Vista Sands Solar Project
Transmission CPCN Application
Portage County, Wisconsin
PSC Docket No. 9820-CE-100
January 3, 2024

VISTA SANDS
SOLAR FARM

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1. Project Overview

Vista Sands Solar LLC, an affiliate of Doral Renewables LLC (Vista Sands Solar or the Applicant), is an independent power producer (IPP) proposing to construct a new 1,310.4 megawatt (MW) solar photovoltaic energy generating facility and 300 MW Battery Energy Storage System (BESS) known as the Vista Sands Solar Project (Project) in Portage County, Wisconsin. The Project is comprised of the: (1) Solar Facility; (2) BESS; (3) construction of one new, approximately 5 to 6.5-mile 345 kV high-voltage transmission line and three new, approximately 2 to 4-mile 138 kV high-voltage transmission lines (Project Transmission Lines); and (4) five substations. This Application evaluates two routes for each of the Project Transmission Lines.

The Project Transmission Lines require a Certificate of Public Convenience (CPCN) from the Public Service Commission of Wisconsin (PSC or Commission) and permit authorization to discharge dredged and/or filled materials into wetlands and place temporary bridges across navigable waters from the Wisconsin Department of Natural Resources (WDNR).

Vista Sands Solar respectfully submits this Application to the PSC for a CPCN pursuant to Wis. Stat. §196.491 and Chapter PSC 111, Wisconsin Administrative Code. Pursuant to Wis. Stat. § 196.491(3)(a)1., this Transmission Line CPCN Application is jointly filed with the Solar CPCN Application[1] for the Vista Sands Solar Project in PSC Docket Number 9820-CE-100.

1.1 Identify the owners and investors of the proposed project including their names, addresses, and percent of ownership (Wis. Admin. Code § PSC 111.55(6)).

The applicant is Vista Sands Solar LLC, which may own and operate the Project, or develop and sell the Project to a utility or other independent power producer. Vista Sands Solar is an affiliate of Doral Renewables LLC (Doral).

1.2 Provide contractual agreements between developer and utilities to construct, finance, lease, use or own transmission facilities.[2]

At the time of this Application, there are no contractual agreements between the Applicant and any utility to construct, finance, lease, use or own transmission facilities.

1.3 Describe the location of the proposed project and its end points, including the length of each proposed route.

The Solar Facility will be connected to the grid via a new switching station and an approximately 1,600-foot 345 kV generator tie line (gen-tie line) to the existing American Transmission Company (ATC) Rocky Run to Werner West 345 kV transmission line. The switching station footprint (i.e., the graded pad) is included in this application. The switching station equipment and gen-tie line will be constructed, owned, and operated by ATC.

Vista Sands Solar is proposing to construct five substations for the Project. Collector Substations

[1] Pursuant to Wisconsin Admin. Code § 111.53(1)(f), the Solar CPCN Application evaluates Primary and Alternative Array Areas

[2] PSC confidential procedures may be used for the submittal of sensitive information.

A, B, and C step power generated from the Project's solar panels from 34.5 kV to 138 kV. The three proposed 138 kV transmission lines will deliver power from the Collector Substations to Project Substations 1 and 2 which will step the power up from 138 kV to 345 kV. The proposed 345 kV transmission line will deliver power generated in the western and central regions of the Project from Project Substation 2 to Project Substation 1, which is located near the existing Rocky Run to Werner West 345 kV transmission line. Project Substation 1 will deliver power to the switching station which will connect to the existing Rocky Run to Werner West 345 kV transmission line via the gen-tie line.

The proposed and alternative transmission lines are further detailed in the table below:

Route Name	Starting Point	End Point	Distance
Proposed Project 138kV A-1 Transmission Line*	Project Collector Substation A	Project Substation 1	2.24 miles
Alternative Project 138kV A-1 Transmission Line*	Project Collector Substation A	Project Substation 1	2.24 miles
Proposed Project 138kV B-2 Transmission Line	Project Collector Substation B	Project Substation 2	3.43 miles
Alternative Project 138kV B-2 Transmission Line	Project Collector Substation B	Project Substation 2	3.85 miles
Proposed Project 138kV C-2 Transmission Line	Project Collector Substation C	Project Substation 2	2.74 miles
Alternative Project 138kV C-2 Transmission Line	Project Collector Substation C	Project Substation 2	2.36 miles
Proposed Project 345kV 2-1 Transmission Line	Project Substation 2	Project Substation 1	5.12 miles
Alternative Project 345kV 2-1 Transmission Line	Project Substation 2	Project Substation 1	3.27 miles

*Neither Proposed nor Alternative Project 138 kV A-1 Transmission Line would be required if the Alternative Project 345 kV 2-1 Transmission Line Route is selected by PSCW.

The Project Overview Map (Figure 1.1.6) contained in Appendix A depicts the Proposed and Alternative Project Transmission Lines and the five Project Substations in relation to the Primary and Alternative Array Areas, the switching station, and the existing Rocky Run to Werner West 345 kV transmission line.

1.4 Provide a list of all cities, villages, and townships and their respective counties that the proposed project, any associated facilities, and any potential construction activities would cross or potentiallyimpact.

Table 1.4 Cities/Villages/Townships Potentially Affected by Construction Activities

City/Village/ Township	County	Associated Facilities	Potential Construction Activities	Proposed Routes
Town of Grant	Portage	Project 345 kV 2-1 Transmission Line Project 138kV B-2 Transmission Line Project 138kV C-2 Transmission Line	Project Transmission Line Construction	Proposed Project 345 kV 2-1 Transmission Line Alternative Project 345 kV 2-1 Transmission Line Proposed Project 138kV B-2 Transmission Line Alternative Project 138kV B-2 Transmission Line Proposed Project 138kV C-2 Transmission Line Alternative Project 138kV C-2 Transmission Line
Town of Plover	Portage	Project 345 kV 2-1 Transmission Line Project 138kV A-1 Transmission Line	Project Transmission Line Construction	Proposed Project 345 kV 2-1 Transmission Line Alternative Project 345 kV 2-1 Transmission Line Proposed Project 138kV A-1 Transmission Line Alternative Project 138kV A-1 Transmission Line
Village of Plover	Portage	Project 138kV A-1 Transmission Line	Project Transmission Line Construction	Alternative Project 138kV A-1 Transmission Line

1.5 PSC Review

1.5.1 State if the application is for a Certificate of Authority (CA) or a Certificate of Public Convenience and Necessity (CPCN) under Wis. Stat. §§ 196.49 and 196.491.

This is an application for a CPCN under Wis. Stat. § 196.491. The CPCN requirement is triggered because the four proposed transmission lines are each defined as a high-voltage transmission line as defined at Wis. Stat. § 196.491(1)(e) and (f). Each proposed transmission line is in excess of one mile in length and has a nominal voltage of 100 kV or more (specifically 345 kV and 138 kV).

1.5.2 Identify the expected type of Commission action under Wis. Admin Code§ PSC 4.10.

This is a Type II action pursuant to Wis. Admin. Code § PSC 4.10(2). The Project Transmission Lines consist of 138 kV and 345 kV transmission lines, approximately four and five miles in length respectively; therefore, it falls under the Type II category listed at Wis. Admin. Code ch. PSC 4, Table 2, section f, which includes electric transmission lines designed for operation at a nominal voltage of 100 kV to 345 kV when any construction takes place outside the area of an existing electric transmission line right-of-way (ROW).

1.5.3 State if the project qualifies for the CPCN exemption under Wis. Stat. § 196.491(4)(c)1m.

The Project Transmission Lines do not qualify for the CPCN exemption under Wis. Stat. § 196.491(4)(c)1m because the centerline of the 138 kV Project Transmission Lines is not located within 60 feet of an existing transmission line and only a portion (Segment 2, 3.2 miles) of the Proposed Project 345 kV 2-1 Transmission line is located within 60 feet of an existing transmission line.

1.5.4 State if the applicant is seeking an expedited review for the project under Wis. Stat. § 196.491(3b)(a).

Vista Sands Solar is not seeking an expedited review under Wis. Stat. § 196.491(3b)(a) because the Project Transmission Lines do not meet the criteria for expedited review. Specifically, the Project Transmission Lines are not limited to adding conductors to existing transmission poles or towers.

1.6 Project Details and Project Area Information

Provide general descriptions of each of the proposed routes and the project area, including the following:

1.6.1 Identify if the proposed project is new construction, rebuilding of an existing line, maintenance of an existing line, etc.

<u>Project 345 kV 2-1 Transmission Line</u>

The Proposed Project 345 kV 2-1 Transmission Line will be new construction and approximately 5.12 miles in length, divided into three segments.

Segment 1
Segment 1 of the Proposed Project 345 kV 2-1 Transmission Line runs north from Project Substation 1 for approximately 1.66 miles to an existing ATC 115 kV transmission line. Approximately 0.75 mile of Segment 1 will be constructed along the east side of 125th St.

Segment 2
Segment 2 of the Proposed Project 345 kV 2-1 Transmission Line will run northeast for approximately 3.2 miles, replacing a portion of an existing ATC-owned 115 kV single-circuit transmission line. It is anticipated that Segment 2 will be built and maintained by ATC as a double-circuit 115/345 kV transmission line. The Proposed Project 345 kV transmission line will be

located on the south side of Segment 2 and the ATC 115 kV transmission line will be located on the north side of Segment 2.

Segment 3
Segment 3 of the Proposed Project 345 kV 2-1 Transmission Line will run southeast approximately 0.25 mile, diverging from the existing ATC-owned 115 kV transmission line and connecting to Project Substation 1.

Alternative Project 345 kV 2-1 Transmission Line

The Alternative Project 345 kV 2-1 Transmission Line will be new construction and approximately 6.53 miles, divided into two segments.

Segment 1
Segment 1 of the Alternative Project 345 kV 2-1 Transmission Line will run east and north approximately 4.44 miles from Project Substation 2 to Project Collector Substation A. Approximately 2.86 miles of Segment 1 will be constructed along the north side of Birch Drive.

Segment 2
Segment 2 of the Alternative Project 345 kV 2-1 Transmission Line will run north approximately 2.09 miles from Project Collector Substation A to Project Substation 1.

Project 138kV A-1 Transmission Line

The Proposed Project 138 kV A-1 Transmission Line will be new construction and approximately 2.24 miles, divided into three segments.

Segment 1
Segment 1 of the Proposed Project 138 kV A-1 Transmission Line will run north from Project Collector Substation A approximately 0.69 mile.

Segment 2
Segment 2 of the Proposed Project 138 kV A-1 Transmission Line will run west and north from the northern terminus of Segment 1 approximately 1.22 miles to the north side of Forest Drive.

Segment 3
Segment 3 of the Proposed Project 138 kV A-1 Transmission Line will run north from the northern terminus of Segment 2 on the north side of Forest Drive approximately 0.33 mile to Project Substation 1.

Alternative Project 138 kV A-1 Transmission Line

The Alternative Project 138 kV A-1 Transmission Line will be new construction and approximately 2.24 miles, divided into three segments.

Segment 1
Segment 1 of the Alternative Project 138 kV A-1 Transmission Line will be identical to Segment 1 of the Proposed Project 138 kV A-1 Transmission Line and run north from Project Collector Substation A approximately 0.69 mile.

Segment 2
Segment 2 of the Alternative Project 138 kV A-1 Transmission Line will run north and west from

the northern terminus of Segment 1 approximately 1.22 miles to the north side of Forest Drive. Segment 2 of the Alternative Project 138 kV A-1 Transmission Line follows a different path than Segment 2 of the Proposed Project 138 kV A-1Transmission Line.

Segment 3
Segment 3 of the Alternative Project 138 kV A-1 Transmission Line will be identical to Segment 3 of Proposed Project 138 kV A-1 Transmission Line and run north from the northern terminus of Segment 2 on the north side of Forest Drive approximately 0.33 mile to Project Substation 1.

Project 138kV B-2 Transmission Line

The Proposed Project 138 kV B-2 Transmission Line will be new construction and approximately 3.42 miles, divided into three segments.

Segment 1
Segment 1 of the Proposed Project 138 kV B-2 Transmission Line will run north and east from Project Collector Substation B approximately 0.51 mile to the north side of Buena Vista Road.

Segment 2
Segment 2 of the Proposed Project 138 kV B-2 Transmission Line will run north and west from the northern terminus of Segment 1 approximately 1.51 miles to the west side of 130th Street.

Segment 3
Segment 3 of the Proposed Project 138 kV B-2 Transmission Line will run north from the northern terminus of Segment 2 on the west side of 130th Street approximately 1.40 miles to Project Substation 2.

Alternative Project 138 kV B-2 Transmission Line

The Alternative Project 138 kV B-2 Transmission Line will be new construction and approximately 3.84 miles, divided into three segments.

Segment 1
Segment 1 of the Alternative Project 138 kV B-2 Transmission Line is identical to Segment 1 of the Proposed Project 138 kV B-2 Transmission Line and will run north from Project Collector Substation B approximately 0.51 mile to the north side of Buena Vista Road.

Segment 2
Segment 2 of the Alternative Project 138 kV B-2 Transmission Line will run east and north and west from the northern terminus of Segment 1 approximately 1.93 miles to the west side of 130th Street.

Segment 3
Segment 3 of the Alternative Project 138 kV B-2 Transmission Line is identical to Segment 3 of Proposed Project 138 kV B-2 Transmission Line and will run north from the northern terminus of Segment 2 on the west side of 130th Street approximately 1.40 miles to Project Substation 2.

Project 138kV C-2 Transmission Line

The Proposed Project 138 kV C-2 Transmission Line will be new construction and approximately 2.74 miles, divided into three segments.

Segment 1
Segment 1 of the Proposed Project 138 kV C-2 Transmission Line will run north from Project Collector Substation C approximately 0.26 mile along the west side of 110th Street.

Segment 2
Segment 2 of the Proposed Project 138 kV C-2 Transmission Line will run north and east from the northern terminus of Segment 1 approximately 1.55 miles along the west side of 110th Street and the north side of Birch Drive to a location on the north side of Birch Drive.

Segment 3
Segment 3 of the Proposed Project 138 kV C-2 Transmission Line will run east from the northern terminus of Segment 2 on the north side of Birch Drive approximately 0.93 mile to Project Substation 2 which is also located on the north side of Birch Drive.

Alternative Project 138 kV C-2 Transmission Line

The Alternative Project 138 kV C-2 Transmission Line will be new construction and approximately 2.35 miles, divided into three segments.

Segment 1
Segment 1 of the Alternative Project 138 kV C-2 Transmission Line will be identical to Segment 1 of the Proposed Project 138 kV C-2 Transmission Line and run north from Project Collector Substation C approximately 0.26 mile along the west side of 110th Street.

Segment 2
Segment 2 of the Alternative Project 138 kV C-2 Transmission Line will run north and east from the northern terminus of Segment 1 approximately 1.16 miles to a location on the north side of Birch Drive. Approximately 0.95 mile of Segment 2 runs along the southeast side of Angle Drive.

Segment 3
Segment 3 of the Alternative Project 138 kV C-2 Transmission Line is identical to Segment 3 of Proposed Project 138 kV C-2 Transmission Line and will run east from the northern terminus of Segment 2 on the north side of Birch Drive approximately 0.93 mile to Project Substation 2, which is also located on the north side of Birch Drive.

1.6.2 For new or expanded above-ground facilities, such as substations, provide the following:

1.6.2.1 Identify the type of new or expanded facility

Project Substation 1

Project Substation 1 will be a new, approximately 14-acre substation located in the northeast area of the Project near the switching station, BESS and Point of Interconnection (POI). Project Substation 1 will contain one 345/199.2-138/79.67 kV Auto Transformer to receive the Project 138 kV A-1 Transmission Line delivering power from Collector Substation A located in the eastern paneled area. Project Substation 1 will contain two 34.5 / 345kV main power transformers to send and receive power to and from the BESS. Project Substation 1 will also receive power from the Project 345 kV 2-1 Transmission Line delivering power from Project Substation 2 located in the central and western paneled areas.

Project Substation 2

Project Substation 2 will be a new, approximately 14-acre substation located in between the central and western areas of the Project. Project Substation 2 will contain two 345/199.2-138/79.67 kV auto transformers to receive the Project 138 kV B-2 Transmission Line delivering power from Collector Substation B located in the southern paneled area and the Project 138 kV C-2 Transmission Line from Project Collector Substation C located in the western paneled area via a 6-position 138kV ring bus. Project Substation 2 will contain two 34.5 / 345kV main power transformers to step up power from the nearest paneled areas delivered via underground 34.5 MV cabling.

Project Collector Substation A

Project Collector Substation A will be a new, approximately 3.5-acre substation located in the eastern area of the Project. Project Collector Substation A will contain four 34.5kV / 138kV main power transformers to step up power from the nearest paneled areas delivered via underground 34.5 MV cabling. Project Collector Substation A will deliver power to Project Substation 1 via the Project 138 kV A-1 Transmission Line.

Project Collector Substation B

Project Collector Substation B will be a new, approximately 3.5-acre substation located in the central area of the Project. Collector Substation B will contain two 34.5kV / 138kV main power transformers to step up power from the nearest paneled areas delivered via underground 34.5 MV cabling. Collector Substation B will deliver power to Project Substation 2 via the Project 138 kV B-2 Transmission Line.

