

**BEFORE
THE OHIO POWER SITING BOARD**

In The Matter of The Application of **Scioto)
Farms Solar Project, LLC**, for a Certificate of)
Environmental Compatibility and Public Need)
For The Construction of a Solar Powered)
Electric Generation Facility in Wayne)
Township, Pickaway County, Ohio)

Case No. 21-868-EL-BGN

**SCIOTO FARMS SOLAR PROJECT, LLC'S RESPONSE TO
STAFF'S FIRST DATA REQUEST**

Noise

- 1) What is the manufacturer, model, and MVA of the substation transformer used in the sound study?

RESPONSE: A substation transformer model has not yet been selected for the Project; therefore, the noise model utilized a generic transformer model with the expected sound of the Project transformer. The proposed Project substation includes one step-up transformer with an estimated sound power level of approximately 91.3 dBA. A tonal penalty of 5 dBA was added to each octave band resulting in an overall sound power level of 96.3 dBA for the substation transformer. The generic substation transformer model utilized is rated as a 175 MVA model.

The sound signature used for the Substation is provided below:

Octave Band (Hz)	63	125	250	500	1,000	2,000	4,000	8,000
	dB	dB	dB	dB	dB	dB	dB	dB
Substation (Total 96.3 dBA)	74.8	86.9	89.4	94.8	92.0	88.2	83	73.9

- 2) What standards, apart from calibrating the noise meters, were used in conducting the ambient noise determination?

RESPONSE: Stantec has conducted the noise measurement surveys based on the following standards (meter calibration and Data Measurement):

- Ohio Administrative Code Chapter 4906-4 (08 and 09)
- ANSI/ASA S1.4-2014/Part 1 / IEC 61672-1:2013. American National Standard for Electroacoustics – Sound Level Meters Part 1:
- Specifications (reaffirmed by ANSI August 13, 2019)

- ANSI/ASA S1.40-2006 (R2020) American National Standard Specifications and Verification Procedures for Sound Calibrators
- (reaffirmed by ANSI, 8 May 2020)
- ANSI/ASA S12.9-1992 Parts 2 and 4 – ANS Quantities and procedures for Description and Measurement of Environmental Sound, as applicable
 - Part 2 – Measurement of Long-term, Wide Area Sound
 - Part 4 – Noise Assessment and Prediction of Long-term Community Response

The industry standards for noise measurements including temperature and precipitation ranges, as well as extended monitoring periods were followed.

- 3) Did the ambient study comply with ANSI S12.100-2014 Methods to define and measure the residual sound in protected natural and quiet residential areas and/or with ANSI S12.9-1992 Quantities and procedures for description and measurement of environmental sound: Part 2 Measurement of long term, wide-area sound?

RESPONSE: Both the ANSI S12.9-1992 and ANSI S12.100-2014 standards were considered and applied as appropriate.

Anomalous sounds and data acquired during weather events were filtered from the dataset before summarizing the ambient sound statistics.

The removal of high frequency bandwidths was considered (ANSI S12.100-2014); however, was not applied to this study. This standard is often applied to remove sounds such as crickets, from the dataset. The following facts were considered in the decision.

- The sounds acquired during the measurement periods represent the ambient sound present in the environment. These same sounds would be present during the post-construction study, which would be conducted under the same standards and methods as the pre-construction to maintain consistency in the analyses.
- Crickets (generally, the main reason to remove the high-frequency bandwidths) are more prevalent in nighttime hours when the equipment will be in standby mode and not operating due to no solar power generation.
- Time of Year – the study was completed in early July; prior to the onset of the fall season, when cricket activity increases. Cricket noise was not noted as prevalent during the July 2021 sound survey.

Cultural Resources

- 4) The cultural resources programmatic agreement states that the archaeology survey report is estimated to be completed by the fourth quarter of 2021. Please forward a copy of the report to Staff when it is sent to SHPO.

