

COMMONWEALTH OF KENTUCKY

BEFORE THE KENTUCKY STATE BOARD ON ELECTRIC GENERATION
AND TRANSMISSION SITING

In the Matter of:

ELECTRONIC APPLICATION OF MEADE)	
COUNTY SOLAR LLC FOR A CERTIFICATE)	
OF CONSTRUCTION FOR AN)	
APPROXIMATELY 40 MEGAWATT)	CASE NO.
MERCHANT ELECTRIC SOLAR GENERATING)	2020-00390
FACILITY IN MEADE COUNTY, KENTUCKY)	
PURSUANT TO KRS 278.700 AND 807 KAR)	
5:110)	

ORDER

On June 3, 2021, Meade County Solar LLC (Meade County Solar or Applicant) filed an application with the Kentucky State Board on Electric Generation and Transmission Siting (Siting Board) seeking a Construction Certificate to construct an approximately 40-megawatt ground mounted solar photovoltaic electric generating facility comprising approximately 370 acres of land in southwestern Meade County, Kentucky¹ (Project).

There are no intervenors in this matter. Pursuant to a procedural schedule established on July 2, 2021, Meade County Solar responded to two rounds of discovery. A site visit was held on August 2, 2021. Siting Board consultants, Wells Engineering, P.S.C. (Wells), filed its consultant’s report (Wells Report) on September 10, 2021, and Meade County Solar submitted its response to the Wells Report on September 23, 2021. A formal hearing was held on October 14, 2021. Meade County Solar filed its responses

¹ Application at 2.

to post-hearing requests for information on October 20, 2021. The matter now stands submitted for a decision.

LEGAL STANDARD

The filing requirements and standard of review for requests to construct a merchant generating facility are set forth in KRS 278.700–.718. KRS 278.704(1) requires that an application be filed with and approved by the Siting Board before the construction of a merchant electric generating facility can commence. KRS 278.706 requires that the application include evidence of public notice and compliance with local planning and zoning ordinances.

KRS 278.708(2) requires the applicant to prepare a site assessment report (SAR) that includes (1) a detailed description of the proposed site; (2) an evaluation of the compatibility of the facility with scenic surroundings; (3) potential changes in property values and land use resulting from the siting, construction, and operation of the proposed facility for property owners adjacent to the site; (4) evaluation of anticipated peak and average noise levels associated with the facility's construction and operation at the property boundary; (5) the impact of the facility's operation on road and rail traffic to and within the facility, including anticipated levels of fugitive dust created by the traffic and any anticipated degradation of roads and lands in the vicinity of the facility; and (6) any mitigating measures to be suggested by the applicant to minimize or avoid adverse effects identified in the SAR.

KRS 278.710(1) delineates the criteria on which the Siting Board will grant or deny the certificate, which include: (1) impact on scenic surroundings, property values, and surrounding roads; (2) anticipated noise levels during construction and operation of the

facility; (3) economic impact on the region and state; (4) whether the proposed facility meets all local planning and zoning requirements existing on the date the application was filed; (5) impact of the additional load on the reliability of jurisdictional utilities; (6) setback requirements; (7) efficacy of mitigation measures proposed by an applicant; and (8) whether the applicant has a good environmental compliance history.

PROPOSED FACILITY

The Project will be located on two sites: one site along Stith Valley Road in Guston, Kentucky, and the other site along Big Spring Road in Vine Grove, Kentucky, both in Meade County. The Project includes approximately 104,000 photovoltaic solar panels, associated ground-mounted racking, 54 inverters, and a substation transformer that will connect to the 69 kV Custer-Flaherty Tap transmission line owned by Big Rivers Electric Corporation (BREC). The power generated by the facility will be sold to BREC under a 20-year power purchase agreement.²

DISCUSSION AND FINDINGS

I. KRS 278.708: SAR Filing Requirements

Detailed Site Description

KRS 278.708 (3)(a)(1-6) requires that the detailed site description in the SAR include: (1) surrounding land uses for residential, commercial, agricultural, and recreational purposes; (2) the legal boundaries of the proposed site; (3) proposed access control to the site; (4) the location of facility buildings, transmission lines, and other

² Application, Exhibit 2.

structures; (5) location and use of access ways, internal roads, and railways; and (6) existing or proposed utilities to service the facility.

Meade County Solar submitted a detailed site plan, attached as Appendix B to this Order that displays residences, the solar panels, inverters, internal roads, security fencing, the project substation, and point of interconnection, and the vegetative buffer. There is one residential neighborhood within a two-mile radius of the proposed Project site. It is located approximately 1.16 miles south of the Big Spring section of the Project, at the unincorporated community of Big Spring.³ The Wells Report reviewed the site plan and found that it omitted sinkholes and other karst features that should be identified with other water resources on future site plans.⁴ The Applicant stated that it intends to avoid encroachment on any active karst or sinkhole features on the proposed project site and will observe a setback off active karst/sinkhole features equal to the greater of 70 feet from any open throat or 25 feet from the periphery of any significant depression.⁵ The Wells Report noted that all underground power lines, including the interconnecting power line between Stith Valley and Big Springs, must provide sufficient clearance from existing underground utilities as well as gas gathering lines, and that all of those underground features, proposed and existing, need to be delineated on future site plans.⁶

³ Wells Report, Attachment B at 5

⁴ Application, Exhibit 5 and 12; Wells Report at 18–19.

⁵ Meade County Solar's Response to Siting Board Staff's Second Request for Information (filed Aug. 26, 2021), Item 2.

⁶ *Id.*

The Wells Report concluded that the legal boundaries of the proposed site are fully provided in the application⁷ and there is an easement agreement for an underground medium voltage electrical line between the two sections of the site.⁸ Security fencing and signage, meeting National Electrical Code (NEC) and Occupational Safety and Health Administration (OSHA) standards, will be installed before construction and maintained during operation.⁹ Internal roadways will be gravel.¹⁰ Any electric service required during construction or operation will be obtained from Meade County Rural Electric Cooperative Corporation.¹¹

Having reviewed the record of this proceeding, the Siting Board finds that Meade County Solar has complied with the requirements for describing the facility and a site development plan, as required by KRS 278.708. However, the Siting Board finds it necessary to impose certain mitigation measures and requirements related to the description of the facility and the proposed site development plan. Specifically, the Siting Board will require that Meade County Solar keep the Siting Board apprised of changes throughout the development of the Project, and as such will order Meade County Solar to provide the final site plan before the commencement of construction. This plan shall clearly indicate and highlight any change, including those to the design and boundaries of the Project, from the proposed site plan provided to the Siting Board during the

⁷ Wells Report, Attachment B at 10.

