Response:

- a. The analysis is based on the amount of spending rather than the amount of time required to complete the project. While spending and time to complete the project are often correlated, an increase in the length of time to complete the project that did not also affect the amount of spending would generally not affect estimates of the economic impact. However, an increase in the length of time to complete the project that also increased spending would affect estimates of the economic impact. For this analysis, we only consider the total construction cost as estimated by the Applicant. The amount of time to complete the project was not an explicit factor in the analysis.
- b. Analysts using IMPLAN must differentiate between the long- and short-term impacts when setting up their analysis. In this case, the short-term impacts are driven by the construction phase and the long-term impacts are driven by the operation phase. Because construction impacts are temporary, they must be modeled separately from the operation phase in IMPLAN. So, for our analysis, the short- and long-term impacts are distinguished by the construction and operation phases.
- c. IMPLAN models the relationship between the amount of spending associated with a project and the total number of jobs supported by that spending. Often, the amount of spending does not support a full job. Analysts often round results from IMPLAN, so fractional employment numbers are not seen. In these cases, rounding could have significant impacts on the estimated job counts. This is particularly true for indirect and induced effects for Kentucky excluding McCracken County. Rounding would make some of these impacts appear to

disappear completely or increase by 50%. For this reason, we chose to display the fractional employment estimates produced by IMPLAN.

- d. The discount rate was selected to reflect society's marginal rate of time preference. In this case, the yield on 20-year US treasury bonds, which was approximately 2% when the analysis was conducted, was selected as a proxy following Cost-Benefit Analysis Concepts and Practices. Another option would be to use a discount rate that reflects the marginal rate of return on private investment. One possible measure for this would be the yield on Moody's AAA rated corporate bonds, which is currently 2.7%. That said, guidance on discount rates varies across federal agencies and ranges from 0% to 7% depending on the agency and project. The main purpose of the present value calculation was to reflect the fact that future impacts will have less value than current impacts.

McCracken County Solar LLC
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9. Refer to the Application, Exhibit 10, Attachment 10.2, page 5.
- a. Explain whether the \$61,000 in reduced area labor income represents the labor income directly generated by the agricultural production of the proposed site. If not, explain how the \$61,000 figure was derived.
 - b. Explain how the value of the non-labor agriculture production was incorporated into the model.
 - c. Explain the modeling assumptions that lead to the range of labor and tax revenue during the operational phase.

Response:

- a. The \$61,000 in lost income represents the direct, indirect, and induced impacts associated with reduced agricultural production. So, this would include the lost income for workers employed by the farm, businesses that provide supplies to the farm, and businesses where these workers spend their income. The estimates were derived based on the relationships between output and labor across industry sectors as estimated in the IMPLAN model.
- b. Lost agricultural production was based on an estimate of the lost agricultural output. In this case, we did not specify the labor and non-labor mix of inputs used in crop production. These estimates of lost production came from the average crop sales per acre in McCracken County applied to the number of acres in production at the project site. IMPLAN estimates the amount of labor and income needed to support this total lost production.
- c. The Applicant was uncertain whether the operations phase would require two or three workers and was also uncertain about the wages these workers would ultimately be paid. To reflect this uncertainty, CBER modeled the economic impacts under two assumptions. The first assumes 2 workers and low wages. The second assumes 3 workers and high wages. These assumptions resulted in the range for the economic impact analysis of the operation phase.

McCracken County Solar LLC
Case No. 2020-00392
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10. Refer to the Application, Exhibit 10, Attachment 10.1, page 7. Explain if the 20-year contract total output of \$62,662,100 represents present value and if this value accounts for solar output degradation.

Response:

The 20-year output does represent a present value. However, our estimate did not account for solar output degradation over the lifetime of the project. Assuming 0.5% rate of degradation in output per year, the present value of the output would total approximately \$59.9 million.

McCracken County Solar LLC
Case No. 2020-00392
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11. Refer to the Application, Exhibit 10, Attachment 10.1, page 7. Explain whether the value of the agricultural output from the proposed site is based on the average \$477 per acre obtained from the 2017 Census of Agriculture or the actual output value of what the site has produced historically. If it is the latter, explain why actual output value is not a better representation of output value.

Response:

Granular data on past production from the proposed project site was not available to CBER. The important point we intended to make is that the proposed project will displace current economic activity on the site. Specific data on agricultural production from the actual site would be more precise. However, our analysis suggests that the output from the solar farm would significantly exceed output from the site derived from agriculture production.

McCracken County Solar LLC
Case No. 2020-00392
Siting Board Staff's First Request for Information

12. Refer to the questions propounded by Wells Engineering, which are attached as an Appendix to this information request, and provide responses to those questions.

Response:

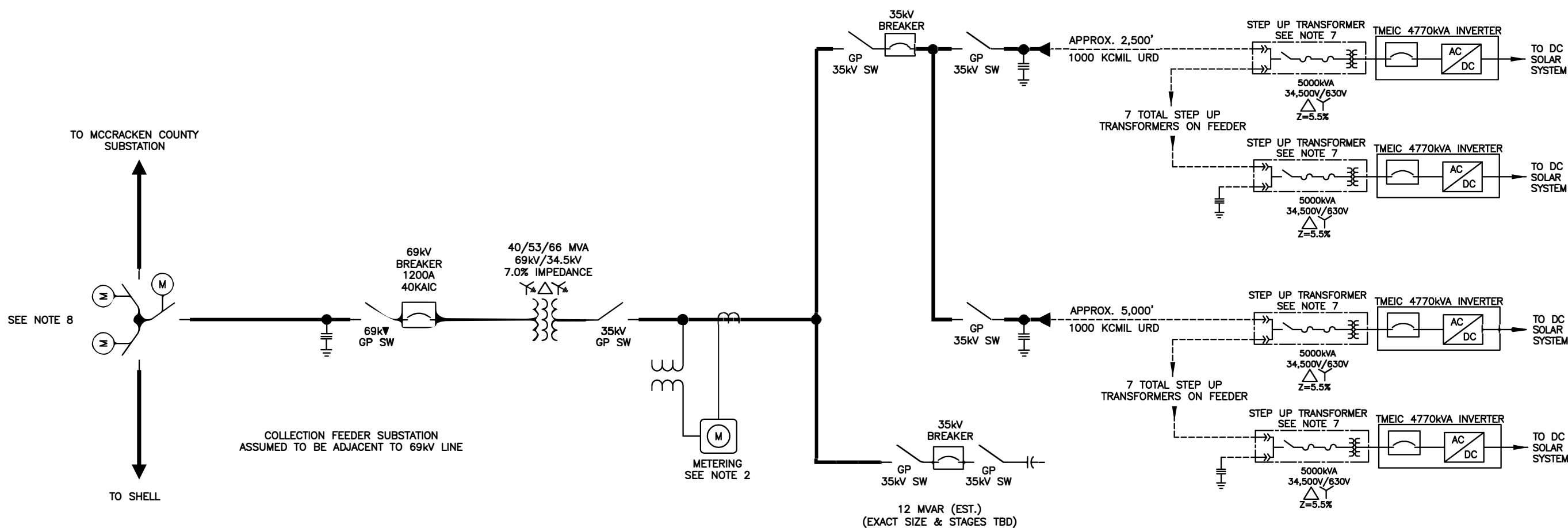
Please see the remaining pages of these responses.