RESPONSE: The Application states that field work was ongoing through December 2021 and the Programmatic Agreement (PA) says that it would be ongoing through the fourth quarter of 2021. Due to extenuating field conditions, the field survey effort has not yet been completed, however we anticipate completion of the field work by the end of January 2022 (weather dependent) with the report to follow in late January or early February.

The term of the PA runs through March 31, 2022 and the Applicant is confident that the surveys and reporting effort will be completed by that date.

- 5) The cultural resources programmatic agreement states that the history/architecture survey report is estimated to be completed in the third quarter of 2021. Please forward a copy of the report to Staff when it is sent to SHPO.

RESPONSE: The history/architecture survey report was sent to SHPO on December 9, 2021 and the report that was submitted to them was also included within the OPSB application (Exhibit S).

- 6) Please forward to Staff SHPO response letters once they are received concerning the archaeology and history/architecture survey reports.

RESPONSE: A SHPO response regarding the History-Architecture Survey was received on January 6, 2022. The response is provided as an attachment to this data request response (Attachment 1).

Land Use

- 7) Please provide an updated Table 08-8 to include total acres of impacts for each land use type and project component type, per OAC 4906-4-08(C)(1)(c).

RESPONSE: Table 8-8 has been updated to include the total acres of impact for each land use type as well as by component type.

Table 8-8. Project Land Use Impacts by Project Component (revised 1/14/2022)

Project Component	Disturbance by Land Use Type		Permanent Disturbance (Acres)
	Row Crop	Old Field	
Access Road	15.3	0.3	15.6
Inverter	0.2	<0.1	0.2
Solar Array	576.7	5.9	582.6
Substation	2.0	--	2.0
Switchyard	7.3	--	7.3
O&M Building	2.0	--	2.0
Other Solar Field*	120.0	2.4	122.4
TOTAL	723.5	8.7	732.1

***Other Solar Field includes all area within the fenceline but without infrastructure present**

- 8) Some of the listed population centers in Table 08-9 appear to exceed 5 miles in distance from the project area. Please provide an updated Table 08-9 to include distances from project area to listed population centers.

RESPONSE: Two communities that are located at a distance greater than 5 miles were inadvertently included in Table 8-9. The table has been updated to reflect the communities within 5 miles and the distances from the Project to each community.

Table 8-9. Current Population Counts and 10-year Projections of Surrounding Populated Places within a 5-mile Radius of the Project Area (revised 01/14/2022)

Populated Place (Distance to Project)	2000 Population	2010 Population	2020 Estimate	2030 Estimate	Annual Percent Change	2010 Population Density (People per Square Mile)
Circleville City (4.6 miles)	13,485	13,506	14,050	14,050	0.4%	2,004
Williamsport Village (5.0 miles)	1,002	1,036	1,074	1,122	0.4%	565

- 9) In accordance with 4906-4-08(D)(3), “describe the identified recreation and scenic areas within ten miles of the project area in terms of their proximity to population centers, uniqueness, topography, vegetation, hydrology, and wildlife. [Include] an evaluation of the impact of the proposed facility on identified recreational and scenic areas within ten miles of the project area and describe plans to mitigate any adverse impact.” Provide further detail on each recreational resource, as well specific detail as to whether the project would be visible from each recreational resource.

RESPONSE: Table 8-10 Recreational Areas Within a 10-mile Radius of the Project Area has been updated to provide additional detail on each recreational area identified within 10 miles. In addition, the Applicant has rerun the viewshed assessment (Visual Resources Technical Report (Exhibit U)) to include the existing vegetation on the landscape to provide a realistic determination regarding the potential visibility of each recreation area. A uniform deciduous vegetation height of 40 feet was used with the model. Consistent with the Visual Resources Technical Report included in the Application (Exhibit U), it was assumed that any resource located at a distance greater than 2 miles from the Project is not actually visible to the human eye. The results of the updated viewshed are provided in the attached Figure 2-A - Visibility of Recreation and Scenic Areas

Within 10 Miles of Project Area and Table 8-10 (revised).

