APPLICATION

TO THE

OHIO POWER SITING BOARD

FOR A

CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

FOR THE

Juliet Solar Project

Wood County, Ohio

Case No. 20-1760-EL-BGN

March 2021

7X.energy™

Prepared for:

Juliet Energy Project, LLC
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March 12, 2021

Via Electronic Filing

Ms. Tanowa Troupe
Administration/Docketing
Ohio Power Siting Board
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3793

Re: Juliet Energy Project, LLC, Case No 20-1760-EL-BGN

Dear Ms. Troupe:

Enclosed for filing in the above-referenced case is a copy of the Application of Juliet Energy Project, LLC for a Certificate of Environmental Compatibility and Public Need to develop, construct, and operate a 101 megawatt ("MW") solar-powered electric facility in Weston and Milton townships, Wood County, Ohio.

Name of Applicant: Juliet Energy Project, LLC
whose authorized representative is
Cliff Scher
Senior Director, Development
7X Energy, Inc.
3809 Juniper Trace Suite 100
Austin, TX 78738

Name/Location of Proposed Facility: Juliet Solar Farm
Weston and Milton Townships
Wood County, Ohio

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Since the pre-application notification letter was filed, there have been no revisions that appear in the application.

Notarized Statement: *See* Attached Affidavit of Scott Pryor, on behalf of Juliet Energy Project, LLC

Sincerely on behalf of
JULIET ENERGY PROJECT, LLC

Dylan F. Borchers
Elyse H. Akhbari

Enclosure

BEFORE
THE OHIO POWER SITING BOARD

In The Matter of The Application of JULIET ENERGY PROJECT, LLC, for a Certificate of Environmental Compatibility and Public Need For The Construction of a Solar Powered Electric Generation Facility in Wood County, Ohio	))))))	Case No. 20-1760-EL-BGN

AFFIDAVIT OF SCOTT PRYOR OF 7X ENERGY, INC.

STATE OF TEXAS :
: ss.
COUNTY OF TRAVIS :

I, Scott Pryor, being duly sworn and cautioned, state that I am over 18 years of age and competent to testify to the matters stated in this affidavit and further state the following based upon my personal knowledge:

1. I am the Chief Development Officer of 7X Energy, Inc. ("7X"), which indirectly owns 100% of the membership interests of Juliet Energy Project, LLC ("Juliet Energy").

2. Juliet Energy's Application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility and Public Need to develop, construct, and operate a 101 MW solar-powered electric facility was prepared and reviewed by 7X employees that are the primary individuals in charge of the development of Juliet Energy on whom I reasonably rely as subject matter experts.

3. To the best of my knowledge, information, and belief, the information and materials contained in the above-referenced Application are true and accurate.

4. To the best of my knowledge, information, and belief, the above-referenced Application is complete.

Scott Pryor
Chief Development Officer
7X Energy, Inc.

Sworn to before and signed in my presence this 11 day of March 2021.

Notary Public

[SEAL]

ASHLEY HIGHSMITH
Notary Public, State of Texas
Comm. Expires 04-08-2023
Notary ID 131964070

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ACRONYMS AND ABBREVIATIONS

AC	Alternating Current
ANSI	American National Standards Institute
BMP	Best Management Practices
CAUV	Current Agricultural Use Value
dBA	Decibels (A-Weighted)
DC	Direct Current
EDR	Environmental Design and Research
EMF	Electromagnetic Fields
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FTE	Full Time Equivalent
gen-tie	Generation Interconnection
GIS	Geographic Information System
IEEE	Institute of Electrical and Electronics Engineers
JEDI	Jobs and Economic Development Impact
kV	Kilovolt
kW	Kilowatt
MW	Megawatt
MWh	Megawatt-hour
NLCD	National Land Cover Database
NEC	National Electrical Code
NESC	National Electric Safety Code
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NREL	National Renewable Energy Laboratory
NRHP	National Register of Historic Places
O&M	Operations and Maintenance
OAC	Ohio Administrative Code
ODOT	Ohio Department of Transportation
ODNR	Ohio Department of Natural Resources
OGS	Ohio Genealogical Society
OHI	Ohio Historic Inventory
OPSB	Ohio Power Siting Board
PJM	PJM Interconnection, LLC
POI	Point of Interconnection
PV	Photovoltaic
ROW	Right(s)-of-Way
SHPO	State Historic Preservation Office
SR	State Route
SWPA	Source Water Protection Area
SWPPP	Storm Water Pollution Prevention Plan
US	U.S. Route
USFWS	U.S. Fish and Wildlife Service
USGS	U. S. Geological Survey
VRA	Visual Resource Assessment
VSA	Visual Study Area

4906-4-01 PURPOSE AND SCOPE

(A) REQUIREMENTS FOR FILING CERTIFICATE APPLICATIONS

Juliet Energy Project, LLC (the Applicant) is proposing to construct Juliet Solar (the Project), a 101 megawatt (MW) solar-powered electric generation facility (the Facility) located in Wood County, Ohio. The materials contained herein and attached hereto constitute the Applicant's submittal (the Application) for a Certificate of Environmental Compatibility and Public Need (the Certificate), prepared in accordance with Chapter 4906-4 of the Ohio Administrative Code (OAC), Certificate Applications for Electric Generating Facilities and associated facilities.

This Application has been prepared by the Applicant, with support from Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services (EDR). EDR has over 20 years of experience with siting and permitting renewable electric generation facilities.

(B) WAIVERS

The Ohio Power Siting Board (OPSB) may, upon an application or motion filed by a party, waive any requirement of this chapter other than a requirement mandated by statute. By motion filed separate from this Application, the Applicant is requesting a waiver, in part, from the provisions of OAC 4906-4-08(D)(2) - (4), which requires the study of impacts to cultural resources within 10 miles of the project area. Additionally, in light of COVID-19, a waiver has been granted from provisions of OAC 4906-3-03(B) requiring a public information meeting be held in the area where the project is to be located. Instead of an in-person public information meeting, the Applicant hosted a web-based information meeting and a telephone conference meeting, mailed additional Project information to affected landowners, and maintain a Project information website.

4906-4-02 PROJECT SUMMARY AND APPLICANT INFORMATION

(A) PROJECT SUMMARY

The Applicant proposes construction of the Facility in a rural area of Wood County, Ohio. The Facility will consist of photovoltaic (PV) panels, access roads, electric collection lines, a collection substation, a short generation interconnection (gen-tie) line (approximately 50 ft), a laydown area for construction staging, an operation and maintenance (O&M) building, and pyranometers. The energy generated at the Facility will be delivered to American Transmission System Inc.'s (ATSI) Weston 69 kV substation, located immediately to the north of the planned Facility substation location in Weston.

(1) General Purpose of the Facility

The purpose of the Facility is to produce solar-powered electricity that will maximize energy production from available solar resources and deliver clean, renewable electricity to the Ohio bulk power transmission system, serving the needs of electric utilities and their customers. The electricity generated by the Facility will be delivered to the transmission grid coordinated by PJM Interconnection, LLC (PJM) for sale at wholesale or under a power purchase agreement.

(2) Description of the Facility

The Facility will be located within approximately 670 acres of private land in Weston Township, and Milton Township, and the Village of Weston in Wood County (Project Area). The 101 MW Facility is expected to operate with an average annual capacity factor of 24%, generating a total of approximately 212,000 megawatt-hours (MWh) of electricity each year. Figure 03-2 depicts the proposed Facility. A detailed description of the Facility, including each Facility component, can be found in Section 4906-4-03(B) of this Application.

The Facility layout presented in this application is considered preliminary and represents a typical 30% design. By solar industry standards, a 30% design includes a general Project site boundary, location of module racking, and the relative location of inverters and medium voltage transformers. These features, fencing, collection lines, laydown yard, and access road locations are depicted in Figure 03-2. A final Facility design will be submitted prior to construction and will include the quantity of electrical cables, cable length, trenching locations, and more features that will be determined by Facility and environmental constraints. Additionally, the final Facility design will include makes and models of Facility components, which is dictated by the then-available technology and market conditions. Panel technology is rapidly advancing, both from a cost and performance perspective, which requires final panel selection to occur close to the commencement of construction. If the Applicant were to select a panel model (or models) prior to Certificate issuance, both the panel and resulting design would be less economically viable before project financing and the start of construction. Accordingly, once a panel model is selected, final engineering of the Facility will be completed

to identity the final locations of the panels, select and locate inverters, and adjust other components including piles, collection lines, and roads.

(3) Description of the Suitability of the Site for the Proposed Facility

The Project Area site selection analysis concluded that the site presented herein meets all factors necessary to support a viable solar energy facility. The proposed site possesses strong solar resources, manageable access to the bulk power transmission system, sufficiently low population density, positive feedback from landowners and local officials, highly compatible land-use characteristics, and few environmentally sensitive areas. A detailed description of Juliet's siting process and the Project Area's suitability is included in Section 4906-4-04 of this Application.

(4) Project Schedule

Acquisition of land and land rights began in mid 2019 and was completed in the fourth quarter of 2020. During this time, the Applicant conducted meetings and outreach to landowners throughout the Project vicinity, as well as Township Trustees and County officials. A web-based public information meeting and a telephone question and answer session were held on January 20, 2021 to facilitate public interaction with the Applicant and its expert consultants, and included information on 7X Energy, Project details, the construction process, potential impacts and benefits of the Project, and the OPSB process. Final designs will be completed in the first quarter of 2022. Construction is anticipated to begin in the second quarter of 2022 and be completed within 12 months, at which point the Facility will be placed in service. Additional information about the Project schedule can be found in Section 4906-4-03(C)(1) of this Application.

(B) APPLICANT INFORMATION

(1) Plans for Future Generation Capacity at the Site

The Applicant has no future plans for additional capacity at this site. The point of interconnection has a maximum capacity of 101 MW.

(2) Description of Applicant and Operator

Juliet Energy Project, LLC is held under a development holding company named 7X DEV, LLC, wholly owned by 7X Energy, Inc. 7X Energy, Inc. is a trusted utility-scale solar development company. Founded in 2016, 7X Energy is headquartered in Austin, Texas, and is independently owned by its employees. 7X Energy offers solar energy power to utilities, municipalities, cooperatives, and corporate customers, demonstrating their financial stability and development success. Each solar project is housed in a separate project LLC for financing purposes.

7X Energy employs a team of industry experts who have held leadership positions with prominent renewable energy development companies and construction companies including SunPower, SunEdison, RES Americas, and Pattern Energy. The 7X Energy development team has a proven track record with more than 10 gigawatts (GW) of collective utility-scale wind and solar expertise, spanning from site acquisition and permitting to interconnection and engineering nationwide. 7X Energy's principals have developed, financed, built, and monetized over 2,500 MW of operating utility-scale renewable projects in markets across the United States and have led development of over 10 GW of renewable projects over the last 10 years. 7X Energy is the lead or originating developer of approximately 1,500 MW_{AC} in solar projects under construction or in operation. Table 02-1 lists contracted utility-scale solar projects that were developed by 7X Energy.

Table 02-1. Utility-Scale Solar Projects Developed by 7X Energy

Project	State	MW_{AC}	Commercial Operation Date	Offtaker
Lapetus	TX	100	2019	Brazos Electric Power, Coserv Electric
Phoebe*	TX	250	2019	Shell Energy
Foxhound*	VA	83	2021	T-Mobile
Prospero*	TX	300	2020	Shell Energy
Taygete I	TX	250	2020	Undisclosed Buyer
Taygete II	TX	250	2021	Undisclosed Buyer
Elara	TX	130	2021	EDF Energy Services, Undisclosed Buyer

* Projects jointly developed by 7X Energy and Longroad Development Company. The joint development arrangement terminated on Dec. 31, 2018.

Construction of the Facility

The Applicant's construction philosophy is to partner with an Engineering, Procurement, and Construction (EPC) firm early in the project lifecycle. 7X Energy has strong relationships with the top-tier EPCs and equipment suppliers in the industry and has completed numerous large-scale renewable projects with these vendors.

The Applicant will complete the preliminary design (30%) and resource analysis prior to contracting with an EPC. The selected EPC will take the in-house engineering product and advance the designs to "Issued for Construction" status. The Applicant will review the detailed designs at each step. As the design is progressed, the full EPC contract and technical exhibits will be negotiated and executed no later than financial close. During construction, the Applicant will have a dedicated project manager and on-site personnel to manage the EPC contractor and major suppliers. The Applicant will remain the main point of contact to the lenders, buyer, utilities, landowners, and any other external party.

Operations & Maintenance

The Applicant will provide EPC management and O&M oversight for the Facility. The Applicant will select a Tier 1 O&M team (minimum of 2,000 MW of O&M experience) that will manage operational and commercial matters related to the Facility. The Applicant will solicit top-tier providers to offer bids for the O&M of the Project. The selected O&M team will provide the following resources to ensure safety and complete readiness by the commercial operation date:

- Permanent staff recruiting;
- Staff training and safety;
- Policy and procedure guidance and manuals;
- Operations and engineering readiness;
- Maintenance services readiness; and
- Installation of Supervisory Control and Data Acquisition (SCADA) and asset management systems.

The O&M team will supply a fully-integrated, data-driven O&M strategy that maximizes Project value. Its in-house operations capabilities will include real-time resource monitoring and analysis, on-site O&M personnel, and Commercial Asset Management staff.

4906-4-03 PROJECT DESCRIPTION AND SCHEDULE

(A) PROJECT AREA DESCRIPTION

The following sub-sections provide information on the Project Area's geography, topography, population centers, major industries, and landmarks.

(1) Geography and Topography Map

The Project Area and surrounding area is relatively flat. The elevation in the Project Area ranges between 670 and 680 feet above mean sea level. Figure 03-1 depicts the geography and topography of the Project Area and the surrounding area within a 2-mile radius. Additionally, Figure 03-1 shows the following features:

(a) The Proposed Facility

The preliminary Facility layout includes the fenceline, PV panel area, belowground collection lines, gen-tie line, inverters, access roads, substation, O&M building, and laydown yard area contained within the Project Area boundary. The Applicant expects that the final Facility layout will remain substantially similar to the preliminary Facility layout; however, due to ongoing technological innovations in the solar industry, continued engineering and survey work, public feedback, and communications during the OPSB certification process, the precise location of these features within the Project Area are subject to change. While the layout is subject to change, all Facility components will be within the Project Area that has been evaluated for environmental, cultural, engineering, and visual impacts. The final Facility layout will be subject to the various conditions and constraints laid out in this Application and stipulations and conditions identified upon Certificate issuance.

(b) Population centers and administrative boundaries

The Project is in the Village of Weston, and Weston and Milton townships, Wood County, Ohio. The nearest population center is the Village of Weston, located within a portion of the southeastern Project Area and east of the Project Area. The City of Bowling Green is approximately 6 miles northeast of the Project Area. The closest metropolitan area is Toledo, located approximately 25 miles north of the Facility.

(c) Transportation routes, gas pipelines, and electric transmission corridors

The Project Area is bound by Euler Road, approximately 0.4 mile to the north, Portage Road, approximately 0.5 mile to the south, and Custar Road, approximately 0.5 mile to the west. The Village of Weston abuts the eastern side of the Project Area. Weston Road lies east of the northern Project Area and a CSX Transportation, Inc. rail line abuts the southeastern Project Area. Sand Ridge Road runs east-west through the central section of the Project Area, Milton Road runs north-south through the western Project Area, and Weston Road runs north-south through the southeastern Project Area. No gas pipelines

or electric transmission lines are within 2 miles of the Project Area (U.S. Energy Information Administration, 2017; USDOT, 2020).

(d) Named rivers, streams, lakes, and reservoirs

Jackson Cutoff Ditch intersects through the southwest corner of the Project Area, Beaver Creek is approximately 1.5 miles west of the Project Area, and Sugar Creek is approximately 2 miles northeast of the Project Area. Many additional unnamed streams and tributaries are within 2 miles of the Project Area. The Weston Reservoir is approximately 97 feet north of the eastern-most side of the Project Area.

(e) Major institutions, parks, and recreation areas

Three parks, one wildlife production area, one cemetery, two government offices, one library, and four places of worship are located within 2 miles of the Project Area. Michael Merrill Park, Old Schoolhouse Park, and Alumni Park are 0.1, 0.5, and 0.6 mile east of the Project Area, respectively, in the Village of Weston. Wood County Wildlife Production Area (ODNR land) is approximately 1.9 miles west of the Project Area. Pottertown Cemetery is approximately 2.0 mile west of the Project Area. The Weston sewage treatment plant is approximately 0.8 mile northeast of the Project Area, and the Weston Township government office is approximately 1.0 mile northeast of the Project Area. The Weston Public Library is approximately 0.3 mile east of the Project Area. These four places of worship are between 0.3 and 0.9 mile east of the Project Area, in the Village of Weston.

(2) Area of All Owned and Leased Properties

A total of approximately 670 acres of private property are under contract within the Project Area, all of which are leased under long-term lease agreements. The Project Area is comprised of 31 separate tax parcels. In addition to the properties currently leased for the Facility, the Applicant anticipates entering into Good Neighbor Agreements with additional residents adjacent to the Project Area.

(B) DETAILED DESCRIPTION OF PROPOSED FACILITY

A detailed description of the Facility is provided in the sub-sections below. The equipment specifications presented in this Application are representative of the options that will be selected for the final procurement of Facility components and materials. Final equipment specifications, characteristics, and dimensions will be provided to OPSB Staff prior to construction. Any changes in equipment specifications from what is presented here are not expected to increase potential impacts.

(1) Description of Generation Equipment

(a) Type and Characteristics of Solar Panels

Facility generation equipment consists of PV modules, a racking system, and inverters to convert electrical output from direct current (DC) to alternating current (AC). Proposed PV are standard crystalline panels, mounted on single-axis trackers and installed in linear arrays. Based on the total generating capacity of 101 MW, the Applicant anticipates using approximately 341,000 PV panels. The panels will operate continuously but will not produce electricity during nighttime hours or during periods with overcast skies. The annual average capacity factor for the Facility is anticipated to be 24%. Accounting for a total generating capacity of 101 MW and an annual capacity factor of 24%, the Facility would generate approximately 212,000 MWh of electricity each year. Because no fuel will be burned by the generating equipment, heat rate is not applicable to solar energy facilities.

(b) Turbine Dimensions

This section is not applicable to the Facility.

(c) Fuel Quantity and Quality

Solar panels generate electricity without burning fuels. Therefore, this section is not applicable to the Facility.

(d) List of Pollutants Emissions and Quantities

Solar panels generate clean, emission-free electricity without releasing airborne pollutants. Therefore, this section is not applicable to the Facility.

(e) Water Requirement, Source, and Discharge Information

Solar panels generate electricity without the use of water. Therefore, no water is treated or discharged, and this section is not applicable to the Facility.

(2) Construction Method and Description of Facility Components

Based on information available at the time of submission of the Application, this section describes the construction method, site preparation and reclamation method, materials, color and texture of surfaces, and dimensions of all facility components. The primary steps for Facility construction include the following: (1) securing the perimeter of the construction areas; (2) installation of storm water and erosion control measures; (3) clearing vegetation where necessary; (4) minor earthwork or grading where necessary; (5) construction of access roads; and, (6) installation of equipment, such as pilings, racking, panels, inverters, pyranometers, the substation, and security fencing.

(a) Solar Modules and Racking System

Once Project access roads are complete, construction and assembly of the trackers and mounting of the PV modules will commence. Since the majority of the site is relatively flat, minimal grading is anticipated to accommodate the PV arrays. The PV modules will be secured on a single-axis tracker racking system supported on metal piles that will be driven into the ground to a depth between 5 and 10 feet. Pile driving activities will occur in two stages: (1) preparing the site and (2) setting and driving pile. Pile driving does not require excavation to install PV modules.

Single-axis tracker designs vary by manufacturer, but generally consist of a series of mechanically-linked horizontal steel support beams. The number of rows within a tracker block is typically determined by multiple factors, including equipment capacity, site constraints, and the amount of desired solar electricity output to the inverters. Rows will be aligned north to south and the PV panels will pivot, tracking the sun's motion from east to west throughout the day. Each panel will be 7.5 feet by 3.7 feet, 1.38 inches thick, and made of tempered glass with an anti-reflective coating. The panels will be a maximum of 15 feet in height from the ground when tilted to their highest position and will be surrounded by a 6-foot chain-link fence with a 1-foot section of barbed wire at the top. For additional detail on PV panel specifications, see the manufacturer's equipment specifications (Exhibit A), which are representative of the PV panels that will be selected for the Facility.

(b) Fuel, Waste, Water, and Other Storage Facilities

Fuel tanks for construction equipment will be stored in the laydown yard during Facility construction. However, PV panels generate electricity without the use of fuel or water, and without generating waste. Therefore, the proposed Facility does not include any significant facilities for fuel, waste, water, or other storage facilities.

(c) Fuel, Waste, Water, and Other Processing Facilities

PV panels generate electricity without the use of fuel or water, and without generating waste. Therefore, the proposed Facility does not include any fuel, waste, water, or other processing facilities.

(d) Water Supply, Effluent, and Sewage Lines

No Facility components will use significant quantities of water or discharge significant quantities of wastewater. The O&M building is expected to be served by an on-site well and septic system developed for the Project.

(e) Associated Electric Transmission and Distribution Lines and Gas Pipelines

The Facility will include a 69 kV gen-tie line, which will be approximately 50 feet in length. This gen-tie line will run overhead from the collection substation to the point of interconnection (POI), the Weston 69 kV substation, owned by ATSI. The Project will be connected to the ATSI transmission system at the Weston 69 kV substation. The interconnection would involve expanding the Weston 69 kV substation, providing a line-exit for the Facility gen-tie line. ATSI supplemental project (number s1953) includes an expansion of the Weston 69 kV substation and is targeted for completion in 2023.

The gen-tie line will be suspended from one to two wood or steel poles, not more than 100 feet in height. The determination to install one or two poles between the Weston 69 kV substation and the collection substation will be based on feedback from ATSI on the preferred direction of entry into the Weston 69 kV substation. The pole(s) will be installed using typical installation techniques to carry 69 kV electric lines, such as direct embed or a caisson foundation, for example. There are no gas pipelines associated with the Facility.

(f) Buried and Overhead Electric Collection Lines

Each solar array will have a network of electric cable and associated communication lines that collect the electric power from the solar modules and transmit it to a centralized location through a DC combiner harness. Power from the DC collector will be transmitted through a series of related electrical components including a DC-to-AC inverter, a medium-voltage transformer that will increase the voltage to 34.5 kV, and a cabinet of power control electronics, all housed inside the power conversion station which will be mounted on a steel skid and set on a steel pile or concrete pad foundation.

The medium-voltage transformer on each power conversion station will increase the voltage to 34.5 kV. Several power conversion stations will be connected in series to form a medium-voltage circuit. These circuits are commonly referred to as the medium-voltage collection system. Medium-voltage cables for each circuit will be either buried underground or run overhead through the Project Area. Approximately 6.2 miles of buried collection cable will be used in the Facility.

The underground portion of the medium-voltage collection system will be installed using either the direct burial method or horizontal directional drilling (HDD). The majority of the underground collection cables will be installed using the direct burial method. HDD is proposed to be used to cross three ditches, and may be used to cross roads.

The direct burial method relies on a trencher which uses a large blade or “saw” to excavate an open trench, generally 24 to 36 inches wide, with an adjacent sidecast area. Using the direct burial method, underground cable is buried to a minimum depth of 36 inches below the surface and requires up to a 20-

foot width of clearing and surface disturbance for equipment access. Once cable is placed in the trench, native soil will be placed around the cable and compacted.

HDD is a widely used underground drilling technique to install buried utilities with minimal impact, by routing the utility under a road or a sensitive feature such as a stream, river, or wetland. More information on HDD can be found in Section 4906-4-08(B). Restoration of disturbed areas will be achieved by seeding with a native mix. If drainage tile is damaged and not functioning properly, a drainage system will be installed to allow the site to drain properly and avoid negative impacts to non-participating landowners.

(g) Substations, Switching Substations, and Transformers

Each solar array will have a network of electric cable and associated communication lines that collect the electric power from the solar modules and transmit it to a centralized location through a DC combiner harness. Power from the DC collector will be transmitted through a series of related electrical components including a DC-to-AC inverter, a medium-voltage transformer that will increase the voltage to 34.5 kV, and a cabinet of power control electronics, all housed inside the power conversion station which will be mounted on a steel skid and set on a steel pile or concrete pad foundation.

The medium-voltage transformer on each of the approximately 31 power conversion stations will increase the voltage to 34.5 kV. Several power conversion stations will be connected in series to form a medium-voltage circuit. Each medium-voltage circuit will terminate at the project collection substation, where an additional voltage step-up from 34.5 kV to 69 kV will occur. The collection substation will be located just south of the existing Weston 69 kV substation, on the eastern side of the Project Area, near the intersection of Sand Ridge Road and Weston Road.

Prior to construction of the collection substation, erosion and sediment control features such as silt fencing will be installed. Given the flat topography in the vicinity of the Project, limited grading is anticipated. Following the installation of erosion and sediment control features, topsoil will be stripped and stored, the site will be graded as necessary, and gravel will be installed around each concrete foundation. After site preparation, permanent erosion and sediment control features will be installed and topsoil will be replaced and seeded. The collection substation will occupy approximately 1 acre and will be enclosed by a chain-link fence. Additional features of the collection substation include a dead-end support structure for the 69 kV gen-tie, main power transformer, circuit breakers, surge arrestors, insulators, lightning mast, and controls inside the O&M building. The tallest structure within the substation is the lightning mast, which is approximately 60 feet tall.