McCracken County Solar LLC
Case No. 2020-00392
Siting Board Staff's First Request for Information
Appendix A – Questions from Wells Engineering

1. Electrical One-Line diagram is a very important document required for understanding and evaluating the Electrical Power Network and Interconnection. Applicant to submit Electrical One-Line diagram of the installation.

Response:

Please see attached 'McCracken County Solar One Line Diagram', page 2 of 2 of this response.



GENERATION SUMMARY:

RATED OUTPUT @ 69kV POI = 60MW @ 40°C
 FLA @ 1.0PF = 502 AMPS
 NET INVERTER OUTPUT WITH ASSUMED 2.2% LOSSES = (4.38)(14)(.978) = 60MW @ 40°C

COLLECTION SYSTEM EQUIVALENT IMPEDANCE (pu) (100MVA BASE, 34.5kV, CABLE ONLY) FOR A SINGLE TRANSFORMER BUS

	R(1)	X(1)	R(0)	X(0)	B
SOLAR ONLY	0.008	0.0088	0.064	0.0039	0.0072

INVERTER SHORT CIRCUIT DATA

Z(1) = Z(2) = 0.8pu
 Z(0) = ∞

NOTES:

- ONE LINE BASED ON FIGURE 1, "TYPICAL TRANSMISSION LINE SUPPLY CONFIGURATION, 63kV" BIG RIVERS FACILITY CONNECTION REQUIREMENTS, CMP-FAC-01.
- THE PROPOSED METERING WILL BE INSTALLED ON THE LOW SIDE OF THE TRANSFORMER AND COMPENSATED TO THE HIGH SIDE OF THE TRANSFORMER. THE METERING WILL USE EXTENDED RANGE CT'S (0.15% ACCURACY ABOVE 1% OF CT RATING), STANDARD METERING ACCURACY PT'S AND SEL-735 METER WIRED IN A STANDARD 3 ELEMENT ARRANGEMENT. THE METER WILL BE PROGRAMMED WITH THE FACTORY TEST LOSSES FOR THE SUBSTATION TRANSFORMER.
- CABLE SIZES AND DISTANCES BETWEEN STEP UP TRANSFORMERS TO BE BASED ON ACTUAL FIELD CONDITIONS. ESTIMATE 1500' BETWEEN TRANSFORMERS.
- SOLAR INVERTERS ARE TMEIC PVU-L0840GR, SOLAR WARE NINJA UNITS WITH SIX(6) INVERTERS PER TRANSFORMER/SKID INSTALLATION AND ARE UL1741 & IEEE 1547 LISTED. INVERTERS ARE RATED 730kW(795kVA) EACH OR 4380kW(4770kVA) PER TRANSFORMER AT 0.92 PF AT 40°C. EXACT RATINGS TO BE CONFIRMED DURING FINAL DESIGN. POI OPERATING PF TO BE 0.95 TO 0.95 WITH INVERTERS AND SWITCHED CAPACITOR BANK.

5. ESTIMATE TRANSFORMER IMPEDANCE

ASSUMED X/R = 30, TERTIARY IS BURIED.
 H-X
 R(1) = 0.23% X(1) = 6.99%
 R(0) = 0.18% X(0) = 5.60%
 H-Y
 R(1) = 0.41% X(1) = 12.58%
 R(0) = 0.33% X(0) = 10.08%
 X-Y
 R(1) = 0.16% X(1) = 4.89%
 R(0) = 0.13% X(0) = 3.92%

6. ALL 69kV AND 34.5kV RELAYING TO BE DESIGNED LATER ALONG WITH UTILITY SCADA INTERFACE(S).

7. STEP-UP TRANSFORMERS SUPPLIED WITH INVERTERS WITH NO LOAD TAPS (±5%, ±2.5%, 0) AND ASSUMED X/R=10. ESTIMATE TRANSFORMER IMPEDANCE
 R(1) = 0.55% X(1) = 5.47%
 R(0) = ∞ X(0) = ∞

8. EXACT CONFIGURATION OF SWITCHES, MOD'S AND SCADA CONTROL TO BE DETERMINED BASED ON LOCAL CONDITIONS AND OPERATING PRACTICES.

LEGEND:

- UG CABLE
- OH LINE OR BUS

**PRELIMINARY
 FOR INTERCONNECTION
 APPLICATION ONLY**

REV	DATE	DWN	CHKD	APVD	DESCRIPTION
E	06/10/20	MT	PM		ADD INVERTER DETAILS
D	04/27/20	MAK	PM		UPDATE TO 60MW
C	04/13/20	MAK	PM		UPDATE NOTES
B	03/25/20	MAK	PM		PRELIMINARY
A	03/20/20	MAK	PM		PRELIMINARY

CEG CONSULTING ENGINEERS GROUP
 LAKEVILLE, MINNESOTA

McCRACKEN COUNTY SOLAR
 BIG RIVERS ELECTRIC CORPORATION
 69kV INTERCONNECTION
 ONE LINE DIAGRAM
 60MW

SCALE: NONE	PROJECT: CEGCOM01-KY
DRAWN: MAK	DWG. NO.
DATE: 03/20/20	MCS-OL-01RE

McCracken County Solar LLC
Case No. 2020-00392
Siting Board Staff's First Request for Information
Appendix A – Questions from Wells Engineering

2. On the Site Map, reference Exhibit 2 Attachment, Applicant to indicate the Churches, Hospitals, Public & Private parks, etc. on the Maps and Plot plans. This information is required to analyze the mitigations proposed by the applicant.

Response:

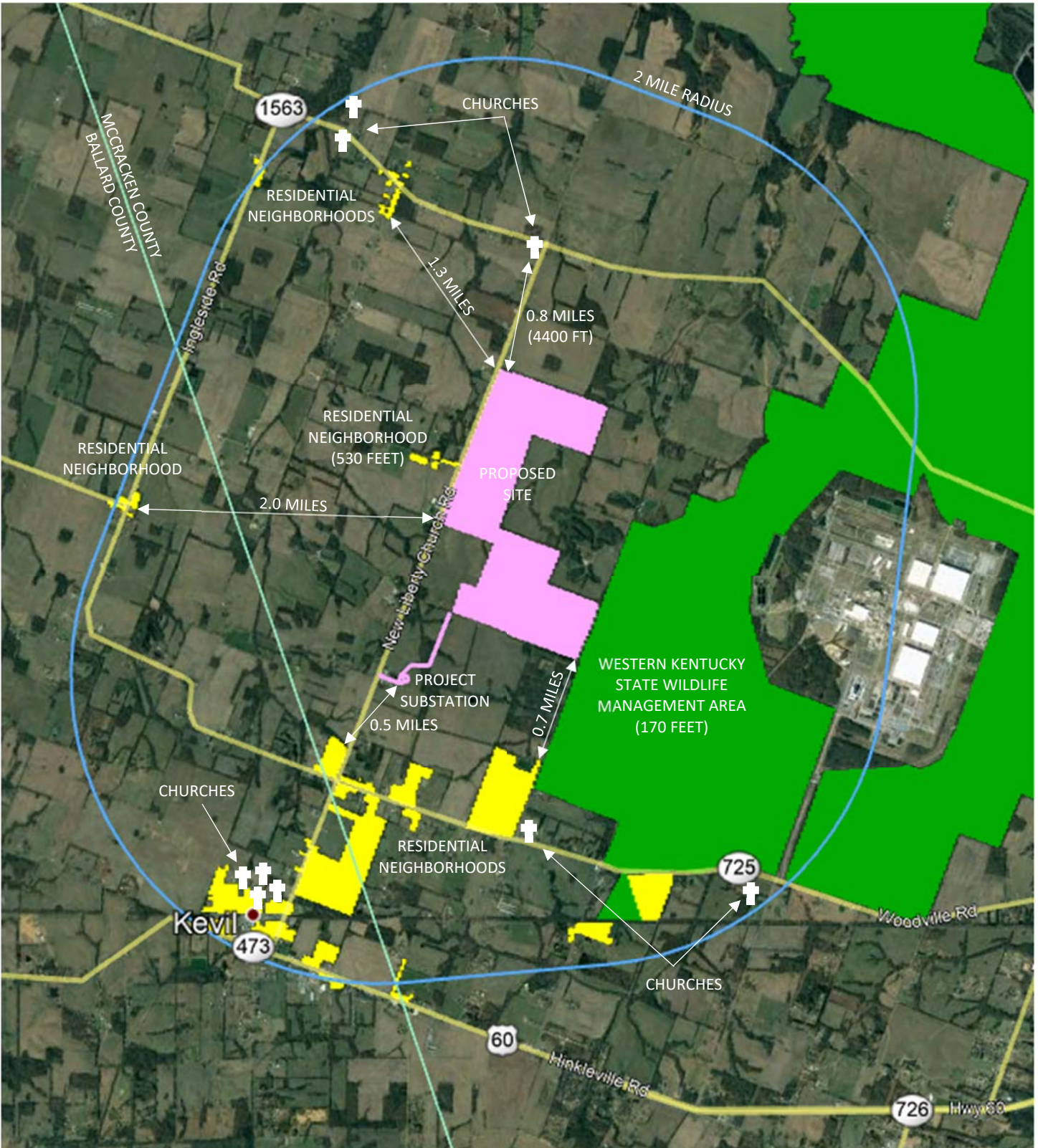
The locations of churches within a 2-mile radius of the proposed facility have been added to the Site Map originally provided as Exhibit 2 Attachment, page 1. The closest church is approximately 0.8 miles (4,400 feet) from the proposed project site.

There are no hospitals within a 2-mile radius of the proposed facility.

The only public park located within a 2-mile radius of the proposed facility is the Western Kentucky State Wildlife Management Area (WMA) identified on the Site Map originally provided as Exhibit 2 Attachment, page 1.

There are no known private parks within a 2-mile radius of the proposed project site.

Please see attached 'McCracken County Solar Updated 2-mile Radius Map', page 2 of 2 of this response.



COMMUNITY ENERGY SOLAR, LLC

3 RADNOR CORP CENTER, SUITE 300
 100 MATSONFORD RD.
 RADNOR, PA 19087
 (866) 946-3123

**MCCRACKEN COUNTY SOLAR - 60MW SOLAR PROJECT
 MCCRACKEN COUNTY, KY**



NEW LIBERTY CHURCH RD, KEVIL, KY 42053
LAT/LONG: 37.12 N / 88.86 W
DATE: 7.1.2021

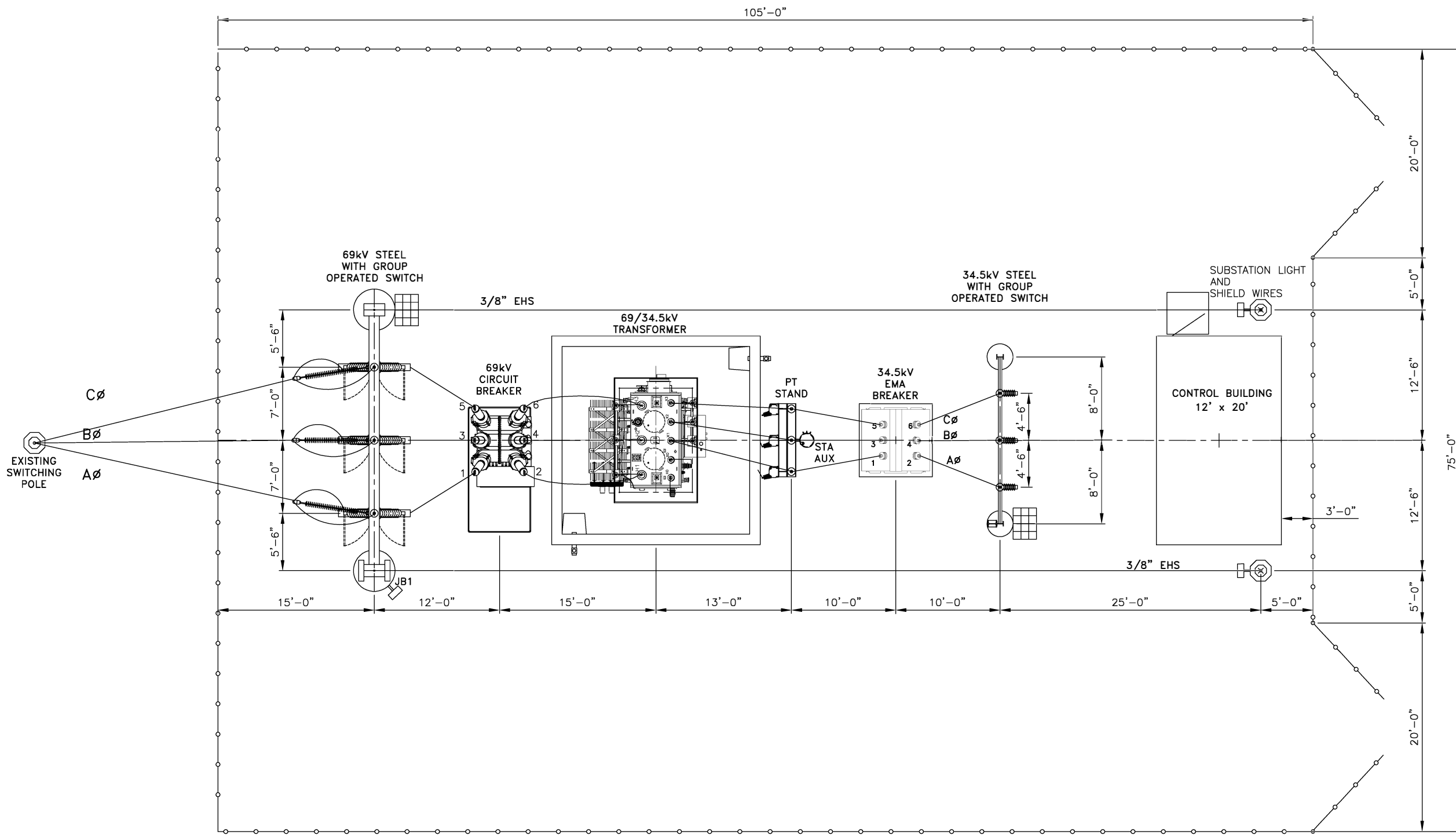
UPDATED MAP SHOWING THE DISTANCE OF RESIDENTIAL NEIGHBORHOODS, SCHOOLS, PUBLIC AND PRIVATE PARKS, CHURCHES, AND HOSPITALS THAT ARE LOCATED WITHIN A TWO (2) MILE RADIUS OF THE PROPOSED FACILITY

McCracken County Solar LLC
Case No. 2020-00392
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3. Applicant to provide the substation layout diagram, if available.