Project Collector Substation C

Project Collector Substation C will be a new, approximately 3.5-acre substation located in the western area of the Project. Project Collector Substation C will contain four 34.5kV / 138kV main power transformers to step up power from the nearest paneled areas delivered via underground 34.5 MV cabling. Project Collector Substation B will deliver power to Project Substation 2 via the Project 138kV C-2 Transmission Line.

1.6.2.2 The location of the new or expanded facility

Project Substation 1

Project Substation 1 will be a new substation located in the eastern half of Section 29, Township 23 North, Range 8 East, in the Town of Plover, Portage County, Wisconsin.

Project Substation 2

Project Substation 2 will be a new substation located in the eastern half of Section 2, Township 22 North, Range 7 East, in the Town of Grant, Portage County, Wisconsin.

Project Collector Substation A

Project Collector Substation A will be a new substation located in the eastern half of Section 5, Township 22 North, Range 8 East, in the Town of Plover, Portage County, Wisconsin.

Project Collector Substation B

Project Collector Substation B will be a new substation located in the western half of Section 24, Township 22 North, Range 7 East, in the Town of Grant, Portage County, Wisconsin.

Project Collector Substation C

Project Collector Substation C will be a new substation located in the eastern half of Section 9, Township 22 North, Range 7 East, in the Town of Grant, Portage County, Wisconsin.

1.6.2.3 The size and dimensions of the new facility or expansion of the existing facility, including any new or expanded driveways.

Project Substation 1

The Project Substation 1 design will be completed during detailed engineering for the Project. A footprint of approximately 933 feet by 650 feet has been allocated at this stage. An approximately 4,700-foot driveway with entrances on Plover Road and Forest Drive will be constructed to provide access to Project Substation 1, the switching station, BESS and Operations and Maintenance (O&M) facility.

Project Substation 2

The Project Substation 2 design will be completed during detailed engineering for the Project. A footprint of approximately 933 feet by 650 feet has been allocated at this stage. An approximately 600-foot driveway with an entrance on Birch Drive will be constructed that will provide access to Project Substation 2.

Project Collector Substation A

The Project Collector Substation A design will be completed during detailed engineering for the Project. A footprint of approximately 500 feet by 300 feet has been allocated at this stage. An approximately 6,700-foot driveway with an entrance on Birch Drive will be constructed that will provide access to Project Collector Substation A.

Project Collector Substation B

The Project Collector Substation B design will be completed during detailed engineering for the Project. A footprint of approximately 500 feet by 300 feet has been allocated at this stage. An approximately 4,000-foot driveway with an entrance on Buena Vista Road will be constructed that will provide access to Project Collector Substation B.

Project Collector Substation C

The Project Collector Substation C design will be completed during detailed engineering for the Project. A footprint of approximately 500 feet by 300 feet has been allocated at this stage. An approximately 1,700-foot driveway with an entrance on Washington Street will be constructed that will provide access to Project Collector Substation C.

1.6.2.4 Total size of the parcel the new or expanded facility would placed, and the orientation of the facility within the parcel.

Project Substation 1

The Project Substation 1 will be located in the southern portion of a 40-acre parcel (030230829-14). A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

Project Substation 2

The Project Substation 2 will be centrally located in a 40-acre parcel (018220702-15). A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

Project Collector Substation A

The Project Collector Substation A will be located in the northern portion of a 40-acre parcel (030220805-1). A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

Project Collector Substation B

The Project Collector Substation B will be located in the southern portion of a 40-acre parcel (018220724-06) and northern portion of an adjacent 40-acre parcel (018220724-07). A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

Project Collector Substation C

The Project Collector Substation C will be located in the southern portion of a 40-acre parcel (018220709-16). A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

1.6.2.5 State if the applicant owns the parcel or is in negotiations for purchase of the parcel.

Vista Sands Solar is in negotiations for purchase of each Project Substation parcel.

1.6.2.6 The current land use and zoning of the parcel.

The current land use of each Project Substation parcel is agricultural crop production. Parcels for all Project Substations are zoned as A1 Exclusive Agriculture except for the Project Collector Substation B which is zoned as A2 Transitional Agriculture.

1.6.2.7 Construction procedures to build or expand the facility.

A typical construction sequence for each substation involves, in order, site grading work, below-grade installation foundations for the equipment and bus structures/supports; conduit, trenching, manholes and ground grid installation; above-grade physical construction of buswork, support structures, gravel/rocking, and installation of major electrical equipment; wiring and completion of all terminations; and testing, commissioning, and ultimately energization. A site-

specific construction specification and schedule will be developed but is not yet available. All contractors will be required to follow the Project's Erosion Control Stormwater Management Plan (ECSWMP), as well as adhere to any site-specific environmental requirements including erosion and dust control.

1.6.2.8 Describe associated permanent stormwater management features that would be constructed, or expansion of or modification to existing stormwater treatment facilities. Identify the locations of the point(s) of collection and discharge.

Permanent stormwater ponds will be constructed to manage and treat stormwater associated with the new Project Substations. The stormwater ponds will be constructed to ensure water is properly routed to the stormwater ponds via overland sheet flow and/or vegetated swales. The stormwater ponds may have emergency overflow weirs designed to safely route excess flow from a 100-year-or-above storm event. This will be determined in the Project's final design.

Project Substation 1

Project Substation 1 will have two associated stormwater ponds. An approximately 6.15-acre stormwater pond will be constructed to the north of Project Substation 1. Stormwater will flow from Project Substation 1 into the south side of this stormwater pond. From there it will infiltrate into the ground or discharge to the east.

An approximately 4.11-acre stormwater pond will be constructed to the south of Project Substation 1. Stormwater will flow from Project Substation 1 into the north side of this stormwater pond. From there it will infiltrate into the ground or discharge back to the north.

Project Substation 2

An approximately 3.84-acre stormwater pond will be constructed to the north of Project Substation 2. Stormwater will flow from Project Substation 2 into the south side of this stormwater pond. From there it will infiltrate into the ground or discharge to the north.

Project Collector Substation A

An approximately 0.58-acre stormwater pond will be constructed to the west of Project Collector Substation A. Stormwater will flow from Project Collector Substation A into the east side of this stormwater pond. From there it will infiltrate into the ground or discharge to the south or west.

Project Collector Substation B

An approximately 0.88-acre stormwater pond will be constructed to the north of Project Collector Substation B. Stormwater will flow from Project Collector Substation B into the south side of this stormwater pond. From there it will infiltrate into the ground or discharge to the north.

Project Collector Substation C

An approximately 1.02-acre stormwater pond will be constructed to the north of Project Collector Substation C. Stormwater will flow from Project Collector Substation C into the south side of this stormwater pond. From there it will infiltrate into the ground or discharge to the north.

1.6.3 Generalized geology, topography, land cover, and land use.

The Project Area is located in southwestern Portage County. Portage County lies within the Eastern Ridges and Lowlands of the Central Lowland Physiographic Province of the United States. Characteristic features of the Central Lowland province are flat lands with geomorphic remnants of glaciation. Portage County itself is typically divided into three areas having similar geologic and hydrologic conditions: the sand-plain province, the drift province and the drift crystalline province. The Project is located in the Central Sand Plain of Wisconsin within the sand plain province of Portage County. This ecoregion supports diverse vegetation types and agriculture and is characterized by sandy soil, lacustrine and glacio-fluvial deposits, and exposures of eroded sandstone bedrock remnants. The majority of the lower-lying terrain within this region was formerly wetland consisting of silty lacustrine materials that impeded drainage before they were drained for agricultural purposes. This area is now mostly comprised of red pine plantations. Native vegetation of this region is oak, pine, and aspen forests with tamarack/ black spruce forests and bottomland hardwoods in wet sites and floodplains.

The Project Area is comprised of Prairie du Chien, Shakopee, Oneota, Trempealeau, Tunnel City, and Elk Mound Formations bedrock geology units. These groups are made up of Cambrian, Ordovician, and Late Archean age sandstone, shale, dolomite, gneiss, migmatite, and amphibolite (USGS 2023). Soils in this portion of the county are classified as Richford-Rosholt-Billet association which are formed mainly on outwash sand and gravel. Slopes are nearly level to gently sloping and the soil ranges from excessively drained to very poorly drained. Soils within the Project Area typically do not flood with the exception of Bowstring Muck (BowA), Winterfield-Evart complex (WiEvA), and Winderfield-Fordum complex (WiFnA), which are frequently flooded. None of the 12 soil types present within the Project Area are eroded. The majority of land cover and land use within the Project Area is row crops and grassland with some upland woodland also present. The Project Area also contains surface waters and wetlands; some of which are emergent and forested.

1.6.4 Any special or unique natural or cultural resources. In this section, include a complete list of special or unique features (by route) that could be impacted by the proposed project. 'Special' or 'unique' may refer to any natural or cultural resource/feature that has been identified by a formal entity that is not otherwise referenced in these AFRs. (Examples include Important Bird Areas, Driftless Area, conservation areas, Niagara Escarpment, etc.)

No special or unique natural or cultural resources are within the transmission line corridors. However, one State Natural Area (SNA) and two State Wildlife Management Areas occur to the south/southeast of several Project facilities, including Proposed Project 138kV B-2 Transmission Line and Alternative Project 345kV 2-1 Transmission Line. These conservation lands manage habitat for the benefit of wildlife, including threatened and endangered (T&E) species, game species, and other non-game species. Specifically, some of these areas are managed for protection and restoration of grasslands habitats and to maintain open, unforested, and undeveloped agricultural land as part of the Central Wisconsin Grassland Conservation Area (CWGCA). A primary objective of the CWGCA is to provide habitat for grassland-dependent species, particularly Greater Prairie Chicken.

A summary of rare species and natural communities is provided in Sections 6.5 and 9.0.

Based on the cultural resources review results provided in Appendix J, no known Native American sites, previously identified historic structures, or districts are located within the Area of Potential Effect (APE) of the Project Transmission Lines.

See Section 6.7 for a summary of the cultural resource investigations conducted as part of the submittal of the Application.

1.6.5 Areas of residential concentrations and urban centers.

There are no areas of residential concentrations or urban centers that will be adversely affected by the Project Transmission Lines. Alternate 138 kV A-1 Transmission Line route crosses through approximately 0.25 mile of an undeveloped parcel of southwestern corner of the Village of Plover.

1.6.6 Transmission configuration (such as single-circuit or double-circuit with existing line, overhead or underground, conductor replacement or new construction, etc.). When describing transmission configurations, also include the range of structure heights, types of structures, range of conductor heights, types of foundations, range of span lengths, expected life of facilities, etc. If there are existing facilities, identify the differences in size of the existing facilities compared to the proposed facilities.

Proposed Project 345 kV 2-1 Transmission Line

The Proposed Project 345 kV 2-1 Transmission Line will be new primarily new construction of a 345 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 96 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 700 feet long. This Project Transmission Line will last the life of the Project until decommissioning.

Segment 2 of the Proposed Project 345 kV 2-1 Transmission Line will run northeast for approximately 3.2 miles, replacing a portion of an existing ATC-owned 115 kV single-circuit transmission line. It is currently proposed that Segment 2 will be built and maintained by ATC as a double-circuit 115/345 kV transmission line. The Proposed Project 345 kV transmission line will be located on the south side of Segment 2 and the ATC 115 kV transmission line will be located on the north side of Segment 2.

Alternative Project 345 kV 2-1 Transmission Line

The Alternative Project 345 kV 2-1 Transmission Line will be new construction of a 345 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 96 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 700 feet long. This Project Transmission Line will last the life of the Project until decommissioning.

Proposed Project 138 kV A-1 Transmission Line

The Proposed Project 138 kV A-1 Transmission Line will be new construction of a 138 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier

foundations. Pole heights will be approximately 90 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long. This Project Transmission Line will last the life of the Project until decommissioning.

Alternative Project 138 kV A-1 Transmission Line

The Alternative Project 138 kV A-1 Transmission Line will be new construction of a 138 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 90 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long. This Project Transmission Line will last the life of the Project until decommissioning.

Proposed Project 138 kV B-2 Transmission Line

The Proposed Project 138 kV B-2 Transmission Line will be new construction of a 138 kV overhead, single-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 86 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long. This Project Transmission Line will last the life of the Project until decommissioning.

Alternative Project 138 kV B-2 Transmission Line

The Alternative Project 138 kV B-2 Transmission Line will be new construction of a 138 kV overhead, single-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 86 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long. This Project Transmission Line will last the life of the Project until decommissioning.

Proposed Project 138 kV C-2 Transmission Line

The Proposed Project 138 kV C-2 Transmission Line will be new construction of a 138 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 90 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long. This Project Transmission Line will last the life of the Project until decommissioning.

Alternative Project 138 kV C-2 Transmission Line

The Alternative Project 138 kV C-2 Transmission Line will be new construction of a 138 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 90 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long. This Project Transmission Line will last the life of the Project until decommissioning.

1.6.7 The length, width, and area of the proposed project right-of-way (ROW) for each proposed route alternative. Explain the relationship to the existing ROWs, for example new ROW, partially overlapping existing transmission ROW, completely within existing ROW, etc.

Proposed Project 345 kV 2-1 Transmission Line

The Proposed Project 345 kV 2-1 Transmission Line ROW will be approximately 5.12 miles long, 150 feet wide, and 92.69 acres.

Segment 2 of the Proposed Project 345 kV 2-1 Transmission Line will run northeast for approximately 3.2 miles, replacing a portion of an existing ATC-owned 115 kV single-circuit transmission line. Segment 2 will be built and maintained by ATC as a double-circuit 115/345 kV transmission line. This rebuild will occur within existing transmission line ROW.

Alternative Project 345 kV 2-1 Transmission Line

The Alternative Project 345 kV 2-1 Transmission Line ROW will be approximately 6.54 miles long, 150 feet wide, and 117.88 acres of new ROW.

Proposed Project 138 kV A-1 Transmission Line

The Proposed Project 138 kV A-1 Transmission Line ROW will be approximately 2.24 miles long, 100 feet wide, and 26.47 acres of new ROW.

Alternative Project 138 kV A-1 Transmission Line

The Alternative Project 138 kV A-1 Transmission Line ROW will be approximately 2.24 miles long, 100 feet wide, and 22.72 acres of new ROW.

Proposed Project 138kV B-2 Transmission Line

The Proposed Project 138 kV B-2 Transmission Line ROW will be approximately 3.43 miles long, 100 feet wide, and 41.37 acres of new ROW.

Alternative Project 138 kV B-2 Transmission Line

The Alternative Project 138 kV B-2 Transmission Line ROW will be approximately 3.85 miles long, 100 feet wide, and 46.51 acres of new ROW.

Proposed Project 138kV C-2 Transmission Line

The Proposed Project 138 kV C-2 Transmission Line ROW will be approximately 2.74 miles long, 100 feet wide, and 32.48 acres of new ROW.

Alternative Project 138 kV C-2 Transmission Line

The Alternative Project 138 kV C-2 Transmission Line ROW will be approximately 2.36 miles long, 100 feet wide, and 27.83 acres of new ROW.

1.7 Other Agency Correspondence/Permits/Approvals

1.7.1 Provide copies of all official correspondence between the applicant and allstate, federal, or local government agencies as described in the *Introduction, page v*.

Copies of official correspondence with applicable agencies are provided in Appendix C, Agency Correspondence.

1.7.2 Provide a list of all state and federal permits/approvals that would berequired for this project and their status. Include the approximate date the permit was/would be submitted and the approximate date a decision is expected (if known).

Table 1.7-1 summarizes the permits and approvals that are required by federal, state, and local agencies for the Project Transmission Lines. All required permits and approvals will be obtained prior to commencing construction activities.

Table 1.7-1 List of Potential Permits and Approvals

Agency	Interest or Permit	Contact	Application/ Notice Date	Status
Federal				
U.S. Army Corps of Engineers (USACE)	Clean Water Act (CWA) Section 404	Stevens Point Regional Office (715) 345-7911	Anticipated Q1, 2025	
FAA	Federal Regulation Title 14 Part 77		Q4, 2023	Filed Form 7460-1 Q4,2023
USFWS	Federal Endangered Species Act (ESA) Coordination	Dawn S. Marsh (952) 252-0092		Coordination Ongoing
State				
PSC	CPCN for construction of transmission facility	Adam Ingwell	Q1, 2024	To be submitted Q1, 2024
WDNR	Wisconsin Pollutant Discharge Elimination System / Stormwater Runoff Permit (NR216)	Samantha Whitens (608) 301-6110	Anticipated Q1, 2025	

Agency	Interest or Permit	Contact	Application/ Notice Date	Status
WDNR	General or Individual Permit for discharge of dredged or fill material into a wetland.	Geri Radermacher (262) 239-0994	Anticipated Q1, 2025	
WDNR	Wisconsin Endangered Species Law (s. 29.604, Wis. Stats.) – Endangered Resources Review	Stacy Rowe (608) 266-7012	Q2, 2023	Coordination Completed
WisDOT	Heavy and oversized load permits	Bob Fasick (608) 266-3438	Anticipated Q2, 2025	
Wisconsin State Historic Preservation Office	Cultural Resources (historical and archaeological) under Section 106 of the National Historic Preservation Act	Chip Brown (608) 264-6508	Q4, 2023	
DATCP	Portage County Drainage District (ATCP 48.44 (related obstructing or altering district drains))	Barton Chapman (608) 224-4608	Anticipated Q2, 2023	Ongoing

1.7.3 Local Permits

1.7.3.1 N/A – Utilities, Certificate of Authority only

1.7.3.2 For CPCN applications and applications filed under the Wis. Stat. § 196.491(4)(c)1m exemption, provide a List of local permits and/or ordinances that would apply to the proposed construction activities, if the exemption did not apply.