⁸ Application, Exhibit 12 Attachment 12.3; Wells Report at 18–19.

⁹ Wells Report at 28.

¹⁰ Application at 211; Wells Report at 18.

¹¹ Meade County Solar's Response to Siting Board Staff's First Request for Information (filed July 29, 2021), Item 10b.

pendency of this matter. Additionally, based on the concerns and proposals of the Wells Report, the Siting Board further finds that the mitigation measures outlined in Appendix A to this Order, and in particular, mitigation measures 1 through 8 shall be adhered to.

Compatibility with Scenic Surroundings

The Applicant indicates that the Project will be compatible with its surroundings. The Applicant states that solar farms, such as the facility proposed here, are a low profile assemblage of equipment, temporarily placed in a field without foundations or brick-and-mortar structures.¹² The Applicant further states the proposed facility is more similar to greenhouses or center-pivot irrigation systems than commercial or industrial development.¹³ The proposed site is a group of farm fields, partially screened by established tree lines and hedgerows. The Applicant maintains that it will adhere to the Meade County Solar Ordinance, preserving existing natural tree growth when reasonably practicable, and where tree lines do not exist, a double row of staggered evergreens will be planted.¹⁴ In addition to preserving or installing a visual buffer, the proposed site plan would position the solar panels a minimum of 500 feet away from any adjacent residence or public road. The Applicant states that these steps will result in a facility that is visually compatible with its surroundings.

Having reviewed the record of the proceeding, including Meade County Solar's response to the Wells Report, the Siting Board finds that, while there will always be an impact on the scenery of neighboring properties, the impact of this project is minimal. The

¹² Application at 214. Wells Report at 78.

¹³ *Id.*

¹⁴ Application at 10.

combination of the topography, existing tree line, existing human made features, and the large setback from the property line proposed by the developer works well to minimize the impact.¹⁵ This, combined with current vegetation and the proposed vegetative buffers, along with other mitigation measures proposed by Meade County Solar, will minimize the effects that the proposed facility will have on the scenic surroundings of the site. The physical characteristics of the proposed solar facility also do not pose any adverse impact to the scenic surroundings given the location of the solar facility components, and the proposed and current vegetative buffering. However, to ensure the continued compatibility of scenic surrounding, mitigation measures addressing obligations to maintain or further develop vegetative buffers and keep the Siting Board informed of potentially material changes to the site plan are necessary. As such, and based on the record, additional mitigation measures regarding scenic compatibility are outlined in Appendix A to this Order, and in particular, mitigation measures 9 through 14.

Impact on Property Values

With respect to impact on property values, Meade County Solar submitted a Property Value Impact Report from a certified real estate appraiser, Richard Kirkland (Kirkland Report), in its SAR. The Kirkland Report contends, based upon a comparative analysis, that the solar facility will have no impact on the property values of abutting or adjacent residential or agricultural properties.¹⁶ The Kirkland Report states that the solar facility would function in a harmonious manner with the nearby surroundings, which are mostly agricultural, and that operation of the solar facility would not generate the level of

¹⁵ Wells Report at 20.

¹⁶ Application at 342.

noise, odor, or traffic impacts to negatively impact the nearby surroundings as compared to a fossil fuel generating facility or other industrial facility.¹⁷

The Wells Report provided a lengthy letter by Mary McClinton Clay, member, Appraisal Institute that evaluated the impacts to property values. Based upon her analysis of the information provided in the Kirkland Report, Ms. Clay opined that the proper methodology for the appraisal findings was missing from the SAR, and the case studies reviewed by Mr. Kirkland for the Kirkland Report were funded by solar developers.¹⁸ Ms. Clay's review also indicates viewshed as the primary area of concern but indicates that every site is different and every property within that site is different and to draw a consistent conclusion is difficult.¹⁹ Ms. Clay's review also examined the North Star case study that showed the number of affected property owners who received compensation through a "neighbor" agreement, or had their property directly purchased by the developer in an attempt to remove or reduce negative responses from property owners.²⁰ These developers then sold the property a few years later at a loss and in one instance sold the property back to the original owner.²¹ Ms. Clay's review concludes that that many more data points are needed in appraising the actual valuation effect of the Project on property values.

¹⁷ Application at 454.

¹⁸ Wells Report at 172–174.

¹⁹ *Id.* at 174–177.

²⁰ *Id.*

²¹ *Id.*

Overall, the Wells Report concludes that while there will always be impact to the scenery of neighboring properties, the impact of this project is minimal, and with proper mitigation measures any impact on property values can be minimized.²²

The combination of the topography, existing tree line, existing human made features, and the large setback from the property line proposed by the developer works well to minimize the impact.²³ The major exceptions to this are the project participants and a few other directly neighboring landowners.²⁴

Having reviewed the record, the Siting Board finds that there is sufficient evidence to conclude that the proposed Meade County Solar facility will more than likely not have any adverse impact on nearby property values, as long as proper mitigation measures are utilized as set forth by Applicant and as ordered in Appendix A. The characteristics of a solar facility operation is passive in nature in that it does not produce any air, noise, waste, or water pollution, nor does it create any traffic issues during operations.

Anticipated Noise Level

Meade County Solar's SAR indicates that the use of the area surrounding the Project use can be defined as agricultural, scattered wood lots, and rural residential.²⁵

According to Meade County Solar's Acoustical Analysis Study, the nearest non-participating residence is approximately 500 feet from the nearest solar panel the nearest

²² Wells Report at 29.