(h) Pyranometer

The Project will include up to 5 pyranometers supported on towers with steel pile embedment,thatwill be up to 10 feet tall.

(i) Access Roads

The Facility will require the construction of approximately 9.3 miles of new access roads within the Project Area. The roads will be gravel-surfaced and typically 20 feet in finished width.

Road construction will involve topsoil stripping and grubbing of stumps, if necessary. Stripped topsoil will be stockpiled along the road corridor for use in site restoration. Any grubbed stumps will be removed, chipped, or buried. Following removal of topsoil, subsoil will be graded, compacted, and surfaced with gravel or crushed stone at a depth to be determined by the final geotechnical analysis. If required, a geotextile fabric will be installed beneath the road surface to provide additional support. To the extent practicable, local sources will be used to obtain gravel and other construction materials that may be needed in support of Facility construction.

During construction, access road installation and use could result in temporary soil disturbance of a maximum width of 50 feet in some areas, to accommodate two-way traffic. Once construction is complete, temporarily disturbed areas will be restored and seeded.

(j) Construction Laydown Areas

One laydown yard is proposed for the Facility, located adjacent to the collection substation and O&M building. The laydown yard will be approximately 6.2 acres and located on privately-owned land. It will accommodate material and equipment storage, parking for construction workers, and construction management trailers. The laydown yard will be equipped with temporary lighting, and temporary erosion and sediment control methods, most of which will be removed upon completion of Facility construction. The laydown yard will be enclosed by a 6-foot chain-link fence with a 1-foot section of barbed wire at the top. Construction and reclamation of the laydown area will be similar to that for access roads. Approximately 1 acre of the 6.2-acre laydown area will remain for material and equipment used to perform maintenance on the Facility.

(k) Security, Operations, and Maintenance Facilities or Buildings

The solar modules and racking system, power conversation station, collection substation, and O&M building will all be fenced with a 6-foot chain-link fence with a 1-foot section of barbed wire at the top. The O&M building will be located south of Sand Ridge Road, approximately 0.2 mile west of Weston Road. The O&M building will be approximately 2,000 square feet, located on privately-owned land, and will

serve as a workspace for operations personnel. A typical O&M building is a metal building with a standing seam roof and walls that are approximately 14 feet high (see Inset 03-1). Lighting will be attached to the perimeter of the building. Construction of the O&M building will follow all applicable local building codes.

Inset 03-1. Typical O&M Building

(l) Other Pertinent Installations

Permanent storm water treatment infrastructure will be installed for the Facility to meet all requirements of Ohio EPA Permit No. OHC000005 (Ohio EPA, 2018). Permanent storm water treatment infrastructure is anticipated to be minimal and will primarily consist of infiltration swales and ditches adjacent to access roads.

(3) Need for New Transmission Lines

The Facility will require construction of a short gen-tie line, which will be approximately 50 feet in length. The gen-tie line will transmit energy from the collection substation to the POI at the Weston 69 kV substation, owned by ATSI. The Facility will be connected to the ATSI transmission system via the gen-tie line following an expansion of the Weston 69 kV substation planned by ATSI. The ATSI supplemental project (number s1953) includes an expansion of the Weston 69 kV substation and is targeted for completion in 2023.

(4) Project Area Map

The proposed layout of all Facility components is illustrated on Figure 03-2, including the following features:

(a) Aerial Photograph

Mapping was developed using Esri ArcGIS Online "World Imagery" map service.

(b) The Proposed Facility

Facility components, as discussed above in Section 4906-4-03(B)(2), were provided by the Applicant.

(c) Road Names

Road name data was obtained from the Ohio Department of Transportation (ODOT) Transportation Information Mapping System.

(d) Property Lines

Property line data was obtained from the Wood County Auditor's Office.

(C) DETAILED PROJECT SCHEDULE

(1) Schedule

A Gantt-style chart is presented as Inset 03-2, illustrating major activities and milestones.

(a) Acquisition of Land and Land Rights

Acquisition of land and land rights began in mid 2019 and continued through the fourth quarter of 2020.

(b) Wildlife Surveys/Studies

Ecological surveys/studies began in September 2020 and were completed in October 2020.

(c) Receipt of Grid Interconnection Studies

Grid interconnection studies were initiated in July 2019 and February 2020. Two sets of interconnection studies were prepared for this Facility, under queue positions AF1-064 and AF2-126 (see Section 4906-4-05). The Feasibility Studies were issued in January 2020 and July 2020, respectively. The System Impact Study for queue position AF1-064 was issued in August 2020. The System Impact Study for queue position AF2-126 was issued in February 2021.

(d) Preparation of the Certificate Application

Preparation of the Application began in the fourth quarter of 2020 and the web-based public information meeting and telephone-based question and answer session were held on January 20, 2021.

(e) Submittal of the Application for Certificate

This Application was officially submitted in the first quarter of 2021.

(f) Issuance of the Certificate

It is anticipated that the Certificate will be issued by the fourth quarter of 2021.

(g) Preparation of the Final Design

It is expected that final designs and detailed construction drawings will be completed in the first quarter of 2022.

(h) Construction of the Facility

Construction is anticipated to begin in the second quarter of 2022 and be completed in 12 months.

(i) Placement of the Facility in Service

The Facility will be placed in service upon completion of construction, anticipated for the second quarter of 2023.

(2) Construction Sequence

Project construction is anticipated to proceed in the following sequence, with multiple activities being performed concurrently:

- General clearing of the Project Area, particularly for PV arrays, access roads, laydown yards, and substation;
- Grading for laydown yards and substation areas;
- Minimal grading for access roads and PV arrays;
- Construction of access roads;
- Installation of piles for support of racking;
- Installation of the electrical collection system;
- Installation of power conversion stations;
- Installation of single axis tracker system (racking)
- Installation of PV modules;
- Construction and installation of substation;
- Facility commissioning and energization;
- Restoration activities.

Graded areas will be smoothed, compacted and freed from irregular surface changes, and sloped to drain. Final earth grade adjacent to equipment will be below the finished floor slab and sloped away from the structure to maintain proper drainage. Slopes of embankments shall be protected against rutting and scouring during construction in a manner similar to that required for excavation slopes. Site grading will be compatible with the general topography and use of adjacent properties, right-of-way, setbacks, and easements.

Construction of PV module foundations, assembly, access road construction, and installation of collection lines are described above in Section 4906-4-03(B)(2). Once construction is complete, temporarily disturbed areas will be restored. Exposed soils in the Project Area will be stabilized by seeding, mulching, and/or plantings.

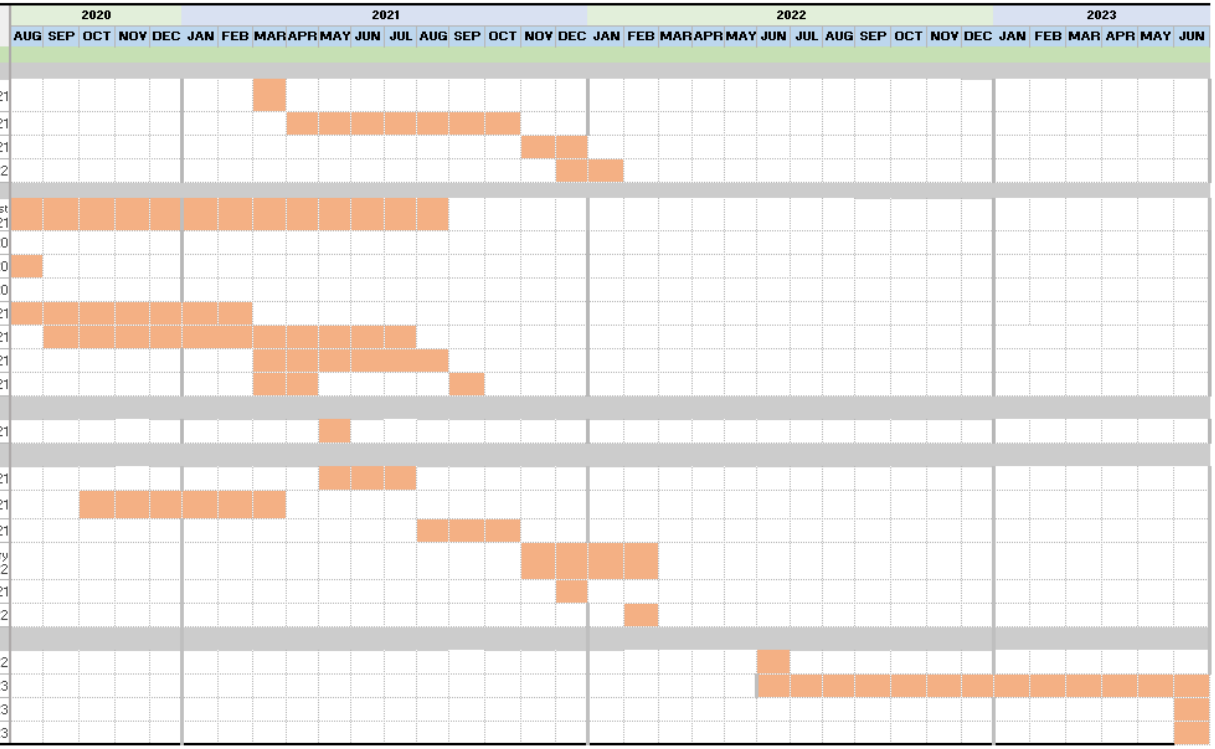
(3) Impact of Critical Delays

Critical delays may have material, adverse effects on Facility financing, including the Applicant's ability to procure PV panels and other Facility components. Such delays may push the in-service date back. In addition, considerable costs would be incurred if the delays prevented the Facility from meeting deadlines for federal incentive programs such as the Investment Tax Credit.

Inset 03-2. Project Schedule Gantt Chart

JULIET - PROJECT SCHEDULE - 101MW AC

Scope	Milestone Date
Permitting and Local Approvals	
Submit Certificate Application to Ohio Power Siting Board (OPSB)	Q1 2021
OPSB Investigation	Q2 – Q3 2021
OPSB Public and Adjudicatory Hearings	Q4 2021
OPSB Certificate Issued	Q1 2022
PJM Interconnection	
Interconnection Process	September 2019 – August 2021
PJM Feasibilty Study AF1-064	Completed January 2020
PJM System Impact Study AF1-064	Q3 2020
PJM Feasibilty Study AF2-162	Q3 2020
PJM System Impact Study AF2-162	Q1 2021
PJM Facilities Study AF1-064	Q2 2021
PJM Facilities Study AF2-162 (if necessary)	Q3 2021
Execute Interim ISA and ISA for AF1-064	Q1 2021
Origination	
Execute Power Purchase Agreement	Q2 2021
Engineering and Procurement	
Procure Balance of Modules – Owner Supplied	Q1 – 2021
Site Studies (Topo, ALTA Survey, Geotech, Phase I ESA, CIA)	Oct 2020 – March 2021
EPC RFP	August – October 2021
LNTP for PV Plant Design & Engineering	November 2021 – February 2022
Order Long Lead Equipment Supplied by EPC	December, 2021
Execute EPC Agreement	February, 2022
Construction	
Full Notice to Proceed	June, 2022
Juliet Construction	June 2022 – June 2023
PJM In-Service Date	Q2 2023
Declare COD	Q2 2023



4906-4-04 PROJECT AREA SELECTION AND SITE DESIGN

The selection of appropriate sites for a solar-powered electric generation facility is constrained by numerous factors that are essential considerations for the Facility to operate in a technically and economically viable manner. This section described the general site selection process, along with associated siting constraints and requirements.

(A) PROJECT AREA SELECTION

(1) Description and Rationale for Selecting Study Area

The availability and quality of solar resource, proximity to the bulk power transmission system, topography, and land use are the initial screening criteria evaluated in the site selection process for any solar power project. The Applicant's initial evaluation was based on publicly available data, such as the National Renewable Energy Laboratory's (NREL) "National Solar Radiation Database," along with site visits and capacity analysis for nearby transmission lines (Sengupta, et al., 2018). The data suggests a suitable solar resource in the northwestern region of Ohio, including Wood County.

Adequate access to the bulk power transmission system is also an important siting criterion, as the system must be able to accommodate the interconnection and accept and transmit power from the Facility. As depicted in Figure 04-1, existing bulk transmission lines are located within the vicinity of the Facility in Wood County. The transmission lines in Wood County are owned and operated by ATSI within the PJM Interconnect. A characteristic which makes the PJM Interconnect suitable for a solar power project is the ability to sell electricity to customers in the region without connecting directly to those customers' facilities. Additionally, the capacity of the Weston 69 kV substation and nearby transmission lines were evaluated to determine that the required network upgrades are likely to be within an acceptable range for a solar power project of approximately 100 MW.

Land use in Wood County is primarily agricultural and characterized by open spaces suitable for hosting a utility-scale solar power project. Initial site visits to the area provided visual verification that the predominate land use in the study area is agricultural with limited residential development, which is compatible with solar project development.

Proximity to major transportation routes is another consideration in identifying a site for the Facility. Located adjacent to the west side of the Village of Weston and approximately 6miles west of the City of Bowling Green, the Project Area is situated approximately 9 miles west of Interstate (I) 75 and approximately 1 mile south of U.S. Route 6. Additionally, several county roads are near to and intersect with the Project Area. These major roads provide accessibility for the transportation of Facility components, construction equipment, and staff.

(2) Map of Study Area

Willing participants are essential to the success of any solar project. After a suitable geographic area was established, the Applicant identified a group of willing Project landowners adjacent to a suitable POI that met the various other siting criteria listed in this section. With a group of willing participants and a viable POI, the study area for the Facility was developed based on the POI. As such, there were no additional sites considered for the Project. A map of the Project Area and 2-mile radius is included as Figure 03-1 and is representative of the area considered.

(3) List and Description of all Qualitative and Quantitative Siting Criteria

Siting criteria used for the selection of the Project Area include:

Adequate solar resource

The Applicant determined through an initial screening process utilizing a statewide solar resource map that global horizontal irradiance was likely to be at a level of 3.85 W/m^2. The Applicant utilized on-site measurements collected since August 2020 to confirm that the Project Area has an adequate solar resource.

Adequate access to the bulk power transmission system

The Applicant determined that the existing transmission infrastructure was adequately accessible from the standpoints of proximity and ability of the system to accommodate the interconnection at a reasonable cost. This determination was made through an initial internal preliminary assessment and subsequent interconnection requests filed with PJM. See Section 4906-4-05 of this Application for additional detail.

Willing land lease participants and host communities

Solar generation facilities can only be sited on property where the landowner has agreed to allow such construction. The Applicant obtained private lease agreements for contiguous areas of land necessary to support the Facility. See Section 4906-4-06(A) of this Application for additional detail on property ownership and lease status. In addition, the Applicant has engaged local and state stakeholders and the local community to educate and share information. See Section 4906-4-06(F)(1) of this Application for additional detail on public interaction.

Site accessibility

The Project Area is served by an existing network of public roads, which will facilitate component delivery, construction, and operation and maintenance activities (see Exhibit B and Figure 03-1).

Appropriate geotechnical conditions

The Applicant determined that significant geotechnical constraints, including but not limited to steep topography, potential for rockfalls and landslides, karst topography, and sinkholes are not anticipated for the Facility (Exhibit C).

Distance from airports

The proposed Facility is sited approximately 9 miles southwest of the nearest public use airport of record, reducing potential impacts from glare. See Section 4906-4-07(E) of this Application for additional detail on aviation facilities.

Limited residential development

The Project Area has a low population and residential development density compared to surrounding areas and statewide averages. Areas with limited residential development generally have more available space for siting solar panels once site-specific constraints are taken into account. See Section 4906-4-08(C)(3)(e) and Exhibit D of this Application for additional detail on demographics in the vicinity of the Project Area.

Compatible land use

The Project Area is predominantly rural agricultural, which is compatible with the proposed Facility. See Section 4906-4-08(C) of this Application for more information on land use see Section 4906-4-08(C).

Limited sensitive ecological resources

The Project Area has adequate open space available to avoid impacting sensitive ecological resources. See Section 4906-4-08(B) and Exhibit E of this Application for more information on ecological resources.

Cultural resources

The Project Area is located so that direct impacts to any identified existing cultural resources can be avoided. For additional information on cultural resources, see Section 4906-4-08(D) and Exhibit F of this Application.

Once the Applicant determined that the Project Area was suitable for development of a solar power facility, various siting factors and constraints were identified and evaluated in order to appropriately site the Facility components. These efforts are discussed in detail below in 4906-4-04(B).

(4) Description of Process by Which Siting Criteria Were Used

As noted above, the selection of possible sites for development of solar power facilities is constrained. Particularly, projects must be located in areas with adequate solar resource, near electric transmission lines with unused capacity sufficient to accept energy from the facility, and situated in locations that can accommodate land use and environmental restrictions imposed by state and federal laws. The Applicant identifies and selects possible sites for development by using 7X Energy, Inc's proprietary mapping program called Smart Power Maps. Smart Power Maps accelerates and optimizes site selection and development by screening potential sites utilizing more than 100 geospatial layers, many of which are generated internally for use in Smart Power Maps. The Applicant uses Smart Power Maps to evaluate environmental constraints, transmission infrastructure, property ownership and existing generator locations to determine economically feasible project locations. Smart Power Maps is also used to generate customizable maps that are helpful in

outreach to landowners and local officials. Smart Power Maps allowed the Applicant to identify optimal project locations early and reduce project risk and costs. Other identified potential sites were determined to not be viable or are under development and cannot be disclosed at this time.

(5) Description of Project Area Selected for Evaluation

Based on the criteria listed in Section 4906-4-04(A)(3) of this Application, the Project Area site selection analysis concluded that the site presented herein meets all the factors necessary to support a viable solar energy facility. The proposed site possesses adequate solar resources, manageable access to the bulk power transmission system, sufficiently low population density, positive feedback from landowners and local officials, highly compatible land-use characteristics, and few environmentally sensitive areas. Siting of solar facilities relies on signing agreements with multiple landowners. Once a region is identified, it is not practical to evaluate multiple project areas in the same vicinity. Instead, the project area is determined by landowner interest.

(B) FACILITY LAYOUT DESIGN PROCESS

The Facility layout presented in this Application is considered 30% complete. If the Applicant were required to select a panel model (or models) prior to certificate issuance, both the panel and resulting design would be less economically viable before Project financing and the start of construction. Accordingly, once a panel model is selected, final engineering and design of the Project will be completed to identity the final locations of the panels, select and locate inverters, and adjust other components including piles, collection lines and roads. The Applicant commits to provide the final Facility layout to the Board's Staff at least 60 days prior to the start of construction, which will include panel model, panel layout, and the final location of other ancillary components. The final Facility layout will: (1) not alter the boundaries of the Project Area, (2) comply with the Project setbacks set forth in this Application, and (3) not create any additional material adverse impact. The Facility layout could also be adjusted due to engineering constraints discovered during the geotechnical survey, to avoid alterations to stormwater flow, to refine panel locations for appropriate panel capacity, or to accommodate specific property characteristics. These types of changes would primarily consist of realignment of access roads and collection lines, and alterations to PV panel placement within the Project Area. These changes are not expected to alter the boundaries of the Project Area or the properties on which Facility components will be located. The final layout will be provided to the OSPB prior to construction.

(1) Constraint Map

A constraint map of the Project Area showing setbacks, public roads, and sensitive receptors is included as Figure 04-1. This illustrative graphic cannot appropriately show all the site-specific constraints and considerations, such as landowner preferences, PV panel engineering factors, and access road engineering requirements, all of which further limit siting alternatives within the participating parcels.

In addition to investigating the layout within the constraints discussed above, numerous expert analyses and field studies have been conducted to ensure that the PV panel arrays are sited so as to minimize environmental impacts to the maximum extent practicable, while still allowing for a successful project. The siting constraints identified in those studies are discussed in further detail below.

(2) Criteria Used to Determine Site Layout and Comparison of Alternative Site Layouts

The siting of project components within a given project area is governed by site-specific factors, including agricultural constraints, noise constraints, wetland and stream constraints, road and property setbacks, and landowner considerations. Once it was determined that the general project site was adequate, the Applicant worked with various consultants to conduct detailed assessments, which identified and defined the siting factors and constraints discussed below. Through the use of GIS tools and consultant assessments, the Applicant performed numerous layout design iterations to develop the proposed Facility layout as presented and described in this Application. The constraints used in designing the Facility layout are discussed in additional detail below.

Agricultural Constraints

Agriculture is the predominant land use within the Project Area. The Applicant has designed the Facility footprint in order to minimize impacts to active agricultural land. These efforts included co-locating collection lines and access roads wherever practicable, and designing, installing, and reseeding areas around collection lines in order to minimize permanent loss of active agricultural land to the maximum extent practicable. For additional information on agricultural land, see Section 4906-4-08(E) of this Application.

Noise Constraints

No existing national, state, county, or local laws specifically limit noise levels produced by solar energy facilities. However, previous OPSB certificates granted to solar projects have included a Facility-related noise limitation of 5 A-weighted decibels (dBA) over the night average (L_{eq}) background level at non-participating parcel boundaries. The Facility layout is designed to minimize noise impacts to nearby residences. For additional information on noise, see Section 4906-4-08(A)(3) and Exhibit G of this Application.

Wetland and Stream Constraints

In order to avoid and minimize impacts to streams and wetlands, on-site investigations were conducted to establish the locations of streams and wetlands, and Facility components were sited in an effort to avoid impacts to these resources to the maximum extent practicable. The Applicant applied a 30-foot setback from delineated wetlands when designing the Facility. For all identified stream and wetland crossing points, appropriate construction techniques will be used to avoid and minimize impacts to the extent practicable. As a result, the vast majority of stream and wetland impacts will be temporary in nature. For additional information on estimated wetland and stream impacts, see Section 4906-4-08(B)(2)(a) and Exhibit E of this Application.

Road and Property Setbacks

The Applicant applied a setback of 25 feet from the edge of public roads to the fenceline of the Facility. In addition, the fenceline will be set back at least 10 feet from the edge of the Project Area property boundaries, and at least 100 feet from non-participating residences. Furthermore, PV panels will be located at least 20 feet inside the fenceline, increasing the total setback between PV panels and public roads, property boundaries, and non-participating residences.

Landowner Considerations

The Applicant has and will continue to meet with participating landowners to review the Facility footprint on their property. Among other things, these meetings often involve field analysis to ensure that Facility components are sited in a manner that allows continued efficient use of land for agricultural purposes and avoids any site features of importance to the landowner. Additionally, to minimize the number of PV panels located near residences, the final design of the Facility will incorporate an internal setback of 100 feet from the PV panel area fenceline to non-participating residential property lines, except in areas where a public road is between the residential property and the fenceline. The final design will also include a setback of 50 feet from the edge of public roads to the fenceline of the Facility.

Glare Considerations

Although there are no airport approach paths within two miles of the Project, a glare study (Exhibit N) was completed to evaluate potential impacts on residences and roadways in the vicinity of the Project. This effort considered potential for glare impacts on 17 residences located to the east, west, and central to the Project Area. Additionally, potential glare impacts were evaluated for traffic along Sand Ridge Road, Milton Road, and Weston Road. There were no issues with glare at any residences or for traffic along any of the roads in the Project Area. To maximize efficiency, solar PV panels are constructed of dark material that is designed to absorb light, thus minimizing reflection and potential glare impacts to the surrounding area. Additionally, the glass in the solar PV panels will have anti-reflective coating. For additional information regarding glare and aviation, see section 4906-407(E).

(3) Description of Number and Type of Comments Received

Written questions and comments were received at the public informational meeting, which was held on January 20, 2021. The public comments addressed a range of topics, with no focus on any particular issue. Topics included noise, decommissioning, visual screening, and participation in the OPSB process. These issues are addressed in this Application. All written comments submitted at the public meeting are attached hereto as Exhibit H.

4906-4-05 ELECTRIC GRID INTERCONNECTION

(A) CONNECTION TO THE REGIONAL ELECTRIC GRID

In order to interconnect new generation to the electric transmission grid, the Facility owner must obtain approval from PJM Interconnection (PJM). PJM is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all of Ohio and all or parts of surrounding states. The interconnection process includes completion of studies by PJM that determine the transmission upgrades required for a project to interconnect reliably to the PJM grid. These studies are completed in a series. The Feasibility Study, the System Impact Study, and the Facilities Study are designed, respectively, to provide developers with increasingly more refined information regarding the scope of required upgrades, completion deadlines, and implementation costs. The Facilities Study is not required for all projects (PJM, n.d.). The OPSB requires submission of two of these studies with the Application, the Feasibility Study and System Impact Study. The OPSB also requires the Applicant to obtain and provide a signed Interconnection Service Agreement with PJM prior to construction.

The proposed Facility will connect to the American Transmission Systems, Inc. (ATSI) transmission system at the Weston 69 kV substation. The interconnection would involve expanding the Weston 69 kV substation, providing a line exit for the additional gen-tie line. ATSI supplemental project (number s1953) includes an expansion of the Weston 69 kV substation and is targeted for completion in 2023. The Applicant will work with ATSI to obtain any necessary permits for the Weston substation improvements exclusive to the Facility, and will be responsible for the construction costs. ATSI will continue to own and operate the substation.