Response:

Please see attached indicative 'McCracken County Solar Project Substation Layout', page 2 of 2 of this response.



MINIMUM CLEARANCES

	69kV	34.5kV
RIGID BUS		
∅ TO GROUND	29"	15"
MIN. METAL TO METAL	31"	18"
ABOVE GRADE IN SUB	11'	10'

SCALE: 3/16"=1'-0"
 0 2 4 6

THIS LINE IS ONE INCH WHEN DRAWING IS FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY.

REV	DATE	MAK	PM	DESCRIPTION
A	10/23/20	MAK	PM	SAMPLE PLAN VIEW

CEG CONSULTING ENGINEERS GROUP
 LAKEVILLE, MINNESOTA

69kV SUBSTATION
 ELECTRICAL LAYOUT
 PLAN VIEW SAMPLE

SCALE: AS SHOWN	PROJECT: ####
DRAWN: MAK	DWG. NO.
DATE: 10/23/20	MCC-EL-01RA

McCracken County Solar LLC
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4. Applicant to provide information on the specifications/model number of the PV cell/Solar Panel to be used.

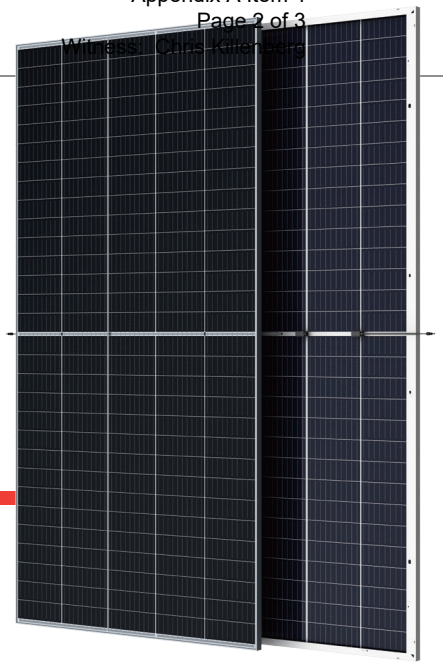
Response:

The solar panels currently scoped for the proposed project are model TSM-500DEG18MC.20 manufactured by Trina Solar. These are monocrystalline bifacial 500watt modules.

Please see attached 'McCracken County Solar PV Solar Panel Datasheet', page 2 of 2 of this response.

THE Vertex

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE



505W

MAXIMUM POWER OUTPUT

21.0%

MAXIMUM EFFICIENCY

0~+5W

POSITIVE POWER TOLERANCE

PRODUCTS

TSM-DEG18MC.20(II)

POWER RANGE

480-505W



High customer value

- Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance of System) cost, shorter payback time
- Lowest guaranteed first year and annual degradation; extended 30-year warranty
- Designed for compatibility with existing mainstream system components
- Higher return on Investment



High power up to 505W

- Large area cells based on 210mm silicon wafers and 1/3-cut cell technology
- Up to 21.0% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection



High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load



High energy yield

- Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications
- The unique design provides optimized energy production under inter-row shading conditions
- Up to 25% additional power gain from back side depending on albedo

Founded in 1997, Trina Solar is the world's leading total solution provider for solar energy. With local presence around the globe, Trina Solar is able to provide exceptional service to each customer in each market and deliver our innovative, reliable products with the backing of Trina as a strong, bankable brand. Trina Solar now distributes its PV products to over 100 countries all over the world. We are committed to building strategic, mutually beneficial collaborations with installers, developers, distributors and other partners in driving smart energy together.

Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716/UL61730

ISO 9001: Quality Management System

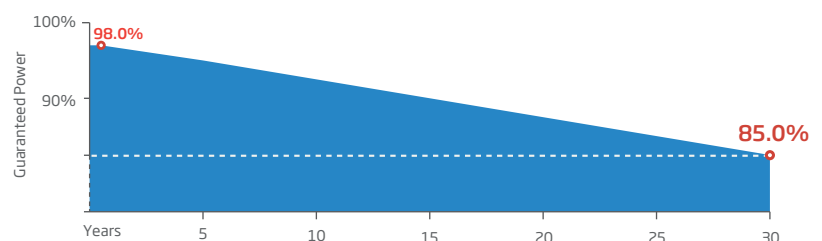
ISO 14001: Environmental Management System

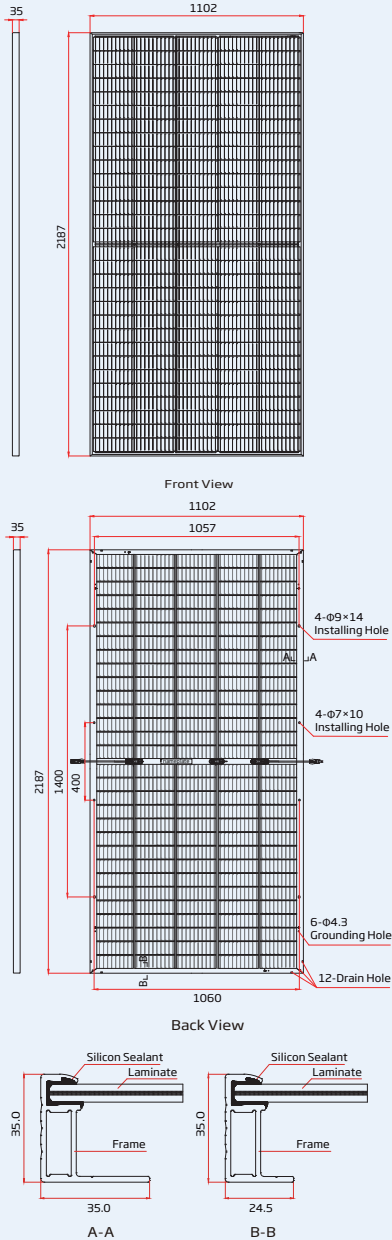
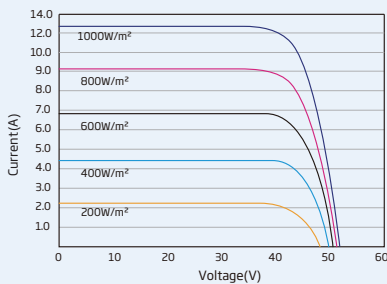
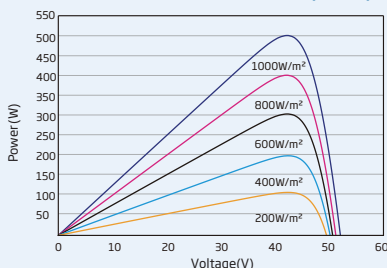
ISO14064: Greenhouse Gases Emissions Verification

ISO45001: Occupational Health and Safety Management System



Trina Solar's Vertex Bifacial Dual Glass Performance Warranty



DIMENSIONS OF PV MODULE(mm)

I-V CURVES OF PV MODULE(500 W)

P-V CURVES OF PV MODULE(500W)

ELECTRICAL DATA (STC)

Peak Power Watts- P_{MAX} (Wp)*	480	485	490	495	500	505
Power Tolerance- P_{MAX} (W)	0 ~ +5					
Maximum Power Voltage- V_{MPP} (V)	42.2	42.5	42.8	43.1	43.4	43.7
Maximum Power Current- I_{MPP} (A)	11.38	11.42	11.45	11.49	11.53	11.56
Open Circuit Voltage- V_{OC} (V)	50.7	50.9	51.1	51.3	51.5	51.7
Short Circuit Current- I_{SC} (A)	11.97	12.01	12.05	12.09	12.13	12.17
Module Efficiency η_m (%)	19.9	20.1	20.3	20.5	20.7	21.0

 STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.
 *Measuring tolerance: \pm 3%.