The local permits and/or ordinances are outlined below in Table 1.7-2, to the extent not preempted by the issuance of the CPCN.

Table 1.7-2 List of Local Permits and/or Ordinances

Agency	Interest or Permit	Contact	Application/ Notice Date	Status
Town of Grant	Driveway Access Permit Ordinance	Mary Rutz (715) 421-9200	Anticipated Q2, 2024	
Town of Plover	Building Permit	715-344-7684	Anticipated Q2, 2024	

1.7.4 Railroad ROWs

1.7.4.1 Identify route segments that cross or share railroad ROWs.

The Project Transmission Lines do not cross or share railroad ROWs.

1.7.4.2 Identify the owners of the railroad ROWs.

The Project Transmission Lines do not cross or share railroad ROWs.

1.7.4.3 Identify abandoned railroad ROWs that are crossed or shared by route segments.

The Project Transmission Lines do not cross or share abandoned railroad ROWs.

1.7.4.4 Provide documentation, if possible, that the proposed ROW crossing or sharing is acceptable to the company.

The Project Transmission Lines do not cross or share railroad ROWs.

1.7.5 Pipeline ROWs

1.7.5.1 Identify route segments that cross or share any pipeline ROWs.

Segment 2 of Alternative Project 138 kV A-1 Transmission Line shares approximately 200 feet of a gas pipeline ROW. This is shown on Figure 4a in Appendix A – Figures.

1.7.5.2 Identify the owners of the ROW property or easements, as applicable.

The pipeline is owned by Flint Hills Resources.

1.7.5.3 Provide documentation, if possible, that the proposed ROW crossing or sharing is acceptable to the company.

Vista Sands Solar will coordinate with Flint Hills Resources if the Alternative Project 138 kV Transmission Line is ordered for construction by the PSCW. This same pipeline shares a corridor with the existing 345kV line at the Vista Sands Solar POI.

1.7.5.4 Provide documentation for all discussions with pipeline operator pertaining to maintaining safety and reliability of the pipeline during transmission construction.

Vista Sands Solar will coordinate with Flint Hills Resources if the Alternative Project 138 kV Transmission Line is ordered for construction by the PSCW.

1.7.6 Wisconsin Department of Transportation (WisDOT) ROWs.

The Project Transmission Lines do not cross or share WisDOT ROWs.

1.7.6.1 Identify route segments that cross or share WisDOT ROW easements and/or properties.

1.7.6.2 Include a description of the potential general routing and siting issues identified in consultations with WisDOT (by route alternative).

1.7.6.3 Supply documentation, if possible that the proposed ROW crossing or sharing is acceptable to the agency.

1.8 Construction Schedule and Sequence

1.8.1 Provide the anticipated general construction schedule, identifying any potential seasonal or regulatory construction constraints. If the route is to be constructed by segment of spread, provide separate construction schedules for each segment of spread. Include a timeline showing construction activities from beginning of construction to in-service. Identify all *critical path* items.

Table 1.8 Estimated Project Schedule

Activity	Estimated Completion
Joint PSC CPCN and WDNR Utility Permit Application	Q1 2024
WDNR Utility Permit Issuance	30 days after PSC Order
Start Construction	March 2025
In-Service Date	December 2028

1.8.2 Generally discuss any generation or transmission outage constraints that may have to be accommodated. Include any documentation pertaining to discussions with MISO or generation facility owners about such constraints.

MISO has identified applicable generation and transmission outage constraints and these are documented within the DPP 1 study results in Appendix D. Vista Sands Solar is working with ATC to determine the need and duration of any outages on the existing transmission lines.

1.8.3 Indicate how many construction spreads, if any, will likely be used during construction, and the approximate length of each construction spread in miles.

There will be four construction spreads broken up into the segments referenced in Section 1.6.7.

1.8.4 Describe the construction sequence for any given construction spread from commencement of construction through completion of construction, and how those construction spreads relate to each other (i.e. built at same time, certain activities such as clearing conducted on different spreads at the same time).

Each spread will begin with vegetative clearing around and in between the pole structures, if applicable, to allow for construction access. Following clearing activities, foundations will be excavated, and steel cages set in preparation to pour concrete slurry. After sufficient curing time, poles will set and secured to their respective foundation. Cabling will then be strung between structures and terminated at their endpoints. It's anticipated that the spreads will have overlapping construction sequences. While one spread begins drilling foundations, another will commence vegetation removal. These overlapping activities will persist across each spread until completion.

1.9 Project Maps

Provide route maps that use the best and most recent data available. Maps must clearly portray the project in a format and scale that is unambiguous and easy to understand. Labels and symbology used on the maps must be clearly visible. Boundary information which is unknown or assumed at the time of submittal should be symbolized differently and discussed in the application. The scale of the maps, the applicable project data, the number of map sets necessary to show all relevant data, and whether they will be submitted electronically or on paper will be discussed during pre-application consultations.

- **Aerial imagery not more than three years old,**
- **Project Data**
  - **Alternative routes/segments evaluated but not proposed.**
  - **Proposed routes and segments (subsegments also, if used for magnetic field analyses).**
  - **Proposed ROW.**
  - **Segment nodes.**
  - **Proposed associated facilities, including new substations and associated storm water management features.**
  - **Proposed access roads, including off-ROW access.**
  - **Proposed laydown areas.**
  - **If any portion of the line will be underground, indicate the underground installation method (directional bore, open-cut trench, etc.).**
- **Environmental Data**
  - **Wetlands and waterways – Refer to Section 8.3 for mapping details.**
- **Soils.**

- **NHI rare species occurrences (confidential)15F16.**
- **Topographic maps.**
- **Floodplains.**
- **Parcel Data**
  - **Private properties (GIS data cross-referenceable with mailing lists).**
  - **Public properties (symbolized differently than private properties), including parks and trails.**
  - **Tribal or other types of properties.**
  - **Political subdivision boundaries.**
  - **Township, range, section.**
- **Land Use**
  - **Land cover (as used in PSC Table 2).**
  - **Zoning.**
  - **Active mines and quarries.**
  - **Sensitive sites (e.g. daycare centers, schools, hospitals, cemeteries, etc.).**
  - **Confined animal operations16F17 within one-half mile of the proposed centerline.**
  - **Agricultural buildings within 300 feet of the proposed centerline.**
  - **Airports, airstrips (public and private).**
  - **Communication towers.**
  - **Recreation areas, trails.**
- **Utility/Infrastructure Data**
  - **Existing transmission, pipelines, and other applicable infrastructure.**
  - **Existing distribution lines that would be modified or relocated due to the proposed project or are adjacent to proposed routes.**
  - **Roads, highways, interstates.**
  - **Applicable infrastructure ROWs (*e.g.,* DOT, pipeline, electric distribution, electric transmission, railroad, trail).**

Project maps are provided as Appendix A – Project Maps. The maps showing the Project Transmission Line routes and other Project Transmission Line data are provided on aerial photographs and include environmental, parcel, land use, and existing utility/infrastructure information. Access roads are not shown on maps, as it is assumed that all access roads will be constructed within Project Transmission Line corridors, and construction matting and temporary bridges will be utilized across wetlands and waterways (see Sections 8.1 and 8.2 for additional information).

Also included is environmental information required to support WDNR's review. Electronic formats of the maps' Geographic Information Systems (GIS) data will be filed separately on discs to the Commission.

1.10 ESRI ArcGIS Data Files

1.10.1 Use a version of ESRI ArcGIS that is compatible with the most current version of ESRI Arc GIS to support all maps and information submitted as part of the application.

1.10.2 1.10.2. Provide a spreadsheet that lists each GIS file (clearly named and organized), a description of the data, data source, and the date when the data was generated or collected for field data.

All Project Transmission Line maps were created using ESRI ArcGIS Version 10.7 or higher (GIS software). A spreadsheet of each GIS file, including the description of the data, the data source, and the date of when the data was generated or collected is provided as part of the GIS transmittal.

1.11 Mailing Lists

1.11.1 Provide a Microsoft Excel mailing list in an acceptable format that is able to be cross-referenced to GIS parcel data as described in the Introduction, pages iii-iv.

1.11.2 Identify the source of the information contained in the mailing lists and discuss the potential for inaccuracies in the data set (new development, poor data, etc.).

1.11.3 Mailing lists must include:

1.11.3.1. All property owners within 300 feet of a proposed transmission centerline and associated facilities. List should include properties on both sides of a roadway regardless of distance.

A list of property owners within 300 feet of a proposed transmission centerline and associated facilities is submitted electronically in Appendix R Mailing List.

1.11.3.2. All public property owners such as schools or other government entities within 300 feet of a proposed transmission centerline and associated facilities. List should include properties on both sides of a street or road.

A list of public properties within 300 feet of a proposed transmission centerline and associated facilities is submitted electronically in Appendix R Mailing List.

1.11.3.3. The clerks and chief executive officers of the counties, towns, villages, or cities in which the routes or other proposed facilities would occupy. Also include on this list the main public library in each county the proposed facilities would occupy.

Municipality	Clerk Name	Phone Number
Portage County	Maria Davis	(715) 346-1351
Town of Grant	Stefanie Schlapa	(715) 213-7370
Town of Plover	Patricia Weller	(715) 344-7684

Municipality	Clerk Name	Phone Number
Village of Plover	Tammy Wojtalewicz	(715) 345-5250

Relevant Public Libraries:

Portage County Public Library
Plover Branch
2151 Roosevelt Dr
Plover, WI
(715) 341-4007

McMillan Memorial Library
490 East Grand Ave.
Wisconsin Rapids, WI 54494
(715) 422-5136

1.11.3.4. The appropriate Regional Planning Commission(s).

Vista Sands Solar Project is located within Portage County which is associated with the North Central Regional Planning Commission.

North Central Regional Planning Commission
210 McClellan St.
Wausau, WI 54403
(715) 849-5510

1.11.3.5. Applicable state and federal agencies.

Agency	Address	Phone Number
U.S. Army Corps of Engineers (USACE)	2926 Post Road, Suite B Stevens Point, WI 54481	(715) 345-7911
USFWS	Dawn S. Marsh 3815 American Blvd., East Bloomington, MN 54425	(952) 252-0092
DATCP	Barton Chapman 2811 Agriculture Dr. Madison, WI 53708-8911	(608) 224-4608

Agency	Address	Phone Number
WDNR	Geri Radermacher 141 NW Barstow St. Waukesha, WI 53188	(262) 239-0994
WDNR	Stacy Rowe 2514 Morse St. Janesville, WI 53545	(608) 266-7012
WDNR	Samantha Whitens 1500 N Johns St. Dodgeville, WI 53533	(608) 301-6110
WisDOT	Bob Fasick 4822 Madison Yards Way Madison, WI 53705	(608) 266-3438

1.11.3.6. Tribal government representatives for Native American Tribes that hold off-reservation treaty rights in Ceded Territory. This only applies to projects within the following counties: Ashland, Barron, Bayfield, Burnett, Chippewa, Clark, Douglas, Dunn, Eau Claire, Florence, Forest, Iron, Langlade, Lincoln, Marathon, Marinette, Menominee, Oconto, Oneida, Polk, Portage, Price, Rusk, Sawyer, Shawano, St. Croix, Taylor, Vilas, Washburn, and Wood County.

The following Tribes hold off-reservation treaty rights in Ceded Territory:

- **Bad River Band of Lake Superior Chippewa Indians**
- **Lac Courte Oreilles Band of Lake Superior Chippewa Indians**
- **Lac du Flambeau Band of Lake Superior Chippewa Indians**
- **Red Cliff Band of Lake Superior Chippewa Indians**
- **St. Croix Chippewa Indians of Wisconsin**
- **Sokaogon Chippewa Community (Mole Lake Band of Lake Superior Chippewa Indians).**

Tribe	Contact Information
Bad River Band of Lake Superior Chippewa Indians	72686 Maple Street Ashland, WI 54806 (715) 682-7111
Lac Courte Oreilles Band of Lake Superior Chippewa Indians	(715) 634-8934
Lac du Flambeau Band of Lake Superior Chippewa Indians	P.O. Box 67 Lac du Flambeau, WI 54538 (715) 588-3303
Red Cliff Band of Lake Superior Chippewa Indians	88455 Pike Road

Tribe	Contact Information
	Red Cliff, WI 54814 (715) 779-3700
St. Croix Chippewa Indians of Wisconsin	24663 Angeline Ave Webster, WI 54893 (715) 349-2195
Sokaogon Chippewa Community (Mole Lake Band of Lake Superior Chippewa Indians)	3051 Sand Lake Road Crandon, WI 54520 (715) 478-7500

2. Project Need Analysis

2.1 Project Need

The Project will be generating 1,182 MW as measured at the POI, which is located in the far northeastern corner of the Project. The Project covers a large geographic area with some of the PV assets located over five miles from the POI. Vista Sands Solar analyzed multiple scenarios to determine a solution to deliver 1310.4 MW of power to the POI. Vista Sands Solar considered Project resiliency, cost of construction, line loss, land constraints, environmental impacts, community acceptance, landowner preference and permitting requirements in this decision.

2.2 Transmission Network Alternatives

2.2.1 Describe the Proposed Solution

Vista Sands Solar's proposed transmission line solution is to construct five substations for the Project. Collector Substations A, B, and C step power generated from the Project's solar panels from 34.5 kV to 138 kV. The three proposed 138 kV transmission lines will deliver power from the Collector Substations to Project Substations 1 and 2 which will step the power up from 138 kV to 345 kV. The proposed 345 kV transmission line will deliver power generated in the western and central regions of the Project from Project Substation 2 to Project Substation 1, which is located near the existing Rocky Run to Werner West 345 kV transmission line. Project Substation 1 will deliver power to the switching station which will connect to the existing Rocky Run to Werner West 345 kV transmission line via a gen-tie line and switching station to be constructed, owned and operated by ATC.

2.2.1.1 Identify and describe any transmission line facilities that would be added or altered for this project. Include one-lines where appropriate.

The existing Rocky Run to Werner West 345 kV transmission circuit will be altered to accommodate the interconnection switching station that will connect solar generation portion of the Project to the existing transmission system. An approximately 1,600-foot generation tie line will also be constructed by ATC to connect the switching station to the existing Rocky Run to Werner West 345 kV transmission circuit.

Other transmission facilities that will be added or altered for the Project are determined as part of the MISO Interconnection Study Process. MISO has identified the gen-tie line in the DPP 1 Study, which is included in this application. A one-line diagram is included in Appendix D. Vista Sands Solar will continue to coordinate with MISO about additional required transmission line facility upgrades or alterations.

2.2.1.2 Identify and describe any substation facilities that would be added or altered for this project. Include electric schematics where appropriate. Substation Filing Requirements may also apply.

The substation facilities that will be added or updated for the Project are determined as part of the MISO Interconnection Study Process. MISO has identified a switching station in the DPP 1 Study. This facility is included in this application but will be constructed by ATC. Vista Sands Solar

will continue to coordinate with the MISO about additional required substation facility additions or alterations.

2.2.1.3 Describe any contingencies resolved by implementation of the proposed solution, including thermal and voltage violations of associated NERC standards.

NERC TPL Contingencies were evaluated in the MISO DPP 1 Study. Final results will be determined as part of the DPP2 and DPP 3 study phases.

2.2.2 Discuss the viable Alternatives considered.

The Project Transmission Lines are required to connect the Project to the electric grid. Two route alternatives are presented. There are no reasonable alternatives to connect the associated solar generation to the local transmission grid, other than lines of this size and type.

2.2.3 For the discussion of the Proposed Solution and viable Alternatives include the following as appropriate:

2.2.3.1 Provide relevant regional studies of transmission network solutions.

The transmission line and switching station facilities that will be added or altered for the Project will be determined as part of the MISO interconnection study process. The DPP 1 studies have been included in Appendix D for reference.

Required upgrades will continue to be refined as part of the DPP 2 and DPP 3 study phases and are only considered preliminary.

MISO is currently planning to release the second round of DPP 2 study results March 2024, and the third round DPP 3 of study results April 2024.

2.2.3.2 Provide details of the reliability and performance benefits of each network solution studied, as available.

The Project Transmission Lines are designed to deliver generated power to the POI; therefore, looped network transmission solutions are not applicable and, thus, were not studied.

2.2.3.3 Supply the electrical losses for each alternative, peak MW and annual GWH estimates.

At this stage of design, electrical losses are estimated to be approximately 2% for each Project Transmission Line alternative.

2.2.3.4 *For generator interconnections*, supply the detailed short circuit, stability and thermal analysis studies that have been performed. There must be some initial studies performed in order for the application to be complete. Provide the costs associated with any interconnection upgrades and how those costs are shared. Provide the MISO interconnection queue number for any generator interconnection, as well as any MISO studies, such as definitive planning phase (DPP) or similar.

Vista Sands Solar holds queue position J2099, J2107, and J2185 in MISO's East ATC DPP-2021 Cycle 1 for the solar generation component of the Project. ATC, on behalf of MISO, issued the final DPP 1 Report on May 10, 2023 (Appendix D). These DPP 1 studies only included results for Steady-State Thermal and Voltage upgrades, including Interconnection Facilities as applicable. No Transient Stability, Short Circuit or Affected Systems analysis is performed until DPP 2. MISO is currently planning to release the second round of DPP 2 study results March 2024, and the third round DPP 3 of study results April 2024.