(B) INTERCONNECTION INFORMATION

(1) Generation Interconnection Request Information

The Applicant will utilize two PJM queue positions to interconnect the Facility. The first queue position, AF1-064, is for 50 MW of energy, with 33.4 MW of that as capacity. The queue position name is Weston 69 kV, and the queue date for AF1-064 is July 31, 2019. The second queue is an uprate to the first position. Queue position AF2-126 is for 51 MW of energy, with 34 MW of that as capacity. The queue position name is Weston 69 kV II kV, and the queue date for AF2-126 is February 28, 2020. The combined capacity of the two queue positions is 101 MW of energy, with 67.4 MW of that as capacity. The website for the PJM queue is https://www.pjm.com/planning/services-requests/interconnection-queues.aspx. Find the queue positions for this project by entering the queue numbers into the “Queue/OASIS ID” search field.

(2) System Studies

The Feasibility Study and System Impact Study are complete for both queue positions, and the Facilities Study is in progress. The completed PJM interconnection studies are included as Exhibit G to this Application.

4906-4-06 ECONOMIC IMPACT AND PUBLIC INTERACTION

(A) OWNERSHIP

The Applicant will construct, own, and operate all structures and equipment associated with the Facility, except for the upgrades to the Weston 69 kV substation. As depicted on Figure 03-2, limited portions of the 34.5 kV electrical collection lines will be located within public road rights-of-way where the collection line route crosses Sand Ridge Road, Milton Road, and Weston Road, from one participating parcel to another. The Applicant has obtained the necessary leases and agreements from participating property owners. For the purposes of this Application, participating parcels include any parcels anticipated to be under a lease, easement or purchase agreement at the time of Facility construction. The proposed Facility will not change the ownership status of the public road rights-of-way. All other components of the Facility will be located entirely on privately-owned land secured by lease and option to purchase agreements. The Applicant is a wholly-owned subsidiary of 7X Energy, Inc. (7X). Founded in 2016, 7X has developed or jointly developed approximately 1,500 MW of solar projects that are currently operating or under construction. Headquartered in Austin, Texas, 7X is establishing itself as a strong developer in the United States, successfully developing multiple utility-scale solar projects.

(B) CAPITAL AND INTANGIBLE COSTS

(1) Estimated Capital and Intangible Costs by Alternative

Due to the sensitive nature of economic data and the potential advantage it could provide to industry competition, capital and intangible costs are included in Part III, Section 2 of the unredacted version of the Socioeconomic Report (Exhibit D), filed under seal with this Application. As described in Section 4906-4-04, the Applicant has not proposed alternative project areas. Therefore, no cost comparison between alternatives is available.

(2) Cost Comparison with Similar Facilities

Installed project costs compiled by the U.S. Department of Energy's Lawrence Berkeley National Laboratory (Berkeley Laboratory) in September 2018 indicate that the capital costs of the Facility are in line with recent industry trends. The Berkeley Laboratory compilation shows that capacity-weighted average installed costs in 2018 averaged roughly $\$1,640/kW_{AC}$ (Bolinger, Seel, & Robson, 2019).

By way of further comparison, solar facilities installed in 2018 with capacities from 100 to 200 MW had a median cost of around $\$1,400/kW_{AC}$ (Bolinger, Seel, & Robson, 2019). These costs are comparable to the cost estimated for the Facility. Additionally, the estimated cost of the Facility is not substantially different from other Facilities completed by the Applicant.

(3) Present Worth and Annualized Capital Costs

Capital costs will include development costs, construction design and planning, equipment costs, and construction costs. The costs will be incurred within a year or two of start of construction. Therefore, a present worth analysis is essentially the same as the costs presented in the Socioeconomic Report. As alternative project areas and facilities were not considered in this Application, the capital cost information in this section is limited to the proposed Facility.

(C) OPERATION AND MAINTENANCE EXPENSES

(1) Estimated Annual Operation and Maintenance Expenses

Annual operation and maintenance expenses are included in the unredacted version of the Socioeconomic Report (Exhibit D), filed under seal with this Application.

(2) Operation and Maintenance Cost Comparisons

O&M costs are anticipated to be consistent with the average costs compiled by the Berkeley Laboratory, and with O&M costs at other solar energy facilities developed by the Applicant. A more detailed O&M cost comparison is included in the unredacted version of the Socioeconomic Report (Exhibit D), filed under seal with this Application.

(3) Present Worth and Annualized Operation and Maintenance

The annual O&M costs itemized in the Socioeconomic Report will be subject to real and inflationary increases. Therefore, these costs are expected to increase with inflation after the first two years. Additional details are included in the unredacted version of the Socioeconomic Report (Exhibit D), filed under seal with this Application. As alternative project areas and facilities were not considered in this Application, the O&M cost information in this section is limited to the Facility.

(D) COST OF DELAYS

Monthly delay costs would depend on various factors. If the delay were to occur in the permitting stage, the losses would be associated with the time value of money resulting from a delay in the timing of revenue payments. If the delay were to occur during construction, costs would include lost construction days and those associated with idle crews and equipment. There could also be penalties associated with failing to meet a delivery deadline under a potential Power Purchase Agreement. In addition, significant losses would be incurred if the delays prevented the Facility from meeting deadlines to qualify for the existing federal Investment Tax Credit. Prorating these one-time delay costs monthly would not be meaningful, as the lost opportunity is triggered at a single deadline and does not accrue over time. For estimates of the cost of delays, see the unredacted version of the Socioeconomic Report (Exhibit D).

(E) ECONOMIC IMPACT OF THE PROJECT

Information provided in this section was obtained from the Socioeconomic Report, prepared by EDR (see Exhibit D). The proposed Facility is anticipated to have local and statewide economic benefits. Solar power development, like other commercial development projects, can expand the local, regional, and statewide economies through both direct and indirect means. Income generated from direct employment during the construction and operation phases of the project is used to purchase local goods and services, creating a ripple effect throughout the state and county.

To quantify the local economic impacts of constructing and operating the Facility, the Job and Economic Development Impact (JEDI) photovoltaics model (version PV12.23.16) was used. This model was created by the NREL, a branch of the U.S. Department of Energy. The JEDI model requires project-specific data input such as year of construction, size of project, module, and location, and calculates the impacts described above using state-specific multipliers. These multipliers account for the change in jobs, earnings, and output likely to occur throughout the local, regional, and statewide economy as a result of project-related expenditures. The most currently available 2018 IMPLAN multipliers for the state of Ohio were used during the time of analysis (IMPLAN Group, 2019). The multipliers are paired with industry standard values such as wage rates and data reflecting local personal spending patterns to calculate on-site, supply chain, and induced impacts. This model allows impacts to be estimated for both the construction and operation phases of the proposed development.

Applying input assumptions of varying levels of confidence, the JEDI model allows users to estimate the jobs, earnings, and economic development impacts from solar power generation projects for both the construction and operation phases (U.S. Department of Energy (USDOE), n.d.). These economic development impacts include earnings and related economic outputs from on-site jobs, local revenue and supply chain jobs, and induced jobs (see Part IV of Exhibit D for a description of impacts).

(1) Construction and Operation Payroll

Annual estimated construction and operation payroll is provided in Table 06-1 below. For additional discussion of inputs used to calculate these estimates, see the Socioeconomic Report.

Table 06-1. Local Economic Impacts

During Construction Period	Jobs	Earnings (Millions)	Output (Millions)
On-site Labor and Project Development	303	$18.8	$23.0
Construction and Installation Labor	156	$10.1	-
Construction Related Services	147	$8.7	-
Module and Supply Chain Impacts	179	$11.0	$28.6
Induced Impacts	136	$7.5	$23.0
Total Construction Impacts	**618**	**$37.3**	**$74.6**
During Operating Years (Annual)	**Jobs**	**Earnings (Millions)**	**Output (Millions)**
On-site Labor Impacts	6	$0.4	$0.4
Local Revenue and Supply Chain Impacts	2	$0.1	$0.4
Induced Impacts	1	$0.1	$0.2
Total Annual Operational Impacts	**9**	**$0.6**	**$1.0**

Source: NREL JEDI Model (version PV12.23.16). Cost values verified by the Applicant in January 2021.
Notes: Earnings and Output values are millions of dollars in 2020 dollars. Construction and operating period jobs are full-time equivalent for one year (1 FTE = 2,080 hours). Impact totals and subtotals are independently rounded, and therefore may not add up directly to the integers shown in this table.

Based upon JEDI model computations, it is anticipated that construction of the proposed Facility will directly generate employment of an estimated 303 full-time equivalent (FTE) on-site construction and project development positions. The JEDI model estimated a total of $18.8 million for annual earnings of the 303 on-site construction jobs.

Module trade and supply chain industries could in turn generate an additional 179 jobs over the course of Facility construction. In addition, Facility construction could induce demand for 136 jobs through the spending of additional household income. The total impact of 655 new jobs could result in up to approximately $37.3 million of earnings, assuming a 2022 construction start and wage rates consistent with statewide and nationwide averages.

Local employment will primarily benefit those in the construction trades, including laborers and electricians. Facility construction will also require workers with specialized skills, such as panel assemblers, specialized excavators, and high-voltage electrical workers. It is anticipated that many of the highly specialized workers will come from outside the area and will remain only for the duration of construction.

Based upon JEDI model computations, the operation and maintenance of the proposed Facility is estimated to generate six direct FTE jobs with estimated annual earnings and overhead of approximately $0.4 million. Wage rates for the direct operational employees are projected to be $21.39 per hour with 45.6% employer

payroll overhead, consistent with Ohio state averages, which are estimated to be approximately $22 per hour for installation, maintenance, and repair occupations (U.S. Bureau of Labor Statistics, 2019).

(2) Construction and Operation Employment

Demand for new jobs associated with the Facility will be created during both the initial construction period and the years in which the Facility is in operation. The money injected into the statewide economy through the creation of these jobs will have long-term, positive impacts on individuals and businesses in Ohio. The results shown in Exhibit D and discussed above describe the potential impact of the Facility on industries throughout the state, including the direct labor impacts that occur specifically within the local economy.

The construction workforce of the Facility is expected to contain at least 80% workers domiciled in Ohio based on the requirements of the Ohio Development Services Agency's Qualified Energy Project certification. In addition, other jobs will be created that play a supportive role. The increased wealth from jobs and spending will have a ripple effect in the local economy, thereby creating the need for additional jobs in the area as the wages of local workers go towards supporting households and local businesses.

(3) Local Tax Revenues

The proposed Facility will have a significant positive impact on the local tax base, including local school districts and other taxing districts in the area. Taxing districts within the Project Area include Milton and Weston townships in Wood County, and the Otsego Local School District.

Solar energy projects in the state of Ohio can be exempted from tangible personal property and real property tax payments if they meet certain conditions. If an applicant is granted exemption from taxation for any of the tax years 2011 through 2023, the Qualified Energy Project will be exempt from taxation for tax year 2024 and all ensuing years, as long as the property was placed into service before January 1, 2024 and pays a Payment In Lieu Of Taxes (PILOT) to the county treasurer. The PILOT expected for this Project includes an escalating payment of $8,000/$MW_{AC}$ for the first five years of operation, $8,500/$MW_{AC}$ for years six through 10, and $9,000/$MW_{AC}$ for the remaining years. Based on the maximum Facility capacity of 101 MW_{AC}, the PILOT amount will average approximately $890,000 annually for the lifespan of the Facility. The Facility is expected to achieve commercial operations as early as 2022 and have a lifespan of approximately 40 years.

(4) Economic Impact on Local Commercial and Industrial Activities

The proposed Facility will have a beneficial impact on the local economy. In addition to jobs and earnings, the construction of the Facility is expected to have a positive impact on economic output, a measurement of the value of goods and services produced and sold by backward-linked industries. Economic output provides a general measurement of the amount of profit earned by manufacturers, retailers, and service providers

connected to a given project. The value of economic output associated with Facility construction is estimated in the Socioeconomic Report to be $74.6 million. Between workers' additional household income and industries' increased production, the impacts associated with the Facility are likely to be experienced throughout many different sectors of the statewide economy.

(F) PUBLIC RESPONSIBILITY

In public meetings and presentations, the Applicant presented the maximum planned extent of the Facility. As described above, changes to the current Facility layout may occur as Facility design progresses, but any such changes will not increase the maximum extent of the Facility, will not require the leasing of additional properties, and would not impact new property owners or create additional impacts for existing adjacent property owners.

(1) Public Interaction

Information has been shared through the following platforms and meetings: multiple conversations with Weston and Milton Township Trustees; consultations with the Weston Village Mayor, and Wood County Commissioners; the Superintendent of Otsego Local School District ; a virtual public information meeting held on January 20, 2021 at 6pm; a mailing to residents including printed copies of the Facility layout and presentation materials for the public information meeting; a telephone information meeting on January 20, 2021 at 8pm; and additional conversations with participating and non-participating landowners discussing the Facility, sharing information and addressing concerns.

The Applicant will continue to make general information about solar power, and specific information about the proposed Facility, available to community members, elected officials, the media, and local civic organizations. A website was developed that includes information about the Project, the permitting process, how to engage in the permitting process, how to contact 7X representatives, and responses to frequently asked questions about the Project and solar development. This website will be updated prior to construction and is expected to remain online during construction and initial operation of the Project.

In addition, notices will be distributed to affected property owners and tenants at least seven days prior to construction and again prior to operation. The notifications will include the following information:

- Description of the project
- How to find the project on the OPSB website
- How to find the Arche Solar website
- Construction activity time restrictions
- Construction schedule
- Information about the complaint resolution process.

These public engagement efforts will ensure that local residents are aware of upcoming construction activity and have access to a toll-free number to use to contact the Project.

A draft Complaint Resolution Plan is included as Exhibit J. The purpose of this plan is to address public complaints, should they arise during construction or operation of the Facility. The Applicant will establish a toll-free number which will be provided to county commissioners, township trustees, emergency responders, schools, and public libraries near the Project Area. A complainant can call that number at any hour and leave a message with the complaint. Complainants will receive correspondence from the Applicant no later than 3 business days after filling the complaint. The purpose of this initial correspondence is to get more information about the complaint. Within 60 days of complaint receipt, the Applicant will complete an assessment of the issue and propose reasonable solutions or mitigation measures, if appropriate. All complaints will be recorded in a logbook which will contain pertinent information about the person making the complaint, issues surrounding the complaint, the date it was received, and the proposed resolution and date of resolution.

(2) Liability Insurance

The Applicant will acquire and maintain throughout the term of the Facility, at its sole cost, insurance against claims and liability for personal injury, death, and property damage arising from operation of the Facility. The insurance policy or policies will insure the Applicant to the extent of their interests. The limits of the insurance policy described will, at a minimum, insure against claims of $1,000,000 per occurrence and $2,000,000 in the aggregate. In addition, the Applicant shall acquire and maintain throughout the construction operation, and decommissioning period, at its sole cost, Umbrella Coverage against claims and liability for personal injury, death, and property damage arising from the operation of the Facility. The limits of the excess liability insurance will, at a minimum, insure against claims of $10,000,000 per occurrence and $10,000,000 in the aggregate.

(3) Roads and Bridges

Information provided in this section was obtained from the Route Evaluation Study prepared by Hull & Associates, Inc. (Hull) attached hereto as Exhibit B. The study identifies vehicles to be used and probable delivery routes; evaluates existing characteristics of and potential impacts to roadways, bridges, and culverts; identifies mitigation measures for potential impacts; and, identifies potential permits required for construction of the Project.

<u>Construction/Delivery Vehicles</u>

During the construction phase, impacts to local traffic are anticipated to be minimal due to low existing traffic volumes. Construction traffic associated with the Facility will consist of standard construction equipment and hauling trucks to deliver Facility components. Most Facility components and construction material will be

delivered to the Project Area using fixed-bed trucks or tractor-trailers, and multi-axle dump trucks. In addition, typical automobiles and pickup trucks will be used to transport construction staff and for incidental truck trips. Most delivery vehicles will be below current maximum weight and dimensions; however, some overweight/oversize vehicles may be required for the delivery of the switchgear or transformer for the collection substation.

Delivery Route

Delivery routes have not been finalized, but it is likely that the delivery of Facility components to the Project Area will be from the east, by way of I-75 to US 6 to SR 235 and then to Taylor Street/Sand Ridge Road. Within the Project Area, county and township roads and new private gravel access roads will be used to transport equipment and materials. Roads surrounding the Project Area experience limited levels of traffic, so no delays to local traffic are anticipated except where delivery vehicles may need to travel narrow roadways (i.e., less than two lanes). If delivery vehicles require the use of these narrow roadways, or for an occasional oversize vehicle, traffic control measures will be utilized. Potential traffic control measures will be detailed in a Traffic Control Plan which will be developed prior to construction and will be shared with local law enforcement, schools, and local landowners.

Hull conducted an on-site visual analysis of roads, bridges, and culverts along potential transportation routes for the Facility to identify hazardous conditions. The conditions of roads within the Project Area are categorized as either 'good' or 'fair,' with 'good' meaning that minor to moderate cracking was observed, and 'fair' pavement containing more weathered conditions like rutting and potholes (see Table 1 of Exhibit B). Hull contacted the Wood County Engineer's office and the Village of Weston to determine if any restrictions existed for bridges or roadways identified in the Project Area. No load restrictions were identified for any roads in the Project Area. Hull visually examined culverts within the Project Area to determine overall conditions. Some culverts could not be viewed because of manhole covers. Of the culverts that could be observed, all were categorized as 'good' or 'fair' based on the structural appearance of the culvert. Pavement over all culverts was categorized as in "fair" condition. No culverts were identified in the Route Evaluation Study as having significant structural issues.

Hull also examined overhead and width restrictions along roadways in the Project Area. There were no width restrictions noted along the probable routes. Permanent structures that cross over roads and restrict the clearance of oversized loads, such as bridges or overpasses, were not observed along evaluated routes. Additionally, no overhead cables deemed obstructive were identified along evaluated routes. If an overhead cable presents an obstruction, utility providers can temporarily or permanently raise the cable and/or move the poles. Therefore, cables are not anticipated to be a limiting feature for road usage.

Impacts and Mitigation

During construction, routes identified in the Route Evaluation Study will experience an increase in truck traffic; however, delays to local traffic are anticipated to be minimal due to low traffic volume in the Project Area. The previously mentioned Traffic Control Plan will include procedures used to manage traffic during construction. Increased traffic during the operation of the Facility is not anticipated.

The following mitigation techniques may be utilized to avoid or minimize transportation-related impacts and/or to provide long-term improvement to the local road system:

Insufficient Roadway Width

- Rerouting over-width vehicles to wider roadways.

Insufficient Vertical Clearance

- Temporarily relocating overhead utility lines and poles.
- Rerouting over-height vehicles to roadways with sufficient vertical clearance.

Poor Pavement Condition or Insufficient Pavement Durability

- Roadside drainage improvement.
- Pavement patching.
- Replacing pavement during or after construction if damaged by construction traffic (may include subgrade improvements).
- Rerouting heavy-loaded vehicles to avoid insufficient pavement.

Insufficient Cover over Drainage Structures

- Adding temporary gravel and/or asphalt cover over structures.
- Using bridge jumpers to clear structures.
- Repairing structures during or after construction if damaged by construction traffic.
- Rerouting heavy-loaded vehicles to avoid structures.

Poor Structure Condition

- Replacing structure during or after construction if damaged by construction traffic.
- Using bridge jumpers to clear structures.
- Rerouting heavy-loaded vehicles to avoid structures.

Inadequate Bridge Capacity

- Using bridge jumpers to clear bridges.
- Rerouting heavy-loaded vehicles to avoid bridges.

Insufficient Roadway Geometry

- Rerouting over-sized vehicles to avoid insufficient roadway geometry.
- Profile adjustments to roadways with insufficient vertical geometry.
- Permanent or temporary plan adjustments to roadways with insufficient horizontal geometry.

Impacts to roadways are anticipated to be minimal; however, roads evaluated in the Route Evaluation Study will be monitored during the construction phase for deterioration to ensure roads are safe for local traffic. Following the completion of construction activities, if needed, roadways will be repaired to pre-construction conditions. Requirements for roadway repairs and improvements will be detailed in a Road Use and Maintenance Agreement between the Wood County Engineer and the Applicant.

(4) Transportation Permits

Prior to construction, the selected transportation provider will obtain all necessary permits from ODOT and the Wood County Engineer. The vast majority of vehicles to be used for the construction and operation of the Facility meet current legal dimensions and weight (see Table 2 of Exhibit B). Therefore, very few transportation-related permits are anticipated. Special Hauling Permits may be required for a few vehicles that will transport the switchgears and transformers for the collection substation. Each vehicle must receive an individual Special Hauling Permit from the ODOT Central Office, as the specifications of the permit depend on the characteristics of the vehicle, its cargo, and duration of the delivery schedule. Additional permits will be required for driveway access and for any crossing of roads and county-maintained ditches by collection and transmission lines.

In addition to coordinating with state, county, and township authorities to obtain transportation permits, the Applicant will also coordinate with appropriate authorities regarding necessary traffic control during the construction of the Facility. Traffic management will be addressed in the Traffic Control Plan and may utilize the assistance of law enforcement officers, escorts, and/or flaggers. The final Traffic Control Plan will be provided to government agencies upon final Facility design, prior to construction commencement, and all road work will be coordinated with the appropriate regulatory agency prior to construction.

(5) Decommissioning

Utility-scale solar facilities typically have a life expectancy of approximately 40 years. If panels or ancillary equipment were to fail before the useful lifetime of the Facility, they will be replaced with operational components. However, if not upgraded, or if large solar arrays are non-operational for an extended period of time, such that there is no expectation of their returning to operation, they will be decommissioned. The Applicant's plan for decommissioning is comprised of two primary components: removal of Facility components/improvements and financial assurance. Each of these is described in additional detail below:

Removal of Facility Improvements

At the termination of the lease, the Applicant will dismantle and remove Facility components and above-ground property owned or installed by the Applicant. At the time of decommissioning, panels may be reused, recycled, or disposed of, as appropriate. Solar panel recycling is increasingly available. Below-ground structures, such as buried collection lines, will be removed to a minimum depth of 36 inches. Any underground infrastructure installed to a greater depth may remain in place. If necessary, the Applicant will re-grade disturbed areas, restoring slopes and contours to their pre-decommissioning grade, to the extent practical and in coordination with landowners. Upon request of the landowner, the Applicant may consider allowing roads, foundations, buildings, structures, or other improvements to remain in place. However, the Applicant will not be obligated to leave any components or improvements and will only consider such action so long as it does not violate any permits or legal requirements.

Financial Assurance

The Applicant, through this Application, is committing to provide financial assurances for Facility decommissioning and reclamation. Prior to the start of construction, the Applicant will retain an independent and registered professional engineer to calculate the net decommissioning costs for the solar farm as outlined in the plan. Cost estimates will be recalculated every five years over the life of the Project. This calculation will include the total cost estimate for implementing the decommissioning plan, accounting for any unanticipated contingencies and estimates of salvage value of the project components. Juliet will post and maintain a surety bond or similar financial assurance instrument in that amount for the removal of the project. If a subsequent calculation of the decommissioning cost increases or decreases, the financial assurance instrument will be adjusted to a reflective amount.

A draft decommissioning plan is provided as (Exhibit K). The plan will be updated with Facility-specific decommissioning costs upon final engineering, and the updated plan will be provided to the OPSB prior to construction.

4906-4-07 COMPLIANCE WITH AIR, WATER, SOLID WASTE, AND AVIATION REGULATIONS

(A) PURPOSE

This section provides information about compliance with existing air, water, solid waste, and aviation regulations, including current site conditions, potential impacts of the proposed Facility, and proposed mitigation measures.

(B) AIR

(1) Preconstruction

The Facility does not require any preconstruction air permits. Therefore, this section does not apply.

(2) Plans to Control Air Quality During Site Clearing and Construction

Best management practices will be utilized and implemented to minimize the amount of dust generated by construction activities (Exhibit M). The extent of exposed/disturbed areas on the site at any one time will be minimized and restored/stabilized as soon as possible. Water or a dust suppressant such as calcium carbonate will be used to suppress dust on unpaved roads (public roads, as well as Facility access roads) as needed throughout the duration of construction activities. Any unanticipated construction-related dust problems will be identified and immediately reported to the construction manager and contractor. In addition, all construction vehicles will be maintained in good working condition to minimize emissions from construction-related activities.

(3) Plans to Control Air Quality During Facility Operation

As per OAC 4906-4-07(B)(3), this requirement does not apply to wind farms. Likewise, the proposed Facility is a renewable energy project that will not produce any air pollution. In fact, the Facility may lead to improvements in air quality by reducing the need for traditional energy systems that negatively contribute to air pollution. Therefore, this requirement does not apply to the proposed Facility.

(C) WATER

(1) Preconstruction

Preconstruction conditions of area waterbodies are discussed in Section 4906-4-08(A)(4).

(a) List of Required Permits to Install and Operate the Facility

Prior to the start of construction, the Applicant will obtain the following permits:

- The Ohio National Pollutant Discharge Elimination System (NPDES) construction storm water general permit, Ohio EPA Permit No. OHC000005

- An individual permit or nationwide permit under Section 404 of the Clean Water Act, (if necessary, as determined after final engineering)
- A Water Quality Certification from the Ohio EPA (as determined after final engineering)
- An Ohio Isolated Wetland Permit (as determined after final engineering)

(b) Water Quality Map

The Facility will not discharge water or waste into streams or waterbodies, nor will Facility operation require the use of water for cooling or any other activities. Furthermore, the Facility will add only small areas of impervious surface, which will be dispersed throughout the Project Area, and will have a negligible effect on surface water runoff and groundwater recharge. Therefore, measurable impacts on the quality of surrounding water resources are not anticipated. Since there are no bodies of water likely to be affected by the proposed Facility, this section is not applicable.