Electrical characteristics with different power bin (reference to 10% Irradiance ratio)

Total Equivalent power - P_{MAX} (Wp)	514	519	524	530	535	540
Maximum Power Voltage- V_{MPP} (V)	42.2	42.5	42.8	43.1	43.4	43.6
Maximum Power Current- I_{MPP} (A)	12.18	12.22	12.24	12.29	12.34	12.39
Open Circuit Voltage- V_{OC} (V)	50.7	50.9	51.1	51.3	51.5	51.7
Short Circuit Current- I_{SC} (A)	12.81	12.85	12.89	12.94	12.98	13.02
Irradiance ratio (rear/front)	10%					

 Power Bifaciality: 70 \pm 5%.

ELECTRICAL DATA (NOCT)

Maximum Power- P_{MAX} (Wp)	362	366	369	373	377	381
Maximum Power Voltage- V_{MPP} (V)	38.7	40.0	40.2	40.5	40.7	41.0
Maximum Power Current- I_{MPP} (A)	9.11	9.15	9.18	9.22	9.26	9.29
Open Circuit Voltage- V_{OC} (V)	47.7	47.9	48.0	48.2	48.4	48.5
Short Circuit Current- I_{SC} (A)	9.65	9.68	9.71	9.74	9.78	9.81

 NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	150 cells
Module Dimensions	2187 \times 1102 \times 35 mm (86.10 \times 43.39 \times 1.38 inches)
Weight	30.1 kg (66.4 lb)
Front Glass	2.0 mm (0.08 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)
Frame	35mm(1.38 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²), Portrait: 280/280 mm(11.02/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4*

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	43°C (\pm 2°C)
Temperature Coefficient of P_{MAX}	- 0.34%/°C
Temperature Coefficient of V_{OC}	- 0.25%/°C
Temperature Coefficient of I_{SC}	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~ +85°C
Maximum System Voltage	1500V DC (IEC)
	1500V DC (UL)
Max Series Fuse Rating	25A

WARRANTY

12 year Product Workmanship Warranty
30 year Power Warranty
2% first year degradation
0.45% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 31 pieces
Modules per 40' container: 620 pieces

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5. Applicant to submit an over-all tentative schedule of the project, starting from the receipt of the certificate for construction of the project. Schedule is to include the length of each construction phase. This document helps in understanding the total time required and major milestones involved. It will also be used to confirm the timing of the economic benefits listed.

Response:

Please see attached 'McCracken County Solar Tentative Construction Schedule', page 2 of 2 of this response.

McCRACKEN COUNTY SOLAR (60MW)
Tentative Construction Schedule

				<u>2021</u>		<u>2022</u>						<u>2023</u>														
				NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN			
	DAYS	START	FINISH																							
Engineering	306	11/07/21	09/08/22																							
Receive Construction Certificate	1	11/07/21	11/07/21																							
Design / Engineering	130	05/02/22	09/08/22																							
Construction Permit	30	08/10/22	09/08/22																							
Procurement	360	02/21/22	02/15/23																							
Module Procurement	360	02/21/22	02/15/23																							
Substation Procurement	250	06/01/22	02/05/23																							
Inverter Procurement	180	07/01/22	12/27/22																							
Racking Procurement	200	05/22/22	12/07/22																							
Construction	295	09/09/22	06/30/23																							
Racking and Pile Delivery	80	09/19/22	12/07/22																							
Inverter Delivery	60	10/29/22	12/27/22																							
Substation Delivery	90	11/08/22	02/05/23																							
Module Delivery	60	12/18/22	02/15/23																							
Civil / Site Prep	100	09/09/22	12/17/22																							
Pile Driving	120	09/19/22	01/16/23																							
Trenching / Excavation	90	09/23/22	12/21/22																							
Racking Installation	200	10/09/22	04/26/23																							
Collection System and Electrical Install	200	10/29/22	05/16/23																							
Substation Installation	180	11/08/22	05/06/23																							
Module Installation	140	12/18/22	05/06/23																							
Commissioning / Startup	60	05/01/23	06/29/23																							
COD	1	06/30/23	06/30/23																							

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6. Applicant to provide information on the temporary power required for construction of the plant.

Response:

Temporary power will either be provided from generators, a temporary electrical service drop, or a combination of the two.

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7. Please identify if energy storage is being used and provide SDS sheet for energy storage system.

Response:

Energy storage is not proposed for this project.

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8. Applicant to provide information on the environment impact and the energy storage system imposes. If batteries are to be used for energy storage, what is the life expectancy of the batteries? How will the batteries be disposed of? Will they be recycled?

Response:

Energy storage is not proposed for this project.

McCracken County Solar LLC
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9. Applicant to provide information on any fiber optic or any kind of communication network installed as part of the project. Applicant to provide information on excavation that may be required for the above.

Response:

Fiber optic cable will connect each inverter/transformer station throughout the site and be collected in the main control center. Fiber will also connect the various relays and switches throughout the site, including those located in the substation and point of interconnection as required.

Fiber for communication with the inverter/transformer stations will be co-located in the medium-voltage transmission trenches serving those stations. Fiber for communication with relays and switches will be installed in dedicated trenches.

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10. Applicant to provide information on where the PV cells/Solar Panels are manufactured.
Applicant to indicate the % of import & % of Made in USA.

Response:

The currently-scoped solar panels are manufactured in China by Trina Solar. The PV cells and the assembled solar panels ultimately selected for this project may be manufactured and assembled in a variety of countries, including the USA, depending on the market for solar panels at the time of construction. Currently, however, the vast majority of solar panels and components on the market are 100% imported and 0% Made in USA.

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11. Applicant to provide the missing information/documents from the Transmission Analysis report by “Electrical Power Engineers” submitted as Exhibit 9 Attachment 9.3. Provide the spreadsheets ‘Table-4 ATC Results’ & ‘Table 5 Generation Projects’

Response:

The excel spreadsheets embedded in the original transmission analysis have been downloaded and provided as Attachment Appendix A Response 11 – Table 4 and Attachment Appendix A Response 11 – Table 5.