2.2.3.5 For new distribution substations, supply the information from the Load Serving Entity on the need and alternatives considered. Those issues include existing conditions, voltage profiles, line capacities, outages, load growth, alternate substation feed pickup capability, etc.

The Project does not include a distribution substation, and, therefore, this section is not applicable.

2.3 Local Transmission, Distribution, and Distributed Resource Alternatives

Local transmission, distribution, and distributed resource alternatives are not applicable for meeting the functional requirements of the Project Transmission Lines, which connect an associated new, large solar project to the transmission grid; therefore, Section 2.3 is not applicable.

2.3.1 Describe local transmission, distribution, and distributed resource alternatives that have been studied and rejected for the proposed project. Local alternatives can include but are not limited to:

- **An upgrade of existing transmission circuits with larger capacity conductors**
- **Installation of capacitor banks**
- **Installation of new substation equipment**
- **New operating guides**
- **Smaller and less expensive line/s in other locations**
- **Distribution networking and upgrades**
- **Distributed resources, including solar, battery storage and other distributed resources alone or in combination**

2.3.2 Explain why the options were not selected.

2.4 Non-transmission Options

Discuss the potential for non-transmission options to the identified problem, as prioritized in Wis. Stat. §§ 1.12(4) and 196.025(1)(ar).

There is no non-transmission option that can connect the Project to the transmission grid.

2.4.1 Energy conservation and efficiency

2.4.2. Noncombustible renewable energy resources

2.4.3. Combustible renewable energy resources

2.4.4. Advanced nuclear energy using a reactor design or amended reactor design approved after December 31, 2010, by the U.S. Nuclear Regulatory Commission

2.4.5. Nonrenewable combustible energy resources in the following order:

2.4.5.1. Natural gas

2.4.5.2. Oil or coal with a sulphur content of less than 1%

2.4.5.3. All other carbon-based fuels

2.5 No-build Options

There is currently no no-build option that can connect the Project to the transmission grid.

2.6 Energy Conservation and Efficiency and Load Response

Discuss the feasibility of energy conservation and efficiency and demand response to reduce, alter, or eliminate the need for this project. Impacts from energy efficiency and demand response may not be feasible for projects that do not directly affect the amount of energy generation or consumption.
If it is feasible that energy conservation and efficiency and load response could reduce, alter, or eliminate the need for this project, provide an analysis that includes:

2.6.1. A description of the existing energy conservation and efficiency and demand response programs and services available to customers in the project area, including any utility-operated demand response or voluntary energy efficiency programs.

2.6.2. An indication of the amount of additional energy efficiency and demand response savings needed to reduce, alter, or eliminate the need for this project. Clearly identify and distinguish the amount of energy efficiency and demand response savings assumed to be achieved through Focus on Energy and utility programs from the additional energy efficiency and demand response needed to reduce, alter, or eliminate the need for this project.

2.6.3. A discussion of the feasibility of achieving the level of energy efficiency and demand response identified in Section 2.6.2. Feasibility analysis should take into account:

- **A clear definition of the energy efficiency and demand response programming options considered;**
- **The cost-effectiveness of available energy efficiency and demand response options, relative to the costs per unit of the proposed project;**
- **The total energy efficiency and demand response savings required to reduce, alter, or eliminate the need for the project, and the corresponding financial investment required to achieve those savings; and**

- **The ability of utilities to implement new or expanded programs to achieve available savings.**
- **Provide analysis to address multiple different scenarios that distinguish between options for reducing, altering, and eliminating the project need. Please provide modeling and/or spreadsheet analysis to fully assess the cost comparison between the proposed project and all alternative scenarios analyzed.**

There is no energy conservation and efficiency and load response options that would reduce, alter or eliminate the need for the Project Transmission Lines.

2.7 For Market Efficiency Projects

Provide the scenario(s) analyses that details adjusted production cost benefits or other market attributes that show the cost and the benefits of the proposed project and/or alternatives. Benefits should include a present value analysis with cumulative tables for the life of the project.

The Project is not a market efficiency transmission project.

2.8 Modeling Information

2.8.1 For all projects submit network modeling information from PSSE or PowerWorld for steady-state power flow solutions. If submitting data from PSSE, submit the *.raw file. If submitting data from PowerWorld, submit the *.pwb file.

The Project Transmission Lines are designed to deliver generated power to the POI; therefore, no modeling data is being submitted to the PSC.

2.8.2 On an individual application basis, as requested by the assigned engineer, provide the computer network simulation(s) data input files, output files, and/or output summaries.

The Project Transmission Lines are designed to deliver generated power to the POI; therefore, no modeling data is being submitted to the PSC.

2.8.3 Provide any additional modeling, including PROMOD or similar production cost models, to demonstrate any economic benefits associated with the project. Coordinate with PSC to electronically submit the the [sic] generation capacity expansion modeling data set(s). In addition to filing the production cost modeling data set(s), a document describing the filing and making any necessary request for confidential treatment should be filed on the Commission's ERF system1.

2.9 Area Load Information

Submit historical peak load by substation, if available, for the study area for at least the past ten years. In the cases where coincident peak load data is not available by substation, provide annual peak load data by substation. Indicate for each substation whether the load data is coincident peak or annual peak. Explain each component of the forecasted load with

quantitative detail. Any changes in the projected growth rates over the forecast period should be fully explained. Area load information requirements will be discussed at the pre-application consultations. Based on the need and scope of the proposed project, different historical data may be required.

The Project is not directly serving load, and, therefore, Vista Sands Solar does not have area load data information.

2.10 Regional Transmission Organization Tariff Information

Discuss any publicly announced generator retirements or additions of electric generating units larger than 50 MW in the MISO load resource zone in which the project is being proposed for a period of five years prior to project energization. Describe how those generator retirements or additions may affect the need for the proposed project. Discuss any generator additions larger than 50 MW with signed Generator Interconnection Agreements and/or Interconnection Service Agreements in the project study area. Describe how those generator additions may affect the need for the proposed project.

The Project is a generation tie line connecting the Vista Sands Solar Project to the MISO transmission grid. Vista Sands Solar is not providing transmission service under a MISO tariff, and, therefore, there is no MISO tariff information.

2.11. Regional Transmission Organization Information

The Vista Sands Solar Project Transmission Lines are not a MISO regional project, nor is it subject to MISO transmission tariffs or service agreements.

2.11.1. For regional projects, supply the cost benefit analysis and the likely cost allocation per the Midwest ISO's filings.

2.11.2. Description of applicable transmission tariffs.

2.11.3. Provide transmission service agreements, if applicable.

3. Magnetic Fields

Project specific magnetic field data will be discussed during pre-application consultations. The following information should be provided in Table 6 or elsewhere in the application. All tabulated data for all segments should provide magnetic field data to a minimum distance of 300 feet from the centerline of the proposed transmission segment for each unique segment. For rebuilding or reconductoring existing transmission lines or where the proposed line would be double-circuited with an existing line or built next to an existing line (including distribution lines), provide the magnetic field data of the current line and the magnetic field data with the proposed project in place (Section 3.1.2). If asymmetric magnetic profiles are anticipated, the full magnetic field profile may be required for both sides of the centerline as determined during the pre-application consultation process.

3.1 Submit the estimated magnetic field data in PSC Table 6 from the following magnetic field profiles:

A study estimating the magnetic profile of the proposed circuits has been completed and is provided in Appendix F.

3.1.1 Predominant transmission line configurations proposed for the project (H- frame, single-pole delta, double-circuit, etc.).

There are different configurations proposed, based on the type of line. These are:

1) Double-circuit 345/115 kV monopole – overhead line
2) Single-circuit 345 kV monopole – overhead line
3) Double-circuit 138 kV monopole – overhead line
4) Single-circuit 138 kV monopole – overhead line

3.1.2 Each unique structure type or circuit configuration (new and existing line) with the exception of dead-end structures adjacent to substations in areas with high residence densities or other sensitive populations.

Proposed circuit configurations are shown on the transmission pole drawings in Appendix B.

3.1.3 Each existing line that would be affected by the proposed transmission line and a post-construction scenario that incorporates the new and the existing lines.

Segment 2 of Proposed Project 345kV 2-1 Transmission Line will be co-located with an existing ATC 115kV line. Vista Sands Solar has had numerous discussions with ATC which has preliminarily stated that ATC is amenable to re-building the corresponding segment of the existing 115 kV transmission line at Doral's expense resulting in the double-circuit 345k / 115 kV segment.

No other existing transmission lines are parallel to the proposed lines.

3.1.4 Each set of circuit configurations for routes that would have multiple adjacent underground circuits.

There are no multiple adjacent underground circuits.

3.2 Includes [sic] the following information in PSC Table 6 for each estimated magnetic field scenario.

3.2.1 Estimate the proposed lines at 80 percent and at 100 percent of peak load for one-year post-construction and 10 years post-construction. For existing lines, use present day loadings to estimate the magnetic fields levels.

A study that includes the information required by Section 3.2.1 is provided as Appendix P EMF Study.

3.2.2 Provide expected current levels for 80 and 100 percent of peak load at one and ten years post-construction.

A study that includes the information required by Section 3.2.2 is provided as Appendix P EMF Study.

3.3 Provide all assumptions used to model magnetic field levels including:

3.3.1 Phase ID and angles.

3.3.2 Pole design diagram that includes the dimensions of pole arms, dimensions of conductor locations, horizontal distance from the pole to the conductors, and the distance of conductors from the ground at the pole.

3.3.3 Height of lowest conductor(s) at mid-span.

3.3.4 Depth from ground surface to circuits, for underground construction.

3.3.5. Estimated background magnetic field caused by the Earth in the area of each segment.

The assumptions required for Section 3.3.1 through Section 3.3.5 that were used to model magnetic field levels are included in the EMF report found in Appendix P EMF Study.

4. Project Costs

4.1. Transmission Route Cost Estimate Tables

Provide table(s) detailing the projected total costs for each proposed route broken into the major categories listed below. Indicate if project costs include Allowance for Funds Used During Construction. Each major category of costs should be broken down into logical components and/or contracts. If portions of the route(s) are to be constructed underground, those costs should be separated from overhead construction costs. Substation costs should also be separated out (see Substation Application Filing Requirements).

- **Material Costs**
- **Labor Costs**
- **Other Costs**
- **Pre-certification Costs**
- **High-Voltage Transmission Impact Fees**
- **Operation and Maintenance Costs**

The Project is required as a Generator Transmission Line to connect the solar generation portion of the Project to the transmission system at the Interconnection switching station. Based on pre-application discussions with PSC staff, Vista Sands Solar understands that these sections are not applicable to the proposed Project.

4.2. For 345 kV projects: Provide a summary table of total costs (transmission and substation) for each proposed route, broken down by the following voltage classes.

- **345 kV**
- **Less than 345 kV**
- **Distribution**

The Project is required as a Generator Transmission Line to connect the solar generation portion of the Project to the transmission system at the Interconnection switching station. Based on pre-application discussions with PSC staff, Vista Sands Solar understands that these sections are not applicable to the proposed Project.

5. Routing and Siting Information

5.1. Describe the factors considered in the applicant's evaluation of potential routes and locations for the transmission line and its associated facilities.

5.1.1. Identify route(s) that were considered and explain why those corridors were or were not chosen. Provide a map of these routes, if available.

Vista Sands Solar identified potential transmission route options between the Solar Facility and the point of interconnection. Potential routes were considered that met the routing priorities identified in Wis. Stat. § 1.12(6), which are:

a) Existing utility corridors;
b) Highway and railroad corridors;
c) Recreational trails, to the extent that the facilities may be constructed below ground and that the facilities do not significantly impact environmentally sensitive areas; and
d) New corridors.

Consistent with Wis. Stat. § 1.12(6) consideration was also given so that routes included economic and engineering considerations, reliability of the electric system, and protection of the environment. In addition to the statutory siting criteria, Vista Sands Solar considered criteria including but not limited to:

- Community and landowner preferences;
- Ability to use routes on land currently under easement by Vista Sands Solar;
- Ability to reduce impacts on environmental features including wetlands, waterways, and forested areas;
- Avoidance of existing residences and farms;
- Archaeological, historic, and architectural resources;
- Known habitat for threatened and endangered species; and
- Maintaining compatibility with existing agricultural practices.

Vista Sands Solar refined route corridors to locate route segments on Vista Sands Solar-controlled parcels and to avoid impacting the other above-identified categories by way of minor alignment shifts to the extent practicable.

The Proposed and Alternative Routes represent feasible route options to carry energy within the Solar Facility and from the Project Substation to the POI. Routes that did not adequately meet the criteria mentioned above are not presented for consideration.

5.1.2 Describe the use of any weighting criteria used to evaluate potential routes.

The routing priorities identified in Wis. Stat. § 1.12(6) were given the most weight to evaluate potential routes. Segment 2 of the Project 345 kV 2-1 Transmission line parallels an existing transmission line for its length of 3.2 miles.

5.1.3 Describe how the transmission line siting priorities in Wis. Stat. § 1.12(6) were considered.

While Vista Sands Solar cannot use existing transmission line corridors because it does not own transmission within the Project Area, the routes were designed to maximize adjacency to transmission and road ROWs while considering community preferences and landowner impact. Railroad corridors and recreational trails do not occur within the Project Area.

5.1.4. Describe contacts or consultations held with government entities, landowners, and other interested parties prior to application submittal regarding alternative project routes.

Vista Sands Solar held meetings and consultations with PSCW and WDNR, as well as local municipalities regarding alternative project routes. Also, Segment 2 of the Proposed Project 345 kV 2-1 Transmission Line utilizes the existing corridor of an ATC 115 kV transmission line. ATC has existing easements within the 115 kV corridor. Vista Sands Solar has consulted with ATC about rebuilding Segment 2 as a double circuit 345/115kV line, and understands new easements must be negotiated for the new circuit. Additionally, a portion of the line crosses National Grid Renewables' Portage Solar project, and Vista Sands Solar is in the process of negotiating easements with National Grid Renewables.

Please see Section 7.2 of the Solar CPCN application for additional details about contacts and consultations with stakeholders.

5.1.5. Identify any issues and concerns raised.

During a pre-application meeting, WDNR expressed concern with potential adverse effects to the Greater Prairie Chicken and other rare wildlife species of the nearby Buena Vista Grassland. Vista Sands Solar continued discussions with WDNR with a focus on the Greater Prairie Chicken (GRPC); these discussions were termed the Vista Sands Greater Prairie Chicken Working Group (Working Group).

5.1.6. Describe how the issues and concerns were addressed in the selection of the proposed routes.

One initial outcome of the Working Group was to adjust the design criteria of the Project to mitigate impacts to GRPC habitat. Additional, Vista Sands Solar and WDNR agreed to craft a Memorandum of Understanding (MOU) outlining GRPC conservation measures to be implemented by the Project and highlighting research opportunities. Vista Sands Solar and WDNR continue to work towards finalizing that MOU.

Vista Sands Solar has real estate agreements with the owners of the agricultural land that would host the Project. Thus, any landowners who own land where facilities are proposed are choosing to do so voluntarily. More detailed descriptions about the use of these priorities in the siting process are available in Sections 5.1.1 and 5.1.2 above.

5.2 Easements and Existing Utility Infrastructure

If the proposed project contains segments that would share part or all of an existing transmission ROW, submit the following for each of those segment(s):

5.2.1. Identify if existing easements would be modified to accommodate the proposed facilities, or if new easements would be pursued. Provide an example of a standard easement agreement that would be utilized for the proposed project, if approved.

5.2.2. Describe changes to the location or width of existing electric ROW.

5.2.3. Provide a description of the existing ROW that would be shared with the proposed project and identify the potential issues and impacts that may be encountered by constructing the proposed facilities.

5.2.4. State if the existing easements are to be renegotiated and/or rewritten. If so, indicate the reason (for example language modernization, change in easement size, change in transmission, etc.).

Segment 2 of the Proposed Project 345 kV 2-1 Transmission Line utilizes the existing corridor of an ATC 115 kV transmission line. ATC has existing easements within the 115 kV corridor. Vista Sands Solar has consulted with ATC about rebuilding Segment 2 as a double circuit 345/115kV line and understands new easements must be negotiated for the new circuit. Additionally, a portion of the line crosses National Grid Renewables' Portage Solar project, and Vista Sands Solar is in the process of negotiating easements with National Grid Renewables.

5.3 Route Segments

5.3.1. If the route(s) has been broken up into segments, provide the number of, names of, and total length of each segment for each proposed route.

5.3.2. For each route segment describe and/or show the following. Figures and/or illustrations may be necessary to adequately convey the following:

5.3.2.1 Type and dimensions of structure and foundation (such as underground/overhead, single-pole/H-frame, direct embed/concrete caisson, type of material, typical span length, etc.)

<u>Proposed Project 345 kV 2-1 Transmission Line</u>

The Proposed Project 345 kV 2-1 Transmission Line will be new primarily new construction of a 345 kV overhead, double-circuit line on approximately 43 steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 96 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 700 feet long.

The Proposed Project 345 kV 2-1 Transmission Line will be approximately 5.12 miles long, divided into three segments.

Segment 1
Segment 1 of the Proposed Project 345 kV 2-1 Transmission Line runs north from Project Substation 1 for approximately 1.66 miles to an existing ATC 115 kV transmission line.

Approximately 0.75 mile of Segment 1 will be constructed along the east side of 125th St.