(c) Description of Water Monitoring and Gauging Stations

As described above, there are no bodies of water likely to be significantly affected by the proposed Facility. Therefore, this section is not applicable.

(d) Existing Water Quality of Receiving Stream

The Facility will not discharge water or waste into streams or waterbodies. Therefore, there will be no receiving streams and this section is not applicable.

(e) Permit Application Data

The Facility will not discharge any water. Therefore, this section is not applicable.

(2) Construction

(a) Water Quality Map

As described above in Section 4906-4-07(C)(1)(b), measurable impacts on the quality of surrounding water resources are not anticipated. Since there are no bodies of water likely to be affected by the proposed Facility, this section is not applicable.

(b) Quantity/Quality of Construction Runoff

The proposed Facility will not result in wide-scale conversion of land to impervious surfaces. While PV panels themselves are impervious, they are disconnected from the ground surface so rain can run off the panel and fall onto the pervious underlying surface. The collection substation and O&M building are the only sources of impervious surfaces within the Facility and are anticipated to generate minimal runoff. Therefore, no significant changes to the rate, make-up, or volume of storm water runoff are anticipated.

Construction of the proposed Facility will have minimal, localized impacts to groundwater. Site-specific studies are ongoing to determine the extent of grading required for the Facility. Soil compaction from the use of construction equipment could limit the efficiency of surface water infiltration to groundwater. When soils are compressed, the pore spaces within the soil are decreased, which reduces water percolation. Construction of access roads will result in minor increases in storm water runoff that otherwise would have infiltrated into the ground at the road locations.

(c) Mitigation

As described above, construction of the proposed Facility is not anticipated to have any significant impacts on water quality. However, the following mitigation measures will be taken to ensure that impacts to groundwater, surface waters, and wetlands are avoided or minimized to the maximum extent practicable during Facility construction.

As mentioned in Section 4906-4-07(C)(1)(a), the Facility will require a NPDES Construction Storm Water General Permit (OHC000005) from the Ohio EPA. This permit is required for all construction sites disturbing 1.0 or more acres of ground. To obtain this permit, the Applicant will develop a Storm Water Pollution Prevention Plan (SWPPP) and file a Notice of Intent (NOI) letter with the Ohio EPA at least 21 days prior to the commencement of construction activities.

The SWPPP will address all minimum components of the NPDES permits and conform to the specifications of the Rainwater and Land Development manual, which describes Ohio's standards for storm water management, land development, and urban stream protection (ODNR, 2006). The SWPPP will identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with construction activities. If applicable, the SWPPP will clearly identify all activities that will be authorized under Section 401 of the Clean Water Act and be subject to an anti-degradation review. The SWPPP will also describe and ensure the implementation of best management practices that reduce pollutants in storm water discharges during construction.

As described below in Section 4906-4-08(E)(2)(c), topsoil removal and de-compaction will occur in agricultural areas for construction of access roads and the collection substation. These practices, and those described in the Ohio EPA document "Guidance on Post-Construction Storm Water Controls for Solar Panel Arrays" will also mitigate any potential impacts that soil compaction could have on infiltration of rain and snowmelt, thereby further reducing any potential impact to groundwater recharge (Ohio EPA, 2019). The construction footprint will be minimized by defining/delineating the work area in the field prior to construction and adhering to work area limits during construction. These measures will limit potential impacts of soil compression on normal infiltration rates.

On-site investigations were conducted to establish the locations of streams, ditches, and wetlands, and Facility components were sited to avoid impacts to these resources to the maximum extent practicable. Impacts to surface waters will be minimized through the use of horizontal directional drilling (HDD) and narrow crossings wherever possible. Equipment restrictions, herbicide use restrictions, and erosion and sediment control measures will also be utilized to reduce adverse impacts to water quality, surface water hydrology, and aquatic organisms. In addition, vegetation clearing along stream banks and in wetland areas will be kept to an absolute minimum. For more information on mitigation measures to protect wetlands and surface water see Section 4906-4-08(B)(2)(b).

(d) Changes in Flow Patterns and Erosion

As a result of the limited impacts discussed in Section 4906-4-07(C)(2)(b) and the mitigation measures discussed above in Section 4906-4-07(C)(2)(c), changes to flow patterns are not anticipated.

(e) Equipment for Control of Effluents

Facility operation will not involve the discharge of effluents into streams or water bodies. Therefore, this section is not applicable.

(3) Operation

(a) Water Quality Map

As described above in Section 4906-4-07(C)(1)(b), measurable impacts on the quality of surrounding water resources are not anticipated. Since there are no bodies of water likely to be affected by the proposed Facility, this section is not applicable.

(b) Water Pollution Control Equipment and Treatment Processes

The Facility will not require any water pollution control equipment or treatment processes. Therefore, this section is not applicable.

(c) NPDES Permit Schedule

As mentioned above, Facility construction will require an Ohio NPDES construction storm water general permit, Ohio EPA Permit No. OHC000005. The Applicant anticipates full and complete compliance with this permit. The NOI and associated fee for the Construction Activities General Permit will be filed at least 21 days prior to commencement of construction activities.

(d) Quantitative Flow Diagram

As explained in the following sub-sections, flow diagram information is not applicable to the proposed Facility.

(i) Sewage

The proposed Facility will not generate any sewage; however, the O&M building will be served by septic system developed for the project.

(ii) Blow-down

This section is not applicable, as PV panels do not utilize blow-down equipment.

(iii) Chemical and Additive Processing

The proposed Facility will not require the use of chemical and/or additive processing. Therefore, this section is not applicable.

(iv) Waste Water Processing

The proposed Facility will not process or generate wastewater. Therefore, this section is not applicable.

(v) Run-off and Leachates from Fuels and Solid Wastes

The Facility will not generate any run-off or leachates from fuels and solid wastes. Therefore, this section is not applicable.

(vi) Oil/water Separators

This section is not applicable because the Facility will not utilize any oil/water separators.

(vii) Run-off from Soil and Other Surfaces

Following completion of construction, temporarily impacted areas will be stabilized and restored to their preconstruction condition. Facility operation will not result in further soil disturbance, aside from occasional repair activities. Therefore, this section is not applicable.

(e) Water Conservation Practices

Aside from very limited quantities of water that may be used for the occasional cleaning of solar panels, the only Facility component requiring water sources will be the O&M building. Staff operating out of the O&M building will use water at a rate comparable to a typical small business or office. Modern, efficient fixtures will be installed and will be maintained in proper working order. Overall, there are water conservation benefits of solar energy, as compared to conventional coal and nuclear power. According to a study supported by the U.S. Department of Energy and the National Renewable Energy Laboratory, the total life cycle water use is lower for PV panels than other generation technologies (Meldrum, Nettles-Anderson, Heath, & Macknick, 2013).

(D) SOLID WASTE

(1) Preconstruction

(a) Nature and Amount of Solid Waste

An assortment of older farm-related structures will be removed prior to installation of Facility components. These structures include nine silos, three barns, four sheds, two equipment buildings, one garage, one livestock house, and one house foundation. Several of the structures and silos are located in the vicinity of 12737-12501 Township Highway 42 (Weston Road), approximately 100 to 300 feet west of Weston Road. The rest of the structures are located approximately 1,100 to 1,800 feet south of Sand Ridge Road, roughly mid-way between Weston Road and Milton Road. Additionally, various types of farm equipment, machinery, and related materials, as well as metallic and polyethylene above ground storage tanks and drums, will be removed prior to construction. The Applicant is not aware of any other debris or solid waste within the Project Area that would require removal for Facility development.

(b) Plans for Waste Removal

Property owners will relocate farm equipment, machinery, as well as metallic and polyethylene above ground storage tanks and drums prior to construction. Remaining preconstruction waste will be collected and disposed of in dumpsters. A private contractor will empty the dumpsters on an as-needed basis and dispose of the refuse at a licensed solid waste disposal facility. Waste materials will be recycled when possible. All waste will be handled, managed, and disposed of in accordance with federal, state, and local regulations.

(2) Construction

(a) Nature and Amounts of Construction Waste

Facility construction will generate some solid waste, primarily plastic, wood, cardboard, and metal packing/packaging materials, construction scrap, and general refuse. During the year-long construction period, the amount of solid waste generated is estimated to be approximately 38,000 cubic yards. Materials such as cardboard and metal packaging will be recycled at an appropriate facility.

(b) Methods for Storage and Disposal of Construction Waste

Construction waste will be collected from PV panel installation sites and other Facility work areas and disposed of in dumpsters located at the laydown yard. A private contractor will empty the dumpsters on an as-needed basis and dispose of the refuse at a licensed solid waste disposal facility. Waste materials will be recycled when possible. Used oil, used antifreeze, and universal waste, if any, will be handled, managed, and disposed of in accordance with federal, state, and local regulations.

(3) Operation

(a) Nature and Amounts of Waste

For the most part, Facility operation will not result in significant generation of debris or solid waste. Waste generated from the O&M building could include wood, cardboard, metal packing/packaging materials, used oil, general refuse, universal waste, and used antifreeze. The O&M building will generate solid wastes comparable to a typical small business office.

(b) Methods for Storage and Disposal of Waste

As described above, Facility operation will not result in generation of significant quantities of debris or solid waste. Therefore, this section is not applicable.

(4) Licenses and Permits

Facility operation will not require acquisition of waste generation, storage, treatment, transportation, and/or disposal licenses or permits.

(E) AVIATION

(1) Aviation Facilities List and Map

There are no known currently active private or public use airports, helicopter pads, or landing strips within 5 miles of the Project Area. One previously mapped private airport, Herr Field, is located approximately 4 miles northeast of the Project Area. A previously active commercial airport, Bordner Field, is located approximately 4 miles east of the Project Area. Wood County Airport is located approximately 9 miles northeast of the Project Area, on the northeastern side of Bowling Green.

(2) FAA Filing Status and Potential Conflicts

The Federal Aviation Administration (FAA) requires notification for objects affecting navigable airspace per 14 CFR Part 77. Any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

- Any construction or alteration exceeding 200 ft above ground level
- Any construction or alteration
    - within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft.
    - within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft.
    - within 5,000 ft of a public use heliport which exceeds a 25:1 surface

- Any highway, railroad or other traverse way whose prescribed adjusted height would exceed that above noted standards
- When requested by the FAA
- Any construction or alteration located on a public use airport or heliport regardless of height or location

Because the proposed Facility does not meet any of the above criteria, the FAA does not need to be notified. In addition to obstruction, reflectivity or glare is a potential concern from the FAA regarding solar facilities. Given that no airports, helicopter pads, or landing strips are located within 2 miles of the Facility, impacts from glare are not anticipated. More information on potential glare from the Project can be found in the Glint and Glare Analysis (Exhibit N).

4906-4-08 HEALTH AND SAFETY, LAND USE, AND ECOLOGICAL INFORMATION

(A) HEALTH AND SAFETY

(1) Equipment Safety and Reliability

(a) Major Public Safety Equipment

To prevent unauthorized entrance to the Project Area, safety measures will be employed during the construction and operation phases. Signage will be placed around the Project Area during construction, warning of potential dangers within the site and discouraging entrance by the public. Personnel exposed to public vehicular traffic shall be provided with and shall wear warning vests or other suitable reflective or high-visibility garments. Similar signage will be placed at the Facility during operation, along with perimeter fencing. During operation, security at the Facility will be maintained by a combination of perimeter security fencing, controlled access gates, electronic security systems, and potentially remote monitoring. Though the public will not have open access to the Facility, once construction is complete, the Facility may be available for guided tours at specified times.

(b) Equipment Reliability

Equipment reliability is an important criterion when selecting solar equipment. The Applicant will only select reliable, certified equipment for all Facility components, including but not limited to PV modules, inverters, racking systems, wiring, and transformers. All equipment will follow applicable industry codes and standards (e.g., Institute of Electrical and Electronics Engineers [IEEE], National Electrical Code [NEC], National Electric Safety Code [NESC], American National Standards Institute [ANSI]).

(c) Generation Equipment Manufacturer's Safety Standards and Setbacks

Generation equipment manufacturer's safety standards will be provided after PV solar module technology has been selected for the Project. All Project equipment is expected to be compliant with applicable UL, IEEE, NEC, NESC, and ANSI listings. The Applicant will follow all safety and setback requirements as outlined in the manufacturer product manuals and specifications. Internal setbacks, defined by the Applicant, are discussed in Section 4906-4-04(B)(2) of this Application.

(d) Measures to Restrict Public Access

The public does not have access to the private land on which the Facility is located; therefore, access by the public would only occur by trespassing. To further restrict public access, a 6-foot chain-link fence with a 1-foot section of barbed wire at the top will be constructed around the Facility. During operation, security of the Project Area will be maintained by a combination of perimeter security fencing, controlled access gates, electronic surveillance systems, and potentially remote monitoring. Additionally, "No Trespassing"

and “High Voltage Equipment” signs will be placed around the fence perimeter, warning the public of the potential hazards within the fenced Project Area.

(e) Fire Protection, Safety, and Medical Emergency Plans

The Applicant will meet with Wood County Emergency Services, including local fire and EMS officials, to discuss safety plans and training protocol. The Applicant will work with emergency personnel to ensure appropriate access. An Emergency Action Plan will be finalized based on coordination with Wood County Emergency Services and will be submitted to the OPSB prior to Facility construction.

(2) Probable Impacts due to Failures of Pollution Control Equipment

Solar panels generate electricity without combusting fuel or releasing pollutants into the atmosphere. Therefore, this section is not applicable.

(3) Noise

Resource Systems Group, Inc (RSG) was retained by the Applicant to conduct a Noise Assessment to evaluate potential noise impacts from the proposed Facility. The study examines current background sound levels, modeled results of sound levels from the Facility on nearby residences, and sound levels from construction activities. The Noise Assessment is included as Exhibit G.

(a) Construction Noise Levels at the Nearest Property Boundary

Construction activities associated with the Facility include road construction, substation construction, trenching, inverter installation, piling, and racking. No blasting is anticipated during Facility construction. Construction will be relatively short in duration, with construction of the substation lasting the longest.

Table 08-1 below presents the maximum sound pressure levels for various pieces of construction equipment at 15 meters (50 feet) away and 38 meters (190 feet) away. The shortest distance between a non-participating residential property boundary and a solar array, where racking and piling will take place, is 15 meters. This property is on the other side of a public road from the Facility. The nearest non-participating residential structure is approximately 58 meters (190 feet) from a solar array. Sound levels from construction activities at 15 meters from a solar array range from 80 dBA (compactor) to 87 dBA (HDD). Sound levels from construction activities at 58 meters from a solar array range from 58 dBA to 72 dBA. The Applicant currently anticipates that HDD will be used only in three locations where collection lines cross ditches.

Table 08-1. Maximum Sound Levels from Various Types of Construction Equipment

Equipment	Maximum Sound at 58 meters (190 feet) (dBA)	Maximum Sound at 15 meters (50 feet) (dBA)
Excavator	67	85
Dozer	67	85
Grader	66	85
Roller	66	85
Dump Truck	65	84
Concrete Mixing Truck	66	85
Concrete Pumper Truck	63	82
Man-lift	67	85
Flatbed Truck	65	84
Large Crane	67	85
Small Crane	65	83
Trencher	61	83
Compactor	58	80
Forklift	64	85
Boom Truck	65	84
HDD	72	87
Small Pile Driver	62	84

(b) Operational Noise Levels at the Nearest Property Boundary

(i) Operational noise from generation equipment

Sound propagation modeling was performed in accordance with the standard ISO 9613-2 "Acoustics – Attenuation of sound during propagation outdoors, Part 2: General Method of Calculation" and used the CadnaA modeling software. A total of 855 receivers were modeled at sensitive receptors within 1 mile of the Project Area, at a height of 4 meters (13 feet) above ground level. Sound propagation modeling also included the use of barriers and relocation for select inverters to reduce the sound level at nearby non-participating residences.

Results from sound modeling at each receptor are included in Appendix C of the Noise Assessment (Exhibit G) and show that all non-participating residences are anticipated to experience a sound level of 46 dBA or less during daytime and nighttime. During the day, the substation is anticipated to produce the greatest amount of sound due to the transformer and associated cooling fans, resulting in a sound level of 46 dBA at the nearest non-participating residence. At night, inverters are anticipated to produce the greatest amount of sound, resulting in a maximum sound level of 45 dBA at the nearest non-participating residence. The highest projected sound level at the Project boundary is 53 dBA, which occurs at southern property line of the southwestern section of the Project area, adjacent to a neighboring field.

Sound modeling for the Facility conservatively assumed inverters to be consistently operational throughout the night; however, constant operation of the inverters is not anticipated. Nighttime operation of the inverters is only anticipated if providing volt-ampere reactive support.

(ii) Processing equipment

The Facility does not include processing equipment; therefore, this section is not applicable.

(iii) Associated road traffic

As stated in Section 4906-4-06(F)(3), traffic levels during construction will not increase significantly. Noise produced from construction equipment and vehicles is provided in Table 08-1 above. Post-construction traffic will be associated with operations personnel traveling to and from the Project Area and will not be a significant source of noise.

(c) Location of Noise-Sensitive Areas within One Mile of the Facility

Noise-sensitive receptors, which includes residences, churches, commercial businesses, and exempt structures, within the vicinity of the Facility are mapped with sound level data in Figures 10 (daytime) and 11 (nighttime) of the Noise Assessment. Receptors are mapped out to a 35 dBA sound level, which is equivalent to a quiet rural area, according to Appendix A of the Noise Assessment (Exhibit G). These receptors are also shown within 1 mile of the Project Area in Figure 08-1 of this Application and Appendix C of the Noise Assessment.

(d) Mitigation of Noise Emissions during Construction and Operation

General construction activities will occur between 7:00 AM to 7:00 PM, or until dusk when sunset occurs after 7:00 PM. Construction activities that do not involve noise increases above ambient levels at sensitive receptors may occur outside of daylight hours, when necessary. Impact pile driving will be limited to the hours of 9:00 AM to 7:00 PM, or until dusk when sunset occurs after 7:00 PM. Impact pile driving may occur between 7:00 AM and 9:00 AM if the noise impact at non-participating receptors is not greater than daytime ambient Leq plus 10 dBA. Construction equipment will minimize the use of back-up alarms to the greatest extent practicable. Additionally, staging areas will be located away from sensitive receptors to the greatest extent practicable.

Setbacks have been implemented into Facility design which will help to mitigate sound impacts from the Facility, including a 100-foot setback for the Facility's fenceline from non-participating residences. Additionally, the final design of the Facility will incorporate an internal setback of 100 feet from the panel area fenceline to non-participating residential property lines, except in areas where a public road is between the residential property and the fenceline.

Mitigation for operational noise was incorporated into the model to meet both the daytime and nighttime design thresholds of 5 dBA above the Project Area ambient average (discussed further below). The mitigation in the model includes shifting the location of 21 inverters, installing barriers adjacent to 26 inverters, and installing a barrier adjacent to the substation transformer. This conceptual mitigation is discussed further in Section 5.3 of the Noise Assessment. This mitigation may be reduced or modified depending on final Facility design and equipment selections. If mitigation is deemed necessary for Facility operation after final Facility design, options might include sound barriers, baffles or other manufacturer-provided mitigation, limiting the use of the inverters at night for VAR support, and/or selection of quieter equipment. Once the Facility design, equipment, and mitigation methods are finalized, and prior to construction, noise modeling will be updated to ensure efficacy.

(e) Pre-construction Background Noise Study

Continuous background noise was measured at three locations representative of the Project Area between January 13 and January 25, 2021. Sound level meters were mounted at a height of 1.5 meters (4.9 feet) and covered with a 7-inch weather-resistant windscreen to reduce influence of wind-induced noise. Data was summarized into 10-minute, overall day, overall night, and full monitoring period length durations. Anomalous data, or data that provided false readings or artificially high levels, were omitted from the sound data. Such events include high wind speeds, precipitation and thunderstorms, temperatures below 14 degrees Fahrenheit, sound equipment interactions, and other anomalous events.

Table 1 of the Noise Assessment includes the average (L_{eq}), upper 10th percentile (L_{10}), median (L_{50}), and lower 10th percentile (L_{90}) background noise levels. The nighttime L_{eq} across the Project Area is 40 dBA and the daytime L_{eq} across the Project Area is 43 dBA.

Though the OAC does not define sound level limits for solar projects, a design goal of 5 dBA over average Project Area ambient level (L_{eq}) was established based on precedent set by the OPSB. Given the ambient levels referenced above, 5 dBA over those values results in a nighttime L_{eq} of 45 and a daytime L_{eq} of 48 dBA. Comparatively, the maximum modeled operational sound level at a non-participating receptor for nighttime was 45 dBA, and for daytime was 46 dBA. These anticipated sound levels are within the 5 dBA above ambient design goal for the Facility. See Section 4.0 of the Noise Assessment for a detailed description of the background noise study.

(4) Water Impacts

Hull & Associates, Inc. (Hull) completed a Geology and Hydrogeology Report for the proposed Facility (Exhibit C).

(a) Impacts to Public and Private Water Supplies from Construction and Operation

Hull conducted a well survey within the Project Area as part of the preliminary Geotechnical Report. The survey was mailed to property owners identified as participating at the time the survey was initiated. A total of nine surveys were mailed and eight were returned. Of the eight respondents, four respondents indicated having no wells, one respondent identified and provided information about a well on their property but the well is located nearly a half mile west of the Project Area, one respondent confirmed two wells on their property that are in little use, one respondent indicated that three old wells may exist but could not confirm whether they still exist or are in use, and one respondent was unsure if there was a well on their property or not. In addition to wells identified by mailed survey, wells identified by the ODNR exist within the vicinity of the Project Area, including several within the Project Area. These wells are presented on Figure 4 of Exhibit C, and are generally located near residences. Based on the information gathered and the associated analysis in the preliminary Geotechnical Report, construction and operation of the Facility is not anticipated to result in any significant negative impact to private water supplies.

Hull also examined Source Water Protection Areas (SWPAs) for public water systems within and surrounding the Project Area. Details on those protection areas for surface water and groundwater are provided below in Section 4906-4-08(A(4)(d); however, Hull concluded that impacts to public sources are not anticipated.

The principal groundwater sources for the majority of the Project Area are the Lake Maumee Lacustrine and the Lake Maumee Beach Ridge aquifers. Groundwater yields from this region can range from 25 to 100 gallons per minute from limestone aquifers at less than 150 feet.

(b) Impacts to Public and Private Water Supplies from Pollution Control Equipment Failures

Solar panels generate electricity without combusting fuel or releasing pollutants. Therefore, this section is not applicable.

(c) Water Resources Map

Figure 4 in the Geology and Hydrogeology Report depicts existing aquifers and water wells in the Project Area. The Ohio EPA map of SWPAs near the Project Area is included as Attachment B in the Geology and Hydrogeology Report.

(d) Compliance with Local Water Source Protection Plans

SWPAs, as defined and approved by the Ohio EPA for the protection of drinking water sources, were evaluated in the Geology and Hydrogeology Report. No SWPAs were identified within the Project Area. The nearest SWPA, located approximately 1.5 miles northeast of the Project Area, is associated with the

community water supply for the city of Bowling Green. The corridor management zone for this SWPA follows the West Branch Tontogany Creek and its tributaries, extending 10 miles upstream of the water intake. However, the drainage basin boundary of the West Branch Tontogany Creek is not located within the Project Area.

The Ohio EPA and other regulatory agencies restrict specific activities within SWPAs. These activities include concentrated animal feeding operations; sanitary, industrial, or residual waste landfills; land application of biosolids; and voluntary brownfield cleanups. The restrictions typically apply to SWPAs relying on groundwater as their drinking water source. Hull has reviewed the range of programs which have adopted rules related to the presence of SWPAs and has concluded that construction of the proposed solar farm facility will not constitute an activity that would be restricted within either a surface water or groundwater SWPA.

(e) Prospects of Floods in the Area

A floodplain is flat land adjacent to a stream or river that experiences occasional or periodic flooding. For regulatory purposes, the floodplain is divided into two areas, based on water velocity: the floodway and the flood fringe. The floodway includes the channel and the portion of the adjacent floodplain required to pass the 100-year flood without increasing flood heights. Typically, this is the most hazardous portion of the floodplain where the fastest flow of water occurs. Due to the high degree of hazard, most floodplain regulations require that proposed floodway developments do not block the free flow of flood water, as this could dangerously increase that water's depth and velocity. The flood fringe is the remaining portion of the floodplain, outside of the floodway, that usually contains slow-moving or standing water. Development in the fringe will not normally interfere as much with the flow of water. Therefore, floodplain regulations for the flood fringe typically allow development to occur but require protection from floodwaters through flood proofing so that water cannot enter the structure (ODNR, 2019).

Surface water within the Project Area includes one stream and five man-made ditches that generally flow north into Beaver Creek, approximately 2.8 miles northwest of the Project Area. Information on floodplains in the vicinity of the Project Area was obtained from ODNR and the Federal Emergency Management Agency (FEMA), as part of the Geology and Hydrogeology Report. There are no 100-year floodplains within the Project Area; therefore, Facility construction and operation is not anticipated to impact a 100-year floodplain.