²³ *Id.*

²⁴ *Id.*

²⁵ Application at 254.

residence is approximately 1,280 feet from the nearest inverter.²⁶ The transformer will be located approximately 1,000 feet to the nearest residence.²⁷

Meade County Solar plans that construction of the facility is expected to commence in September of 2022 and be completed in June of 2023.²⁸ The loudest source from construction is anticipated to be pile driving equipment used to install solar panel support posts. The anticipated noise produced by pile driving equipment will be approximately 64 dBA at the nearest residence located approximately 500 feet from the closest solar panel.²⁹ A ditch trencher will be used for laying electrical cables in a trench three to four feet deep and two feet wide. The anticipated noise produced by the trenching equipment will be approximately 54 dBA at the nearest residence located approximately 500 feet away.³⁰ Meade County Solar asserts that construction work is expected to progress across the site such that equipment and activities would only be in a single area for a short period and that the sound level is temporary and will decrease as equipment moves further away.³¹ Meade County Solar proposes to mitigate the effect of construction noise on nearby residence by designating portions of the project site as Neighbor Zones. The noisier construction activities, such as pile driving, are proposed to be limited to 9 a.m. to 5 p.m., Monday through Friday, in these Neighbor Zones.³² Neighbor Zones

²⁶ *Id.*

²⁷ *Id.*

²⁸ Meade County Solar's Response to Siting Board Staff's First Request for Information (filed July 29, 2021), Item 18.

²⁹ Application at 265.

³⁰ *Id.* at 266.

³¹ *Id.*

³² Application at 219.

would be comprised of the area of the project site within 300 feet of an adjacent residence boundary.³³ With the nearest residence 500 feet to the site footprint, Meade County Solar asserts this would result in the noisier construction activity within 800 feet from neighboring residences occurring during the proposed limited times.³⁴

When the solar facility is operating, there will be noise associated with the solar equipment, intermittent noise from tracking motors, and nearly constant noise from inverters and the transformer. The tracking motors are anticipated to produce sound levels of 26.87 dBA at the closest residence, 500 feet away.³⁵ Sound from inverters is described as a hum and roughly the same output as a household air-conditioning unit. The sound level produced by inverters is predicted to be 37.11 dBA at the nearest residence, 1,120 feet away.³⁶ Sound level from the transformer is predicted to be less than 1 dBA at the closest receptor, 1,030 feet away.³⁷ According to the Wells Report, site operations and maintenance sound levels from activities such as mowing will produce sound levels comparable to those of ambient agricultural operations in the area.³⁸

The Wells Report likewise notes that noise issues stem from construction activities and operational components of the solar facility. During construction, noise will be produced from pile drivers, chainsaws, bulldozers, dump trucks and other equipment.

³³ Meade County Solar's Response to Siting Board Staff's First Request for Information (filed July 29, 2021), Item 35.

³⁴ *Id.*

³⁵ Wells Report at 81.

³⁶ *Id.* at 73.

³⁷ *Id.* at 74.

³⁸ *Id.*

The Wells Report finds that the application submitted by Meade County Solar is substantially in compliance with the intent of the Kentucky Revised Statutes.³⁹ The Wells Report determined that during construction the proposed project would not significantly increase sound levels compared to current agricultural activities in the area.⁴⁰ The Siting Board is concerned about the noise in view of the information in the record and finds that the further mitigation measures as set forth in Appendix A, mitigation measures 15 through 19, should be required.

During operation of the proposed solar facility, noise will be emitted from transformers, inverters, and the tracking motors which rotate the panels to track the sun. The anticipated noise during regular operation and maintenance of the facility will be at or near ambient sound levels at the nearest sound receptor,⁴¹ thus noise during operation should not be a problem for the residents nearby.

Impact on Roads, Railways, and Fugitive Dust

The anticipated routes for construction equipment, materials deliveries, and construction and operation crews to access the Project site consist of the existing roads adjacent to the site and the existing roads that would be used to access the Meade County Site.⁴² Although numerous local county and state maintained roads exist near the site areas, this Applicant's consultants assumed US 31 W via KY 313 would generate the majority of worker and material delivery traffic entering and leaving the site.⁴³ Extensive

³⁹ *Id.* at 29.

⁴⁰ *Id.* at 83.

⁴¹ *Id.*

⁴² Application at 468.

⁴³ *Id.* at 469.

detail has been submitted and reviewed concerning the additional traffic that will be anticipated; approximately 150 cars and nine trucks daily.⁴⁴ In an attempt to reduce traffic congestion at intersections and along the local roads, the Applicant has set forth a number of measures, including “route and parking cards” and “Ride-sharing” for employees if it becomes necessary. In addition, safety precautions are set to be followed.⁴⁵ Applicant agrees that: “[A]ny impact to the local roads due to construction of the facility will be repaired at the expense of the solar farm.”⁴⁶ The Siting Board finds that traffic and road degradation issues can be addressed with Applicant’s measures and those mitigation measures set forth in Appendix A, in particular mitigation measures 20 through 27.

The Siting Board anticipates fugitive dust from the construction phase. The Applicant has affirmed that “To reduce potential dust impacts, open-bodied trucks will be covered while in motion. Internal roadways will be constructed from compacted gravel. Due to an increase associated with dust from gravel roads and site use in general, water may be applied to reduce dust generation as needed. The Meade County Solar facility will apply best management practices (BMP) for dust mitigation.”⁴⁷ The Siting Board will require additional mitigation measures to reduce this harmful effect on the neighboring community, as outlined in Appendix A, mitigation measure 28. Dust will not be a factor during operations. Likewise there is no rail impact.⁴⁸

Mitigation Measures Proposed by Applicant and Siting Board Consultant

⁴⁴ Application, at 470–478.

⁴⁵ Application at 483.

⁴⁶ Application at 483.

⁴⁷ Application at 484.

⁴⁸ Application, Exhibit 12 at 19.