Segment 2
Segment 2 of the Proposed Project 345 kV 2-1 Transmission Line will run northeast for approximately 3.2 miles, replacing a portion of an existing ATC-owned 115 kV single-circuit transmission line. Segment 2 will be built and maintained by ATC as a double-circuit 115/345 kV transmission line. The Proposed Project 345 kV transmission line will be located on the south side of Segment 2 and the ATC 115 kV transmission line will be located on the north side of Segment 2.

Segment 3
Segment 3 of the Proposed Project 345 kV 2-1 Transmission Line will run southeast approximately 0.25 mile, diverging from the existing ATC-owned 115 kV transmission line and connecting to Project Substation 1.

Alternative Project 345 kV 2-1 Transmission Line

The Alternative Project 345 kV 2-1 Transmission Line will be new construction of a 345 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 96 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 700 feet long.

The Alternative Project 345 kV 2-1 Transmission Line will be approximately 6.53 miles long, divided into two segments.

Segment 1
Segment 1 of the Alternative Project 345 kV 2-1 Transmission Line will run east and north approximately 4.44 miles from Project Substation 2 to Project Collector Substation A. Approximately 2.86 miles of Segment 1 will be constructed along the north side of Birch Drive.

Segment 2
Segment 2 of the Alternative Project 345 kV 2-1 Transmission Line will run north approximately 2.09 miles from Project Collector Substation A to Project Substation 1.

Proposed Project 138kV A-1 Transmission Line

The Proposed Project 138 kV A-1 Transmission Line will be new construction of a 138 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 90 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long.

The Proposed Project 138 kV A-1 Transmission Line will be approximately 2.24 miles, divided into three segments.

Segment 1
Segment 1 of the Proposed Project 138 kV A-1 Transmission Line will run north from Project Collector Substation A approximately 0.69 mile.

Segment 2
Segment 2 of the Proposed Project 138 kV A-1 Transmission Line will run west and north from the northern terminus of Segment 1 approximately 1.22 miles to the north side of Forest Drive.

Segment 3
Segment 3 of the Proposed Project 138 kV A-1 Transmission Line will run north from the northern terminus of Segment 2 on the north side of Forest Drive approximately 0.33 mile to Project Substation 1.

Alternative Project 138 kV A-1 Transmission Line

The Alternative Project 138 kV A-1 Transmission Line will be new construction of a 138 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 90 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long.

The Alternative Project 138 kV A-1 Transmission Line will be approximately 2.24 miles long, divided into three segments.

Segment 1
Segment 1 of the Alternative Project 138 kV A-1 Transmission Line will be identical to Segment 1 of the Proposed Project 138 kV A-1 Transmission Line and run north from Project Collector Substation A approximately 0.69 mile.

Segment 2
Segment 2 of the Alternative Project 138 kV A-1 Transmission Line will run north and west from the northern terminus of Segment 1 approximately 1.22 miles to the north side of Forest Drive. Segment 2 of the Alternative Project 138 kV A-1 Transmission Line follows a different path than Segment 2 of the Proposed Project 138 kV A-1Transmission Line.

Segment 3
Segment 3 of the Alternative Project 138 kV A-1 Transmission Line will be identical to Segment 3 of Proposed Project 138 kV A-1 Transmission Line and run north from the northern terminus of Segment 2 on the north side of Forest Drive approximately 0.33 mile to Project Substation 1.

Proposed Project 138kV B-2 Transmission Line

The Proposed Project 138 kV B-2 Transmission Line will be new construction of a 138 kV overhead, single-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 86 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long.

The Proposed Project 138 kV B-2 Transmission Line will be approximately 3.42 miles long, divided into three segments.

Segment 1
Segment 1 of the Proposed Project 138 kV B-2 Transmission Line will run north and east from Project Collector Substation B approximately 0.51 mile to the north side of Buena Vista Road.

Segment 2
Segment 2 of the Proposed Project 138 kV B-2 Transmission Line will run north and west from the northern terminus of Segment 1 approximately 1.51 miles to the west side of 130th Street.

Segment 3
Segment 3 of the Proposed Project 138 kV B-2 Transmission Line will run north from the northern

terminus of Segment 2 on the west side of 130th Street approximately 1.40 miles to Project Substation 2.

Alternative Project 138 kV B-2 Transmission Line

The Alternative Project 138 kV B-2 Transmission Line will be new construction of a 138 kV overhead, single-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 86 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long.

The Alternative Project 138 kV B-2 Transmission Line will be approximately 3.84 miles long, divided into three segments.

Segment 1
Segment 1 of the Alternative Project 138 kV B-2 Transmission Line is identical to Segment 1 of the Proposed Project 138 kV B-2 Transmission Line and will run north from Project Collector Substation B approximately 0.51 mile to the north side of Buena Vista Road.

Segment 2
Segment 2 of the Alternative Project 138 kV B-2 Transmission Line will run east and north and west from the northern terminus of Segment 1 approximately 1.93 miles to the west side of 130th Street.

Segment 3
Segment 3 of the Alternative Project 138 kV B-2 Transmission Line is identical to Segment 3 of Proposed Project 138 kV B-2 Transmission Line and will run north from the northern terminus of Segment 2 on the west side of 130th Street approximately 1.40 miles to Project Substation 2.

Proposed Project 138kV C-2 Transmission Line

The Proposed Project 138 kV C-2 Transmission Line will be new construction of a 138 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 90 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long.

The Proposed Project 138 kV C-2 Transmission Line will be approximately 2.74 miles long, divided into three segments.

Segment 1
Segment 1 of the Proposed Project 138 kV C-2 Transmission Line will run north from Project Collector Substation C approximately 0.26 mile along the west side of 110th Street.

Segment 2
Segment 2 of the Proposed Project 138 kV C-2 Transmission Line will run north and east from the northern terminus of Segment 1 approximately 1.55 miles along the west side of 110th Street and the north side of Birch Drive to a location on the north side of Birch Drive.

Segment 3
Segment 3 of the Proposed Project 138 kV C-2 Transmission Line will run east from the northern terminus of Segment 2 on the north side of Birch Drive approximately 0.93 mile to Project Substation 2 which is also located on the north side of Birch Drive.

Alternative Project 138 kV C-2 Transmission Line

The Alternative Project 138 kV C-2 Transmission Line will be new construction of a 138 kV overhead, double-circuit line on steel monopoles using direct embed or concrete pier foundations. Pole heights will be approximately 90 feet above ground. Conductors will typically be 50 feet or higher above ground and spans will typically be 500 feet long.

The Alternative Project 138 kV C-2 Transmission Line will be approximately 2.35 miles long, divided into three segments.

Segment 1
Segment 1 of the Alternative Project 138 kV C-2 Transmission Line will be identical to Segment 1 of the Proposed Project 138 kV C-2 Transmission Line and run north from Project Collector Substation C approximately 0.26 mile along the west side of 110th Street.

Segment 2
Segment 2 of the Alternative Project 138 kV C-2 Transmission Line will run north and east from the northern terminus of Segment 1 approximately 1.16 miles to a location on the north side of Birch Drive. Approximately 0.95 mile of Segment 2 runs along the southeast side of Angle Drive.

Segment 3
Segment 3 of the Alternative Project 138 kV C-2 Transmission Line is identical to Segment 3 of Proposed Project 138 kV C-2 Transmission Line and will run east from the northern terminus of Segment 2 on the north side of Birch Drive approximately 0.93 mile to Project Substation 2, which is also located on the north side of Birch Drive.

See Appendix B – Engineering Schematics for transmission structure drawings for the Project.

5.3.2.2 Transmission configuration (single-circuit, double-circuit, etc.)

See Section 5.3.2.1 above.

5.3.2.3 Conductor information (for example size, voltage, etc.)

The Proposed and Alternative Project 345 kV 2-1 Transmission Lines were designed using a bundled 795 kcmil 26/7 Strands Drake ACSR conductor. The Proposed and Alternative Project 138 kV Transmission Lines were designed to use 1272 kcmil 45/7 Strands Bittern ACSR conductor. Conductor sizing will be finalized during detailed design.

5.3.2.4 Height of structures and span length

See Section 5.3.2.1 above.

5.3.2.5 Number of structures

See Section 5.3.2.1 above.

5.3.2.6 Existing transmission affected by proposed project

The transmission line facilities that will be added or altered for the Project will be determined as part of the MISO interconnection study process. The DPP 1 studies have been included in

Appendix D for reference and are noted in Section 2.2.1.1. Additionally, and as described above, Vista Sands Solar intends to double circuit Segment 2 of the Proposed Project 345 kV 2-1 Transmission Line with an existing ATC line.

5.3.2.7 Existing distribution affected by the proposed project

Existing distribution is not expected to be impacted by the Project at this time.

5.3.2.8 ROW size. For rebuild project to be built in the same ROW as the existing line, indicate if an off-set is needed, and if so, the size of the off-set.

Segment 2 of the Proposed Project 345 kV 2-1 Transmission Line will run northeast for approximately 3.2 miles, replacing a portion of an existing ATC-owned 115 kV single-circuit transmission line. Segment 2 will be built and maintained by ATC as a double-circuit 115/345 kV transmission line.

5.3.2.9 Shared ROW configuration

The Project Transmission Lines will primarily use new ROW.

Segment 2 of the Proposed Project 345 kV 2-1 Transmission Line will run northeast for approximately 3.2 miles, replacing a portion of an existing ATC-owned 115 kV single-circuit transmission line. Segment 2 will be built and maintained by ATC as a double-circuit 115/345 kV transmission line.

5.4 PSC Impact Tables

Route impact tables, which quantify the general impacts of constructing the transmission line, have been prepared for each route. Tables 1 through 5 and 7 summarize impacts associated with the proposed transmission line corridor (Appendix W – PSC Tables). Table 6 provides an estimate of magnetic field data and is found in Appendix W – PSC Tables. An outline of the methods used to prepare the impact tables is presented below.

The information contained within Tables 1 through 5 and 7 was developed based on a combination of sources including available reference data, aerial photography, and field observations. These sources were utilized to measure and calculate impacts using GIS software.

The reference data utilized include county tax parcel data; databases from the State of Wisconsin, Google Earth and Esri USA Institutions regarding the locations of schools, daycares, and hospitals; and state managed lands information from the WDNR and the Protected Areas Database of the U.S. (PAD-US). National Agriculture Imagery Program aerial photography (2020) was also utilized.

Field observation of the routes include both windshield surveys completed in 2023, and field surveys completed along several segments in 2023 to generally evaluate land cover.

Table 1 - General Route Impacts

The general ROW requirement and ROW sharing characteristics for each route are presented in Table 1. For this table, the two routes were broken into segments to facilitate analysis. Segment breaks were based primarily on the type and extent of existing ROW sharing. GIS software was used to determine segment lengths, and new and shared ROW width in some cases, for this table.

Existing ROWs along the routes include road and transmission line ROW. The extent of road ROW was estimated from aerial photographs while typical transmission line easement widths were obtained from the utility owner.

Table 2 – Land Cover

Land cover along both routes was identified using aerial photography and field observations along several segments. Land cover was digitized into a GIS layer to quantify land cover impacts, and the land cover categories correspond to the categories specified in Table 2.

For each route, a corridor corresponding to the required ROW width for each segment was established along the route centerline. Existing ROW corridors were then overlaid on the route corridor to distinguish land cover in existing ROW versus new ROW. The polygons of each land cover type were then clipped with the route and existing ROW corridors. The acreages of each resulting polygon were quantified with GIS software. The resulting acreages were summed by land type within existing and new ROW for each segment.

An estimate of the land cover area that will be impacted by each route, and the digitized land cover along both routes is presented. The land cover present on the routes and identified in Table 2 includes undeveloped lands (i.e., grassland, forested wetland and upland forest) and developed / urban lands as described in the footnotes to Table 2.

Table 3 - Federal, State, Local, and Tribal Lands Excluding Road ROWs

County parcel data was used to identify federal, state, local and Tribal lands along the routes; road ROW was not included in this evaluation. Privately owned lands that are managed by federal or state entities were identified by review of the WDNR's Managed Land's website (http://dnrmaps.wi.gov/DNRManagedLands/), the PAD-US, the National Conservation Easement Database, and data from the United States Forest Service and The Nature Conservancy.

No Federal, State, Local or Tribal Lands exist within Project Transmission Line ROWs.

Table 4 - Distances of Schools, Daycare Centers, and Hospitals from ROW Centerline

The presence of sensitive receptors (schools, daycares and hospitals) in proximity to the routes was determined through review of the following databases:

- Locations of licensed family and group childcare centers were provided by the Wisconsin Department of Children and Families, Esri USA Institutions and Google Earth;
- Public and private school locations were provided by the Wisconsin Department of Public Instruction and Esri USA Institutions; and
- Hospital locations were provided by the Wisconsin Department of Health Services and Google Earth.

Based on review of this information, no sensitive receptors are present within 300 feet of Project Transmission Line ROWs.

Table 5 - Distances of Residential Buildings from ROW Centerline

The type of residential buildings (homes and apartments) and the distance of these buildings from the route centerlines were determined using GIS measurements on aerial photography. These buildings were tallied according to five distance categories from the route centerlines: 0–25 feet, 26–50 feet, 51–100 feet, 101–150 feet, and 151–300 feet.

Table 6 – Magnetic Fields
Table 6 provides an estimate of magnetic field data and is found in Appendix W – PSC Tables.

Table 7 – Route Impact Summaries
A summary of the impacts associated with each route option is provided in Table 7 of Appendix W – PSC Tables.

5.5 Construction Impacts

5.5.1 Discuss the proposed construction sequence for both overhead and underground lines in the project

The Project does not involve the construction of underground lines. Therefore, activities are only described for overhead transmission line construction.

Construction of the Project Transmission Lines requires several different activities at any given location. In general, the construction will follow this sequence:

1. Survey and Staking of the ROW

   Prior to construction, a survey crew will delineate and stake and/or flag both edges of the Project Transmission Line ROW, work pads and pulling pads, access roads, vegetation clearing boundaries and new structure locations. This activity will have minimal impact and is typically completed by a two-person crew travelling by foot, ATV, or pick-up truck.

2. Installation of Best Management Practices (BMPs)

   During the site preparation phase of the work some of the sediment and erosion control measures will be installed, for which installation will be in accordance with the ECSWMP. Those measures that are not installed at this time will be installed after tree clearing and vegetation removal is complete, but before or concurrent with the start of earth disturbing activities associated with the installation of access roads, work pads and stringing sites. All control measures will be regularly monitored and maintained or repaired as necessary throughout construction through final stabilization. Supplemental controls will also be added where necessary to account for changing site conditions and seasonal variations in weather.

3. Vegetation Clearing

   Vegetation will be cleared for the full width of the Project Transmission Line ROW to facilitate construction equipment access and provide safe clearances between vegetation and the transmission line. Low-growing vegetation will be removed with mechanical methods such as brush hogging or mowing. Where tree removal is necessary, root stocks will generally be left in place except in areas where stump removal is necessary to facilitate the movement of construction vehicles, or if requested by the landowner. Side trimming the ROW would happen shortly after the clearing is completed. Following the side trimming, a final mowing of debris and stump cleanup will be completed. Where permission of the landowner has been

obtained, stumps of tall-growing species will be treated with an herbicide to discourage re growth.

4. Work Area Construction

   Construction will proceed with access road, work pad, and stringing location development. Access roads are necessary to allow equipment, vehicles, materials, and construction and oversight staff to access the various work locations. Work pads will be required at each transmission line structure site, as well as at conductor and optical groundwire pulling, or stringing sites, and potentially at locations where temporary guard structures will be erected during conductor installation. The work area at each structure will be approximately 50 feet by 50 feet.

   Grading at work areas will be limited to the extent necessary to facilitate the safe operation of construction vehicles and equipment.

5. Material Delivery

   Transmission line structures will be delivered to the installation locations in sections. Structure spotting will involve trucks hauling structure sections from the laydown yards to the site on public roads and Project access roads, and then using a forklift, crane, or other equipment to offload the structure sections from the truck.

6. Foundation Excavation

   The majority of the transmission line structures will be set into holes with backfill placed around them (direct embed pole installation) but drilled shaft foundations may be necessary for large dead-end structures. A direct embed pole installation involves drilling a hole, inserting the structure, and backfilling around the structure with aggregate. Excess excavated non-hazardous soil material will be spread in adjacent upland areas and stabilized in accordance with the requirements of the ECSWMP or will be hauled off site to an appropriate disposal facility if spreading in an upland area (e.g., agricultural sites) is not possible.

7. Structure Placement

   Once foundation holes are excavated, structures will be lifted into position and inserted into the foundation holes. Depending on the structure size and the preference of the installer, setting may be done with one or more cranes, bucket trucks, telescoping boom forklifts, excavators, or other equipment. The equipment will lift the structure and crews will secure it in place.

8. Conductor Stringing

   Conductor and wire stringing are generally completed in pulls from one dead-end structure to the next. Pulling pads will be required at each end of the pull section to provide room for pulling equipment and wire reels, and to allow for the proper pulling angle as specified by the manufacturer to avoid overstressing the conductor or wire during the pull. At one end of the pull section there will be wire reels and associated tensioning and reel handling equipment to handle them. At the other end of the pull

section the pulling and tensioning equipment will be in place. A pulling rope, which is attached to a steel cable, which is in turn attached to the conductor or wire, will be brought to each structure on foot or via vehicles on the ground. Once the pulling rope has been connected to the pulling equipment, the conductor or wire will be pulled from the reels under tension to avoid contacting the ground and other objects. At road crossings and other locations, guard structures and equipment will be used.