(5) Geologic Suitability

The Geology and Hydrogeology Report includes several figures depicting existing geological features in the Project Area. Bedrock geology and topography are provided as Figure 1; seismic features are depicted on

Figure 2; soil types are included in Figure 5; and underground and surface mines are shown on Figure 6. There are no oil, gas, or injection wells within or near the Project Area (ODNR, n.d.). Topographic contours are shown on Figure A-7 of the Ecological Assessment (Exhibit E).

(a) Suitability of Site Geology

Existing Conditions

The surface elevation within the Project Area is approximately 676 feet to 681 feet above mean sea level. Bedrock appears to be flat across the entire Project Area and ODNR water well logs indicate it is encountered between 51 to 68 feet below ground surface (bgs). According to information obtained from ODNR, Division of Geological Survey, no karst features have been identified in the immediate vicinity of the Project Area. The nearest mapped karst feature, an unverified feature, is approximately 23 miles east of the Project Area, in Sandusky County.

Figure 6 of the Geology and Hydrogeology Report illustrates that no known coal, underground, abandoned, or surface mines are mapped within the Project Area. There are no mapped abandoned underground or surface mines in the Project Area. The closest active mineral surface mine is greater than 2 miles west of the Project Area.

A review of seismic information for the Project Area is included in the Geology and Hydrogeology Report. No epicenters lie within the Project Area. The most recent nearby seismic event occurred in 1992 and was a magnitude 2 earthquake located in Wood County with an epicenter located approximately 12 miles south of the Project Area. No faults were identified within the Project Area. The two nearest faults to the Project Area are the Maumee and the Bowling Green Fault Systems located approximately 3 miles to the northwest and 5 miles to the east, respectively. These seismic features are shown on Figure 2 of the Geology and Hydrogeology Report.

Site Suitability

Based on their experience with earthwork in the region, Hull indicates that solar array equipment is lightly loaded, and conventional driven steel piles and helical piles are typical foundation support for solar modules. However, suitability of these foundation supports will need to be confirmed through geotechnical exploration and evaluation for each solar array site. If it is determined that driven steel piles or helical piles are not suitable for structural support, alternate foundation systems, such as auger cast piles, concrete foundations, ballasted foundations, or rammed aggregate pier systems may be necessary to support solar modules and site improvements. The structural engineer will evaluate the subsurface conditions identified in the geotechnical report for determining appropriate foundation support of the

planned improvements, and review and approve foundation designs that are suitable for the site soils. Test borings have been conducted on the site and are discussed further in paragraph (c) below.

(b) Soil Suitability

Existing Conditions

Hull examined soils properties in the Project Area using the U.S. Department of Agriculture Soil Conservation Service Soil Survey of Wood County. Soil surveys furnish surface soil maps and provide general descriptions and potentials of the soil to support specific uses and can be used to compare the suitability of large areas for general land uses. Surface soils in the vicinity of the Project Area are comprised primarily of Mermill-Aurand Complex (approximately 35% of the Project Area), Haytville Clay loam (approximately 16% of the Project Area), and Wauseon Fine sandy loam (approximately 10% of the Project Area). The remainder of the Project Area is covered by various silt loams as shown in the soil types map, Figure 5 of the Geology and Hydrogeology Report. The characteristics of these soils are also described further in the Geology and Hydrogeology Report.

Site Suitability

To maintain soil stability during construction, adequate surface water run-off drainage will be established and properly controlled at the Project Area to minimize any increase in the moisture content of the subgrade material. Positive drainage of each construction site will be created by gently sloping the surface toward drainage swales. It should be noted that sub-grade soils are subject to shrinking and swelling due to variation in seasonal moisture contents, and consideration should be given during constructability reviews to determine how best to deal with potential moisture fluctuations.

Based on a review of the soil survey information and Hull's experience with earthwork in the area, the soils on-site are anticipated to be suitable for grading, compaction, and drainage, as discussed in the Geology and Hydrogeology Report.

(c) Plans for Test Borings

A total of 50 bores were performed within the area of PV panel arrays, all to a depth of 15 feet below existing site grades. Boring log results are included as Exhibit L. Boring closure followed standard procedures and methods and the test bores were backfilled with the auger cuttings and bentonite chips following completion. Groundwater was observed at a depth of 6 feet during drilling in one of the 50 boring locations. Upon drilling completion, groundwater was observed at a depth of 1 foot at one of the 50 boring location.

Subsurface conditions encountered during borings mostly include loose to very stiff soils consisting of lean clay with sand. Cobbles and boulders were not encountered, and only two of the bores contained gravelly soils.

As test borings have been provided as part of this Application, and additional borings would inform very specific engineering consideration, it is not proposed that any additional geotechnical boring logs or data will be provided to the OPSB. If additional borings are determined to be necessary, the onsite contractor will prepare and follow a plan similar to the completed borings and will use standard methods for boring closure. The results of any additional borings are not anticipated to significantly alter the placement of Facility components. Plans for test borings are provided in Attachment F in the Geology and Hydrogeology Report (Exhibit C).

(6) Prospects of High Winds in the Area

The Facility will be engineered and installed to withstand typical high-wind occurrences. The Facility design factors in wind speeds, which are based on building code wind speed maps. The Facility is designed using Risk Category I maps and is based on the maximum expected three-second gust from the building codes.

(7) Blade Shear

Given the nature of the Facility, this section is not applicable.

(8) Ice Throw

Given the nature of the Facility, this section is not applicable.

(9) Shadow Flicker

Given the nature of the Facility, this section is not applicable.

(10) Radio and Television Reception

The Applicant is not aware of any research conducted to date that indicates utility-scale solar generation facilities interfere with communication systems. PV arrays generate weak electromagnetic fields (EMFs) during the day that dissipate at short distances. These EMFs are “generated in the same extremely low frequency range as electrical appliances and wiring found in most homes and buildings” (Massachusetts Department of Energy Resources, 2015). In a study of three solar projects in Massachusetts, electric field levels measured along the boundary of each project did not exceed background levels (Massachusetts Clean Energy Center, 2012). Accordingly, the Applicant does not anticipate interference with radio or television reception due to weak electric fields produced by the proposed solar facility.

(11) Radar Interference

As stated above, solar facilities produce weak EMF signals that quickly dissipate off-site. Additionally, according to the FAA, PV systems represent little risk of interfering with radar transmission due to their low profile (Lawrence & Magnotta, 2018). As a result, the Facility is not anticipated to interfere with radar communication systems.

(12) Navigable Airspace Interference

Due to the low profile of the Facility, where the tallest structure will be the gen-tie line pole(s), with a height of no more than 100 feet, impacts to navigable airspace are not anticipated. See Section 4906-4-07(E) of this Application for a discussion of potential aviation impacts from glare.

(13) Communication Interference

Interference in microwave communication signals occurs when the line-of-sight between two microwave transmitters is blocked (Polisky, 2005). Microwave communication interference is a common concern in development of a wind facility due to the presence of large structures. However, components of this Facility are low in profile with the tallest structure being the overhead gen-tie line. Due to the lack of tall structures that may interfere with the line-of-sight of microwave transmitters, interference with microwave communications from the Facility is not anticipated.

(B) ECOLOGICAL IMPACT

(1) Ecological Resources in the Project Area

In support of this Application, Cardno completed an Ecological Assessment (Exhibit E). In its Ecological Assessment, Cardno conducted a desktop review of the Project Area plus a ¼ mile buffer covering land use, bedrock geology, glacial drift, wetlands, water quality/floodplain, habitat characterization, and major species, including federal and state-listed threatened and endangered species. Further, Cardno conducted field studies that included surface water delineations in the Project Area as well as habitat observations and sensitive species assessment in the Project Area and visually within ¼ mile of the Project Area.

(a) Open Spaces and Facility Map

Figures in the Ecological Assessment show the proposed Facility and ecological features within 0.5 mile of the Project Area (Ecological Assessment [EA] Study Area), as outlined below:

(i) The proposed Facility and Project Area boundary

The proposed Facility layout includes PV panels, collection lines, access roads, inverters, laydown and O&M area, fenceline, substation, and gen-tie line.

(ii) Undeveloped or abandoned land such as wood lots or vacant tracts of land subject to past or present surface mining activities

Undeveloped land is mapped in Figure A-1 of the Ecological Assessment. Approximately 97% of the Project Area is undeveloped land consisting of cultivated crops. There are no past or present surface mining locations within 0.5 mile of the Project Area (Figure 6, Exhibit C).

(iii) Wildlife areas, nature preserves, and other conservation areas

No wildlife areas, wildlife refuges, or critical species habitats were noted within or adjacent to the EA Study Area (Figure A-5, Exhibit C). The EA noted a variety of Bird "hotspots" and Audubon Society Important Bird Areas located from 3 to 20 miles outside of the Project Area (see section 4.4.2 and Figure A-5 of the EA). Due to a lack of adequate habitat in the immediate Project Area, it is likely that birds would opt for higher quality habitats offered in these areas, rather than the Project Area.

(iv) Surface bodies of water

The EA reported six delineated linear waterbodies within the EA Study Area, including a perennial stream, named Cutoff Ditch, and five un-named ditches. All waterways are illustrated on Figure A-6 of the EA.

(v) Highly erodible soils and steep slopes

A review of soil classifications presented in Section 4.3 of the EA shows that soils within the Project Area are characterized primarily with slopes of 0% to 2%, and to a lesser amount (less than 15% of the acreage) with slopes of 2% to 6%. The EA found that Project Area soils are not classified as highly erodible.

(b) Field Survey of Vegetative Communities and Surface Waters within 100 Feet of Construction Area

Vegetative Communities

Vegetative communities were initially identified by Cardno via a desktop analysis of aerial photography, then later field verified during surveying efforts. Three communities were identified, including agricultural land, disturbed/developed, and forestland. Successional communities and large deciduous forests were not identified in the Project Area.

The EA Study Area consists primarily of agricultural land (approximately 97%) that is either currently active or recently fallowed. The agricultural fields observed were a mix of remnants from the previous year's soybean and corn crops. It is likely that the type of crop changes seasonally, but the general extent of the cultivated area remains roughly the same. Additionally, many of the cultivated areas and roadside areas contain grassy swales with a mix of turf grasses (*Festuca sp. and Fescue sp.*) that appear to be mowed seasonally. Weedy plant species identified in the windrows and along agricultural field edges

include Canada goldenrod (*Solidago canadensis*), smooth brome (*Bromus inermus*), Queen Anne's lace (*Daucus carota*), common teasel (*Dipsacus fullonum*), honey locust (*Gleditsia triacanthos*), and white mulberry (*Morus alba*).

Developed open space consists of approximately 3% of the EA Study Area and is characterized by residences and farmsteads with lawns, landscaped areas, driveways, and unpaved roads. Low intensity developed areas and deciduous forest areas each make up less than 1% of the EA Study Area.

Wetland and Stream Delineations

Cardno conducted surface water delineations within the Project Area during October 2020. Wetland delineations were conducted in accordance with the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0). These two manuals outline three criteria that must be met in order to determine the presence of a wetland, including hydrophytic vegetation, hydric soils, and sufficient hydrology. No wetlands were identified within the Project Area during the field survey.

Cardno delineated ditches and streams in the Project Area and assessed them using the Ohio Headwater Habitat Evaluation Index (HHEI) and/or the Ohio Qualitative Habitat Evaluation Index (QHEI) scoring method, as applicable. Both methods yield a numerical score for the section of streams and ditches evaluated, which Cardno used to estimate the extent of existing aquatic life use of each stream.

Two ditches delineated in the field were assessed using the HHEI as outlined in the Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams Review. The HHEI is used to determine the status of smaller streams as one of three classes of primary headwater habitats (PHWH). The method scores streams on a range of 0 to 100 based on physical characteristics. Scores less than 30 indicate a Class I PHWH (ephemeral streams); scores 30 to 50 indicate a Class II PHWH (intermittent, interstitial, or perennial warm water streams); scores greater than 50 can be either Class II or Class III depending on their conditions; and scores 75 or greater indicate a Class III PHWH (perennial, cool water streams).

Additional assessments were performed on three ditches and one stream which were identified as potentially having a drainage area of greater than one square mile (259 hectares) or with predominant pools having maximum pool depths over 40 cm using the Ohio EPA's QHEI. The QHEI assessment examines a number of stream characteristics and yields a score ranging from 0 to 100. Scores less than 32 typically indicate a limited resource water (LRW). Scores of 32 to 60 may be indicative of a modified warmwater habitat (MWH), meaning a WWH that has been disturbed but could potentially recover. A score of 60 typically indicates a stream has the physical characteristics needed to support diverse

macroinvertebrate and fish populations and attain the warmwater habitat (WWH) designation. Scores that are greater than 75 are indicative of a possible exceptional warmwater habitat (EWH).

A total of six waterbodies were delineated in the Project Area, consisting of five ditches and one stream Three ditches and the stream were identified as perennial waterbodies, while two ditches were identified as intermittent. Two of the ditches were evaluated with a HHEI score. The scores for these ditches were 27 and 52, meaning that one of these ditches is classified as a modified ephemeral ditch and the other is classified as a modified small drainage warm water ditch.

Three of the ditches and the one stream were evaluated using QHEI scores. The scores for the ditches were 21, 22, and 22, and the score of the stream was 57.5. These scores indicate that the stream is designated as a modified warm water habitat (MWH), while the three ditches are designated as limited resource waters (LRW).

Based on the QHEI/HHEI scoring, all of the delineated ditches have a low potential to provide suitable aquatic habitat for rare, threatened, and endangered (RTE) species. The one stream has only a moderate potential to provide suitable aquatic habitat for RTE species. However, due to surrounding disturbances and modifications from existing land uses, the stream and ditches identified in the Project Area are unlikely to serve as habitat for RTE species. Additional information on delineated streams and ditches can be found in Exhibit E.

(c) Literature Review of Plant and Animal Life within 0.25 Mile of Project Area

This section provides the results of a literature review of the plant and animal life within at least 0.25-mile of the Project Area boundary. The literature review is broken into two sections: (i) for plants and (ii) for animals.

(i) Plant Species

Aquatic and Terrestrial Plants

The review of plants within 0.25 mile of the Project Area boundary focuses on species of commercial or recreational value and species designated as endangered or threatened. This information was compiled through review and analysis of existing data from the ODNR and summarized below.

Species of Commercial or Recreational Value

Aside from crops, there are no known plant species of commercial or recreational value within 0.25 mile of the Project Area.

Threatened and Endangered Species

Based on ODNR's records for state-listed species as presented in Cardno's EA Report, there are 28 state listed plant species, consisting of 12 endangered species and 16 threatened species, known to occur in Wood County (ODNR, 2016). The status and general habitat requirements for each of these species are summarized below in Table 08-2. None of the species identified in Table 08-2 are federally listed and none of these species were identified within the Project Area.

Table 08-2. Threatened and Endangered Plant Species in Wood County

Scientific Name	Common Name	General Habitat[1]	Ohio Status[2]
Agalinis skinneriana	Skinner's-foxglove	sandy soil, or moist to dry habitats, open woods, barrens, moist thickets, bluffs, prairies	E
Androsace occidentalis	western rock-jasmine	grasslands, steppe, open forest, plains, valleys.	E
Arabidopsis lyrata	Lyre-leaved Rock Cress	dry sandy or rocky soil along cliffs or ledges.	E
Aureolaria pedicularia var. ambigens	Prairie Fern-leaved False Foxglove	sandy upland forests, sandy upland savannas, sandy thickets or stabilized sand dunes	E
Carex formosa	Handsome Sedge	mesic woods	E
Comptonia peregrina	Sweet Fern	dry, sandy areas, associated with pine stands	E
Gentiana puberulenta	Prairie Gentian	open and sunny oak-hickory savannah	E
Hesperostipa spartea	porcupine grass	prairies of dry black soil, sand, or gravel, pastures, roadsides, along railroads	E
Lilium philadelphicum	Wood Lily	prairie grasslands, mountain meadows and deciduous forests	E
Monarda punctata	dotted horsemint	sandy areas or disturbed areas such as along railroads or roadsides	E
Prunus nigra	Canada plum	moist woods and thickets	E
Vernonia fasciculata	Prairie Ironweed	low prairies, ditches, marshes and along shores	E
Amelanchier sanguinea	Rock's Serviceberry	rocky woods and slopes, along stream banks	T
Anemone cylindrica	prairie thimbleweed	dry upland areas of black soil prairies	T
Carex bicknellii	Bicknell's Sedge	dry upland prairies and wet river bottom prairies	T
Carex conoidea	field sedge	moist soil of meadows, woodlands and around open ponds, streams, plains and valleys	T
Carex crus-corvi	raven-foot sedge	wet prairies, swales, sloughs, and open floodplain areas along major rivers	T
Descurainia pinnata	tansy mustard	along cliffs and slopes, and in disturbed sites such as railways and yards	T
Dichanthelium leibergii	Leiberg's Panic Grass	dry to wet-mesic prairies, savannas and openings in oak forests	T
Helianthemum canadense	Canada Frostweed	dry sandy prairie openings, savannas and barrens	T
Hieracium umbellatum	Canada Hawkweed	sandy upland savannas, sand prairies, sand dunes, sandy or rocky woodlands, roadsides	T
Juncus greenei	Greene's rush	wet sandy, gravelly soil along shores, swales, dunes, meadows and prairies	T
Krigia virginica	Virginia dwarf-dandelion	mesic to dry sand prairies, sandy fields, or sandy areas along paths and roadsides	T
Lechea minor	thyme-leaved pinweed	sandy woodlands, roadsides, fields, shorelines	T

Scientific Name	Common Name	General Habitat[1]	Ohio Status[2]
Lithospermum caroliniense	plains puccoon	prairies, rocky open woods, by roads, railroads	T
Ranunculus fascicularis	Early Buttercup	upland woodlands, rocky or sandy savannas and pastures	T
Salix petiolaris	Slender Willow	wet river banks, wet meadows, wet ditches	T
Sphenopholis obtusata var. obtusata	Prairie Wedge Grass	prairies, marshes, dunes and disturbed areas	T

1 General Habitat is based on Table 4-3 of Cardno's Ecological Assessment, Exhibit E
2 E=Endangered, T=Threatened

(i) Animal Species

Aquatic and Terrestrial Animals

Cardno identified animal resources within 0.25 mile of the Project Area boundary through review and analysis of existing data sources, including the Audubon Society's Important Bird Areas database, the Cornell Lab of Ornithology's eBird website, the USFWS Information for Planning and Conservation (IPaC) database, and ODNR Department of Wildlife's Ohio Listed Species report. Information from these sources has been synthesized and is presented below for birds, mammals, reptiles/amphibians, aquatic species, commercial species, and recreational species. Each of these discussions identifies potential presence of species designated as endangered or threatened in accordance with the U.S. and Ohio threatened and endangered species lists. Table 08-3 provides a summary of listed species with potential presence in the Project Area. See Section 4906-4-08(B)(1)(d) below for discussion of field surveys conducted on-site.

Table 08-3. Federal and State-Listed Species with Potential Presence in the Project Area

Scientific Name	Common Name	Listing[1]
Birds		
Bartramia longicauda	upland sandpiper	S-E
Chondestes grammacus	lark sparrow	S-E
Circus hudsonius	northern harrier	S-E
Cygnus buccinator	trumpeter swan	S-T
Ixobrychus exilis	least bittern	S-T
Lanius ludovicianus	loggerhead shrike	S-E
Sterna hirundo	common tern	S-E
Mammals		
Myotis septentrionalis	northern long-eared bat	F-T, S-E
Myotis sodalis	Indiana bat	F-E
Reptiles		
Clemmys guttata	spotted turtle	S-T
Clonophis kirtlandii	Kirkland's snake	S-T
Fish		
Fundulus diaphanus menona	western banded killifish	S-E
Moxostoma valenciennesi	greater redhorse	S-T
Mussels		

Scientific Name	Common Name	Listing[1]
Ligumia recta	black sandshell	S-T
Megalonaias nervosa	washboard	S-E
Obliquaria reflexa	threehorn wartyback	S-T
Truncilla donaciformis	fawnsfoot	S-T
Uniomerus tetralasmus	pondhorn	S-T

1 S-State-listed, F-Federally-listed; E-endangered, T-threatened

Birds

Cardno's review of USFWS and ODNR resources found a total of seven listed bird species for Wood County. No critical habitat for these species exists in the Project Area, and no individuals were observed in the Project Area. Cardno also reviewed the Audubon Society's Important Bird Areas database and the Cornell Lab of Ornithology's eBird website, providing information about bird habitats in the vicinity of the Project Area. Information about two Important Bird Areas and seven eBird hotspots is presented in section 4.4.2 of the EA. The closest of these areas is the Baldwin Woods Preserve, located three miles east of the Project boundary.

Cardno also coordinated with USFWS and ODNR and reviewed publicly available data on bald eagle and sensitive raptor nests. No records of bald eagle or sensitive raptor nests were found in the Project Area or within in the 0.25 mile of the Project Area. Additionally, both USFWS and ODNR indicated that it is unlikely for the Project Area to host bald eagles, due to inadequate foraging or roosting habitat.

Mammals

Cardno's review of USFWS and ODNR resources found two listed mammal species in Wood County, the Indiana bat (*Myotis sodalis*) and the northern long-eared bat (*Myotis septentrionalis*). Neither species has critical habitat within the Project Area, and no individuals were observed in the Project Area. Common mammalian game species that could occur in the Project Area include eastern cottontail rabbit, eastern gray squirrel, fox squirrel and white-tailed deer. However, Cardno observed minimal wildlife use of the Project Area in its field investigations

Amphibian and Reptile

Cardno's review of USFWS and ODNR resources found no listed amphibian species and two listed reptile species for Wood County, the spotted turtle and Kirtland's snake. Critical habitat for neither of these species exists in the Project Area, and no individuals were observed in the Project Area. Although the Project Area primarily consists of agricultural land, common amphibian and reptile species could occasionally use the Project Area for foraging, breeding and/or shelter. Typical for construction activities, there is a potential for incidental injury or mortality of juvenile or slower moving individuals.

Aquatic Species

Cardno's review of USFWS and ODNR resources for Wood County found two listed fish species, the western banded killifish and greater redhorse, and five listed mussel species, the washboard, black sandshell, pondhorn, threehorn wartyback, and fawnsfoot. Critical habitat for none of these species exists in the Project Area, and no individuals were observed in the Project Area. Cardno's field assessment found no wetlands in the Project Area. Further, Cardno found that, based on the QHEI/HHEI scoring, all of the delineated ditches have a low potential to provide suitable aquatic habitat for RTE species. The one stream has only a moderate potential to provide suitable aquatic habitat for RTE species. However, due to surrounding disturbances and modifications from existing land uses, the stream and ditches identified in the Project Area are unlikely to serve as habitat for RTE species. Project designs have the stream and one of the ditches not being crossed by access roads or collection lines. Culverts for access roads will be placed in three ditches. Collection lines will cross four ditches in five locations, two of which will be by open cut, and three by horizontal directional drilling (HDD). The potential for impacts to listed aquatic species is minimal.

Commercial and Recreational Species

Commercial species consist of those trapped or hunted for fur and recreational species consist of those hunted as game. The ODNR regulates the hunting and trapping of commercial and recreational species. Cardno's EA found that common game species in northwestern Ohio include American woodcock (*Scolopax minor*), chukar (*Alectoris chukar*), gray partridge (*Perdix perdix*), northern bobwhite (*Colinus virginianus*), ring-necked pheasant (*Phasianus colchicus*), ruffed grouse (*Bonasa umbellus*), wild turkey (*Meleagris gallopavo*), mallard (*Anas platyrhynchos*) and other ducks, mourning dove (*Zenaida macroura*), eastern cottontail rabbit (*Sylvilagus floridanus*), eastern gray (*Sciurus carolinensis*) and fox (*Sciurus niger*) squirrels, and white-tailed deer (*Odocoileus virginianus*). No commercially valuable species are anticipated to be present in the Project Area, and during the field surveys, Cardno staff observed minimal wildlife use of the Project Area.

(d) Results of Field Surveys for Plant and Animal Life Identified in Literature Review

The literature review discussed in Section 4906-4-08(B)(1)(c) identified the potential presence of plants and animals in the vicinity of the Project Area based on previously published data and Cardno's agency consultations. This review largely identified common species, but also indicated that some RTE species could occur in the vicinity of the Project Area.

During the fall of 2020, Cardno conducted field surveys within the Project Area and a visual assessment in the ¼ mile area surrounding the Project Area. Field surveys included sensitive species habitat assessments and surface water delineations. No species-specific field surveys were conducted.

However, during field surveys and surface water delineations, Cardno staff observed no listed species, nor obvious evidence of such species, including freshwater mussels. Cardno staff also observed minimal wildlife use of the Project Area.

In order to protect mussel species in Ohio, ODNR-DOW and USFWS developed protocols to follow for identifying the presence or absence of mussels. Based on the classification and drainage area of streams and ditches in the Project Area, and the fact that no evidence of freshwater mussels was observed during surface water delineations, none of the streams or ditches in the Project Area meet the requirements for a mussel survey.

(e) Summary of Additional Ecological Impact Studies

Based on agency consultation and field survey results, no additional ecological studies are proposed. Results of the consultation efforts are detailed in Sections 4906-4-08(B)(2)(b) and (3)(b), and in Appendix B of Exhibit E.