ATTACHMENTS FOR THIS
RESPONSE ARE EXCEL
SPREADSHEETS AND ARE
BEING UPLOADED
SEPARATELY INTO THE
ELECTRONIC CASE FILE

McCracken County Solar LLC
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12. In the Application – Exhibit 12, Volume 1, Tab 12, Applicant to provide information on the proposed access control applicable to site. It may include, Fencing and Secured access, etc. Applicant to provide compliance on Physical Access control as per requirements from NERC, FERC and DHS, if found applicable.

Response:

It is the Applicant's understanding that the minimum photovoltaic system capacity required to register with NERC is 75 megawatts alternating current (75 MWac). The proposed facility will have a capacity of 60 MWac and would therefore not be subject to NERC standards, including the Physical Access Control requirements.

However, NERC requirements may be triggered by several factors other than system capacity, such as the protocols of the Operations & Maintenance (O&M) contractor's network operating center or one of the major stakeholders in the project (e.g. interconnecting utility, PPA off-taker, site owner).

Should NERC compliance be required at the proposed facility for any reason, the Applicant intends to fully comply with any relevant requirements as they pertain to physical security controls, electrical access controls, cyber incident response and transient cyber assets and removable media malicious code risk mitigation.

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13. At end of life when the system is decommissioned will the area be useful for farming? If not, what guarantee will be used to bring the site back to a useful state?

Response:

The Applicant anticipates that the proposed project site will be useful for farming at the end of the project life. No topsoil will be removed from the project site. Grading of the project site in preparation for construction will be minimal. After construction, during the operating life of the project, a continuous bed of grass will be maintained within and around the facility, stabilizing and revitalizing the soil.

Each lease executed between the Applicant and each landowner of the proposed project site requires the Applicant to conduct the following decommissioning steps:

- a. remove all above-ground Solar Facility Equipment,
- b. remove all Solar Facility Equipment installed below-grade, and
- c. restore the soil surface and slope of the Leased Property to substantially similar condition as existed prior to commencement of Company's activities thereon

Each lease requires the Applicant, prior to construction of the proposed facility, to provide to the landowners an estimate of the cost, calculated by a reputable, mutually agreed upon third-party engineer, for the removal of the Solar Facility Equipment from the Leased Property. The Applicant is additionally required to post or arrange for the posting of security funds in a manner and amount sufficient to ensure decommissioning of the Solar Facility consistent with the decommissioning cost estimate.

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14. Applicant to provide information on Signage developed for the Project. Based on the revision to the McCracken County Zoning Code, this project will require the appropriate signage for safety for both construction and operation of the facility. Has a signage plan been developed? If it has, please provide it and if it has not, please develop and provide it.

Response:

The McCracken County Zoning Code, SECTION 150.040 - SOLAR ENERGY SYSTEMS, includes the following requirements for signage:

Signage

There shall be no signs permitted except those displaying emergency information, owner contact information, warning or safety instructions or signs that are required by a federal, state or local agency. Such signs shall not exceed 5 square feet in area.

The Applicant intends to comply with the Signage requirements of the McCracken County Zoning Code.

During construction, traffic safety plans will include appropriate advance warning signs, temporary flag-persons as needed, and temporary “trucks entering highway” signage at main access points. Should the Siting Board so determine, such a plan can be provided to the Kentucky Public Service Commission before construction commences.

During operations, signs displaying emergency information, owner contact information, and warning or safety instructions will be posted on each of the planned gates providing access to the proposed facility. The Applicant is not aware of specific signs that are required by any federal, state, or local agency.

A more detailed plan for signage will be developed closer to the start of construction. The Applicant intends to submit a final Signage plan to McCracken County for review prior to construction and anticipates that the approval of the Signage plan by McCracken County will be required prior to the issuance of a building permit.

McCracken County Solar LLC
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15. Applicant to provide a security fencing plan as required by the revised zoning code.

Response:

The McCracken County Zoning Code, SECTION 150.040 - SOLAR ENERGY SYSTEMS, includes the following applicable requirements for security fencing:

Security Fencing

A security fence shall surround all Level 2 SES and be at least 7 feet tall or 6 feet tall with 3 strands of barbed wire.

The Applicant intends to comply with the applicable Security Fencing requirements of the McCracken County Zoning Code. A more detailed plan, designating either a 7 foot tall fence, or a 6 foot tall fence with 3 strands of barbed wire, will be developed closer to the start of construction, and driven by final facility design and market costs for materials at that time. The Applicant intends to submit a final Security Fencing plan to McCracken County for review prior to construction and anticipates that the approval of the Security Fencing plan by McCracken County will be required prior to the issuance of a building permit.

McCracken County Solar LLC
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16. Applicant to provide a comprehensive ground maintenance plan as required by the McCracken County Zoning Code.

Response:

The McCracken County Zoning Code, SECTION 150.040 - SOLAR ENERGY SYSTEMS, includes the following requirements for ground maintenance:

Ground Maintenance

Topsoil shall not be removed. Grasses shall be maintained or established. Grasses inside and outside the security fence shall not exceed 10 inches tall. The Board of Adjustment may waive this requirement if the developer can show this requirement will create an undue burden and an acceptable ground maintenance plan is submitted with the conditional use permit application.

The Applicant intends to comply with the applicable Ground Maintenance requirements of the McCracken County Zoning Code. The Applicant will not remove topsoil from the project site. The Applicant will maintain or establish grasses inside and outside the security fence, which shall not exceed 10 inches tall. Accordingly, the Applicant is not seeking to waive these requirements, and has not developed an alternate ground maintenance plan.

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17. What are the specific plans to keep the area safe from a traffic perspective both during construction and operation of the facility? A detailed plan should be submitted to the Kentucky Public Service Commission before construction commences.

Response:

Traffic safety plans will include appropriate advance warning signs, temporary flag-persons as needed, and temporary “trucks entering highway” signage at main access points. Should the Siting Board so determine, such a plan can be provided to the Kentucky Public Service Commission before construction commences.

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18. What will the specific impacts of fugitive dust be on local project area residences and business be during construction and during operation? Please estimate specific levels of fugitive dust, PM and PM10 on a map of the project area.

Response:

Dust particle size analysis was not considered nor required as part of the Traffic Study submitted in support of the Application. However, a high-level discussion of Fugitive Dust Impacts was included. Mitigation measures relative to the project site and surrounding areas were addressed using intermediated gravel surfaced haul roads and watering techniques in localized construction areas.

McCracken County Solar LLC
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19. Three species of bats that are either threatened or endangered are potentially located within the site area. Additionally, what potential mitigation for these species will be provided both during construction and operation?

Response:

A Threatened and Endangered Species Habitat Assessment (“T&E Assessment”) of the proposed Project site was performed by Copperhead Environmental Consulting, Inc. The desktop review identified the proposed project area as potentially including suitable habitat for three federally-listed species of bats: the Indiana Bat, the Northern Long-Eared Bat, and the Gray Bat.

During the spring, summer, and fall, the Indiana Bat and the Northern Long-Eared Bat use a variety of forested habitats for roosting, foraging, and commuting, including forest blocks and woodlots, as well as linear features such as fencerows, riparian forests, and other wooded corridors. A field reconnaissance of the proposed project site indicated the presence of approximately 93 acres of forested habitats within the project site suitable for use by Indiana Bats and Northern Long-Eared Bats during the spring, summer, and fall.