Table 8-10. Recreational Areas Within a 10-mile Radius of the Project Area (revised 1/14/2022)

Recreational Area	Owner/Type of Recreational Resource	Distance from Project Area (Miles)	Project Visibility	Impact
Martha Gunder Schneider Preserve (WRP_Pickaway, OH (39129)) ³	NRCS/Nature Preserve with Birding	0.4	No	No Impact
Circleville Canal Wildlife Area ²	ODNR/Wildlife Area with Hiking	0.4	No	No Impact
Wildlife Habitat Restoration Area 65-2 ¹	ODNR/Restoration Area	1.8	Yes	No Impact
Wildlife Habitat Restoration Area	ODNR/Restoration Area	2.9	No	No Impact
WRP Ross, OH (39141)	NRCS/Wetland Reserve Program	3.0	No	No Impact
WRP Pickaway, OH (39129)	NRCS/Wetland Reserve Program	3.8	No	No Impact
Betsch Fen Fee	The Nature Conservancy/Natural Area	4.3	No	No Impact
Wildlife Habitat Restoration Area	ODNR/Restoration Area	4.5	No	No Impact

Recreational Area	Owner/Type of Recreational Resource	Distance from Project Area (Miles)	Project Visibility	Impact
Kinnikinnick Scioto River Access	ODNR/Wildlife area with Hunting, Hiking, Birding, and Fishing	4.9	No	No Impact
Wildlife Habitat Restoration Area	ODNR/Restoration Area	5.0	No	No Impact
Elmon Richards Scioto River Conservation Area & Boating Area	ODNR/Boat Access to Scioto River and Birding	5.1	No	No Impact
WRP Pickaway, OH (39129)	NRCS/Wetland Reserve Program	5.5	No	No Impact
Wildlife Habitat Restoration Area	ODNR/Restoration Area	5.9	No	No Impact
Wildlife Habitat Restoration Area	ODNR/Restoration Area	6.0	No	No Impact
Pleasant Valley Wildlife Area	ODNR/Wildlife Area with Hunting and Birding	7.4	No	No Impact
WRP Pickaway, OH (39129)	NRCS/Wetland Reserve Program	7.7	No	No Impact
Great Seal State Park	ODNR/Recreational Area including Hiking, Hunting, Camping, etc.	8.0	No	No Impact
The Trump Wildlife Preserve	ODNR/Wildlife area with hunting	8.3	No	No Impact
Hopewell Culture National Historic Park	NPS/Historic property with earthworks	8.4	No	No Impact
Wildlife Habitat Restoration Area	ODNR/Restoration Area	8.6	No	No Impact
A.W. Marion State Park	ODNR/Park with Boating, Camping, Fishing etc.	8.8	No	No Impact
Stages Pond Nature Preserve	ODNR/Nature Preserve with hiking trails	9.6	No	No Impact

#VRI Label (within 2-miles) shown on Figure 2A - Visibility of Recreation and Scenic Areas Within 10 Miles of Project Area

Threatened and Endangered Species

- 10) Small, segmented areas of suitable habitat for the lark sparrow, a state endangered bird, were identified in the project area. The Application states that impact to this species is not anticipated due to the majority of the project area consisting of agricultural land. Does the Applicant commit to the seasonal construction recommendation (avoiding construction in suitable habitat between May 1 and July 31) set forth by the ODNR should construction in these areas be necessary?

RESPONSE: As documented in the Ecological Assessment provided as Exhibit Q, potential habitat for the Lark Sparrow is limited to areas identified as Old Field. Approximately 32.0 acres of Old Field habitat were identified within the Project Area and it is anticipated that 8.7 acres of Old Field habitat would be disturbed as part of the Project. The

Applicant will either work with ODNR Department of Wildlife to complete pre-construction nest identification surveys in the limited areas of Old Field where disturbance would occur or commit to avoiding clearing in areas identified as Old Field between the period of May 1 and July 31.