(2) Construction Impacts

(a) Estimation of Impact of Construction on Undeveloped Areas, Plants, and Animals

Because the Facility is located entirely on leased private land, there will be no construction-related impacts to recreational areas, parks, wildlife areas, nature preserves, or other conservation areas. Potential impacts to undeveloped areas, plants, and animals may occur during construction as a result of the installation of PV panels, access roads, and electrical interconnects; development and use of the laydown yard; and the construction of the collection substation. Anticipated impacts to these resources are discussed below.

<u>Impacts to Plants</u>

Construction activities that may result in impacts to vegetation include site preparation, earth-moving, excavation, and backfilling activities associated with construction of the laydown yard, access roads, substations, and buried collection lines. These activities will result in the cutting and clearing of vegetation, the removal of stumps and root systems, and increased exposure or disturbance of soil. Along with direct loss of, and damage to, vegetation, these impacts can result in a loss of wildlife food sources and habitat, increased soil erosion and sedimentation, increased risk of colonization by non-native invasive species, and disruption of normal nutrient cycling; however, it is not anticipated that any plant species occurring in the Project Area will be extirpated or significantly reduced in abundance as a result of construction activities.

Impacts to Wildlife Species

Construction-related impacts to wildlife are anticipated to be very limited given that the Facility will be sited on agricultural land, which provides habitat for only a limited number of wildlife species. Potential impacts from construction are described below.

Incidental Injury and Mortality: Because most Facility components are sited in active agricultural land that provides limited wildlife habitat, and which currently and historically experiences frequent agricultural-related disturbances, such impacts are anticipated to be very minor.

Siltation and Sedimentation: To prevent adverse effects to water quality and aquatic habitat during construction, runoff will be managed under an NPDES construction storm water permit and the associated SWPPP. An erosion and sediment control plan will be developed prior to construction that will use appropriate runoff diversion and collection devices (Exhibit M). Also, because the majority of Facility components are being sited in active agricultural land, soil disturbance or exposure due to Facility construction will generally occur in areas already subject to regular agricultural disturbances such as plowing, tilling, and harvesting.

Habitat Loss: The Facility will be built on or adjacent to agricultural land, which provides habitat for mostly common wildlife species. In addition, most of these areas are already subject to periodic disturbance from agricultural activities. Forest communities have largely been avoided and will experience less than 0.1 acre of construction-related disturbance.

Disturbance/Displacement: Some wildlife displacement may also occur due to increased noise and human activity as a result of Facility construction. The significance of this impact will vary by species and the seasonal timing of construction activities. Because most of the Facility will be located on agricultural land, species utilizing those habitats are most likely to be temporarily disturbed or displaced by Facility construction; however, the few bird and mammal species observed by Cardno during field investigations should have the capability of vacating the Project Area during construction. Additionally, similar habitat is available adjacent to the Facility for displaced species.

Impacts to Habitat

Table 08-4 and Table 08-5 quantify the temporary and permanent impacts to natural resources. Impacts were calculated using the impact assumptions outlined in the Ecological Assessment.

Table 08-4. Temporary Impacts to Natural Resources

Impact Type	Upland Soil (acres)	Forested Uplands, Tree Clearing (acres)	Wetland (acres)	Streams (acres)	Streams (linear feet)	Ponds (acres)
Access Roads	16.93	0	0	0.028	91	0
Buried Collection Line	3.43	0	0	0.010	40	0
Laydown Area	7.09	0	0	0	0	0
Substation	0	0	0	0	0	0
O&M Facility	0	0	0	0	0	0
Array Pilings / Panels	0	0	0	0	0	0
Gen-Tie Line	0.10	0	0	0	0	0
Inverter Pads	0	0	0	0	0	0
Pyranometer	0	0	0	0	0	0
Total	27.55	0	0	0.037	131	0

Table 08-5. Permanent Impacts to Natural Resources

Impact Type	Upland Soil (acres)	Forested Uplands, Tree Clearing (acres)	Wetland (acres)	Streams (acres)	Streams (linear feet)	Ponds (acres)
Access Roads	11.28	0.10	0	0.02	60	0
Buried Collection Line	0	0	0	0	0	0
Laydown Area	0.92	0.88	0	0	0	0
Substation	2.12	0	0	0	0	0
O&M Facility	0.05	0	0	0	0	0
Array Pilings / Panels	1.2	0	0	0	0	0
Gen-Tie Line	0.001	0	0	0	0	0
Inverter Pads	0.11	0	0	0	0	0
Pyranometer	<0.01	0	0	0	0	0
Total	15.68	0.98	0	0.02	60	0

Impacts to Wetlands and Surface Water Habitats

The proposed Facility has been designed to avoid impacting wetlands and surface waters, to the extent practicable, and to minimize such impacts where avoidance is not possible. The Facility has been sited in upland areas that are currently or were recently used for agricultural production.

Temporary impacts to ditches could occur during cut and fill activities for the access roads or trenching for underground collection lines. The Facility is not sited to cross any delineated wetlands, so no temporary or permanent impacts are anticipated. Culverts will be installed for access road crossing of three ditches. Underground collection lines will be installed across two ditches by open cut trenching. Additionally, three ditches will be crossed by underground collection lines which will be installed using

HDD techniques. HDD installation of underground collection lines is not anticipated to cause any temporary or permanent impact to the ditches they are crossing. Due to careful Facility design, no direct impacts to streams (other than ditches) or wetlands are anticipated. For additional information on wetland impacts, see Appendix E of Exhibit E.

(b) Description of Short-term and Long-term Mitigation Procedures

(i) Site restoration and stabilization of disturbed soils

Following completion of construction, temporarily impacted areas will be restored to their pre-construction condition. Restoration activities are anticipated to include the following:

- Buried electrical collection line routes will be restored to pre-construction contours as necessary and allowed to regenerate naturally.
- Disturbed soils within the Facility's fence line will be re-seeded with a low-growth, native seed mix to stabilize exposed soils and control sedimentation and erosion.
- The majority of the laydown yard will be removed post-construction, followed by gravel removal and soil decompaction, as necessary. Approximately 1 acre will remain for parking and equipment staging during Facility operation.

All removed inorganic material and demolition debris will be stockpiled in designated locations. Each stockpile will be transported off-site to either a recycling center, when feasible, or to an approved landfill depending on the material type. Debris will be broken down into manageable sizes to aid in transportation.

The objectives of reclamation and revegetation are to vegetate and stabilize soils within the Project Area and to return other disturbed areas to approximately pre-construction use and capability. This involves the treatment of soil as necessary to preserve approximate pre-construction capability and the stabilization of the work surface in a manner consistent with the initial land use.

(ii) Frac out contingency plan

Facility construction will include the use of trenchless excavation methods known as HDD. This widely used technique accomplishes the installation of buried utilities with minimal impact, by routing the utility under a sensitive feature such as a stream, river, or wetland. HDD operations have the potential to inadvertently release drilling fluids into the surface environment. This inadvertent release is referred to as a "frac out" and occurs due to pressurization of the drill hole beyond the containment capability of the overburden soil material, or through fractured bedrock into the surrounding rock.

The HDD procedure uses a bentonite slurry, a fine clay material, as a drilling lubricant. Although bentonite is non-toxic and non-hazardous, it has the potential to adversely impact aquatic species if released into waterbodies. Seepage of drilling fluid is most likely to occur near the bore entry and exit points where the drill head is shallow. Frac outs can occur, however, in any location along a directional bore.

An Inadvertent Release of Drilling Fluid Contingency Plan is included as Appendix F of the Ecological Assessment (Exhibit E) and sets forth response measures for inadvertent returns and containment methods for various locations (e.g., inland, wetlands, or streams), notification procedures, and clean-up activities.

(iii) Methods to demarcate surface waters and wetlands during construction

The boundaries of jurisdictional streams and wetlands within and immediately adjacent to the construction limits of disturbance will be demarcated with highly visible flagging, staking, or fencing prior to construction. These sensitive areas will also be depicted on construction drawings. All contractors and subcontractors working on-site will be provided with training to understand the significance of the types of flagging used, and the importance of staying within defined limits of work areas, especially in and adjacent to marked sensitive resource areas such as wetlands.

(iv) Inspection procedures for erosion control measures

The Applicant will seek coverage for the Facility under the Ohio EPA construction stormwater general NPDES permit. The NPDES permit requires development of a SWPPP for erosion control and stormwater management.

To avoid and minimize impacts to aquatic resources resulting from construction-related siltation and sedimentation, an approved SWPPP will be implemented. To protect surface waters, wetlands, groundwater, and stormwater quality, erosion and sediment control measures will be installed and maintained throughout site development. Such measures might include silt fence, hay bales, and/or temporary siltation basins. Examples of best management practices (BMPs) for erosion and sedimentation control are provided in Exhibit M. The location of these features will be detailed on the construction drawings, approved by the Ohio EPA as part of the NPDES review, and reviewed by the contractor prior to construction.

Erosion and sediment control measures will be inspected by a qualified individual throughout the construction phase to assure that they are functioning properly until completion of all restoration work. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall

be inspected for evidence of, or the potential for, pollutants entering the drainage system. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking. Inspections will be conducted at least once every seven calendar days, and within 24 hours after any storm event with 0.5 inch or greater of rain. This inspection frequency may be reduced to once every month if the entire site is temporarily stabilized and runoff is unlikely due to weather conditions such as snow, ice, or frozen ground.

Following each inspection, the qualified inspector will complete and sign a checklist and inspection report. At a minimum, the inspection report shall include:

- the inspection date;
- names, titles, and qualifications of personnel making the inspection;
- weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
- weather information and a description of any discharges occurring at the time of the inspection;
- locations of any BMPs that need to be maintained; and
- any corrective actions recommended.

For three years following the submittal of a notice of termination form, the Applicant will maintain a record summarizing the results of the SWPPP inspections described above, including the names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and a signed certification as to whether the Facility is in compliance with the SWPPP.

As described above, a duly-qualified individual will also inspect these features throughout the construction phase to assure that they are functioning properly until completion of all restoration work.

(v) Measures to protect vegetation

Protection of vegetation will primarily be accomplished through careful site planning. Nearly all Facility components have been sited on agricultural land, thus avoiding significant impacts to successional grassland, shrubland, forested, and wetland areas. In addition to siting, measures to protect vegetation include: identifying sensitive areas such as streams and ditches where no

disturbance or vehicular activities will be allowed; limiting areas of disturbance to the smallest size practicable; preserving mature trees to the maximum extent practicable; educating the construction workforce on respecting and adhering to the physical boundaries of off-limit areas; employing BMPs during construction; and maintaining a clean work area within the designated construction sites. Following construction activities, temporarily disturbed areas will be seeded to reestablish vegetative cover in these areas. Other than in active agricultural fields, native species will be allowed to revegetate all temporarily disturbed areas.

(vi) Options for clearing methods and disposing of brush

Although the Facility is located almost exclusively on agricultural land, some vegetative and tree clearing may be required. Trees cleared from the work area will be cut into logs and either left for the landowner or removed, while limbs and brush will be buried, chipped, or otherwise disposed of as directed by the landowner and as allowed under federal, state, and local regulations. Using these methods avoids the need for and movement of heavy vehicles, further limiting the impact of construction at the Project Area.

(vii) Avoidance measures for state or federally listed and protected species and their habitats

Based on Cardno's consultations with the ODNR and USFWS and on-site field surveys, habitat for state or federal RTE species within the Project Area is minimal. The Facility has been sited to avoid the majority of woodlots and the higher-quality stream. If the Facility requires tree clearing, such activities will be conducted between October 1 and March 31, per USFWS guidelines, to further avoid potential impacts to the Indiana and northern long-eared bats. Additionally, potential impacts to RTE aquatic species will be mitigated through the use of BMPs, as previously discussed, to reduce risks of erosion and sedimentation, and through low-impact installation methods such as HDD for buried collection lines.

(3) Operation Impacts

(a) Estimation of Impact of Operation on Undeveloped Areas, Plants, and Animals

Aside from minor disturbances associated with routine maintenance and occasional repair activities, no additional disturbance to plants, vegetative communities, wetlands, or surface waters are anticipated from Facility operation. As previously indicated, the Facility is located entirely on leased private land. Therefore, the Facility will not result in physical disturbance or impacts to recreational areas, parks, wildlife areas, nature preserves, or other conservation areas as identified in Section 4906-4-08(B)(1)(a).

(b) Procedures to Avoid/Minimize/Mitigate Short-term and Long-term Operational Impacts

The Applicant has sited the Facility to avoid wetlands and streams to the maximum extent practicable. Once operational, the Facility is not anticipated to result in additional impacts to wetlands and streams.

Forested areas that may contain mature trees will be avoided to the maximum extent practicable, minimizing impacts of forest fragmentation and suitable wildlife habitat. While additional tree clearing is not expected during the operational phase of the Facility, if required due to shading, tree clearing activities will be conducted between October 1 and March 31 to avoid impacts to bat species. Additional vegetation management practices may include the application of herbicide, as necessary, around fence lines or to control noxious weeds. Applications will be made by a licensed professional and in accordance with manufacturer instructions. A Vegetation Management Plan is included as Exhibit N.

Direct impacts to wildlife from an operational solar facility in Ohio are low. Solar facilities do not have the same collision risk for avian and bat species as wind facilities due to their low profile and lack of rapidly moving parts. Because no significant operational impacts to these resources are anticipated, no mitigation measures are proposed.

(c) Post-Construction Monitoring Plans

The Applicant has no plans for post-construction monitoring of wildlife impacts because no significant impacts from the construction or operation of the Facility are anticipated. The Facility does not include any large rapidly moving parts, and will not result in environmental discharges during operation that may impact wildlife and their habitat.

(C) LAND USE AND COMMUNITY DEVELOPMENT

(1) Land Use

Land uses within 1 mile of the Project Area are shown on Figure 08-1. Land use mapping was developed using parcel data obtained from the Wood County Auditor's Office. Among other information, Figure 08-1 shows the following features:

(a) Land Use Map

(i) The proposed Facility

The proposed Facility layout includes PV panels, collection lines, access roads, inverters, laydown yard, O&M Building area, fenceline, substation, and gen-tie line.

(ii) Land use

Land use was mapped within 1 mile of the Project Area. A majority of land use is agricultural, with some residential parcels and more diverse land use near the Village of Weston.

(iii) Structures

Structures within 1 mile of the Project Area primarily include residences. Additional structures include commercial and industrial buildings, churches, and public service facilities, primarily associated with the Village of Weston. For identification, structures were digitized based on aerial imagery and confirmed through existing databases, and include residences and other buildings people congregate for extended periods of time.

(iv) Incorporated areas and population centers

Only one population center, the Village of Weston, is located within 1 mile of the Facility.

(b) Structures Table

(i) Distance between structures/property lines and the nearest PV panel (for structures within 1,500 feet)

Distances between the PV panels and existing structures within 1,500 feet are shown in Table 08-6 below. Distance between PV panels and property lines within 1,500 feet are shown in Table 08-7.

There are 78 structures within 1,500 feet of a PV panel. Table 08-6 presents the distance to the nearest PV panel and the participation status of the underlying parcel (i.e., participating or non-participating).

Table 08-6. Structures Within 1,500 Feet of a PV Panel

Structure Type	Distance to PV Panel (Feet)	Participation Status of Underlying Parcel[1]
Residence	190.3	Non-Participating
Residence	192.1	Non-Participating
Residence	201.6	Non-Participating
Residence	204.5	Non-Participating
Residence	210.6	Non-Participating
Residence	214.7	Non-Participating
Residence	218.4	Non-Participating
Residence	218.5	Non-Participating
Residence	218.6	Non-Participating
Residence	222.5	Non-Participating
Residence	224.0	Non-Participating
Residence	225.7	Non-Participating
Residence	228.6	Non-Participating
Residence	236.0	Non-Participating
Residence	246.6	Non-Participating

Structure Type	Distance to PV Panel (Feet)	Participation Status of Underlying Parcel[1]
Residence	247.1	Non-Participating
Residence	285.8	Non-Participating
Residence	293.7	Participating
Residence	323.8	Non-Participating
Residence	326.9	Non-Participating
Residence	328.3	Non-Participating
Residence	332.3	Non-Participating
Residence	335.0	Non-Participating
Residence	355.1	Non-Participating
Residence	358.5	Non-Participating
Residence	361.8	Non-Participating
Residence	458.7	Non-Participating
Residence	493.7	Non-Participating
Residence	550.4	Non-Participating
Residence	600.0	Non-Participating

Structure Type	Distance to PV Panel (Feet)	Participation Status of Underlying Parcel[1]
Residence	621.5	Non-Participating
Exempt	640.0	Non-Participating
Residence	653.2	Non-Participating
Residence	683.5	Non-Participating
Residence	693.9	Non-Participating
Residence	708.7	Non-Participating
Exempt	838.7	Non-Participating
Residence	846.2	Non-Participating
Residence	853.4	Non-Participating
Residence	853.8	Non-Participating
Residence	855.0	Non-Participating
Residence	861.2	Non-Participating
Residence	862.4	Non-Participating
Residence	927.0	Non-Participating
Residence	928.2	Non-Participating
Residence	934.3	Non-Participating
Residence	978.6	Non-Participating
Residence	1050.8	Non-Participating
Residence	1051.6	Non-Participating
Residence	1059.7	Non-Participating
Residence	1062.8	Non-Participating
Residence	1065.1	Non-Participating
Residence	1065.4	Non-Participating
Residence	1076.3	Non-Participating
Industrial	1079.2	Non-Participating
Residence	1098.4	Non-Participating
Residence	1102.5	Non-Participating
Residence	1118.5	Non-Participating
Residence	1155.2	Non-Participating
Residence	1178.5	Non-Participating
Residence	1191.8	Non-Participating
Residence	1194.7	Non-Participating
Residence	1199.3	Non-Participating
Residence	1201.3	Non-Participating
Residence	1202.8	Non-Participating
Residence	1207.9	Non-Participating
Residence	1213.2	Non-Participating
Residence	1233.3	Non-Participating
Residence	1251.2	Non-Participating
Residence	1263.0	Non-Participating
Residence	1288.0	Non-Participating
Residence	1303.8	Non-Participating
Residence	1353.5	Non-Participating
Residence	1364.1	Non-Participating
Residence	1377.3	Non-Participating
Residence	1381.0	Non-Participating
Residence	1446.5	Non-Participating
Residence	1461.8	Non-Participating

1 Landowners with parcels anticipated to be under a lease or easement agreement at the time of Facility construction are identified as participating residences for the purposes of this Application.

There are 232 properties within 1,500 feet of a PV panel. For each of these properties, Table 08-7 presents the distance to the nearest PV panel and the lease status of the parcel (i.e., participating or non-participating).

Table 08-7. Parcels Within 1,500 Feet of a PV Panel

Parcel ID	Distance to PV Panel (Feet)[1]	Lease Status[2]
409020000001000	0	Participating
409020101025000	0	Participating
409030000016000	0	Participating
409030000017000	0	Participating
409030000018000	0	Participating
409030000031000	0	Participating
409030000032000	0	Participating
409040000016000	0	Participating
409040000017000	0	Participating
509340000034000	0	Participating
509340000035000	0	Participating
509340000036000	0	Participating
509340000037000	0	Participating
509340000040000	0	Participating
509340000043000	0	Participating
509340000048000	0	Participating
509340000049500	0	Participating
509340000055000	0	Participating
509340000056500	0	Participating
509340000028000	26.1	Non-participating
509340000060000	32.5	Non-participating
409030000033000	37.9	Participating
409030000019001	39.8	Non-participating
409030000030000	42.2	Non-participating
409040000008500	44.7	Non-participating
509340000061000	47.0	Non-participating
409020101026000	48.3	Participating
409020000005000	51.8	Non-participating

Parcel ID	Distance to PV Panel (Feet)[1]	Lease Status[2]
509340000033000	59.4	Non-participating
409040000012000	66.1	Non-participating
409040000004000	68.7	Non-participating
409040000001000	70.1	Non-participating
409040000013000	70.9	Non-participating
409020000002000	74.8	Participating
509340000038500	75.4	Non-participating
509330000014500	77.5	Non-participating
509330000011000	79.5	Non-participating
509330000014510	79.5	Non-participating
509330000011002	82.0	Non-participating
509330000011001	82.8	Non-participating
409040000003000	82.9	Non-participating
409040000006000	83.4	Non-participating
409040000017001	85.6	Non-participating
509330000012000	86.3	Non-participating
409020000006000	86.9	Non-participating
409040000014000	87.6	Non-participating
509340000058000	89.6	Non-participating
509340000027000	92.6	Non-participating
409040000015000	96.7	Non-participating
509340000054000	107.9	Non-participating
509340000051000	110.5	Non-participating
509340000048001	112.3	Non-participating
509340000056502	113.4	Non-participating
509340000047000	114.3	Non-participating
509340000056501	114.5	Non-participating
509340000046000	115.9	Non-participating
509340000045000	116.7	Non-participating
409020101017500	120.3	Non-participating
509340000044000	120.8	Non-participating
509340000042000	121.0	Non-participating
409030000000000	125.1	Participating
409030000014000	125.2	Participating
409030000013000	126.3	Non-participating
409020101017501	126.9	Non-participating
409030000010000	127.4	Non-participating
409020101024000	127.5	Non-participating
409030000009000	128.5	Non-participating
509340000034001	129.1	Non-participating
409030000006001	129.6	Non-participating
509340000041000	130.9	Non-participating
509340000059000	134.8	Non-participating
509340000023000	162.3	Non-participating
409040000009000	167.0	Non-participating
509330000013000	174.5	Non-participating
409030000004000	199.7	Participating
409030000015000	208.1	Participating
409020101016000	213.8	Participating
409030000005000	245.9	Non-participating
409020101014000	273.3	Non-participating

Parcel ID	Distance to PV Panel (Feet)[1]	Lease Status[2]
409030000006000	278.6	Participating
409020000003000	313.6	Participating
409030000012000	352.6	Participating
409030000011000	355.3	Participating
409030000008000	358.0	Participating
409020101015000	359.9	Participating
409030000007000	360.2	Participating
409020101900200	367.9	Non-participating
509330000014502	368.4	Non-participating
409020000004000	373.7	Non-participating
409040000002000	374.1	Non-participating
509350318002500	378.0	Participating
409030000002000	379.5	Participating
509350318001000	380.7	Non-participating
409030000001001	381.6	Non-participating
409020000900200	384.7	Non-participating
409030000003000	392.7	Participating
509340000032000	415.4	Non-participating
409020000007000	443.7	Non-participating
409030000001000	444.1	Participating
409020101012000	467.3	Participating
409020101017505	469.6	Non-participating
409020000019000	477.1	Participating
509350318005000	477.4	Non-participating
409020101017503	492.2	Non-participating
409020000020000	497.9	Participating
509340000031000	518.9	Non-participating
409020101011000	529.2	Participating
409020101023000	536.5	Non-participating
409020101013000	546.7	Non-participating
409020101019000	609.8	Non-participating
409020101020000	611.1	Non-participating
409020101021000	611.8	Non-participating
409020101022000	614.0	Non-participating
509340000030000	616.7	Non-participating
409020000008000	619.8	Non-participating
409030000019000	674.4	Non-participating
409030000029000	674.4	Non-participating
409020101017504	682.8	Non-participating
509340000029000	714.4	Non-participating
509340000026000	717.8	Non-participating
509340000022000	724.3	Non-participating
509330000002000	726.4	Non-participating
409020101017502	756.2	Non-participating
409020101009000	760.3	Non-participating
509350300000000	789.6	Non-participating
409030000028000	806.6	Non-participating
509350316005000	819.1	Non-participating
509350316006000	819.2	Non-participating
509350317010000	819.9	Non-participating
509350317009000	820.6	Non-participating

Parcel ID	Distance to PV Panel (Feet)[1]	Lease Status[2]
509350317008000	821.2	Non-participating
509350318002501	821.8	Non-participating
509350317007000	821.9	Non-participating
509350316007000	822.3	Non-participating
509350317006000	822.5	Non-participating
509350318006000	828.2	Non-participating
509350316008000	831.3	Non-participating
509350315010000	855.7	Non-participating
509350315011000	876.8	Non-participating
509350315012000	889.5	Non-participating
509350315013000	902.5	Non-participating
409020101007000	917.7	Non-participating
409030000900200	928.6	Non-participating
509350315014000	932.2	Non-participating
409020101006000	970.4	Non-participating
509350316004000	970.9	Non-participating
509350316003000	970.9	Non-participating
509350317001000	971.7	Non-participating
509350317002000	972.3	Non-participating
509350317003000	973.0	Non-participating
509350316002000	973.4	Non-participating
509350317004000	973.6	Non-participating
509350317005000	974.2	Non-participating
509350316001000	980.8	Non-participating
509350315009000	1001.3	Non-participating
509350315015000	1012.8	Non-participating
509350315008000	1019.3	Non-participating
509350315007000	1041.4	Non-participating
509350315016000	1050.3	Non-participating
509350315006000	1066.5	Non-participating
509350315003000	1067.9	Non-participating
509350315005000	1075.1	Non-participating
509350318006000	1078.5	Non-participating
409020101010000	1094.0	Participating
409020101008000	1094.4	Non-participating
509350315004000	1096.5	Non-participating
509350313004001	1114.0	Non-participating
409030000029000	1122.3	Non-participating
509350318007000	1129.2	Non-participating
509350315018000	1149.7	Non-participating
509350318012000	1153.8	Non-participating
509350315017000	1153.8	Non-participating
509350318013000	1153.8	Non-participating
509350318011000	1154.6	Non-participating
509350318010000	1155.1	Non-participating
509350318009000	1155.6	Non-participating
509350318014000	1155.8	Non-participating
509350318008000	1156.2	Non-participating
509350318015000	1162.1	Non-participating
509350318016000	1179.4	Non-participating
409020000017000	1182.4	Non-participating

Parcel ID	Distance to PV Panel (Feet)[1]	Lease Status[2]
409020101005000	1189.8	Non-participating
509350318017000	1194.4	Non-participating
509350318018000	1213.0	Non-participating
509350315002000	1216.7	Non-participating
509350315001000	1220.1	Non-participating
509350313008000	1230.7	Non-participating
509350318019000	1235.6	Non-participating
409020000021000	1246.6	Participating
509350318020000	1261.1	Non-participating
509350313900200	1270.8	Non-participating
509350313004000	1282.2	Non-participating
409020101004000	1299.0	Non-participating
509350318003000	1301.8	Participating
409030000022000	1305.9	Non-participating
409030000023000	1305.9	Participating
509350314008000	1308.6	Non-participating
409030000024000	1318.7	Non-participating
509350318004000	1322.7	Participating
509350314009000	1331.1	Non-participating
509350314010000	1333.6	Non-participating
409030000025000	1336.1	Non-participating
409030000020000	1336.4	Non-participating
409020101001000	1342.1	Non-participating
509350313003000	1350.5	Non-participating
409020101008001	1353.8	Non-participating
409030000026000	1354.6	Non-participating
409030000027000	1360.1	Non-participating
509350300000000	1363.1	Non-participating
509350314012000	1365.1	Non-participating
509340000062001	1365.3	Non-participating
509350314011000	1366.4	Non-participating
509350313005000	1374.9	Non-participating
409020000010000	1379.5	Non-participating
409020101003000	1385.4	Non-participating
509350312020000	1392.9	Non-participating
409040000011000	1393.4	Non-participating
509330000003000	1395.3	Non-participating
509350313002000	1409.4	Non-participating
509330000010000	1414.7	Participating
509350101007000	1416.4	Non-participating
509350314007000	1425.5	Non-participating
509350314014000	1428.3	Non-participating
509350314013000	1431.5	Non-participating
509340000024000	1439.8	Non-participating
409020000018000	1439.8	Non-participating
409020101002000	1474.7	Non-participating
509350313001000	1475.1	Non-participating
509350314006000	1492.5	Non-participating
509350314016000	1492.5	Non-participating

Parcel ID	Distance to PV Panel (Feet)[1]	Lease Status[2]
509350314015000	1494.2	Non-participating
509350311010000	1499.1	Non-participating

1 Distances that equal zero represent parcels that contain PV panels.
2 Landowners with parcels anticipated to be under a lease or easement agreement at the time of Facility construction are identified as participating for the purposes of this Application.