Applicant proposed various mitigation measures consistent with the statutes regarding traffic, noise, roadway preservation, permitting, setbacks, public safety, scenic preservation, and decommissioning. The Wells Report listed the following 11 mitigation measures in addition to Applicant's proposed mitigation measures:

1. Create a Site Survey Map indicating the property boundaries. This will be a good reference for current and future needs of the project.
2. Create an over-all plot plan indicating all water bodies, bridges, culverts, access roads, power lines, residential and public structures, etc.
3. Update the property ownership records.
4. Provide site access control consistent with Kentucky Revised Statutes, Federal Electric Regulatory Commission, & North American Electric Reliability Corporation guidelines.
5. For locating the solar modules and other associated equipment of the plant, maintain sufficient clearance from the existing power lines adhering to NEC, National Electrical Safety Code & OSHA standards.
6. Adhere to the setback distance at all locations consistent with the guidelines from the local planning zone authority.
7. Setbacks for solar equipment from roads and property lines, with increased setbacks for certain equipment. Security fencing, vegetative buffer and pollinator plantings shall not be subject to setback restrictions.
8. Leave existing vegetation between solar equipment and neighboring residences in place, to the extent practicable, to help screen the Project and reduce visual impact

9. Provide notices to neighbors regarding potential construction and operation noises, as well as limits on working hours during the construction period, as described in the Application.

10. Fugitive dust and PM10 (coarse particles), can irritate eyes, nose, and throat. Dust from roads, farms, dry riverbeds, construction sites, and mines are types of PM10. The Applicant should submit in writing, ten days prior to commencing construction, the specific plan to control fugitive dust and PM10 during the construction process.

11. Ten days prior to the commencement of construction, the Applicant will provide a detailed plan on how it will protect water resources in the project area. The site assessment documents in several locations say that certain mitigation measures regarding erosion and protection of water resources “may” be carried out. The primary focus should be on preventing turbidity being added to local streams as a result of erosion during construction.⁴⁹

The Applicant agreed to items 1–6 and 8–11. As to item 7, it agreed on setbacks of 500 feet to adjacent landowners and 1,000 feet between inverter and adjacent landowner, which exceeds the requirements of the local ordinance.⁵⁰

The Siting Board has reviewed the mitigation measures proposed by the Applicant and the consultant and finds that, in addition to those the Applicant has initially proposed, the mitigation measures set forth in Appendix A are appropriate and reasonable because they achieve the statutory purpose of mitigating the adverse effects identified in the site assessment report in accordance with KRS 278.708.

⁴⁹ Wells Report at 22.

⁵⁰ Applicant’s Response to Wells Report (filed Sept. 23, 2021) at 1–6.

II. KRS 278.710(1)-Criteria

In addition to the evaluation of the factors contained in the SAR, KRS 278.710(1) directs the Siting Board to consider the following additional criteria in rendering its decision:

1. Economic impact on the affected region and state;
2. Existence of other generation facilities;
3. Local planning and zoning requirements;
4. Potential impact on the electricity transmission system;
5. Compliance with statutory setback requirements; and
6. History of environmental compliance.

Economic Impact on Affected Region and the State

The Center for Business and Economic Research at the University of Kentucky, using IMPLAN, prepared the Economic Impact Report (EI Report). According to the EI Report, the Project is expected to have significant impacts on the economies of Meade County and Kentucky as a whole, bringing new employment, spending, and taxes to the areas. There will be two phases of the project (1) the Construction Phase, and (2) the Operation Phase, and an economic impact analysis was performed separately for each phase. The Construction Phase is estimated to last approximately six to nine months, with the majority of economic impact occurring in the construction sector.⁵¹ Other sectors are expected to be affected as contractors purchase supplies and materials from businesses in the area and workers spend a portion of their incomes at local

⁵¹ Application, Exhibit 10 at 163.

businesses.⁵² The Operation Phase is estimated to last 30 years or more.⁵³ The Operation Phase stands to bring less, but long-term, economic impacts to a variety of businesses in the area.⁵⁴

The EI Report analyzes the direct, indirect, and induced impacts to Kentucky and Meade County. Direct impacts refer to any employment and wages associated specifically with the project.⁵⁵ Indirect impacts refer to employment and wages that occur outside the project, but support the completion and operation of the solar site, such as materials and supplies purchased from local businesses.⁵⁶ Induced impacts refer to employment and wages, unrelated to the project, that result from the increase in business and household spending, stemming from the direct and indirect impacts.⁵⁷ Lastly, total impact refers to the combination of the direct, indirect, and induced impacts. Tax revenues generated from a 4.2 percent Kentucky income tax, a 6 percent Kentucky sales tax, and various property taxes will contribute to the overall economic impact of the project.⁵⁸

During the Project's Construction Phase, Meade County Solar estimates a direct impact of up to 150 full-time equivalent workers (FTE) over the six to nine month

⁵² Application at 164.

⁵³ *Id.* at 166.

⁵⁴ *Id.*

⁵⁵ *Id.* at 163.

⁵⁶ *Id.* at 164.

⁵⁷ *Id.*

⁵⁸ *Id.*

construction period with a direct payroll of \$4.9 million.⁵⁹ Meade County Solar stated that approximately 80 percent of this workforce will come directly from the county.⁶⁰ The total impact to the county is estimated to be 164 total FTE jobs with a new payroll of around \$5.4 million.⁶¹ A full analysis for the Commonwealth of Kentucky estimated that 14 additional full-time jobs would be created for an estimated total impact of 178 jobs and a payroll of 6.0 million.⁶² Consequently, the project is expected to generate \$434,000 in income and sales taxes accruing to the Commonwealth of Kentucky.⁶³

For the Operation Phase of the project, Meade County Solar stated that two to three full-time workers would be necessary to support continued operation of the site over the 30-year project life.⁶⁴ The Operation Phase will have an additional combined indirect and induced impact of 3.4–5.0 jobs throughout the county and state.⁶⁵ Accounting for the displaced economic impact of agricultural production on the land, the Operation Phase is estimated to have a net, present value, total impact of \$5.9 million to \$8.9 million in payroll.⁶⁶ Over 30 years, this results in an estimated \$423,000 to \$643,000 in tax revenues to the Commonwealth of Kentucky.⁶⁷

⁵⁹ *Id.* at 164–165.

⁶⁰ *Id.* at 164.