Wind Velocity

- 11) Please provide the maximum values of the three-second wind gust. Please also provide the 50 and 100 year maximum wind speeds.

RESPONSE: Ohio Building Code 2018 (adopts IBC 2015)

Risk Category I

3 second wind gust = 105 mph (Exposure C)

- ASCE 7-10 Figure 26.5-1C

100 yr MRI = 96 mph (Exposure C)

- ASCE 7-10 Commentary Figure CC-4

50 yr MRI = 90 mph (Exposure C)

- ASCE 7-10 Figure Commentary Figure CC-3

- 12) What design considerations, efforts, and precautions will be taken to assure that the facility will not be negatively impacted by the maximum wind speeds?

RESPONSE: The tracker system will be engineered with a safety factor to withstand negative impact from high wind speeds. In addition, the tracker system will monitor wind conditions on site and adjust position to minimize risk of a negative impact during high wind events.

- 13) What different designs of trackers are yet under consideration?

RESPONSE: Potential racking/tracker vendors include: ATI, Nextracker, FTC, PV Hardware, and Gamechange.

- 14) What is the stow mode for the panels during high wind occurrences?

RESPONSE: The stow mode for the tracker during high wind events depends on the selected racking/tracker vendor. A racking/tracker vendor has not yet been selected. A common stow mode points the leading edge of the tracker towards the ground to brace against oncoming wind.

- 15) Will the meteorological stations monitor wind speed, and would this data be used for adjustments in the tracker system and the implementation of the stow mode?

RESPONSE: Yes. The meteorological stations will monitor wind speed and the data will be used for adjustments in the tracker system and the implementation of a stow mode.

- 16) What loads or forces would be expected on the panels, racking, pilings, and tracking mechanisms for various wind velocities?

RESPONSE: These loads will be calculated by the racking/tracker vendor based on the design wind velocities. Those loads will be incorporated into structural simulations to determine the resultant pile loads, and then a pile design. A racking/tracker vendor has not yet been selected, so these loads are not available.

- 17) What stresses would be induced in these various components and how do these stresses compare to the maximum allowable stresses of the panels and supporting structures?

RESPONSE: These stresses will be calculated as described above. The design of the system, including torque tube, drive gear, and pile design, will account for the maximum allowable stresses of the components. Tracker stow algorithms will minimize the risk of surpassing the maximum allowable stress of the panels.

Attachments

- SHPO response letter regarding the History-Architecture Survey - January 6, 2022
- Figure 2A -Visibility of Recreation and Scenic Areas Within 10 Miles of Project Area



In reply, please refer to:
2021-PIC-51994

January 6, 2022

Anne Lee
Commonwealth Heritage Group
4608 Indianola Ave, Ste. C
Columbus, OH 43214

RE: Scioto Farms Solar Project – History-Architecture Reconnaissance Survey
Wayne Township, Pickaway County, Ohio

Dear Ms. Lee:

This letter is in response to correspondence received on December 9, 2021, and additional information received on January 5, 2022. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-4). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I History/Architecture Survey for the Scioto Farms Solar Project, Wayne Township, Pickaway County, Ohio* (Commonwealth, 2021). The proposed solar facility will be 1,070 acres, and the indirect Area of Potential Effect (APE) does overlap that of Yellowbud Solar (OPSB #20-0972-E-BGN). The twenty-two (22) properties that were surveyed with the Yellowbud facility were not resurveyed, but were noted in the report. Eighty (80) resources over 50 years of age were surveyed for this report. Of these properties, fifteen (15) had been previously recorded and included one (1) property listed (Ref. #80003210) in the National Register of Historic Places (NRHP), one NRHP-listed historic district (Ref. #SG100003572), and three (3) properties were previously determined to be eligible for listing. As part of this survey, Commonwealth recommended that the previously listed properties were still eligible as were the properties that were previously determined to be eligible. In addition, it was recommended that 28197 Westfall Road (OHI #PIC0070913) was eligible for listing in the NRHP under Criterion A. Commonwealth evaluated sixty-five (65) newly recorded properties. Of the newly recorded properties, three (3) were recommended as eligible for listing in the NRHP (Survey #S015, S082, and S064), and three (3) were recommended for more research before an eligibility recommendation could be made (Survey #S004, S017, and S056). The SHPO agrees with these recommendations.