The remaining insulators and hardware will then be installed at angle and dead-end structures. Finally, in accordance with industry standards and design specifications, the conductors and wires will be pulled to their design tensions, and crews in bucket trucks will secure the conductor or wire to the hardware or structure. After the connections are completed, any temporary hardware will be removed.

9. Cleanup and Restoration

Cleanup and site restoration will occur upon completion of construction. This includes removing construction mats and other material or debris from the ROW, and any necessary seedbed preparation and seeding. Typical equipment for these activities includes mat trucks, bobcats, pickup trucks and other light duty vehicles.

5.5.2 Describe the construction impacts associated with each phase of construction, including:

5.5.2.1 The size of excavations for foundations or other underground structures

In general, the excavated holes for the foundations will be approximately 2-5 feet in diameter and 15 feet in depth, although these estimates may vary depending upon soil conditions. These estimates will be refined during final design of the transmission line.

If conditions warrant during construction, dewatering activities may be necessary during the excavation of foundations. If dewatering or pumping of water is necessary, all water will be discharged in a manner that does not cause erosion, scouring, or other nuisance conditions. The contractor will employ the use of filtration and erosion control devices, such as filter bags, straw bales, and geotextiles. Water will be released into upland areas only and prevented from directly entering wetlands or waterways.

The contractor will construct and maintain all dewatering BMPs necessary to comply with discharge requirements and will comply with the standards and methodologies as presented in the WDNR Technical Standard 1061.

5.5.2.2 The type of construction machinery that would be used

Section 5.5.1 describes the typical equipment anticipated to be used on the Project.

5.5.2.3 The construction disturbance zone, if different from the ROW

Construction activity will stay within the ROW except where guy wire installation is required. An additional work area of up to approximately 250 square feet adjacent to the ROW will be required at these locations.

5.5.2.4 How spoil materials would be managed on and off-site

Native soil not used to backfill will be spread within uplands in the ROW or hauled off-site to an approved location. Excavated soils will not be spread in wetlands.

5.2.5 If any underground line installation will occur, identify the installation method(s), such as directional bore, open-cut trench, plow, etc.

No underground transmission line installation will occur.

5.5.3 For unique construction methods (e.g., directional boring, jack and bore, helicopter, vibratory caissons, etc.), provide the following:

5.5.3.1. The location and reason for the construction method

5.5.3.2. A description of the construction method

5.5.3.3. The temporary construction needs and limitations such as boring pits, staging areas, frac-outs, timing, weather, etc.

Unique construction methods are not expected to be used.

5.6 Identify and describe the location, footprint, and existing land use of staging areas and any additional temporary workspace.

There will be five laydown areas constructed for the Vista Sands Solar Project. These will also be used for the construction of the Project Transmission Lines. These laydown yards are depicted on Solar CPCN Figure 4.1.1 General Project Area and Solar CPCN Figure 4.1.2 Detailed Project Area. Laydown Yard Impacts are quantified in Solar CPCN PSC Table

Two laydown yards, 2.3 acres and 11.5 acres each, will be constructed near Lake Rd and 100th Street South in the southwestern portion of the Project. A 10.1-acre laydown yard will be constructed in the south/southwestern portion of the Project near Lake Rd and County Road F. There will be a 13.0-acre laydown yard constructed near County Road FF and 110th Street S in the southwest part of the Project. And a 2.7-acre laydown yard will be constructed near the O&M building near the north end of the Project.

Laydown areas consist entirely of agricultural land.

5.7 Off-ROW Access Roads

Off-ROW access roads are not anticipated to be required for the Project.

6. Natural Resource Impacts

6.1. Forested Lands

Forested lands are defined as areas where mature trees are present forming mostly closed stands with greater than 20 percent canopy cover and trees with diameter at breast height (dbh) of six inches or more. Planted pine plantations of varying age classes are included in this category, but areas of cleared pine plantation that were not obviously re-planted and may only contain scattered saplings are not included as forest cover. Forested lands were identified and reviewed using aerial photography and observations taken during field surveys.

Forested areas were quantified as part of the land cover impact analysis and the resulting acreages are outlined in the Land Cover Table (Appendix B, Table 2). Forested lands within the Project Transmission Line corridors are described below.

6.1.1 For each route segment describe the forested lands that would be impacted by the proposed project. Include the following information in the description.

- **Type of forest,**
- **Dominant species,**
- **Average age, size of trees,**
- **Ownership (private, county, etc.),**
- **Use (recreation, timber, riparian habitat, etc.),**
- **Timing of clearing activities, and;**
- **Equipment to be used.**

In general, the proposed transmission lines intersect with varying stands and age classes of forested lands.

Forested areas along the proposed and alternative routes include red and scotch (*Pinus resinosa* and *Pinus sylvestris*) pine plantation and lesser amounts of dry-mesic to dry mixed coniferous-deciduous woodland. A small amount of forested wetland was observed along both proposed and alternative routes.

No field survey has been completed specifically for forested lands, but a survey will be completed prior to construction to determine the type of vegetation, dominant species, and average age or size of vegetation. Commonly incidentally observed species within proposed Project Transmission Line corridors included jack pine (*Pinus banksiana*), white pine (*P. strobus*), and red oak (*Quercus rubra*). Within the potential wooded wetland, white pine and quaking aspen (*Populus tremuloides*) were observed. The forest lands are privately owned and managed for timber within the areas of red and scotch pine plantation and recreational land use within the remainder.

Forest lands will be cleared to construct the new transmission line corridors. Clearing of vegetation in the ROW will occur during construction in accordance with permit conditions and construction schedule.

6.1.2 Managed Forest Law (MFL) and Forest Crop Law (FCL)

6.1.2.1 Identify properties within proposed ROWs that are enrolled in the MFL or FCL programs. For properties enrolled in MFL, include the anticipated amount of forested areas that would be cleared on each property.

Vista Sands Solar obtained information from the WDNR identifying enrollment in Managed Forest Law (MFL) and Forest Crop Law (FCL) programs. According to this information, one section along the proposed Project 345 kV 2-1 Transmission Line route is enrolled in the MFL program. There are no properties enrolled in the FCL program along the Proposed or Alternative routes.

6.1.2.2 Discuss how the proposed project would affect the properties enrolled in the MFL or FCL programs and how landowners would be compensated for that impact.

The extent to which a property is enrolled in the MFL will be identified during the easement negotiation process. If a landowner would be unable to continue participation, Vista Sands Solar will compensate the landowner for the costs of withdrawal and adverse tax consequences.

6.1.3 Provide specific details for mitigating or minimizing construction impacts in and around forested lands.

The Project Transmission Lines will require the clearing of incompatible vegetation within the ROW. Incompatible vegetation within the ROW that may interfere with access and safe and reliable operation of the transmission line will be removed and controlled. Clearing of vegetation in the ROW will typically occur prior to the construction activities in accordance with permit conditions and easement acquisition activities.

Vista Sands Solar will utilize standard vegetation management practices that are in accordance with the PSC's restrictions on oak tree cutting and pruning as specified in Wis. Admin. Code § PSC 113.0511.

6.2 Grasslands

6.2.1 For each route segment describe the grasslands that would be impacted by the proposed project. Include the following information in the description.

- **Type of grassland (prairie, pasture, old field, etc.),**
- **Dominant species,**
- **Ownership (private versus public), and;**
- **Use (agricultural, non-productive agricultural, recreation, natural area, etc.)**

No field survey has been completed specifically for grasslands. Grasslands were identified and reviewed using aerial photography and observations from field work. Grasslands are defined as undeveloped landscapes dominated by herbaceous (non-woody) vegetation. Within the Project area along both routes, identified grasslands include areas of area of non-productive or fallow cropland.

Grasslands within the Project Transmission Line corridors are privately-owned.

6.2.2 Provide specific details for mitigating or minimizing construction impacts in and around grasslands.

Project Transmission Line construction will require vehicle traffic over the ROW through grassland areas. Primary considerations for minimizing impacts to native prairie grasslands include minimizing soil disturbances such a rutting and compaction and preventing and minimizing the spread of invasive species. Impact minimization may include matting through native grasslands, work in frozen conditions and/or during plant dormancy, and use of invasive species best management practices as outlined in Section 6.3. Restoration of native prairie and grasslands will include seeding with seed mixes similar to the pre-construction condition.

6.3 Invasive Species (Uplands and Wetlands)

6.3.1 Describe areas where invasive species or disease-causing organisms have been observed or are a concern for the construction of the project (e.g., invasive plants, oak wilt, emerald ash borer, etc.). State if invasive species surveys have occurred or will be conducted. If invasive species surveys have been conducted, provide documentation showing where surveys occurred and locations of invasive species found, indicating which species.

The presence of invasive species was generally noted during field investigations; however, targeted surveys to identify and map invasive species along the routes have not been completed. Invasive species observed include spotted knapweed and honeysuckle.

Several disease-causing organisms have been observed in Portage County. Oak wilt (*Ceratocystis fagacearum*) and emerald ash borer (*Agrilus planipennis*) have been identified in Portage County, and Portage County occurs within the spongy moth (*Lymantria dispar*) quarantine area.

6.3.2 Describe mitigation methods that would be used to avoid the spread of invasive plants or disease-causing organisms and comply with Wis. Admin. Code ch. NR 40, such as cleaning of machinery, surveys, etc.

To prevent the spread of invasive species into other areas to the extent practicable, all equipment used, including construction matting, will be cleaned prior to work in areas without invasive species. If possible, construction matting for use in invasive species areas will be designated prior to the start of construction to minimize the time and expense needed to clean the mats. Additional BMPs will be followed to minimize the spread of invasive species. BMPs may include:

- Proper storage and cleaning of construction vehicles and materials;
- Minimizing ground disturbance to the extent practicable;
- Placing barriers such as temporary matting between construction vehicles and plants;
- Proper storage and disposal of plant materials; and
- Re-seeding or promoting native vegetation regeneration.

To minimize the spread of oak wilt, Applicants will utilize standard vegetation management practices that are in accordance with the PSC's restrictions on oak tree cutting and pruning as specified in Wis. Admin. Code § PSC 113.0511. Practices that minimize the spread of emerald ash

borer include avoiding movement of ash wood products and hardwood firewood from emerald ash borer quarantine areas to non-quarantine areas as per Wis. Admin. Code § ATCP 21.17. Standard practices to avoid the spread of the spongy moth include inspections and avoiding movement of wood projects from spongy moth quarantine areas to non-quarantine areas per Wis. Admin Code § ATCP 21.10.

6.4 Archaeological and Historic Resources

Vista Sands Solar's consultant (Stantec) completed field surveys within archaeological site high-probability (determined from site probability modeling completed in October 2021 and February 2023) areas within the Project during the weeks of May and October 2023. Fourteen previously unidentified archaeological sites were identified in the survey of the Project archaeological site high probability area. These sites date between the Archaic and the Historic period. An additional five archaeological sites and the remains of one demolished historical structure were reidentified within the Project archaeological site high probability areas. None of the sites identified or re-identified are located within the transmission line APE. The Phase I Cultural Resources Report is included in Appendix J.

6.4.1. Provide maps or GIS files and a description of all archaeological sites, historic buildings and districts, and human burial sites within the project's area of potential effect (APE). For archaeological and historic sites, the APE is comprised of the physical project area where any ground disturbing activity may occur (e.g. digging, heavy equipment movement, etc.). For historic buildings and districts, the APE consists of the distance that the project may be visible from the outside of the project area. Maps of archaeological and burial sites must be submitted confidentially.

Mapping of archaeological sites, historic buildings and districts, and human burial sites are included in the Phase I Cultural Resources Report included in Appendix J.

6.4.2. For archaeological sites and historic buildings or districts within the APE, determine the boundaries, historic significance, and integrity of each resource. Additional field surveys may be required to make these determinations. In some cases, such as a landowner not granting land access, field surveys may instead be performed following the approval of a project.

Based on the cultural resources review results provided in Appendix J, no known Native American sites, previously identified historic structures or districts are located within the Project Transmission Lines APE.

6.4.3 Identify the potential project effects on each resource.

Based on the cultural resources review provided in Appendix J, no previously identified resources are located within the Project Transmission Lines APE of the and no effect is expected from Project construction.

6.4.4. Describe modifications to the project that would reduce, eliminate, avoid, or otherwise mitigate effects on the resources. Examples of modifications include changes to construction locations, modified construction practices (e.g. use of low-pressure tires, matting, etc.), placement of protective barriers and warning signage, and construction monitoring.

Vista Sands Solar completed field surveys of the Project Transmission Line ROWs and generation assets within archaeological site high probability areas during May and November 2023. The archaeological sites identified and reidentified during the survey are not located within the transmission line corridors, therefore no adverse impacts are anticipated.

6.4.5. For any human burial sites within the APE, contact WHS to determine whether a Burial Site Disturbance Authorization/Permit is required.

Based on the cultural resources review provided in Appendix J, no previously identified burial sites or cemeteries are located within the Project APE. Six cemeteries or burial sites are located within the indirect APE. All six of these cemeteries/burial sites are located greater than 0.25 mile from the Project Area, and no direct or indirect effects are anticipated to these sites due to the construction of the Project.

6.4.6. Provide an unanticipated archaeological discoveries plan. The plan should outline procedures to be followed in the event of an unanticipated discovery of archaeological resources or human remains during construction activities for the project.

An Unanticipated Archaeological Resources Discovery Plan is included in Appendix K.

6.4.7. Notify Wisconsin Tribal Historic Preservation Officers of any Native American human burial sites and significant prehistoric archaeological sites within the APE. Provide copies of all correspondence.

Based on the cultural resources review results provided in Appendix J, no known native American burial sites or significant prehistoric archaeological sites are present within the Project APE for direct effects or the Project APE for indirect effects.

6.5 Conservation Easements

6.5.1 By route segment, for each route identify properties with conservation easement agreements.

Based on a review of data available from the National Conservation Easement Database, PAD-US, the Nature Conservancy, the WDNR, and Wisconsin Department of Agriculture Natural Resources Conservation Service Easements, there are no properties with known conservation easements along either route.

6.5.2. For each conservation easement that would be crossed by a route, identify and discuss:

6.5.2.1. The holder and type of easement.

6.5.2.2. The conditions of the easement.

6.5.2.3. The approvals necessary to construct on the property.

6.5.2.4. The potential impacts to the landowner, including costs, penalties etc.

6.5.2.5. Whether the proposed project is consistent with the stated goals of the easement.

6.6 Restoration of Disturbed Areas

6.6.1 Type of re-vegetation proposed for impacted areas (e.g. traditional restoration seed mixes, specialty native seed mixes for restoration of high-quality habitats or habitat enhancement such as seeding with a pollinator species).

As work is completed, crews will clean up and restore areas disturbed by construction by removing any construction debris, removing mats installed for temporary access roads and work pads, and revegetating the sites as described in the Vegetation Management Plan (Appendix I).

The Vegetation Management Plan includes habitat-specific seed mix information. Disturbed sites, including wetlands, will be restored based on the level of disturbance, land type, and conditions of the Project permits and landowner commitments. In some cases, re-growth of vegetation in disturbed areas may be allowed to occur without supplemental seeding. In cases where there is no sign of re-growth of pre-existing vegetation species in the first month of the subsequent growing season, an assessment will be made and if necessary, an appropriate seed mix will be brought in and properly applied.

6.6.2 Vegetative monitoring criteria (number of post-construction years or percent cover achieved) and methods.

During and after construction, inspections will be conducted to monitor success of re-vegetation and restoration activities in accordance with Wis. Admin. Code Ch. NR 216 and the WPDES general permit conditions. Monitoring methods and documentation of revegetation progress will comply with WDNR requirements.

6.6.3 Invasive species monitoring and management

Vista Sands Solar will prevent, to the extent practicable, the transport and spread of invasive species during Project construction. Appropriate construction practices aimed at reducing the spread of invasive species and post construction monitoring procedures are detailed in the Vegetation Management Plan

6.7. Contaminated Sites

6.7.1. Using the Wisconsin Remediation and Redevelopment Database (WRRD), http://dnr.wi.gov/topic/Brownfields/WRRD.html, identify any contaminated sites (open and closed) within the project area and within two miles of the project area.

According to a records search, there are no open contamination sites within two miles of the Project. There are 42 closed remediation sites within two miles of the Project.

6.7.2. Using the Historic Registry of Waste Disposal Sites, http://dnr.wi.gov/topic/Landfills/registry.html, identify any Environmental Repair and Solid Waste disposal sites within the project area and within two miles of the project area.

There are two closed solid waste disposal sites within two miles of the Project.

6.8. Floodplains

6.8.1. Identify any work occurring in floodplains.

6.8.2. Discuss if impacts to the floodplain have been evaluated, and how impacts to the floodplain will be avoided or minimized.

6.8.3. Provide information on any discussions that have occurred with the application floodplain zoning authority, and how the project will comply with local floodplain ordinance(s). This requirement is not intended to preclude or otherwise modify Wis. Stat. §196.491(3)(i).

There are no identified floodplains within the Project Transmission Line boundaries.

7. Community Impacts

7.1. Communication with Potentially Affected Public

7.1.1 List all attempts made to communicate with and provide information to the public.

7.1.2 Provide a description of public information meetings and who was invited.

A description of Vista Sands Solar's community outreach efforts is described in Section 7.2 of the Vista Sands Solar CPCN application.