⁶¹ *Id.* at 165.

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.* at 166.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.* at 167.

Meade County Solar is under a 20-year contract with BREC to sell 100 percent of the produced electricity at a fixed price of \$27.30 per MWh.⁶⁸ The output value of the electricity produced over the contact period is \$39.1 million, assuming no solar degradation.⁶⁹ The economic output of the site converted for solar production is significantly greater than the value of the land's economic output if it were to remain in agricultural use.⁷⁰

Having reviewed the record, the Siting Board finds that the Meade County Solar facility will have a positive economic impact on the region.

Existence of Other Generating Facilities

Meade County Solar investigated the feasibility of locating the proposed facility on a site where existing electric generating facilities were located. However, no such location in Meade County was identified.⁷¹

Local Planning and Zoning Requirements

Pursuant to Meade County Ordinance No. 2021-005 "Solar Energy Systems" 1, the Proposed Project is a Level 3 Solar Energy System (Level 3 SES), defined as any system that does not satisfy the parameters for a Level 1 or Level 2 Solar Energy System. Setback requirements for a Level 3 SES are (1) all components of the SES shall be at least 50 feet from the perimeter property lines of the project area and at least 250 feet from any residential structure, nursing home, church, or school; interconnection facilities

⁶⁸ *Id.* at 168.

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.* at 123.

may be located within the setback lines; (2) no interior property line setbacks shall be required if the project spans multiple contiguous properties; and (3) the Planning and Zoning Commission may require more stringent setback lines, to be determined on a case-by-case basis.⁷² A complete copy of Meade County Ordinance No. 2021-005 is found in the Application, Exhibit 5 Attachment. The Siting Board finds that the Project as proposed complies with the zoning ordinance.

Impact on Transmission System

Meade County Solar states that the proposed facility's effect on the electricity transmission system of Kentucky will be minimal.⁷³ Further, Meade County Solar anticipates that it will bear any costs related to upgrades to the electricity transmission system of Kentucky that are directly related to the proposed facility and required for its interconnection and operation.

The information supporting the expectation of minimal effects on the electricity transmission system, and the steps that Meade County Solar took to confirm such effects include the required Midcontinent Independent System Operator (MISO) studies. The purpose of the System Impact Study is to determine a plan, with estimated cost and construction time, to connect the proposed facility to the BREC transmission system. The System Impact Study determines potential impacts to the regional electric grid and the need for any network upgrades to mitigate potential impacts.

In February 2020, the Applicant emailed BREC to inquire about the capacities of various 69kV transmission lines in Meade County. At that time, the Applicant's primary

⁷² Application at 27-28

⁷³ *Id.* at 153

proposed point of interconnection (POI) was BREC's 69 kV Flaherty Tap–Flaherty Substation line, whose rating was described by BREC as “approximately 40 MVA.” In that same email, BREC described the 69 kV Custer-Flaherty Tap line (the currently proposed POI) as having a rating of “approximately 50 MVA.” In April 2020, BREC specified that the segment of the 69 kV transmission line from Flaherty Tap to Custer was rated 53 MVA.⁷⁴

In June 2020, the Applicant submitted an Interconnection Request for a 40 MW Generating Facility (IR) to MISO, the regional transmission system operator governing BREC's 69 kV transmission system in the Meade County area. In that initial IR, the Applicant identified the 69 kV Flaherty Tap line as the primary POI. The initial MISO IR dated June 19, 2020, with banking information redacted, is filed in the record.⁷⁵

In March 2021, the Applicant provided an updated IR to MISO, which included a change in the primary POI from the 69 kV Flaherty-Flaherty Tap line to the 69 kV Custer-Flaherty Tap line.⁷⁶

In April 2021, in order to provide additional information regarding the proposed facility's projected effect on the electricity transmission system, the Applicant engaged a third-party engineering consultant to determine the ability of the transmission grid to accommodate the export of up to 40 MW from the Project when interconnecting to the 69 kV Custer-Flaherty Tap transmission line. The consultant, Electric Power Engineers (EPE), performed load flow calculations using the MISO 2025 Summer Peak model,

⁷⁴ Application at 128

⁷⁵ *Id.* at 131.

⁷⁶ *Id.* at 140.

updated by including higher-queued generation projects in the model. The scope of the EPE study was designed to mirror the anticipated scope of MISO's study. EPE's analysis indicates that the 69kV Custer-Flaherty Tap transmission line will allow the Project to export up the full 40 MW of generation without any transmission upgrades.⁷⁷

The Siting Board finds that Meade County Solar has satisfied the requirements of KRS 278.710(f) and that the additional load imposed upon the electricity transmission system by use of the Meade County Solar facility will not adversely affect the reliability of service for retail customers of electric utilities regulated by the Public Service Commission (PSC). This is based upon Meade County Solar's commitment to the interconnection process requirements and its acceptance of any cost obligations resulting from the interconnection process and protocols consistent with the requirements under KRS 278.212.

Compliance with Setback Requirements

Applicant has requested no deviation from the statutory setback requirements. The proposed setbacks match or exceed the local ordinance as set forth above.

History of Environmental Compliance

Neither Meade County Solar, nor any person or entity with an ownership interest in Meade County Solar has violated any state or federal environmental laws or regulations. There are no known actions, whether judicial or administrative, pending against Meade County Solar, nor any person or entity with an ownership interest in Meade

⁷⁷ Application at 150.

County Solar.⁷⁸ The Siting Board considers this an important factor and finds that that certain reporting be made in the event the certificate is transferred or the ownership/control is changed. This will be set forth more fully in Appendix A at mitigation measure 29.