During the winter months, Indiana Bats and Northern Long-Eared Bats roost in underground hibernacula typically consisting of caves located in karst areas of the east-central United States, or in cave-like locations, including abandoned mines and under bridges. A field reconnaissance of the proposed project site did not identify any caves or mine openings or bridges within the project site.

The Gray Bat typically roosts in caves year-round. Habitat requirements for roosts are highly specific, with fewer than 5 percent of caves representing suitable habitat. A field reconnaissance of the proposed project site did not identify any caves or mine openings within the project site.

To avoid any effect on the Indiana Bat, the Northern Long-Eared Bat, and the Gray Bat, the Applicant proposes a Winter Tree Clearing Coordination plan. The Applicant will adhere to seasonal tree clearing restrictions, only clearing trees on the project site during the period 15 November – 31 March. Prior to any such winter tree clearing, the Applicant will coordinate with the US Fish and Wildlife Service (USFWS) and the

Appendix A Item 19

Page 2 of 2

Witness: Marty Marchaterre

Kentucky Department of Fish and Wildlife Resources (KDFWR) for documentation of compliance and approval.

McCracken County Solar LLC
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20. The Bald Eagle, a Kentucky Threatened Species could be found in the site area. What mitigation should be performed regarding the species?

Response:

While the proposed project site may contain suitable habitat for the Bald Eagle, a site reconnaissance conducted by Copperhead Environmental Consulting, Inc. did not identify any Bald Eagles, Bald Eagle nests, or tall trees suitable for Bald Eagle nests within the proposed project site.

In Kentucky, Bald Eagles usually lay eggs between January and March, but will begin nest building and repair as early as October. Young eagles usually fledge (leave the nest) between April and July.

Prior to and during construction, if the Applicant identifies an eagle's nest or an eagle's nest under construction within the project site, the Applicant will follow the USFWS National Bald Eagle Management Guidelines (Guidelines) (2007). The Guidelines include recommendations for land management practices that will benefit Bald Eagles and is intended primarily as a tool for those who seek information and recommendations regarding how to avoid disturbing Bald Eagles.

If a Bald Eagle nest is identified within the project site, development within 660 feet of the nest tree will require coordination with USFWS to avoid an incidental take of eagles and their young. To the extent practicable, the Applicant will mitigate any effect on Bald Eagles by restricting all clearing, construction, and landscaping within 660 feet of a Bald Eagle nest to outside the nesting season (August through mid-January). The Applicant will file any such mitigation plan with the USFWS and seek approval prior to any such development. Should the Applicant need to construct any part of the proposed facility closer than 660 feet from an active Bald Eagle's nest, it will obtain an incidental take permit from the USFWS.

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21. Is a consultation with the US Army Corps of Engineers and/or US Fish & Wildlife Service planned regarding mitigation for bat, bird and fish endangered, threatened or sensitive species?

Response:

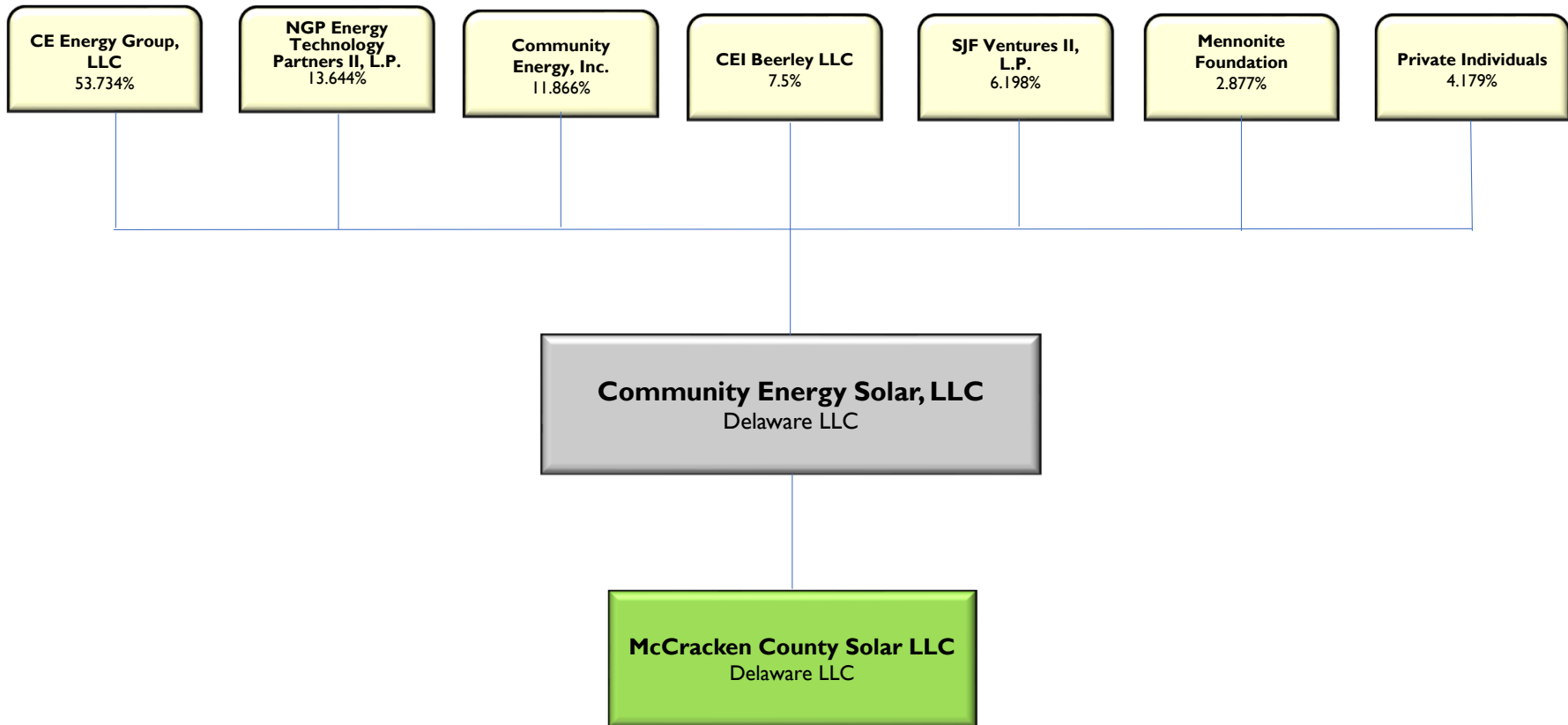
The Applicant may require a Nationwide Permit for the purpose of repairing existing crossings (culverts) of jurisdictional streams on the proposed project site. If such a need arises, the Applicant's consultation with the US Army Corps of Engineers (USACE) and the US Fish & Wildlife Service (USFWS) will include a review of the presence or absence of threatened and endangered species and whether habitat would be adversely impacted during any such repair, construction, or operation of stream crossings. Section 7 of the Endangered Species Act (ESA) requires federal agencies to ensure that actions they authorize, fund, or carry out do not jeopardize the existence of any species listed under the ESA, or destroy or adversely modify designated critical habitat of any listed species.

McCracken County Solar LLC
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22. Provision of a table of organization or similar structural representation from McCracken County Solar LLC through its ultimate parent organization, including any intermediate ownership and ownership percentages.