7.1.3 Submit copies of public outreach mailings and handouts.

Copies of public outreach mailings and handouts are included in Appendix S – Public Outreach.

7.1.4 Provide electronic copies of written public comments (e.g., letters, emails, forms, etc.) submitted prior to filing the application with the PSC.

Copies of written public comments are included in Appendix S – Public Outreach.

7.2 Community Issues

List and discuss the concerns that groups, local governments and potentially impacted communities have raised about the project.

Vista Sands Solar values working with communities that welcome solar projects and responsible economic development opportunities. Vista Sands Solar places great importance on community-supported projects and engages with local landowners, neighboring landowners, municipal leaders, and state legislators early in the development process. In order to be a good neighbor, it is important that any project is transparent and in frequent communication with the public from the time the project is initiated.

Vista Sands Solar has met and coordinated with the Town of Plover, the Town of Buena Vista, the Town of Grant, the Village of Plover, and Portage County representatives as well as with the larger community to discuss local issues. Vista Sands Solar will continue to work proactively with the towns, county, and local communities to identify and address issues and concerns should they arise. The Project's goal is to utilize development agreements with the local government units to address concerns. Draft development agreements were sent to all municipalities where facilities were planned and the Project requested to start negotiations as soon as practicable.

7.3 Land Use Plans

Provide relevant portions of land-use plans that describe future land uses potentially impacted by the project. (Land use plans include recreational plans, agricultural plans, etc.)

Land use plans, zoning ordinances, and relevant planning documents are listed in Table 5.13-1 and provided in Appendix E.

Table 7.3 Land Use Plans and Ordinances

Government	Plan or Ordinance
Town of Grant	Town of Grant Adopted Comprehensive Plan (adopted from Portage County Comprehensive Plan)
	Town of Grant Zoning Ordinance
Town of Plover	Town of Plover Adopted Comprehensive Plan (adopted from Portage County Comprehensive Plan)
Village of Plover	Village of Plover Zoning Code
	Village of Plover Comprehensive Plan
Portage County	Portage County Zoning Ordinance
	Portage County Comprehensive Plan

7.4 Agriculture

For each route, by route segment, provide the following:

7.4.1. Type of farming: pasture, row crops, or other type (e.g., orchards, tree plantations, cranberry bogs, etc.).

The lands within the Project Transmission Line corridors are predominantly row crops production. Crops within the agricultural areas consist of potatoes, corn, soybeans, oats, millet and rye. A pasture and cranberry bog are traversed by the Project 138 kV B-2 Transmission line.

7.4.2 Any agricultural practices that may be affected by the project (construction or operation), such as irrigation systems, aerial seeding or spraying, windbreaks, organic farms, and drainage systems (tiles, ditches, laterals).

Center pivot irrigation systems are common within the vicinity of the Project Transmission Lines but are not anticipated to be affected by the Project Transmission Lines because a) most irrigation systems will be decommissioned and replaced with solar panels, b) the Project Transmission Line routes were developed to avoid center pivot irrigation systems (e.g. Proposed Project 345 kV 2-1 Transmission Line Segment 1), and c) Project Transmission Line Routes were developed to utilize existing transmission corridors that already co-exist with center pivot irrigation systems (e.g. Proposed Project 345 kV 2-1 Transmission Line Segment 2).

One aerial applicator runway is located 0.5 mile east of Alternative Project 345 kV 2-1 Transmission Line Segment 1.

Removal of existing windbreaks will be avoided as feasible so they can remain in place as visual screening for the Vista Sands Solar Project.

No organic farms have been identified within one mile of the Project Transmission Lines.

No drain tiles have been identified along the Project Transmission Line routes.

Ditches were identified and are documented in Appendix H – Wetland Delineation Report. These are discussed at length in Section 8.1.

7.4.3 Identify the number and size of parcels enrolled in farmland preservation programs and permanent agricultural or conservation easements that may be affected by the proposed project.

Vista Sands Solar is not aware of any of the Project parcels being enrolled in farmland preservation programs, permanent agricultural or conservation easements that may be affected by the Project.

7.4.4 Specific details for mitigating or minimizing construction impacts in and around agricultural lands.

During construction, agricultural operations may be temporarily disrupted. Vista Sands Solar will minimize short-term disruptions to farming activities through scheduling, planning, and the implementation of effective soil protection, construction mitigation, and restoration measures.

Vista Sands Solar will implement the following during construction to limit the impacts in and around agricultural land:

- Disturbance to surface and subsurface drainage features (ditches, diversions, tile lines, etc.) will be avoided. If necessary, restoration of these features will be coordinated with the landowner and/or farm operator.
- Temporary fencing will be installed in coordination with the farm operator and/or the landowner, as needed.
- No logs, stumps, brush, or wood chips from clearing operations will be staged or placed within active agricultural fields.
- All vehicular movements and construction activity will be restricted to marked access roads.
- To avoid restricting access to portions of active agricultural areas, crossings accessible to the farm operator will be identified in coordination with the farm operator.

7.4.5. Identify any parcels of land in the project area that may impact a Drainage District, and identify the Drainage District if applicable. The following applies when any part of a project impacts a Drainage District.

Portions of the Proposed and Alternative Project Transmission Lines are located within the Portage County Drainage District. These locations are summarized below.

<u>Alternative Project 345 kV 2-1 Transmission Line</u>

The Alternative Project 345 kV 2-1 Transmission Line ROW overlaps and runs parallel to Portage County Drainage District Ditch #1 for approximately 3 miles. No transmission structures will be placed within Ditch #1 and the construction and operation is not anticipated to impact the Portage County Drainage District.

Proposed Project 138 kV A-1 Transmission Line

The Proposed Project 138 kV A-1 Transmission Line ROW overlaps and runs parallel to Portage County Drainage District Ditch #1 for approximately 0.25 miles and crosses it twice. No transmission structures will be placed within Ditch #1 and the construction and operation is not anticipated to impact the Portage County Drainage District.

Alternative Project 138 kV A-1 Transmission Line

The Alternative Project 138 kV A-1 Transmission Line ROW overlaps and runs parallel to Portage County Drainage District Ditch #1 for approximately 0.25 miles and crosses it twice. No transmission structures will be placed within Ditch #1 and the construction and operation is not anticipated to impact the Portage County Drainage District.

Proposed Project 138kV B-2 Transmission Line

The Proposed Project 138 kV B-2 Transmission Line ROW will cross a straightened segment of Buena Vista Creek. No transmission structures will be placed within Buena Vista Creek and the construction and operation is not anticipated to impact the Portage County Drainage District. One TCSB crossing is planned at this location for construction.

Alternative Project 138 kV B-2 Transmission Line

The Alternative Project 138 kV B-2 Transmission Line ROW will cross a straightened segment of Buena Vista Creek. No transmission structures will be placed within Buena Vista Creek and the construction and operation is not anticipated to impact the Portage County Drainage District. One TCSB crossing is planned at this location for construction.

7.4.5.1. The County Drainage Board will need to be notified before undertaking any action, including any change in land use that will alter the flow of water into or from a district drain, increase the amount of soil erosion, or the movement of sediment solids to a district drain or affect the operation of the drainage district, or the costs incurred by the Drainage District. This applies to parcels of land that receive water from, or discharge water to a Drainage District, regardless of whether the land is included in the Drainage District.

Vista Sands Solar introduced the Project and associated Project Transmission Lines to a Portage County Drainage District Commissioner in October 2023 and will continue to coordinate with the District throughout the final design process.

7.4.6 Agricultural Impact Statement 25F 26 (AIS) – Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP). If the project is a transmission line of 100kV or more, is longer than one mile, and would affect any properties used for agricultural purposes, submit one of the following, either:

7.4.6.1 A completed Agricultural Impact Notice (see DATCP web site and search "Agricultural Impact Notice" for appropriate form).

7.4.6.2 A release letter from DATCP stating that an AIS will not be written for this proposed project.

This Project does not have, and will not be exercising, powers of eminent domain. Thus, pursuant to Wis. Stat. § 32.035(4)(a), an AIS is not required.

7.4.7 Neutral-to-Earth Voltage (NEV) and Induced Voltage

7.4.7.1 The number of confined animal dairy operations within one-half mile of the proposed centerline.

There is one confined animal dairy operation with one-half mile of the proposed centerline of the Project Transmission Lines.

7.4.7.2 The number of agricultural buildings located within 300 feet of the proposed centerline.

There are five agricultural buildings located within 300 feet of the proposed centerline of the Project Transmission Lines. This includes two sheds and a barn.

7.4.7.3 Discuss NEV and induced voltage issues as they relate to the project and routes.

Vista Sands Solar will coordinate with Flint Hills Resources regarding Neutral to Earth and induced voltage issues if the Alternative Project 138 kV Transmission Line is ordered for construction by the PSCW. However, Neutral to Earth and included voltage issues are not anticipated to be problematic because this same pipeline shares a corridor with the existing 345kV line at the Vista Sands Solar POI.

7.5 Residential and Urban Areas

***7*.5.1 Discuss anticipated impacts to residential/urban neighborhoods and communities such as ROW clearance and temporary construction impacts, including noise, dust, duration of construction, time-of-day of construction, road congestion, impacts to driveways, etc.**

7.5.2 Discuss how anticipated impacts would be mitigated.

Anticipated impacts to residences and the planned mitigation are described below:

<u>Sound</u>

Overhead transmission line and substation construction will generate noise levels that are periodically audible. Construction of the proposed Project is expected to involve site clearing, excavation, and the use of typical utility construction equipment. The primary sources of construction noise will be associated with equipment operation, use of heavy-duty vehicles, grading and foundation work activities, and equipment use for the transmission lines wire stringing, tower transportation, and structure erection. Overhead line construction is typically completed in four stages, but various construction activities may overlap with multiple

construction crews operating simultaneously: (1) site access and preparation, (2) installation of structure foundations, (3) erecting of support structures, and (4) stringing of conductors. Substation construction activities will be similar in nature to those activities associated with constructing the transmission lines listed above.

Vista Sands Solar will take measures to minimize construction impacts to residences where possible. Work in the proximity of any single general location within the Project Transmission Line ROWs will be short-lived as construction activities move along the Project Transmission Line ROWs. Furthermore, construction noise will attenuate with distance from the construction activities. Therefore, receptors along the ROWs would not be exposed to significant noise levels for extended periods of time. The equipment and construction sound levels will be consistent with local truck traffic and equipment. Sound will be intermittent and not out of the ordinary for general truck traffic. Most truck and equipment sound will be from 7:00am to 6:00pm, Monday – Saturday. When undertaking construction activities near residences, Vista Sands Solar will be cognizant of the residents and will limit work hours in those areas, specifically during the early morning hours.

Fugitive Dust

Vista Sands Solar will take appropriate measures to minimize fugitive dust and airborne debris from construction activity. High-traffic areas with exposed soils will be wetted as needed during extended dry periods to minimize dust generation. Typically, only plain water will be used for dust suppression. Chemical dust suppressants will be used in situations where plain water dust suppression is not effective and where no sensitive areas (e.g., wetland, stream, potable water) are adversely impacted by its use.

Duration of Construction

Construction is anticipated to occur during the period between March 2025 and June 2028.

Time-of-Day Construction

Vista Sands Solar plans to work during daylight hours, typically 7:00am – 6:00pm, Monday – Saturday. The workday will vary slightly depending on time of year, access constraints, and weather conditions. There may be times when contractors are required to perform work on weekends or at night due to electric system or access constraint requirements.

Road Congestion

Construction and construction-related traffic are anticipated to have minimal impact on local traffic. Traffic control plans will be developed and implemented during construction to minimize traffic impacts and comply with permit requirements. Construction vehicles will use public roads in compliance with all applicable laws and requirements.

Impacts to Driveways

Vista Sands Solar does not anticipate requiring the use of driveways for Project ROW access or construction. If a driveway is needed, prior landowner consent will be obtained and the driveway will be protected using composite mats or other low-profile protection systems. In addition, no driveways will be blocked by equipment unless agreed upon with the landowner or resident.

7.6 Aesthetic Impacts

7.6.1 Submit photo simulations of the project for public-valued views based on collaboration with the agencies.

Please refer to Section 4.3 of the Vista Sands Solar CPCN application for a discussion of visual simulations prepared for the Project Transmission Lines. Photos of existing conditions and corresponding visual simulations are provided in Appendix G.

7.6.2 Identify scenic roads within the project area and discuss the potential impact of the project.

No scenic roads are located within the Project area.

7.7 Parks and Recreation Areas

7.7.1 Identify any parks and recreation areas or trails that may be impacted by the proposed project and the owner/manager of each recreation resource

No parks or recreational areas are located within the Project Area.

Two snowmobile trails cross the Project Transmission Lines. The trails are managed by a local snowmobile club.

7.7.2 Provide any communications with these owners/managers.

Vista Sands Solar has not yet consulted with the snowmobile club.

7.7.3 Discuss how short- and long-term impacts to these resources would be avoided and minimized, including access.

Snowmobile users may experience short-term impacts during construction. If construction occurs during the winter, snowmobile trail users may need to be re-routed where the trail intersects or occurs near the routes. No long-term impacts are anticipated.

7.8 Airports

7.8.1 Identify the location of all private and public airports/airstrips in the project area.

A private, unnamed airstrip is located 0.5 mile east of the Project Transmission Lines.

7.8.2 Describe the airports/airstrips, their runways (length, orientation), and type of use.

Runway Leasing Inc Airport Nr 2 is a private airstrip. It has one 2,600-foot asphalt runway and is operated by an aerial spraying service.

7.8.3 Describe any potential for impact to aircraft safety and intrusion into navigable airspace (runway approaches).

Vista Sands Solar utilized the Federal Aviation Administration (FAA) obstruction evaluation tool. The Project Transmission Lines do not meet any obstruction criteria. Results of the obstruction evaluation tool analysis are in Appendix Y.

7.8.4 Identify potential construction limitations and permit issues.

No construction limitations or permit issues have been identified.

7.8.5 Provide documentation of consultation with the WisDOT Bureau of Aeronautics and the Federal Aviation Administration.

Documentation of coordination with the FAA are found in Appendix Y – FAA Determination of No Hazard.

7.9 Communication Towers

7.9.1 Discuss any potential interference to the function of communication towers within the project area by the proposed project.

There are no communication towers within 300 feet of the proposed Project Transmission Lines.

7.9.2 Provide GIS location information for communications facilities evaluated in Section 7.9.1. Include in the GIS information the communications technologies used for each facility.

Please find GIS location information for communications facilities in Appendix F – GIS Data.

7.10 Community Income from High-Voltage Transmission Impact Fees

7.10.1 Provide an estimate of all fee payments that must be made to the Department of Administration as required under Wis. Stat. §196.491(3g).

7.10.2 Identify which components of the total project cost were used as the base cost and how the fees were calculated.

7.10.3 Provide estimates of one-time and annual payments that would be made to each affected city, village, town, or county.

An annual impact fee of 0.3 percent of the total cost of the Project 345 kV 2-1 Transmission Line and a one-time environmental impact fee in an amount equal to 5 percent of the Project 345 kV 2-1 Transmission Line's cost will be paid to the Department of Administration pursuant to Wis. Stat. § 196.491(3g) and Wis. Admin. Code Ch. Adm 46. The annual impact fee shall be distributed to the municipalities in which the Project 345 kV 2-1 Transmission Line is located, in proportion to the amount of investment allocated to each eligible municipality by the PSCW. The one-time environmental fee shall be distributed 50 percent to Portage County, and 50 percent to the same municipalities, also in proportion to the amount of investment allocated to each municipality by the PSCW. The total cost of the Proposed Project 345 kV 2-1 Transmission Line will depend on route, final engineering, and construction timing. Upon receiving a CPCN for the Project, Vista Sands Solar will work with the Commission to determine the total fee to be paid to the Department of Administration.

8. Waterway/Wetland Permitting Activities

8.1. Waterway Activities

8.1.1 Identify the number of waterways present, including DNR-mapped waterways and additional field identified waterways. Also identify the number of times the waterway meanders in and out of the project area and indicate the number of waterway crossings.

A summary of all waterbodies and waterways (hereafter collectively referred to as waterways) intersecting the routes is presented in Appendix V – Wetland and Waterway Permitting: WDNR Table 1 and WDNR Table 2 and shown on Appendix A Figures 3a through 3d. The identification of waterways was based on review of the WDNR 24K Hydrography layer, National Agriculture Imagery Program aerial photographs, and field delineations and observations along accessible routes. Features with distinguishable beds and banks and evidence of scour were considered to be a waterway, regardless of the width or if it was identified in the WDNR 24K Hydrography layer.

Eight waterways were identified within the transmission line corridors and mapped as they may be subject to federal and/or state authority. None meander in and out of the transmission line corridors.

Additional information about each waterway can be found in Appendix V – Wetland and Waterway Permitting.

8.1.2 Identify any waterways in the project route(s) that are classified as Outstanding or Exceptional Resource Waters, Trout Streams, Wild Rice Waters, and/or Wild or Scenic Rivers.

Waterway 1039-S1 (Lateral #3) is a Class II Trout Stream. This waterway is crossed by Segments 1 of the Proposed Project and Alternative Project 138 kV A-1 Transmission Lines and Segment 2 of the Alternative Project 345 kV 2-1 Transmission Line.