Decommissioning

The proposed solar facility would have an expected minimum useful life of 30 years.⁷⁹ Lease agreements with participating landowners include commitments regarding infrastructure removal and land restoration. Additionally, the Applicant must meet decommissioning requirements under the Conditional Use Permit (CUP) issued by Meade County Zoning Board of Adjustments, including removal of all non-utility owned equipment, conduit, structures, fencing, roads, and foundations to the depth of three feet, and Restoration of the property to substantially similar physical condition that existed immediately prior to construction of the Solar Energy System (SES).⁸⁰ The CUP also requires:

Prior to construction, a Surety Bond or other form of security acceptable to the County shall be posted in an amount sufficient for the decommissioning of the SES and restoration of the project site, in case of abandonment of the site and/or in the event the commission must remove the facility. Abandonment shall be when the SES ceases to transfer energy on a continuous basis for twelve (12) months. The Surety Bond or other form of security shall be one hundred (100) percent of a reasonable estimate submitted for the decommissioning of the project, to be re-calculated every five (5) years during the life of the project. The cost of the

⁷⁸ Application at 206.

⁷⁹ Meade County Solar's Response to Staff's Post Hearing Request for Information (filed Oct. 20, 2021), Response 2 Attachment at 4.

⁸⁰ *Id.*

decommissioning will include a reasonable reduction for the scrap value of the components left on the property.⁸¹

Meade County Solar has stated that, prior to construction, it will provide a decommissioning cost estimate for the removal of the SES from the leased property (net of salvage value) and the restoration of the soil surface to a condition reasonably similar to its original condition and post or arrange for the posting of security funds in a manner and amount sufficient to ensure the decommissioning consistent with the decommissioning cost estimate. Meade County Solar has also committed to updating the decommissioning cost estimate every five years and fully-performing its decommissioning, removal, and restoration obligations within six months of the termination of the lease agreements.⁸²

The Wells Report does not discuss decommissioning or make any recommended mitigation measures regarding decommissioning.

The Siting Board finds that mitigation measures are necessary to insure protection from potential nonperformance of the decommissioning obligation. The Siting Board will require Meade County Solar to implement mitigation measures that require it and its successors and assigns to meet all land restoration requirements in the leases with participating landowners, as well as mitigation measures that require a decommissioning plan specific to Meade County Solar. These additional mitigation measures are outlined in Appendix A, mitigation measures 30 through 34.

⁸¹ *Id.*

⁸² *Id.*

CONCLUSION

After carefully considering the criteria outlined in KRS Chapter 278, the Siting Board finds that Meade County Solar has presented sufficient evidence to support the issuance of a Construction Certificate to construct the proposed merchant solar facility. The Siting Board conditions its approval upon the full implementation of all mitigation measures and other requirements described herein and listed in Appendix A to this Order. A map showing the location of the proposed solar generating facility is attached hereto as Appendix B.

IT IS THEREFORE ORDERED that:

1. Meade County Solar's application for a Construction Certificate to construct an approximately 40 MW merchant solar electric generating facility in Meade County, Kentucky, is conditionally granted subject to full compliance with the mitigation measures and conditions prescribed in Appendix A.
2. Meade County Solar shall fully comply with the mitigation measures and conditions prescribed in Appendix A.
3. In the event mitigation measures within the body of this Order conflict with those prescribed in Appendix A, the measures in Appendix A shall control.
4. This case is closed and removed from the commission's docket.

By the Kentucky State Board on Electric
Generation and Transmission Siting



ATTEST:

A handwritten signature in blue ink that reads "Linda C. Bidwell". The signature is written in a cursive style and is positioned above a horizontal line.

Executive Director
Public Service Commission
on behalf of the Kentucky State
Board on Electric Generation
and Transmission Siting

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY STATE BOARD ON ELECTRIC GENERATION AND TRANSMISSION SITING IN CASE NO. 2020-00390 DATED OCT 29 2021

MITIGATION MEASURES AND CONDITIONS IMPOSED

The following mitigation measures and conditions are hereby imposed on Meade County Solar LLC (Meade County Solar) to ensure that the facilities proposed in this proceeding are constructed as ordered.

1. A final site layout plan shall be submitted to the Siting Board upon completion of the final site design. Deviations from the preliminary site layout should be clearly indicated on the revised graphic. Those changes could include, but are not limited to, location of solar panels, inverters, transformers, substation, operation and maintenance building or other Project facilities and infrastructure.

2. Any change in the Project boundaries from the information which formed this evaluation shall be submitted to the Siting Board for review.

3. The Siting Board will determine if any deviation in the boundaries or site layout plan is likely to create a materially different pattern or magnitude of impacts. If not, no further action is required, but if yes, the application will support the Siting Board's effort to revise its assessment of impact and mitigation requirements.

4. A final, Project specific, construction schedule, including revised estimates of on-site workers and commuter vehicle traffic, shall be submitted to the Siting Board. Deviations from the preliminary construction schedule provided in this matter should be clearly indicated.

5. The Siting Board will determine if any deviation to the construction schedule or workforce estimates is likely to create a materially different pattern or magnitude of impacts. If not, no further action is required, but if yes, the Applicant will support the Siting Board's effort to revise its assessment of impacts and mitigation requirements.

6. The Applicant or its contractor will control access to the site during construction and operation. All construction entrances will be gated and locked when not in use.

7. The Applicant's access control strategy shall also include appropriate signage to warn potential trespassers. The Applicant must ensure that all site entrances and boundaries have adequate signage, particularly in locations visible to the public, local residents, and business owners.

8. According to NESC regulations, the security fence must be installed prior to any electrical installation work. The substation shall have its own separate security fence and locked access installed. Meade County Solar will comply with the fencing requirements of NESC.

9. Existing vegetation between solar arrays and nearby roadways and homes shall be left in place to the extent feasible to help minimize visual impacts and screen the project from nearby homeowners and travelers.

10. The Applicant shall implement planting of native evergreen species as a visual buffer to mitigate viewshed impacts, particularly in areas directly adjacent to the Project without existing vegetation.

11. The Applicant shall carry out visual screening consistent with the plans proposed in its application, Site Assessment Report, and the maps included and ensure

proposed new vegetative buffers are successfully established and develop as expected over time. Should vegetation used as buffers die over time, Meade County Solar shall replace them as appropriate.

12. The Applicant shall provide a visual buffer between Project infrastructure and residences or other occupied structures with a line of sight to the facility to the reasonable satisfaction of the affected adjacent property owners. If vegetation is used, plantings should reach eight feet high within four years. To the extent that an affected adjacent property owner indicates to the Applicant that such a buffer is not necessary, Meade County Solar will obtain that property owner's written consent and submit such consent in writing to the Siting Board.