Out of the previously and newly surveyed properties, two (2) were recommended as potentially being adversely affected by the solar facility. Those properties include 27960 SR 104 (S004) and 2995 Dungan Road (S017). The SHPO agrees with these recommendations, and for the purpose of this review, the SHPO has determined that 27960 SR 104 is potentially eligible for listing under Criteria A and C, and 2995 Dungan Road is potentially eligible for listing under Criterion

C. It was felt that one (1) additional property (179 Davenport) could be adversely affected by the solar facility, but in the information received on January 5, 2022, we were informed that the wooded area at the southeast portion of the facility boundary would remain as is. Therefore, there will be no effect on 179 Davenport.

We are aware that the applicant is planning to install vegetative screening between the facility and the public right of way. This will help minimize the adverse effect the project will have on resources S004 and S017. It is recommended that this mitigation be memorialized in a Memorandum of Understanding between the applicant and the SHPO.

Please note that this determination of effects is for above ground resources only. The archaeological component of the project is being coordinated separately. Our office looks forward to additional coordination for the project with Scioto Farms Solar Project, LLC, and Commonwealth Heritage Group.

If you have any questions, please contact me at kkoehlinger@ohiohistory.org or (614) 298-2000. Thank you for your cooperation.

Sincerely,



Diana Welling, Department Head & Deputy State Historic Preservation Officer for
Resource Protection and Review

"Please be advised that this is a Section 106 decision. This review decision may not extend to other SHPO programs."

RPR Serial No: 1091511

Figure No. 2-A

Visibility of Recreation and Scenic Areas Within 10 Miles of Project Area

Client/Project: Scioto Farms Solar Project, LLC

Scioto Farms Solar Project

Project Location: Pickaway County, Ohio
Prepared by: JLR on 2022-01-10
Reviewed by: JLR on 2022-01-13



Legend

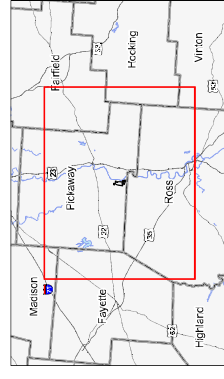
- Security Fence Boundary
- Radius from Project Boundary
- ODNR Land
- Recreation Area
- Visibility⁴
- More Visible
- Less Visible

Existing vegetation included on the landscape to provide a realistic determination regarding the potential visibility of each recreation area. A uniform deciduous vegetation height of 40 feet was used with the model.