(ii) Distance between structures/property lines and associated facility (for structures within 250 feet of access road, collection line, or other associated facility)

Distances between associated facilities and existing structures within 250 feet are shown in Table 08-8. Distances between the associated facilities and property lines within 250 feet are shown in Table 08-9. There are ten structures within 250 feet of an associated Facility component including collection lines, access roads, laydown yard, O&M building, or collection substation.

Table 08-8. Structures Within 250 Feet of a Facility Component

Structure Type	Distance (Feet)	Closest Facility Component	Lease Status of Underlying Parcel[1]
Residence	110.3 155.6	Collection Substation Access Road	Non-Participating
Residence	115.4	Collection Line	Non-Participating
Residence	118.9 208.7	Collection Substation Laydown Yard	Non-Participating
Residence	154	Access Road	Non-Participating
Residence	163.6	Collection Substation	Participating
Residence	195.9	Collection Line	Non-Participating
Residence	220.1	Access Road	Non-Participating
Residence	224.1	Access Road	Non-Participating
Residence	224.2	Access Road	Non-Participating
Residence	235.8	O&M Building	Non-Participating

1 Landowners with parcels anticipated to be under a lease or easement agreement at the time of Facility construction are identified as participating residences for the purposes of this Application.

There are 58 parcels within 250 feet of an associated Facility component, including 46 parcels that are within 250 feet of multiple Facility components. For each occurrence of an associated Facility component within 250 feet of a property line, Table 08-9 presents the nearest distance to the parcel boundary and the lease status of the parcel (i.e., participating or non-participating).

Table 08-9. Parcels Within 250 Feet of a Facility Component

Parcel ID	Distance (Feet)[1]	Associated Facility Component	Lease Status[2]
409020000005000	89.4 110.6	Access Road Collection Line	Non-participating

Parcel ID	Distance (Feet)[1]	Associated Facility Component	Lease Status[2]
409030000018000	0 0 0	Inverter Access Road Collection Line	Participating
409020000002000	133	Access Road	Participating
409020000001000	0 0 34.8	Inverter Access Road Collection Line	Participating
409030000031000	0 0 0	Inverter Access Road Collection Line	Participating
409040000003000	52.6	Access Road	Non-participating
409020101025000	38.3 109.1 149.4	Collection Line Access Road Inverter	Participating
409030000032000	0 0 0 0 20.8	Inverter Access Road Collection Line Laydown Yard Collection Substation	Participating
409030000033000	0 0 43.2 13.3 21.8 184.6	Collection Line Laydown Yard Inverter Access Road Collection Substation O&M Building	Participating
409030000002000	0 0 179.3	Collection Substation Access Road Collection Line	Participating
409030000003000	0 68.6 16.5 15.3	Collection Substation Laydown Yard Access Road Collection Line	Participating
409030000007000	0 0 22.6 207.5	Collection Substation Laydown Yard Collection Line Access Road	Participating
409030000008000	0 9.3 216.7	Laydown Yard Collection Substation Collection Line	Participating
409030000011000	0 201.8 215.3	Laydown Yard Collection Substation Collection Line	Participating
409030000012000	142.5 4.7 213.3	O&M Building Laydown Yard Collection Line	Participating

Parcel ID	Distance (Feet)[1]	Associated Facility Component	Lease Status[2]
409030000015000	0 0 96.7 153.0	O&M Building Laydown Yard Access Road Collection Line	Participating
409020101024000	0 159.8 219.2	Access Road Collection Substation Collection Line	Non-participating
409030000001000	0 5.0	Collection Substation Access Road	Participating
409030000006000	0 50.9 208.8 207.3	Collection Substation Laydown Yard Access Road Collection line	Participating
409020101021000	239	Access Road	Non-participating
409020101022000	141	Access Road	Non-participating
409020101023000	50.3 167.4	Access Road Collection Substation	Non-participating
409030000001001	20.5 79.5	Collection Substation Access Road	Non-participating
409030000005000	21.8 101.9	Collection Substation Access Road	Non-participating
409030000004000	0 25.8 92.7 206.9	Collection Substation Access Road Laydown Yard Collection Line	Participating
409030000006001	24.3 234.4 130.8	Collection Substation Access Road Laydown Yard	Non-participating
409030000009000	9.9 50.4	Collection Substation Laydown Yard	Non-participating
409030000010000	200.7 52.6	Collection Substation Laydown Yard	Non-participating
409030000013000	86.9 144.5	Laydown Yard O&M Building	Non-participating
409030000014000	0 166.8 157.3 52.5	O&M Building Access Road Collection Line Laydown Yard	Participating
409030000016000	0 0 0 0 0	Inverter Access Road Collection Line O&M Building Laydown Yard	Participating
409030000017000	0 0 0	Inverter Collection Line Access Road	Participating
509340000054000	151	Access Road	Non-participating
509340000051000	62.5	Access Road	Non-participating

Parcel ID	Distance (Feet)[1]	Associated Facility Component	Lease Status[2]
509340000056502	147.3 235.9	Collection Substation Access Road	Non-participating
509340000056501	161.5 231.5 244.6	Access Road Inverter Collection Line	Non-participating
509340000043000	0 0 0	Inverter Access Road Collection Line	Participating
509340000058000	104.0 216.8 222.7	Access Road Inverter Collection Line	Non-participating
409030000000000	0 0 0 133.9 48.5	O&M Building Laydown Yard Collection Substation Collection Line Access Road	Participating
509350318002500	209.7 227.9	Collection Sub Access Road	Participating
509340000056500	0 0 0 173.3 76.0	Inverter Collection Line Access Road Collection Substation O&M Building	Participating
509340000055000	0 0 0 74.6	Inverter Collection Line Access Road O&M Building	Participating
509340000049500	0 0 0	Inverter Access Road Collection Line	Participating
509340000048000	0 0 0	Inverter Access Road Collection Line	Participating
509340000040000	204.1 189.7 204.3	Inverter Access Road Collection Line	Participating
509330000012000	78.2	Access Road	Non-participating
509330000011001	220	Access Road	Non-participating
509340000061000	16.0 42.7	Access Road Collection Line	Non-participating
509340000037000	0 0 0	Access Road Collection Line Inverter	Participating
509340000036000	0 0 0	Inverter Access Road Collection Line	Participating
509340000035000	0	Access Road	Participating
509330000011000	10.3	Access Road	Non-participating

Parcel ID	Distance (Feet)[1]	Associated Facility Component	Lease Status[2]
409040000008500	50.4	Access Road	Non-participating
409040000017001	54.7 123.5 230.8	Access Road Collection Line Inverter	Non-participating
409040000017000	0 0 0	Inverter Access Road Collection Line	Participating
409040000016000	0 0 0	Inverter Access Road Collection Line	Participating
409040000004000	0.9	Access Road	Non-participating
509340000038500	137	Access Road	Non-participating

1 Distances that equal zero represent parcels that contain associated Facility Components
2 Landowners with parcels anticipated to be under a lease or easement agreement at the time of Facility construction are identified as participating for the purposes of this Application

(iii) Land/lease status of the property for each structure

The lease status for each structure and property is presented above in Table 08-6 through Table 08-9.

(c) Land Use Impacts

Table 08-10 below presents the total, temporary, and permanent land use impacts of the Facility. As the entire fenced area is anticipated to be unavailable to landowners, total land use impacts include the entire area within the fenceline.

Table 08-10. Total Land Use Impacts

Facility Components	Temporary Impact[3] (Acres)	Permanent Impact (Acres)	Total Impact (Acres)
Agricultural			
Area Inside Fenceline[1]	0.0	521.8	521.8
Area Outside Fenceline[2]	1.4	0.2	1.6
Total Agricultural	**1.4**	**522.0**	**523.4**
Residential (Vacant)			
Area Inside Fenceline	0.0	60.9	60.9
Area Outside Fenceline	0.1	0.1	0.2
Total Residential	**0.1**	**61.0**	**61.1**
Total Land Use Impact	**1.5**	**583.0**	**584.5**

1. As the entire fenced area is anticipated to be unavailable to landowners, permanent land use impacts include the entire area within fenceline.
2. Impacts outside the fenceline include small areas of access road and collection line impact
3. Temporary impact areas represent only the additional impact area during construction and do not include the permanent impact area. The temporary and permanent impact areas are added together in the total impact column.

Facility-related impacts to land use were calculated based on the impact assumptions noted below the table and the land use codes for each parcel, obtained from the Wood County Auditor's Office. Of note, the parcels classified as residential within the Project Area do not contain any residential structures. In ArcGIS, Facility components were intersected with the parcel data, resulting in areas of impact to each land use associated with the respective Facility components, and then the impact areas or lengths for all Facility components were entered into a spreadsheet for calculation.

The land use impact within the fenceline is considered permanent because this land will be unavailable for other uses for the life of the Facility. This permanent loss totals 584.5 acres. For linear components such as access roads and collection lines, the appropriate impact widths were multiplied by the component lengths to create an area of impact. Finally, using the spreadsheet, the separate areas of impact for each Facility component were added together, resulting in the temporary, permanent, and total areas of impact associated with each component and for each land use type. Table 08-11 below outlines land use impacts separately for each component.

Table 08-11. Land Use Impacts by Facility Components

Facility Components	Temporary Impact[8] (Acres)	Permanent Impact (Acres)	Total Impact (Acres)
Agricultural			
Solar Arrays[1]	0.0	444.4	444.4
Access Roads[2]	7.5	9.9	17.4
Collection Lines[3]	2.2	0.0	2.2
Inverter Pads[4]	0.0	0.1	0.1
Collection Substation[5]	0.0	0.1	0.1
O&M Building[6]	0.0	1.0	1.0
Laydown Yard[7]	4.1	1.0	5.1
Total Agricultural	**13.8**	**456.5**	**470.3**
Residential (Vacant)			
Access Roads	1.1	1.4	2.5
Laydown Yards	1.1	0.0	1.1
Collection Substation	0.0	2.1	2.1
Solar Arrays	0.0	49.0	49.0
Total Residential	**2.2**	**52.5**	**54.7**
Total Impact for Components	**16.0**	**509.0**	**525.0**

1. Permanent land use impacts from solar arrays include the entire area underneath and between the panels, because that area will be taken out of its current use for the life of the Facility.
2. Access roads will have a temporary disturbance area of 50 feet, and a permanent width of 20 feet, except where additional width is needed along curves, turning radii, at intersections, or to support deliveries.
3. A temporary, 20 foot wide work area will be required for belowground collection line installation. In areas where collection lines and access roads overlap, the impact area of the access road was used in the calculations, because it represents the larger, permanent impact.
4. Includes 31 inverter pads each with an approximate area of 265 square feet.
5. Includes the entire collection substation area and gen-tie 50-foot ROW; the built collection substation will only occupy about half of this area.
6. Includes an approximately 1-acre area within which the 2,000 sq. ft. O&M building will be located.
7. Approximately 1 acre of the laydown area will be maintained permanently for parking and storage.
8. Temporary impact areas represent only the additional impact area during construction and do not include the permanent impact area. The temporary and permanent impact areas are added together in the total impact column.

Although changes in land use are anticipated within the Project Area as a result of Facility operation, no changes are predicted outside the Project Area. During Facility operation, no additional impacts to land use are anticipated. All of the impacts from Facility construction and operation will occur on agricultural land.

Construction impacts will be temporary in nature and confined to the properties of participating landowners. As described in Section 4906-4-08(E)(2)(b), the Applicant has developed construction specifications for construction activities occurring partially or wholly on privately owned agricultural land. These specifications, along with special siting considerations, will minimize impacts to agricultural land uses in the Project Area.

(d) Structures That Will Be Removed or Relocated

An assortment of older farm-related structures will be removed prior to installation of Facility components. These structures include nine silos, three barns, four sheds, two equipment buildings, one garage, one livestock house, and one house foundation. Several of the structures and silos are located in the vicinity of 12737-12501 Township Highway 42 (Weston Road), approximately 100 to 300 feet west of Weston Road. The rest of the structures are located approximately 1,100 to 1,800 feet south of Sand Ridge Road, roughly mid-way between Weston Road and Milton Road. Additionally, various types of farm equipment, machinery, and related materials, as well as metallic and polyethylene above ground storage tanks and drums, will be removed prior to construction.

(2) Parcel Status Map

This requirement is not applicable to this Facility because the Facility is not a wind farm.

(3) Setback Waiver

This requirement is not applicable to this Facility because the Facility is not a wind farm.

(4) Land Use Plans

(a) Formally Adopted Plans for Future Use of Site and Surrounding Lands

Wood County and Henry County are the only jurisdictions within 5 miles of the Project Area with formally adopted plans for future land use. These plans are reviewed in the Socioeconomic Report (Exhibit D).

The 2017 Wood County Land Use Plan lists prominent goals to guide decision making over the next 30 years to include sustainability, agricultural production, and employment and economic development. The plan has a strong focus on encouraging sustainability and promotes flexibility in the development of large-scale projects for renewable energy such as solar and wind production facilities. Additionally, the desire to protect agricultural land is highlighted and the county is looking for ways to incentivize the production of agricultural land. Population growth is expected, presenting a need for growth of employment opportunities. The development of the Facility is compatible with the goals of Wood County's Land Use Plan. The Facility will provide the county with renewable energy, provide short- and long-term job opportunities in the area, and will provide agricultural landowners supplemental income to further develop agricultural production on existing farmland, if desired.

The goals of the 2003 Henry County Comprehensive Plan are to encourage the protection of agricultural lands and water resources, while promoting economic development. The plan states that in order to successfully implement economic development, there needs to be adequate utility infrastructure such as energy and communication resources. The Facility will assist with the production of energy resources in

the area, and in doing so, the Facility is compatible with the need to increase economic development within Henry County.

(b) Applicant's Plans for Concurrent or Secondary Uses of the Site

The Applicant has no plans for concurrent or secondary uses of the site.

(c) Impact on Regional Development

Housing

The Facility is not anticipated to have a significant impact on the regional housing market. The Facility will not result in a significant increase for rental property owners, and given the availability of vacant housing, the Facility is not anticipated to have a destabilizing effect on current rental properties. For additional information on housing within the 5-mile study area, see Exhibit D.

Commercial and Industrial Development

The impact of the Project on local commercial and industrial development during construction and operation is discussed further in Section 4906-4-06(E) of this Application. The Project will generate employment opportunities during construction and operation. Employee earnings, spending on accommodations, food, and activities during construction, and direct payments to landowners participating in the Project are expected to increase spending in the local economy. This spending would support commercial development in the region.

Schools

The Facility is located within the Otsego Local School District. Development of the Facility will result in substantial positive economic benefits to the school district in the form of the PILOT payment, discussed in further detail in Section 4906-4-06(E)(3). The Project will bring jobs to the region, primarily during construction. It is expected that most of these workers will travel to the area rather than relocating permanently; therefore, the Project is not expected to increase the need for services from the school district.

Transportation System Development

Transportation within the 5-mile study area includes numerous state, county, and local roads, a freight line, and a private airport which is no longer operating. Construction of the Facility is not expected to have a significant adverse impact on roadway traffic, given the anticipated low number of oversized vehicles needed for deliveries. For more information on roadway impacts, see Exhibit B, Part II of Exhibit D, and Section 4906-4-06(F)(3) and (4). Impacts to the freight line are not anticipated because the transportation of Facility components will not utilize the rail system. Adverse impacts to air navigation are also not anticipated from Facility construction due to the large distance between the Facility and the nearest airport

(approximately 4 miles away), which is no longer in use. Additional discussion on impacts to aviation facilities is provided in Section 4906-4-07(E). While construction of the Project will bring many jobs to the area, causing a temporary increase in traffic, this traffic will not impact the development of the transportation system in the region.

Other Public Services and Facilities

The Facility is not expected to have significant growth-inducing effects on the surrounding locales. Therefore, no significant impact on local public services and facilities is expected. Construction workers will commute to the work site daily. Local employees will be hired to the extent possible. Hiring of non-resident workers would occur only when local residents with the required skills were not available or competitive. It is expected that non-resident workers would commute or stay in regional transient housing or motels, and not require new housing. It is also assumed that non-resident workers would not bring families that might require family healthcare or additional school facilities. The principal impact on public services in the site locale would be a temporary increase in traffic on roads leading to the Project Area, due to deliveries of equipment and materials during construction.

(d) Regional Plan Compatibility

There would be no impacts to regional plans or regional growth as a result of this Facility. As discussed in Section 4906-4-08(C)(3)(a), Wood and Henry counties have adopted comprehensive land use plans. The compatibility of the Facility with those plans is discussed above in Section 4906-4-08(C)(3)(a).

(e) Current and Projected Population Data

Table 08-12 presents the population trends for the Ohio counties, townships, and villages located within 5 miles of the Project Area, including percent change in population from 2000 to 2018. As indicated in the table, the population of Wood County has grown slightly, while Henry County has decreased slightly. At a local level, nine of the twelve communities within the 5-mile Study Area decreased in population from 2000 to 2018, while three municipalities increased in population. The population trends experienced by each community are expected to continue regardless of whether the proposed Facility is built.

Table 08-12. Population of Ohio Jurisdictions within 5 Miles

Jurisdiction	2000 Population	2018 Population	Annual Growth Rate (2000-2018)	Projected 2030 Population	Projected Total Growth (2018-2030)	2018 Population Density (people per square mile)
Henry County	29,210	27,316	-0.4%	26,158	-4.2%	65
Wood County	121,065	129,936	0.4%	136,427	5.0%	209
Damascus Township	1,781	1,712	-0.2%	1,668	-2.6%	56
Richfield Township	654	541	-1.0%	482	-10.9%	15
Grand Rapids Township	1,631	1,556	-0.3%	1,509	-3.0%	112
Washington Township	1,688	2,153	1.5%	2,583	20.0%	99
Plain Township	1,706	1,482	-0.7%	1,357	-8.4%	48
Liberty Township	1,862	1,869	0.0%	1,874	0.3%	51
Weston Township	2,274	2,337	0.2%	2,381	1.9%	159
Milton Township	1,159	988	-0.8%	895	-9.4%	27
Village of Grand Rapids	1,002	959	-0.2%	932	-2.8%	1880
Village of Weston	1,659	1,543	-0.4%	1,473	-4.6%	1416
Village of Milton Center	195	140	-1.6%	116	-17.3%	359
Village of Custar	208	200	-0.2%	195	-2.5%	800

Source: U.S. Census Bureau Decennial Census (2000), ACS 5-Year Estimates (2014-2018), population projections based on respective 2000-2018 growth rates (U.S. Census Bureau, 2000; U.S. Census Bureau, 2018).

Although construction employment for the Facility will be substantial, this employment is relatively short term and is not expected to result in the permanent relocation of construction workers to the area; therefore, the Facility is not anticipated to generate significant population growth within the region.

(D) CULTURAL AND ARCHAEOLOGICAL RESOURCES

(1) Landmarks of Cultural Significance Map

Figure 08-2 depicts formally adopted land and water recreation areas, recreation trails, scenic rivers, scenic routes or byways, and registered landmarks of historic, religious, archaeological, scenic, natural, or other cultural significance in Ohio within 10 miles of the Project Area.

Cardno, Inc. (Cardno) conducted a literature review for archaeological and historic resources within 2 miles of the Project Area (Cultural Resources Study Area). Results of the review are provided in the Phase 1 Cultural Workplan (Phase 1A Survey), included as Exhibit F. The purpose of the Phase 1A Survey is to assist the Ohio State Historic Preservation Office (SHPO) in the review of the Facility. The Phase 1A Survey documents previously identified cultural resources located within the Cultural Resources Study Area, that could potentially

be affected by the construction and operation of the Facility. The Phase 1A Survey also includes proposed research designs for subsequent archaeological and historical resources field surveys that the Applicant anticipates will be necessary for the Facility.

Cardno reviewed numerous sources of information relating to archaeological and historic resources located within the Cultural Resources Study Area, including:

- National Historic Landmark list
- National Register of Historic Places (NRHP) list
- Cultural Resource Management reports
- County Histories and Atlas Maps
- Ohio Historic Inventory (OHI)
- Ohio Archaeological Inventory (OAI)
- Ohio Genealogical Society (OGS) cemetery files
- Mills Archaeological Atlas of Ohio (1914)

Within the Project Area, three archaeological sites were identified. Within the Cultural Resources Study Area, six additional archaeological sites were identified, along with four OGS cemeteries, and 11 OHI properties. No previous cultural surveys have been conducted in the vicinity of the Facility. No NRHP properties, NRHP-eligible properties, National Historic Landmarks, or OAI sites were identified within the Cultural Resources Study Area.

(2) Impact to Landmarks and Mitigation Plans

Cardno completed a Phase I Archaeological Reconnaissance of the Project Area in December of 2020 and January of 2021. Due to the sensitive nature of archaeological resources, the study has been filed under seal as Exhibit R. The field survey consisted of visual inspection, controlled surface survey, and shovel testing throughout the Project Area. These investigations resulted in the identification of 24 new archaeological sites. According to the study, two sites (33WO0592 and 33WO0597) were identified within the Project Area that were recommended as potentially eligible for NRHP listing and should be avoided, or otherwise would require additional archaeological studies. The Phase I Archaeological Reconnaissance was submitted to the SHPO on February 24, 2021.

Currently, on-site surveys assessing indirect effects on historic resources in the vicinity of the Facility are in progress by Cardno in the form of a historic resources survey with completion of SHPO inventory forms for identified historic resources, if necessary. Work plans for this survey has been submitted to the SHPO (Exhibit F), and all work will be conducted in accordance with SHPO requirements and guidance.

Significant direct effects to identified archaeological resources are not anticipated because the majority of the Facility is sited on open, agricultural land, which allows for potential affects to be mitigated by minor layout modifications. In the event that a potentially NRHP-eligible archaeological site cannot be avoided by the proposed Project, then additional Phase II site investigations and, potentially, Phase III data recovery/mitigation would be conducted at the site. In most instances, the types of finds noted below will not be considered NRHP-eligible. As such, they will not require avoidance or additional archaeological investigations:

- isolated pre-contact finds,
- isolated historic-period finds,
- small low-density lithic scatters that lack diagnostic artifacts and/or indications of intact subsurface features,
- low-density scatters of historic-period artifacts (particularly in agricultural fields, which likely represent artifacts associated with manuring practices that cannot be associated with specific households or contexts), and
- artifacts/deposits of clearly modern origin.

The Facility may cause indirect effects on historic resources. Indirect effects are defined as changes in the setting of a historic resource resulting from the introduction of solar panels or other Project components and include effects such as alterations to the visual or auditory landscape. The extent of these impacts will be determined through reconnaissance surveying of architectural resources throughout the Facility's area of potential effect.