13. Meade County Solar shall cultivate at least two acres of native pollinator-friendly species onsite.

14. Meade County Solar will not remove any existing vegetation except to the extent it must remove such vegetation for the construction and operation of Project components.

15. Meade County Solar is required to limit the construction activity, process, and deliveries to the hours between 8 a.m. and 6 p.m. Monday through Saturday. Non-noise-causing and non-construction activities can take place on the site between 7 a.m. and 10 p.m., Monday through Sunday, including field visits, arrival, departure, planning meetings, mowing, surveying, etc. To the extent that the Applicant has proposed more limited hours in the "Neighborhood Zones," those are approved; however, the herein stated requirements govern all parts of the project as the minimum.

16. Meade County Solar shall notify residents and businesses within 2,400 feet of the project boundary about the construction plan, the noise potential, and mitigation plans one month prior to the start of construction.

17. If the pile driving activity occurs within 1,500 feet of a noise sensitive receptor, Meade County Solar shall implement a 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).

18. Meade County Solar shall implement a Customer Resolution Program to address any complaints from surrounding landowners. Meade County Solar shall also submit annually a status report associated with its Customer Resolution Program, providing, among other things, the individual complaints, how Meade County Solar addressed those complaints, and the ultimate resolution of those complaints identifying whether or not the resolution was to the complainant's satisfaction.

19. Meade County Solar shall place panels, inverters and substation equipment consistent with the distances to noise receptors indicated in Meade County Solar's noise and traffic study and with its proposed setbacks of 500 feet from a residence for solar panels and 1,000 feet from an inverter to a residence. Nevertheless, Meade County Solar shall not place solar panels or string inverters, if used, closer than 150 feet from a residence, church or school, 25 feet from non-participating adjoining parcels, and 50 feet from adjacent roadways. Meade County Solar shall not place a central inverter, and, if used, energy storage systems, closer than 450 feet from a residence, church or school. These setbacks shall not be required for residences owned by landowners involved in the Project that explicitly agree to lesser setbacks and have done so in

writing. All agreements by participating landowners to lesser setbacks must include language advising the participating landowners of the standard setback required by the order. All agreements by participating landowners to lesser setbacks must be filed with the Siting Board prior to commencement of construction of the Project.

20. Meade County Solar shall fix or pay for damage resulting from any vehicle transport to the project site. For damage resulting from vehicle transport in accordance with all permits, those permits will be controlling.

21. Meade County Solar shall comply with all laws and regulations regarding the use of roadways.

22. Meade County Solar shall implement ridesharing between construction workers when feasible, use appropriate traffic controls or allow flexible working hours outside of peak hours to minimize any potential delays during AM and PM peak hours.

23. The Applicant shall consult with the Kentucky Transportation Cabinet (KYTC) regarding truck and other construction traffic and obtain necessary permits from the KYTC.

24. The Applicant shall consult with the Meade County Road Department (MCRD) regarding truck and other construction traffic and obtain necessary permits from the MCRD.

25. The Applicant shall develop special plans and obtain necessary permits before transporting heavy loads, especially the substation transformer, onto state or county roads.

26. Meade County Solar shall comply with any road use agreement executed with MCRD. Such an agreement might include special considerations for overweight loads, routes utilized by heavy trucks, road weight limits, and bridge weight limits.

27. Meade County Solar shall develop and implement a traffic management plan to minimize the impacts on traffic flow and keep traffic safe. Any such traffic management plan shall also identify any noise concerns during the construction phase and develop measures that would address those noise concerns.

28. Meade County Solar shall properly maintain construction equipment and follow best management practices related to fugitive dust throughout the construction process, including use of water trucks. Dust impacts shall be kept at a minimal level. The Siting Board requires the Applicant's compliance with 401 KAR 63:010.

29. If any person shall acquire or transfer ownership of, or control, or the right to control the Project, by sale of assets, transfer of stock, or otherwise, or abandon the same, Meade County Solar or its successors or assigns shall request explicit approval from the Siting Board with notice of the request provided to the Meade County Fiscal Court. In any application requesting such abandonment, sale or change of control, the Applicant shall certify its compliance with KRS 278.710(1)(i).

30. As applicable to individual lease agreements, Meade County Solar, its successors, or assigns will abide by the specific land restoration commitments agreed to by individual property owners, as described in each executed lease agreement.

31. Meade County Solar shall file a full and explicit decommissioning plan with the Siting Board. This plan shall commit Meade County Solar to removing all facility components, above-ground and below-ground, regardless of depth, from the project

site. Upon its completion, this plan shall be filed with the Siting Board or its successors. The decommissioning plan shall be completed at least one month prior to construction of the Project.

32. Meade County Solar shall file a bond with the Meade County Fiscal Court, equal to the amount necessary to effectuate the explicit or formal decommissioning plan naming Meade County as a third-party obligee (or secondary, in addition to individual landowners) beneficiary, in addition to the lessors of the subject property insofar as the leases contain a decommissioning bonding requirement, so that Meade County will have the authority to draw upon the bond to effectuate the decommissioning plan. For land in which there is no bonding requirement otherwise, Meade County shall be the primary beneficiary of the decommissioning bond for that portion of the project. The bond(s) shall be filed with the Meade County Treasurer or with a bank, title company or financial institution reasonably acceptable to the county. The acceptance of the county of allowing the filing the bond(s) with an entity other than the Fiscal Court, through the Meade County Treasurer, can be evidenced by a letter from the Judge-Executive, the Fiscal Court, or the County Attorney. The bond(s) shall be in place at the time of commencement of operation of the Project. The bond amount shall be reviewed every five years at Meade County Solar's expense to determine and update the cost of removal amount. This review shall be conducted by an individual or firm with experience or expertise in the costs of removal or decommissioning of electric generating facilities. Certification of this review shall be provided to the Siting Board or its successors and the Meade County Fiscal Court. Such certification shall be by letter and shall include the current amount of the anticipated bond and any change in the costs of removal or decommissioning.