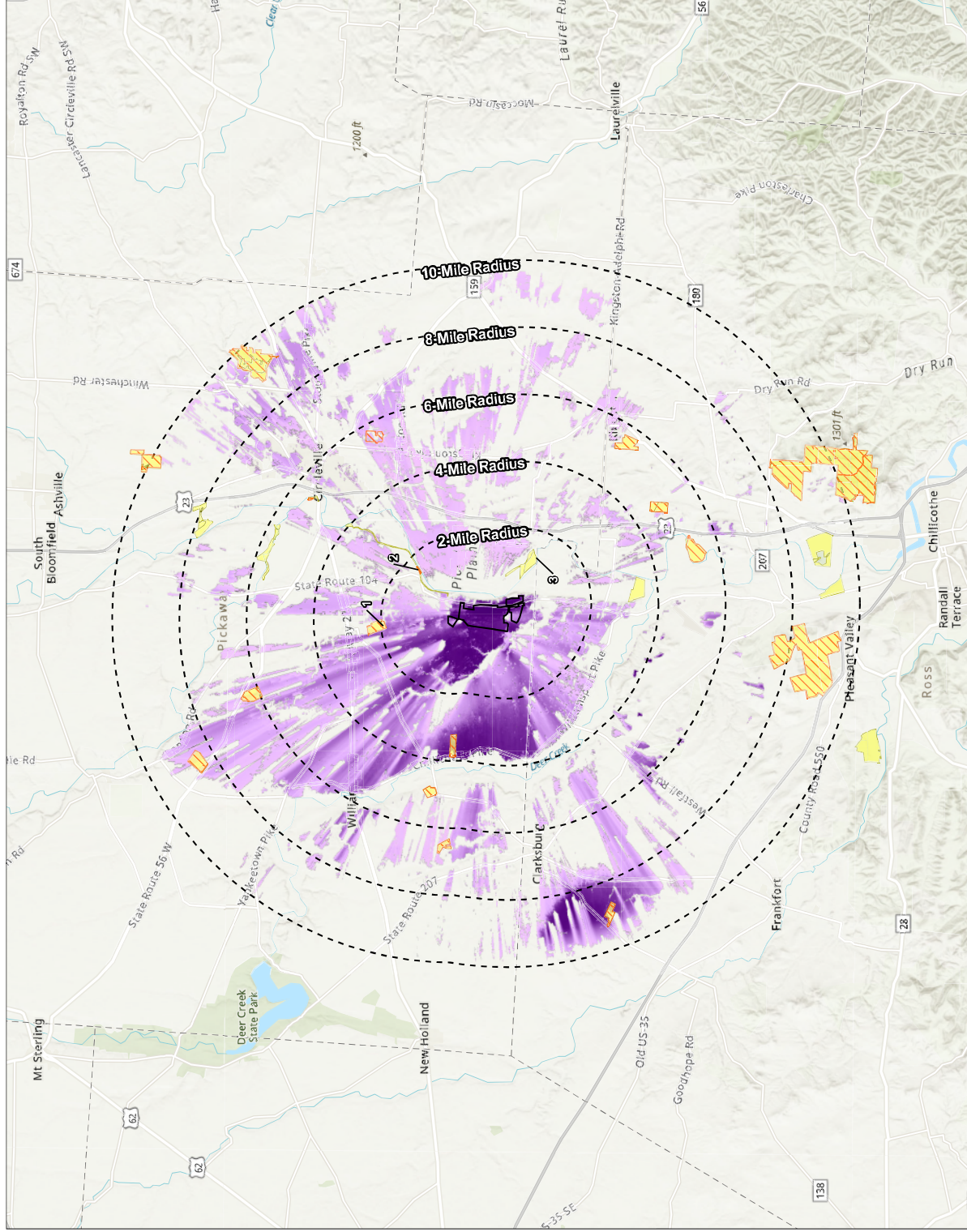
VRI Label (within 2-miles)*

- Pickaway County Wildlife Production Area 65-2
- Circleville Canal Wildlife Area
- Martins Gundersen Preserve

*Any resource located at a distance greater than 2 miles from the Project is not actually visible to the human eye.



Notes:
1. Geographic System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Source: Stantec, Garmin, USGS, NLD, ODN, PAUS, PAUS
3. Visibility model: Visibility of solar panels 20 feet in height above the existing terrain to a 6-foot observer height. 1-meter elevation data and NLD and use data were used for the visibility model.
4. Visibility model: Visibility of solar panels 20 feet in height above the existing terrain to a 6-foot observer height. 1-meter elevation data and NLD and use data were used for the visibility model.



**This foregoing document was electronically filed with the Public Utilities
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1/14/2022 1:43:36 PM

in

Case No(s). 21-0868-EL-BGN

Summary: Response of Scioto Farms Solar Project, LLC to Staff's First Data
Request electronically filed by Teresa Orahood on behalf of Sommer Sheely