Response:

Please see attached 'McCracken County Solar Org Chart', page 2 of 2 of this response.



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23. Obtain an explanation and a reconciliation of the sets of real estate descriptions and, if necessary, modification of all calculations, descriptions, estimations, and other discrepancies resulting from these differing identifications. (The reference is to the composite maps on pages 3 and 4 of Exhibit 2 and Exhibit 5, pages 6-10 which all show contiguous parcels. However, the three parcels in Attachment 10.2, parcel number 020-00-00-017 is not contiguous with the other two parcels).

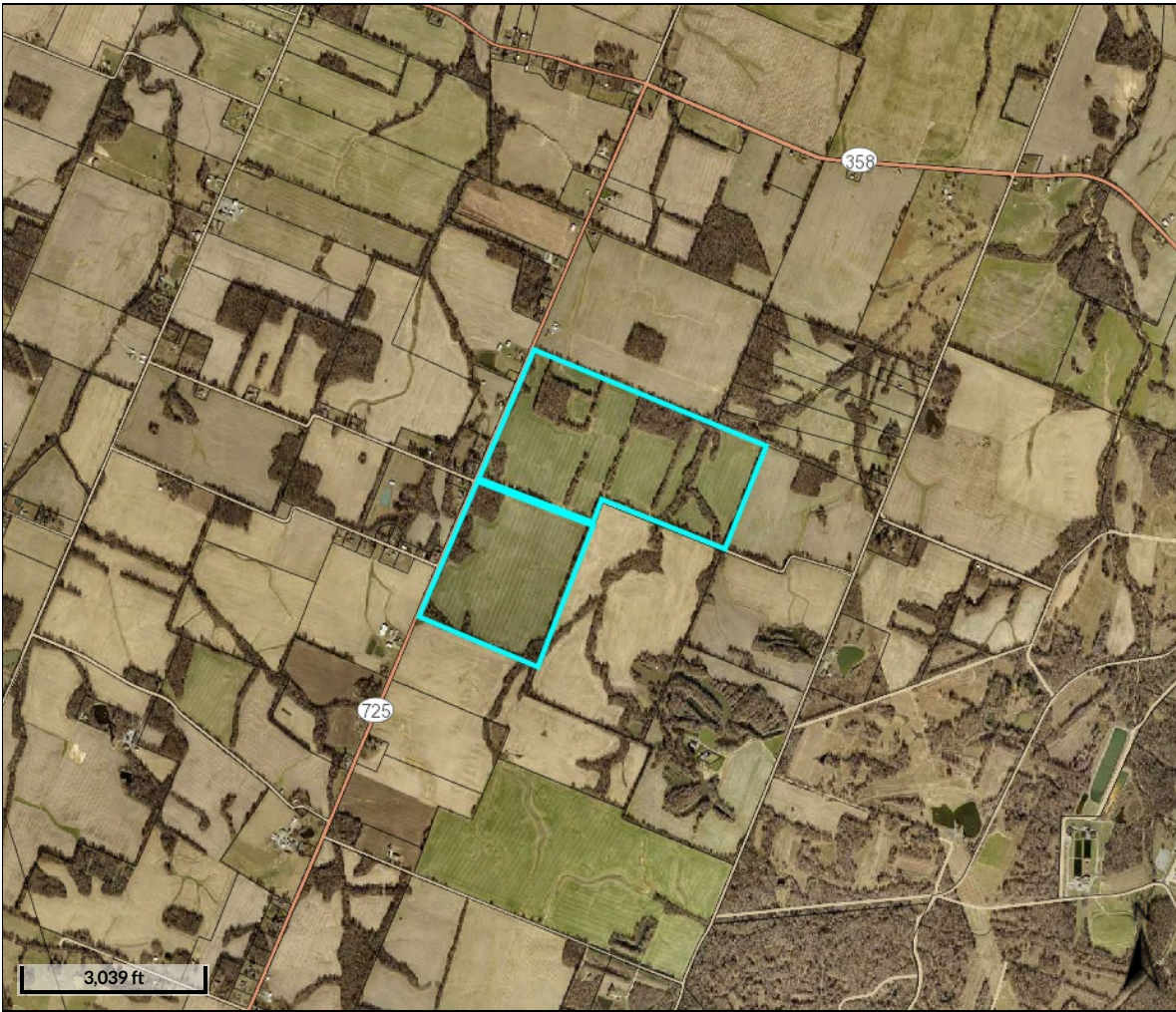
Response:

Parcel number 020-00-00-017 is in fact contiguous with parcel number 013-00-00-026.

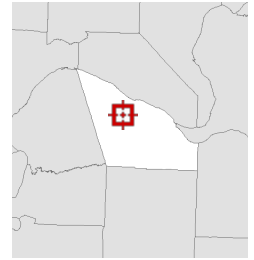
Attachment 10.2 of the original application, which supports the Applicant's estimate of property taxes to be paid by the proposed project, includes maps downloaded from the McCracken County PVA website (for tax valuation purposes). The map of parcel 020-00-00-017 included in Attachment 10.2 is in error, depicting only the northern portion of parcel 020-00-00-017. The Applicant has contacted the McCracken County PVA office, and the map for parcel number 020-00-00-017 has been corrected in the McCracken County PVA system.

No modification of calculations, descriptions, estimations, etc. included in the original application is required.




Please see attached 'McCracken County PVA – Parcel 020-00-00-017', page 2 of 2 of this response.



Overview



Legend

-  Current Parcels
-  Roads
-  Paducah City Limit
- City Labels

Parcel ID	020-00-00-017	Class	FARM (20)	Owner Address	WC'S FIELDS LLC C/O PADON GREGORY L
Sec/Twp/Rng	n/a	Acreage	299.65		2426 PARKDALE AVENUE
Property Address	6200 NEW LIBERTY CHURCH ROAD				LOUISVILLE, KY 40220
District	01-Outside Fire				
Brief Tax Description	20-7-40 299.65 AC KOW TR 23 & 25				
	<i>(Note: Not to be used on legal documents)</i>				

Date created: 6/29/2021
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24. Obtain a description of the nature and means for any lease, easement and ownership of said properties being used to transmit or perform distribution or substation activities involved.

Response:

Parcel number 013-00-00-032.01 will be used for a utility easement, connecting the main project site to the project substation location, and for the project substation location, which is adjacent to the point of interconnection.

The Applicant has executed an Access, Substation and Utility Easement Option Agreement with the landowners of parcel 013-00-00-032.01.

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25. Consider whether the projections of 30 years should be reduced to 20 years for economic impact for the known contractual period under contract.

Response:

The proposed McCracken County Solar project should be evaluated as a 30-year project. While the initial contract period for the sale of the project's output is limited to 20 years, the Applicant is confident that the market for power in years 21-30 will be sufficiently economically attractive to support continued operation over that period. Accordingly, the Applicant has executed 30-year leases for the proposed project site.

The proposed project will interconnect to a MISO-controlled transmission line and therefore the Applicant has access to the MISO wholesale market. It is the Applicant's expectation that either a bi-lateral contract with a MISO-connected offtaker will be executed prior to operation year 21, or that spot pricing on the wholesale market will be economically attractive at that time.