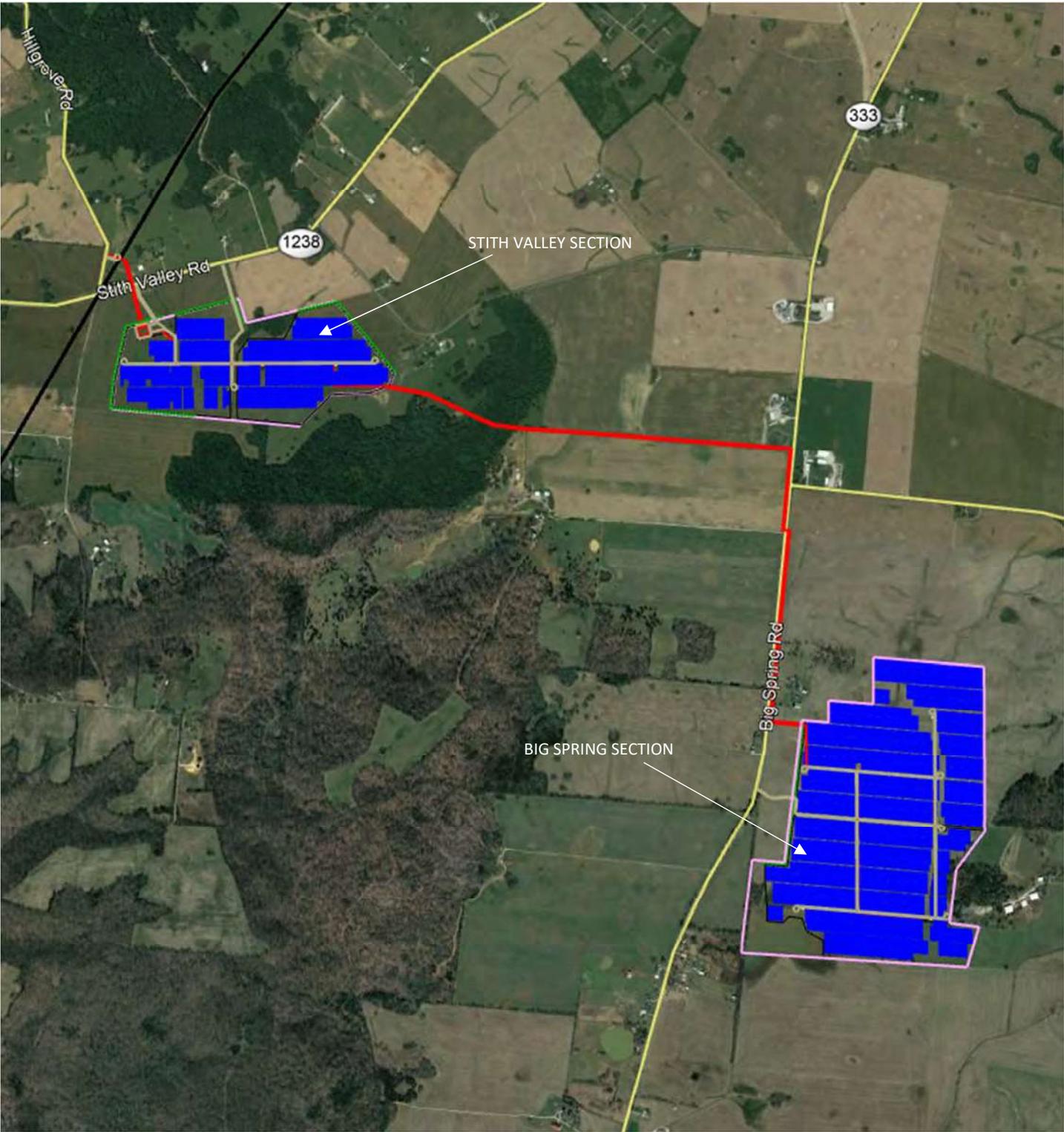
33. Meade County Solar or its assigns must provide notice to the Siting Board if during any two-year (730 days) period, it replaces more than 20 percent of its facilities. Meade County Solar shall commit to removing the debris and replaced facility components from the Project site and Meade County upon replacement. If the replaced facility components are properly disposed of at a permitted facility, they do not have to be physically removed from Meade County. However, if the replaced facility components remain in Meade County, Meade County Solar must inform the Siting Board of where the replaced facility are being disposing of.

34. Any disposal or recycling of Project equipment, during operations or decommissioning of the Project, shall be done in accordance with applicable laws and requirements.

APPENDIX B

APPENDIX TO AN ORDER OF THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING IN
CASE NO. 2020-00390 DATED OCT 29 2021

ONE PAGE TO FOLLOW



 COMMUNITY ENERGY®	MEADE COUNTY SOLAR - 40MW SOLAR PROJECT MEADE COUNTY, KY		SITE PLAN OVERVIEW
COMMUNITY ENERGY SOLAR, LLC 3 RADNOR CORP CENTER, SUITE 300 100 MATSONFORD RD. RADNOR, PA 19087 (866) 946-3123		GUSTON KY: 37.48N / -88.16W	
VINE GROVE KY: 37.82N / -86.13W			
DATE: 5.19.2021			

*L Allyson Honaker
Goss Samford, PLLC
2365 Harrodsburg Road, Suite B325
Lexington, KENTUCKY 40504

*David S Samford
Goss Samford, PLLC
2365 Harrodsburg Road, Suite B325
Lexington, KENTUCKY 40504

*Guy Garcia
Meade County Planning & Zoning - Chairman
516 Hillcrest Drive, Ste. 13
Brandenburg, KENTUCKY 40108

*Jeff Greer
2125 Highway 70
Brandenburg, KENTUCKY 40108

*Mark David Goss
Goss Samford, PLLC
2365 Harrodsburg Road, Suite B325
Lexington, KENTUCKY 40504

*Karen Chiari
Meade county Planning & Zoning- Administrator
516 Hillcrest Drive, Ste. 13
Brandenburg, KENTUCKY 40108