(3) Impact to Recreational Areas and Mitigation Plans

Existing scenic and recreational area within a 5-mile radius in Ohio of the proposed Facility are depicted on Figure 08-2 and listed in Table 08-13 below. Recreational areas were identified using the following resources: ODNR, Esri Topographic Map, Ohio Statewide Imagery Program, and local municipal websites.

Table 08-13. Recreational Areas Within 5 Miles

Recreational Area	Location	Distance from Project Area (miles)
Michael Merrill Park	Village of Weston, Wood County	0.1
Old Schoolhouse Park	Village of Weston, Wood County	0.5
Alumni Park	Village of Weston, Wood County	0.6
Beaver Creek	Grand Rapids, Weston, & Milton townships, Wood County; Richfield Township, Henry County	1.5
Wood County Wildlife Production Area 87-7	Milton Township, Wood County	1.9

Recreational Area	Location	Distance from Project Area (miles)
Baldwin Woods Preserve	Plain Township, Wood County	2.1
Village of Milton Center Park	Village of Milton Center, Wood County	2.4
Wood County Wildlife Production Area 87-1	Grand Rapids Township, Wood County; Damascus Township, Henry County	2.4
Little Beaver Creek	Grand Rapids Township, Wood County	2.8
Henry County Wildlife Production Area 35-1	Richfield Township, Henry County	2.9
Village of Custar Park	Village of Custar, Wood County	3.4
Beaver Creek Preserve	Grand Rapids Township, Wood County	3.5
Grand Rapids Township Park/ Labino Park	Village of Grand Rapids, Wood County	4.3
Hammer Creek	Richfield Township, Henry County	4.4
Pirates Memorial Park	Village of Grand Rapids, Wood County	4.5
Maumee River	Providence Township, Lucas County; Grand Rapids Township, Wood County	4.5
Metropark Towpath Trail	Providence and Waterville townships, Lucas County	4.6
Buckeye Trail	Providence Township, Lucas County	4.7
Grand Rapids Park	Village of Grand Rapids, Wood County	4.7
Mary Jane Thurston State Park	Grand Rapids Township, Wood County	4.8

As listed in Table 08-13 above, 20 scenic and recreational areas occur within 5 miles of the Facility. Each of these recreational sites is described below, along with an assessment of potential impacts from the Facility. Additional information regarding the results of the viewshed analysis is provided in Section 4906-4-08(D)(4).

Alumni Park is an approximately 15-acre park located 0.6 mile east of the Project Area. The park consists of two baseball diamonds, a playground, maintained lawns, and a memorial to the alumni of Weston High School (Village of Weston, 2020). According to the viewshed analysis, partial visibility of the Facility is possible from Alumni Park.

Beaver Creek is an approximately 20-mile-long tributary that flows north into the Maumee River. The creek passes through Bartlow, Richfield, Milton, Weston, and Grand Rapids townships. The creek has points of public access for fishing, and at its closest point, is 1.5 miles from the Project Area. Visual impacts from the Facility on those recreating along the trail are possible based on viewshed analysis.

Wood County Wildlife Production Area (87-7) is an approximately 40-acre grassland preserve in western Wood County. The preserve permits a regulated amount of hunting during deer season, according to an agreement with the Division of Wildlife (ODNR, 2021). The preserve is located 1.9 miles west of the Project Area, and visual impacts are not anticipated because the land is located outside the extent of visual impacts, as determined by the viewshed analysis.

Baldwin Woods Preserve is an approximately 125-acre, partially wooded preserve located 2.1 miles northeast of the Project Area. The preserve was purchased in 1993 and contains woodlands, grasslands, and wetlands. A key feature of the preserve is its lack of trails, allowing visitors to explore the area in its natural state. The preserve is open to hunting through a program overseen by the Ranger Department (Wood County Park District, 2021a). Visual Impacts from the Facility on the Baldwin Woods Preserve are not anticipated because the preserve is located outside of the extent of visual impacts, as determined by the viewshed analysis.

Village of Milton Center Park is a 0.6-acre park located 2.4 miles south of the Project Area in the Village of Milton. The park has a covered picnic area, playground, basketball hoop, and plenty of open space for other recreational activities. According to the viewshed analysis, partial visibility of the Facility is possible from Village of Milton Center Park.

Wood County Wildlife Production Area (87-1) is an approximately 35-acre grassland preserve in northeast Wood County. The preserve permits a regulated amount of hunting during deer season, according to an agreement with the Division of Wildlife (ODNR, 2021).The Preserve is located 2.4 miles north of the Project Area, and visual impacts from the Facility are possible based on viewshed analysis.

Little Beaver Creek is an approximately 2-mile-long tributary that flows east to meet Beaver creek, which feeds the Maumee River. The Creek has points of public access for fishing and is located in northwest Wood County, 2.8 miles northwest of the Project Area at its closest point. Visual Impacts are not anticipated because the creek is located outside the extent of visual impacts, as determined by the viewshed analysis.

Henry County Wildlife Production Area (35-1) is a 60-acre wooded preserve surrounding a section of Beaver Creek in eastern Henry County. The preserve permits a regulated amount of hunting during deer season, according to an agreement with the Division of Wildlife (Ohio Division of Natural Resources, 2021). The Preserve is located 2.9 miles west of the Project Area, and visual impacts are not anticipated because the land is located outside the extent of visual impacts, as determined by the viewshed analysis.

Village of Custar Park is a 5.5-acre park located 3.4 miles south of the Project Area in the Village of Custar. The park has a playground, baseball diamond, and open space for other recreation opportunities. Visual Impacts are not anticipated because the park is located outside the extent of visual impacts, as determined by the viewshed analysis.

Beaver Creek Preserve is an approximately 4-acre preserve located 3.5 miles north of the Project Area along Beaver Creek. The preserve contains both woodland and grassland but is best known for its stargazing area complete with a large telescope (Wood County Park District, 2021b). Visual impacts from the Facility on the

Beaver Creek Preserve are not anticipated because the preserve is located well outside the extent of visual impacts, as determined by the viewshed analysis conducted for the Facility.

Grand Rapids Township Park, or Labino Park, is an approximately 18-acre park located 4.3 miles north of the Project Area in the Village of Grand Rapids. The park contains a tennis court, two basketball courts, a swimming pool, two baseball diamonds, and plenty of open green space. Visual impacts from the Facility are not anticipated because the park is located well outside of the extent of visual impacts, as determined by the viewshed analysis.

Hammer Creek is an approximately 6-mile-long tributary that flows northeast to meet with Beaver Creek, which feeds the Maumee River. The creek has points of public access for fishing. At its closest point, the creek is 4.4 miles from the Project Area. Visual Impacts are not anticipated because the creek is located outside the extent of visual impacts, as determined by the viewshed analysis.

Pirates Memorial Park is an approximately 1.5-acre park located 4.5 miles north of the Project Area in the Village of Grand Rapids. The park is adjacent to the Grand Rapids Township Hall & Fire Station, was built in recognition of all graduates of Grand Rapids High School between 1916 and 1968, and was named after the school's mascot (Ohioans Historical Exploration, 2020). The park features a stone memorial as well as large grassy field for recreation. Visual impacts from the Facility are not anticipated because the park is located well outside of the extent of visual impacts, as determined by the viewshed analysis.

The Maumee River is a 137-mile-long river that begins at the confluence of St. Josephs and St. Marys rivers in Fort Wayne, Indiana. The river flows northeast through Ohio and into Lake Erie. The Maumee River was designated an Ohio State Scenic River in 1974, and today the Maumee watershed supports a large amount of Ohio's farmland (American Rivers, 2019). The river has areas of public access for fishing and recreating, and at its closest point is 4.5 miles from the Project Area. Visual Impacts for those recreating along the river are not anticipated because the river is located outside the extent of visual impacts, as determined by the viewshed analysis.

The Metropark Towpath Trail, located 4.6 miles north of the Project Area in southern Lucas County, is a part of the historic Buckeye Trail. The trail is an 18-mile round trip and is open for walking, biking, and bird watching (Metroparks Toledo, 2021).Visual impacts from the Facility on those recreating along the trail are not anticipated as the trail is located well outside the extent of visual impacts, as determined by the viewshed analysis.

The Buckeye Trail is a historic Ohio trail that begins at Lake Erie and ends in Headlands Beach State Park east of Cleveland. Proposed in 1958, the purpose of the trail was to connect Cincinnati and Lake Erie. Since

construction began in 1959, the trail has expanded to cover 1,444 miles and circles the entire state of Ohio. The Trail passes through 49 of Ohio's 88 counties, Ohio's only National Forest, Ohio's largest National Park, 18 Ohio State Parks, 5 Ohio State Forests, 4 Wildlife Areas, 8 Ohio Historical Society properties, 6 Watershed Conservancy lands, 18 County or Metropark lands, and is hosted by many private landowners (Buckeye Trail Association, 2021). A portion of the trail is located in Lucas County, 4.7 miles northwest of the Project Area. Visual Impacts from the Facility on those recreating along the Buckeye Trail are not anticipated based on the viewshed analysis.

Grand Rapids Park is a 15.5-acre park located 4.7 miles north of the Project Area in the Village of Grand Rapids along the southern edge of the Maumee River. The park consists of a riverside walking path, open fields, and gazebos for gathering. The park is also conveniently located on Front St., which is home to most of the village's restaurants and shops. Visual impacts from the Facility are not anticipated because the park is located well outside of the extent of visual impacts, as determined by the viewshed analysis.

Mary Jane Thurston State Park is a 100-acre park located along the Maumee River on the border of Wood and Henry counties. The park provides hunting, fishing, camping, skiing, ice skating, and boating opportunities, in addition to 9 miles of hiking trails (Ohio State Parks, 2021). The park and associated trails are approximately 4.8 miles north of the Project Area. Visual Impacts are not anticipated because the park is located outside the extent of visual impacts, as determined by the viewshed analysis.

(4) Visual Impact

EDR prepared a Visual Resource Assessment (VRA) for the proposed Facility (Exhibit P). EDR staff who contributed to the report include licensed landscape architects, GIS professionals, and environmental specialists with experience preparing visual resource assessments, including several for applications to the OSPB. OAC 4906-4-08(D)(4) requires that visual impacts to recreational, scenic, and historic resources be evaluated within a 10-mile radius. However, based on the low profile of the proposed equipment, and the results of the visibility analysis presented herein, it was determined that 10 miles would be an excessive study area for this Facility.

To define an appropriately sized visual study area (VSA), a viewshed analysis was conducted to better understand the Facility's area of potential effect. This viewshed analysis indicates that areas of potential Facility visibility diminish rapidly after 1.5 miles, with scattered corridors of potential visibility extending out to 5 miles (see Figure 2.1 of the VRA). Beyond the distance of 5 miles, the PV panels would be indistinguishable due to the limits of human visual acuity and the presence of intervening landscape features. The resulting VSA encompasses approximately 103.9 square miles and includes Weston, Milton, Grand Rapids,

Washington, Plain, and Liberty townships in Wood County, Damascus and Richfield townships in Henry County, and a small portion of Providence Township in Lucas County.

(a) Project Visibility and Viewshed Analysis

The viewshed analysis conducted for the Facility incorporated screening effects of topography, structures, and vegetation. A digital surface model of the VSA was created from lidar data, which include the elevations of buildings, trees, and other objects large enough to be resolved by lidar technology. Areas within the panel array fenceline were cleared of any vegetation in the model, as were small woodlots and hedgerows that will be cleared during construction of the Facility, in order to reflect the bare-earth elevation in these locations. From the digital surface model, a viewshed analysis was conducted for the PV panels substation, and gen-tie line.

Based on the results of the viewshed analysis, the Facility will be screened from approximately 68.6% of the VSA. Above ground electrical components (collection substation and gen-tie line) will be screened from approximately 76.7% of the VSA. Screening of these components is attributed to intervening landforms, vegetation, and structures. The viewshed analysis also suggests that panel visibility is highest within 0.5 miles. Between 0.5 and 1.5 miles, potential visibility is limited to the northeast, southwest, and west. Open agricultural fields allow for potential visibility at this distance range to the north, south, east, and southeast. Extending beyond 1.5 miles and out to 4 miles, potential visibility is more scattered in narrow bands between intervening structures and vegetation. Only small areas of potential visibility exist beyond 4 miles and out to 5 miles. While a line of sight from this distance may theoretically be available, the presence of foreground and middle ground distractions, along with the relatively low panel height, would prohibit potential visibility from these distances.

Visibility of the above ground electrical components is indicated in areas similar to what was described for the PV panels; although the height of the components increases the potential visibility within the VSA. It is important to keep in mind that the above-ground electrical component viewshed analysis presents theoretical visibility. Due to the narrow profile and neutral color of the masts, gen-tie, and substation structures, these structures will be difficult to discern at distances beyond the foreground. Additional information on methods and results of the viewshed analysis is provided in the VRA.

(b) Description of Scenic Quality of Existing Landscape

Landscape types within the VSA were categorized based on the similarity of the various features, including landform, vegetation, water, and/or land use patterns, in accordance with established visual assessment methodologies. Pasture/cropland is the dominant landscape within the VSA (88.8%) and

comprises most of the area that will host Facility components. This landscape type is likely to provide the greatest opportunities for views of the Facility.

Developed landscape is the second most predominant landscape, comprising approximately 6.2% of the VSA. The villages of Grand Rapids, Weston, and Milton Center are the main sources of developed landscape and will have limited views of the Facility due to the presence of buildings and closely situated houses, vegetation, utility poles, and other visual obstructions.

Forest landscapes comprise 3.2% of the VSA and provide limited visibility of the Facility due to the presence of dense vegetation. Wetlands and open water landscapes comprise 1.3% of the VSA and are primarily concentrated in the western portion associated with Beaver Creek where long-distance views are likely limited due to the presence of tree-lined riverbanks and adjacent forest slopes. The remaining portions of the VSA are comprised of 0.3% of barren ground and 0.2% of grassland/shrubland landscapes.

In addition to these landscape types, the VRA included a review of existing data, plans, policies, and regulations in order to identify visual preferences and visually sensitive resources within the VSA, including historic properties, scenic resources, public lands, recreational resources, and high use public areas. Additional information on these visually sensitive resources is included in paragraph (d) below and in the VRA.

(c) Landscape Alterations and Impact on Scenic Quality of the Landscape

Construction and operation of the proposed Facility will result in the alteration of the existing landscape through the introduction of low-profile PV panels. The visibility and visual impact of the Facility will vary due to the extent of natural screening, the presence of other man-made features in the view, and distance of the viewer from the Facility. The most notable changes include the introduction of a gray horizontal line in previously open landscapes, blocking of background and middle ground vegetation and structures by PV panels, and enclosing areas that were once open. As distance increases beyond 1,000 feet from the Facility, the panels become more difficult to perceive, and begin to appear as thin horizontal lines of grayish tan color.

The above-ground electrical facilities and O&M building are likely to result in visual effects from foreground viewpoints along Weston Road and Sand Ridge Road; however, their effect on landscape character is minimized due to the presence of the existing 69 kV line and substation.

(d) Visual Impacts to Landmarks of Cultural Significance

A total of 148 visually sensitive resources were identified within the VSA, including 115 properties of historic significance, two designated scenic resources, 21 public lands and recreational resources, and 10 high-use public areas. Appendix B of the VRA shows the location of visually sensitive resources relative to the Project Area. Of the 148 resources identified within the VSA, 25 have the potential for PV array visibility, while one additional resource has the potential for some level of collection substation visibility. Additional information on visually sensitive resources is provided as Appendix E in the VRA (Exhibit P), which includes a list of all identified resources, their distance from the Facility, and estimated visibility of the Facility from the identified resource.

EDR also reviewed existing plans, policies, and regulations of the communities within the VSA for references to identified visual resources or visual preferences of the community. Wood County (2017) and Henry County (2003) are the only communities within the VSA with documented land use or comprehensive plans. Neither plan specifically addresses scenic resources or visual preferences within the county.

The Wood County Park District has a Strategic Plan that was updated in 2013. This update included community input through town hall meetings and an online survey. There is no mention of scenic resources or visual preferences in the summary of community input in the Strategic Plan. The Park District's mission is ". . .to conserve, enhance and protect the natural and cultural resources of Wood County, while providing quality outdoor recreational and educational opportunities. . ." (2013, p. 3). The two Wood County Park District parks that are within the VSA, Baldwin Woods Preserve and Beaver Creek Preserve, are not anticipated to have visibility of PV panels.

The Wood County Historical Society, in a combined effort with historical and cultural agencies throughout the county, created a historic and scenic driving tour through the county. A map of the driving tour shows that only a small portion is within the VSA, through the Village of Milton Center and along the west side of Jackson Cutoff Ditch (Wood County Historical Society, n.d.). As discussed in Section 2.1.3 of this report, the Project is not anticipated to be widely visible in this area.

(e) Photographic Simulations

To illustrate anticipated visual changes associated with the proposed Facility, photographic simulations of the Facility were developed from five selected viewpoints. These simulations allow the viewer to better evaluate visibility, appearance, and contrast with the existing landscape, with and without vegetative mitigation. The simulations show panels mounted on a tracking system that would result in a maximum panel height of 15 feet in a fully-tilted position. The visual simulations are included as Appendix D to the

VRA (Exhibit P) along with detailed discussions of each simulation. Viewpoints were selected to show representative locations at various distances from the Facility from public vantage points near the Project Area.

(f) Impact Minimization Measures

Project Area Location and Facility Layout

The proposed Facility is located in a rural, relatively sparsely populated area. To further reduce impacts to those living in the area, the Applicant designed the Facility to account for setbacks to the fenceline from non-participating residential structures (100 feet) and the edge of public roads (25 feet). Additionally, in response to feedback from local residents, the final design of the Facility will incorporate an internal setback of 50 feet from the edge of public roads and 100 feet from the panel area fenceline to non-participating residential property lines, except in areas where a public road is between the residential property and the fenceline.

Lighting

Lighting during construction is anticipated to be minimal, and will be restricted to construction hours (7:00 AM to 7:00 PM, or until dusk when the sun sets after 7:00 PM). To the extent practicable, lighting will be oriented toward the interior of the Facility, away from roadways and adjacent residences. Lighting during Facility operation will be downlit. Motion-activated lighting will be used at the O&M building.

Visual Screening

The installation of native vegetative mitigation will help screen the Facility to lessen potential visual impact. Visual screening introduces natural, vertical elements that break up the horizontal lines created by the PV arrays and fenceline. This helps the Facility fall into the background vegetation rather than stand out as a foreground element. After the public information meeting and subsequent conversations with local residents, the preliminary vegetative mitigation was modified to incorporate public feedback, including the use of more evergreen species. Representation of potential vegetative mitigation is included in the visual simulations for each viewpoint. Details regarding vegetative mitigation are included in the Landscape Mitigation Plan provided as Appendix C to Exhibit P.

Facility Materials and Coloration

PV modules will use anti-reflective glass coating and are designed to absorb the light that hits the panels, reducing potential for glare. Additionally, the racking system for the panels allows panel rows to follow some variation in topography, limiting the landscape alteration needed for installation.

(E) AGRICULTURAL RESOURCES

(1) Agricultural Land and Agricultural District Land Map

Agricultural land is the dominant land use in Wood County, consisting of approximately 270,000 acres of land. Similarly, the Project Area consists almost exclusively of agricultural land. Figure 08-3 depicts agricultural districts and crop cover within and surrounding the Project Area.

(2) Potential Impacts and Proposed Mitigation

The Facility will be almost entirely sited on agricultural land and will take that land out of production for approximately 30 to 40 years. After the useful life of the Facility, it will be decommissioned, and the site will be restored to pre-construction conditions.

(a) Acreage Impacted

Table 08-14 quantifies impacts to agricultural land uses, and Table 08-15 presents impacts to agricultural district land. Impacts to CAUV land are the same as those presented in Table 08-15, because all of the agricultural district parcels are enrolled in the CAUV program.

Table 08-14. Total Agricultural Land Use Impacts

Agricultural Land Use	Temporary Disturbance (Acres)[3]	Permanent Loss (Acres)	Total Disturbance (Acres)
Agricultural Cash – Grain or General Farm (101)			
Area Inside Fenceline[1]	0.0	521.8	521.8
Area Outside Fenceline[2]	1.4	0.2	1.6
Total Agricultural Land Use Impact	**1.4**	**522.0**	**523.4**

1. As the entire fenced area is anticipated to be unavailable to landowners, permanent land use impacts include the entire area within fenceline.
2. Impacts outside the fenceline include small areas of access road and collection line impact
3. Temporary impact areas represent only the additional impact area during construction and do not include the permanent impact area. The temporary and permanent impact areas are added together in the total impact column.

Table 08-15. Impacts to Agricultural District Land

Agricultural Districts	Temporary Disturbance (Acres)[3]	Permanent Loss (Acres)	Total Disturbance (Acres)
Area Inside Fenceline[1]	0.0	582.7	582.7
Area Outside Fenceline[2]	1.5	0.3	1.8
Total	**1.5**	**583.0**	**584.5**

1. As the entire fenced area is anticipated to be unavailable to landowners, permanent land use impacts include the entire area within fenceline.
2. Impacts outside the fenceline include small areas of access road and collection line impact.
3. Temporary impact areas represent only the additional impact area during construction and do not include the permanent impact area. The temporary and permanent impact areas are added together in the total impact column.

(b) Impacts on Agricultural Facilities and Practices

(i) Field operations

Plowing, planting, cultivating, spraying, aerial applications, and harvesting will be halted on land occupied by the Facility during the lifetime of the Facility. Once the Facility has reached the end of its useful life, Facility components will be removed, and the underlying Project Area will be restored for potential agricultural use.

(ii) Irrigation

Irrigation systems are not in widespread use in the Project Area. Potential interference to irrigation operations is very limited and coordination with affected landowners will alleviate potential for significant long-term disruption.

(iii) Field drainage systems

Construction of the Facility could result in damage to subsurface drainage systems. Avoidance and mitigation of damage to drainage systems will be incorporated into the final Facility design. Additional information regarding the identification of field drainage systems, as well as avoidance and mitigation measures to repair potential damage, is detailed below in Section 4906-4-08(E)(2)(c).

(iv) Structures used for agricultural operations

Construction of the facility will require the removal of an assortment of older structures previously used for agricultural operations. These include nine silos, three barns, four sheds, two equipment buildings, one garage, and one livestock house. Several of the structures and silos are located in the vicinity of 12737-12501 Township Highway 42 (Weston Road), approximately 100 to 300 feet west of Weston Road. The rest of the structures are located approximately 1,100 to 1,800 feet south of Sand Ridge Road, roughly mid-way between Weston Road and Milton Road. Additionally, various types of farm equipment, machinery, and related materials, as well as metallic and polyethylene above ground storage tanks and drums, will be removed prior to construction..

(v) Viability as agricultural district land

Figure 08-3 depicts parcels enrolled in the agricultural district program. All parcels within the Project Area are enrolled, according to data provided by Wood County in December 2020. Once the Facility is constructed, parcels within the Project Area will no longer be eligible for inclusion in that program. The Applicant will pay additional property taxes incurred due to the disenrollment of property in the program and will be responsible for responding to nuisance lawsuits. Once the Facility is decommissioned, the parcels could be re-enrolled in the program.

(c) Proposed Mitigation Procedures

(i) Avoidance/minimization of damage to field tile drainage systems

Drainage tiles were identified through consultations with participating landowners and the Fulton County Engineer. In addition, a survey was conducted using a combination of aerial imagery extraction using thermal analysis and ground penetrating radar. The locations of identified drainage tiles are presented in the Drain Tile Maintenance Plan (Exhibit Q).

The Applicant will avoid known drainage tiles to the extent commercially practicable. A hydrology study which considers a 100-year flood will be completed prior to final engineering, which will help determine areas for avoidance, in addition to known drainage tile locations. Where avoidance is not practicable, measures will be implemented during construction and operation of the Facility to mitigate potential impacts. Mitigation measures such as grading and drainage routing will be included in a grading plan, which will be prepared as part of final engineering plans for the Facility. The detailed grading and drainage plan will include mitigation for neighboring properties as well as participating landowners.

(ii) Timely repair of damaged field tile systems

If drainage tiles are impacted during construction of the Facility, the Applicant will evaluate the damage and either repair or replace the tile with a functionally equivalent system, unless otherwise specified by the landowner. If the Applicant becomes aware of drainage tile damage that is affecting adjacent properties or public drains during operation of the Facility, the Applicant will investigate the damage and implement mitigation techniques, to the extent commercially practicable. Mitigation efforts may include drainage routing or corrections in stormwater flow through retention facilities.

(iii) Topsoil segregation, decompaction, and restoration

Topsoil movement will occur during installation of foundations for the collection substation and inverters, trenching of collection lines, installation of the laydown yard, and the installation of access roads. In areas where grading is proposed, topsoil will be stripped where required by federal, state, and/or local environmental regulations. Any topsoil that is to be stripped prior to site grading shall be stockpiled on-site in a manner that meets all federal, state and/or local requirements.

Gravel used for the laydown yard and any excess materials used for the temporary access roads will be removed. Upon removal, soil will be de-compacted, regraded, and stabilized with a native, low-growth seed mix. All temporary BMPs will be removed following construction. Additionally, construction debris will be removed from the site and disposed of properly.

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Summary: Application Text electronically filed by Teresa Orahood on behalf of Dylan F. Borchers