Waterway 1017-S1 (Buena Vista Creek is a Class I Trout Stream. This waterway is crossed by Segments 2 of the Proposed and Alternative Project 138 kV B-2 Transmission Lines.

8.1.3 State if you are requesting DNR staff perform a navigability determination on any of the DNR mapped waterways and/or field identified waterways that will be impacted and/or crossed by project activities. If a navigability determination is requested, provide the following information in a separate appendix with the application filing:

- **A table with columns for:**
  - **The crossing unique ID,**
  - **Waterbody Identification Code (WBIC) for each waterway (found in the Surface Water Data Viewer or in the GIS data for the DNR mapped waterways),**
  - **Latitude and longitude for each crossing,**
  - **Waterway name,**
  - **Waterway characteristics from field investigation, and;**

- **Any other pertinent information or comments.**

- **Site photographs, clearly labeled with the photo number, direction, date photo taken, and crossing unique ID. A short description of what the photo is showing, and any field observation must also be included in the caption.**
- **Aerial photograph review of multiple years, including historical photos.**
- **Project map showing the following:**
  - **Aerial imagery (leaf-off, color imagery is preferred),**
  - **DNR mapped waterways (labeled with their unique ID),**
  - **Field identified waterways (labeled with their unique ID),**
  - **The location of each site photograph taken (labeled with the photo number),**
  - **The project area , and;**
  - **Call out box/symbol for each DNR mapped waterway crossing where the navigability determination is requested (labeled with their unique ID).**

No navigability determinations are being requested in relation to waterways crossed by the Project Transmission Lines.

8.1.4 Provide the following information

8.1.4.1. How many waterway crossings are proposed to be traversed with equipment and how that crossing will be accomplished (i.e. placement of temporary clear span bridges (TCSB), use of existing bridge or culvert, driving on the bed, etc.).

Five waterway crossings are proposed to be traversed with equipment and all crossings will be accomplished with TCSBs.

8.1.4.2. How many structures are proposed to be placed below the ordinary high water mark (OHWM) of a waterway. Indicate if structures are temporary or permanent.

No transmission line structures are proposed to be placed below the OHWM of waterways along the Proposed and Alternative Project Transmission Lines. It is not expected that any temporary structures below the OHWM of waterways will be required for construction access.

8.1.4.3. Indicate if any other waterways would be impacted and/or crossed by other construction activities regulated under Chapter 30 Wis. Stats. (i.e. placement of a new storm water pond within 500 feet of a waterway, stream relocation, staging areas, placement of riprap, etc.).

No other waterways will be impacted and/or crossed by other construction activities regulated under Chapter 30 Wis. Stat.

8.1.4.4. For underground installation only: Indicate the amount of waterway crossings via underground installation and specify the installation method (i.e. X waterways will be bored, Y waterways will be trenched, etc.)

No underground installation is being proposed for the Project Transmission Lines.

8.1.5. Provide the methods to be used for avoiding, minimizing, and mitigating construction impacts in and near waterways. This discussion should include, but not be limited to, avoiding waterways, installation methods (i.e. directional bore versus open-cut trenching or plowing), equipment crossing methods (i.e. for temporary access, the use of TCSB versus temporary culvert; for permanent access, the use of permanent bridge versus permanent culvert), sediment and erosion controls, invasive species protocols for equipment, etc.

The number of potential temporary waterway crossings has been minimized in areas where construction can be completed by accessing the ROW on either side of the waterway or from adjacent roads. Vista Sands Solar will work with private landowners to identify alternative access routes to further reduce the use of waterway crossings, if practicable. A summary of waterway crossings and TCSB locations is provided in WDNR Table 1 in Appendix V – Wetland and Waterway Permitting.

The amount of disturbance associated with deployment of the TCSBs will be minimized to reduce potential impact to the waterways. Other mitigation methods will be employed during construction to further reduce impacts. In addition, an Erosion Control Plan will be prepared and BMPs will be employed near waterways to minimize the potential for erosion.

Please see Section 6.3.2 for a discussion regarding invasive species protocols for equipment, etc.

8.1.6. For waterways that will be open-cut trenched, provide the following:

8.1.6.1. State if any waterways are wider than 35 feet (measured from OHWM to OHWM).

8.1.6.2. The machinery to be used, and where it will operate from (i.e. from the banks, in the waterway channel) and if a TCSB is needed to access both banks.

8.1.6.3. The size of the trench (length, width, and depth) for each waterway crossing.

8.1.6.4. Details on the proposed in-water work zone isolation/stream flow bypass system (i.e. dam and pump, dam and flume, etc.).

8.1.6.5. Duration and timing of the in-stream work, including the installation and removal of the isolation/bypass system and the trenching activity.

8.1.6.6. How impacts to the waterway will be minimized during in-water work (i.e. energy dissipation, sediment controls, gradually releasing dams, screened and floating pumps, etc.).

8.1.6.7. How the waterway bed and banks will be restored to pre-existing conditions.

Open-cut trenching is not proposed at any of the waterways crossed by the Project Transmission Lines.

8.1.7. For waterways that will be directionally bored, provide the following:

8.1.7.1. The location and size of any temporary staging and equipment storage.

8.1.7.2. The location and size of bore pits and their distance from waterways.

8.1.7.3. Provide a contingency plan for bore refusal and a plan for the containment and clean-up of any inadvertent releases of drilling fluid (e.g. a frac-out).

Directional boring is not proposed at any of the waterways crossed by the Project Transmission Lines.

8.1.8. For waterways that will have a TCSB installed across them, provide the following:

8.1.8.1. Description of the TCSB proposed, including dimensions, materials, and approaches. Verify the TCSB will completely span the waterway.

TCSBs will be made from supported construction matting and will be 12-15 feet wide by 35 feet long. Header matting will be incorporated so the TCSBs do not sit directly on the ground. TCSBs are anticipated to completely span each waterway.

8.1.8.2. State if any waterways are wider than 35 feet (measured from OHWM to OHWM), and/or if any in-stream supports will be used.

TCSBs are anticipated to completely span each waterway.

8.1.8.3. State how the TCSB placement and removal will occur (i.e. carried in and placed with equipment, assembled on site, etc.) and if any disturbance would occur to the bed or banks for the installation and removal, including bank grading or cutting.

TCSBs will be delivered via the Project Transmission Line ROWs by pulp trucks with attached cranes. The attached cranes will be used to put TCSBs and header mats in place. Header mats will minimize disturbance to bed and banks during installation and removal. No bank grading or cutting is anticipated.

8.1.8.4. Duration of the placement of the TCSB.

TCSB's will remain in place for the duration of construction which is anticipated to be less than six months.

8.1.8.5. Sediment controls that will be installed during the installation, use, and removal of the TCSB's.

Temporary sediment controls such as silt fence and straw wattles will be installed during the installation, use and removal of the TCSB's.

8.1.8.6. How the TCSB's will be inspected during use and how they will be anchored to prevent them from being transported downstream.

TCSB's will be inspected for debris, snow and ice. During winter months, TCSB's will be shoveled of snow daily and the TCSB's will be sanded, not salted, for equipment traction. During spring, summer and fall months, TCSB's will have mud removed daily.

Screw anchors will be installed in the header mats and TCSB's to prevent them from being transported downstream.

8.1.8.7. State if the required 5-foot clearance will be maintained, or if the standards in NR 320.04(3), Wis. Adm. Code will be complied with.

TCSB's are anticipated to maintain the required 5-foot clearance above the waterways. If it is determined that the required 5-foot clearance will not be maintained, "Waterway Ahead" signs will be installed on the bank 50-feet upstream and downstream from the TCSB's and "Warning" signs will be installed on the sides of the TCSB's.

8.1.8.8. How the waterway bed and banks will be restored when the TCSB is removed.

The use of anchored headers will minimize damage to waterway bed and banks. However, if damage has occurred, banks will be graded, seeded and stabilized with either straw matting or coconut matting.

8.1.9. Describe the proposed area of land disturbance and vegetation removal at waterway crossings. Include a description of the type of vegetation to be removed (e.g. shrub, forest), and if this vegetation removal will be temporary (allowed to regrow) or permanent (maintained as cleared).

All TCSB's will occur within the Project Transmission Line ROWs so woody vegetation will be cleared aboveground but not grubbed. Woody vegetation will be allowed to re-grow but will ultimately be maintained as transmission line ROW per NERC guidelines.

8.1.10. If any of the following activities are proposed, provide the information as detailed on the applicable permit checklist:

- **New culvert placement: https://dnr.wi.gov/topic/waterways/documents/PermitDocs/GPs/GP-CulvertWPEDesign.pdf https://dnr.wi.gov/topic/Waterways/documents/PermitDocs/IPs/IP-culvert.pdf (General Permit) or (Individual Permit).**
- **New permanent bridge placement: https://dnr.wi.gov/topic/waterways/documents/PermitDocs/GPs/GP-ClearSpanBridge.pdf https://dnr.wi.gov/topic/Waterways/documents/PermitDocs/IPs/IP-bridgeTempCross.pdf (General Permit, no in-stream supports) or (Individual Permit, in-stream supports).**
- **New storm water pond placed within 500 feet of a waterway: https://dnr.wi.gov/topic/waterways/documents/PermitDocs/GPs/GP-StormwaterPond.pdf.**

None of the above activities are proposed for the Project Transmission Lines.

8.2 Wetland Activities

This section should be consistent with the waterways included in DNR Tables 1 and 2 and associated maps. This section should apply to the proposed and alternative sites/routes (if applicable) and their associated facilities (for example, off-ROW access roads, staging areas, permanent structures, new substations and/or expansion of existing substations (including associated driveways and permanent storm water management features to be constructed).

8.2.1. Describe the method(s) used to identify wetland presence and boundaries within the project area (i.e. wetland field delineation, wetland field determination, conservative desktop review, etc.). If conservative desktop review was the only method used to identify the presence of wetlands, state if any areas will be field-verified (and when). If a combination of methods were used, describe which project areas utilized which method. The associated delineation report and/or desktop review documentation should be uploaded to the PSC's website as part of the application filing.

Wetland determinations were based on the criteria and methods outlined in the *Corps of Engineers Wetlands Delineation Manual,* Technical Report Y-87-1 (1987) and subsequent guidance documents, and Northcentral/Northeast Regional Supplement to the *Corps of Engineers Wetland Delineation Manual*.

The wetland determination involved the use of available resources to assist in the assessment such as U.S. Geological Survey (USGS) topographic maps, U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey, WDNR Wisconsin Wetland Inventory (WWI) mapping, WDNR Digital Elevation Model (DEM) and aerial photography.

Field-Delineation

Access was permitted across most of the Project, and on-site wetland delineations were completed using the three criteria (vegetation, soil, and hydrology) and technical approach defined in the USACE 1987 Manual and applicable Regional Supplement. According to procedures described in the 1987 Manual and applicable Regional Supplement, areas that under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands.

Wetland boundaries and sampling points were identified and surveyed with a Global Positioning System (GPS) capable of sub-meter accuracy and mapped using Geographical Information System (GIS) software.

Desktop Review/ Field-Determined Methods

While the majority of the Project Area was field delineated, access was limited in some portions of the Project (Appendix B, Figure 1). A few areas were observable from legally accessible public roadways, and wetland boundaries were determined in the field by direct observation and sketched on aerial imagery. A desktop review was completed for other portions of the Project Area that were added after the field investigations, and wetland boundaries were conservatively estimated using aerial photograph interpretation, soil survey mapping, DEMs and WWI maps.

Figures 6a through 6d in Appendix A – Figures, depicts which wetland identification methodology

was within the Project Transmission Line ROWs. Additional field investigations will be performed during the 2024 or 2025 growing season in areas where desktop methodology was used to determine wetland locations.

A combined Wetland Delineation Report for the Vista Sands Solar Farm and all associated Project Transmission Lines is found in Appendix H – Wetland Delineation Report.

8.2.2. Identify the number of wetlands present and by wetland type, using the Eggers and Reed classification. Provide as an overall project total, as well as broken down by the proposed site and the alternative site(s) (if applicable) and their associated facilities.

Twenty wetlands exist with the Proposed and Alternative Project Transmission Line ROWs. Additional details are provided in DNR Table 1 Transmission Line in Appendix V – Wetland and Waterway Permitting.

8.2.3. Wetland functional values:

8.2.3.1. Discuss the existing functional values of the wetland present. Functional values include but are not limited to floristic diversity, fish and wildlife habitat, flood storage, water quality, groundwater discharge and recharge, public use, etc.

Most of the wetlands crossed by the Project Transmission Line routes are degraded wet meadows or farmed wetlands characterized by low floristic diversity that provide little significant fish and wildlife habitat or flood storage. Nor do they provide significant water quality, groundwater discharge and recharge, or public use benefits.

Three hardwood swamp and shrub-carr wetlands associated with Buena Vista Creek (1018-W2, 1017-W4 and 1018-W3) are crossed by the Proposed and Alternative Project 138 kV B-2 Transmission Line routes. These wetlands maintain higher floristic diversity and provide greater fish and wildlife habitat than the degraded wet meadows and farmed wetlands crossed by the Project Transmission Lines.

8.2.3.2. Discuss how the project may impact existing functional values of wetlands.

Functional values of the farmed wetlands crossed by the Project Transmission Lines will typically be enhanced as they will be re-vegetated with the wet-mesic Graminoid Plus seed mix found in Appendix I Vegetation Management Plan. Functional values of the degraded meadows crossed by the Project Transmission Line ROWs are anticipated to remain unchanged. Adverse effects to functional values of the hardwood swamp and shrub-carr conversion will be minimized because only a small percentage of the overall wetlands will be cleared and maintained as transmission line corridor.

8.2.3.3. Provide Wisconsin Rapid Assessment Methodology (WRAM) forms, or other assessment methodology documentation, if completed.

WRAM forms were not completed during the wetland delineation.

8.2.4. Identify any wetlands in the project area that are considered sensitive and/or high-quality wetlands, including, but not limited to:

8.2.4.1. Any wetlands in or adjacent to an area of special natural resource interest (ASNRI) (NR 103.04, Wis. Adm. Code).

Three hardwood swamp and shrub-carr wetlands associated with Buena Vista Creek (1018-W2, 1017-W4 and 1018-W3) are crossed by the Proposed and Alternative Project 138 kV B-2 Transmission Line routes. These wetlands are adjacent to Buena Vista Creek, which is a Class II Trout Stream.

8.2.4.2. Any of the following types: deep marsh, northern or southern sedge meadow not dominated by reed canary grass, wet or wet-mesic prairie not dominated by reed canary grass, fresh wet meadows not dominated by reed canary grass, coastal marsh, interdunal or ridge and swale complex, wild rice-dominated emergent aquatic, open bog, bog relict, muskeg, floodplain forest, and ephemeral ponds in wooded settings.

None of these types of wetlands are located within the Project Transmission Line ROWs.

8.2.4.3. Any wetlands with high functional values based on factors such as abundance of native species and/or rare species, wildlife habitat, hydrology functions, etc.

Wetland 1017-W4 has a high proportion of native plant vegetation.

8.2.5. Provide the following:

8.2.5.1. The number of wetlands that would have construction matting placed within them to facilitate vehicle access and operation and/or material storage. Provide the total amount of wetland matting, in square feet.

Please refer to DNR Table 1 Transmission Line in Appendix V – Wetland and Waterway Permitting.

8.2.5.2. The number of structures that would be constructed within wetlands. Indicate if structures are temporary or permanent. Provide the total square footage of permanent and temporary wetland impact for the placement of structures.

Please refer to DNR Table 1 Transmission Line in Appendix V – Wetland and Waterway Permitting.

8.2.5.3. How many wetlands will have permanent fill placed within them. Provide the total amount of permanent wetland fill, in square feet.

Please refer to DNR Table 1 Transmission Line in Appendix V – Wetland and Waterway Permitting.

8.2.5.4. How many shrub and/or forested wetlands would be cleared for construction. Provide the total amount of shrub and/or forested wetland conversion, in square feet.

Please refer to DNR Table 1 Transmission Line in Appendix V – Wetland and Waterway Permitting.

8.2.5.5. How many wetlands will be impacted and/or crossed by other construction activities regulated under 281.36 Wis. Stats. (i.e. road building activities such as grading and cutting, substation upgrades, new tie-ins, vehicle/equipment access across wetland resulting in soil mixing or soil rutting, etc.).

No wetlands will be impacted by these activities.

8.2.5.6. For underground installation only: how many wetlands will be crossed by collection lines and specify the installation method (i.e. X wetlands will be bored, Y wetlands will be trenched, etc.).

No underground installation will occur for the Project Transmission Lines.

8.2.6. Describe the sequencing of matting placement in wetlands and the anticipated duration of matting placement in wetlands. For matting placed in any wetland for longer than 60 consecutive days during the growing season, prepare and submit a wetland matting restoration plan with the application filing.

Construction matting will be delivered via the Project Transmission Line ROWs by pulp trucks with attached cranes. The attached cranes will be used to put construction matting in place and then remove the construction matting. Construction matting in wetlands are not anticipated to remain in any wetland for longer than 60 consecutive days during the growing season.

8.2.7. For wetlands that will be open-cut trenched, provide the following:

No wetlands will be open-cut trenched for the Project Transmission Lines.

8.2.7.1. Provide details on the total disturbance area in wetland, including how total wetland disturbance was calculated. Include the size of the trench (length, width, and depth), where stockpiled soils will be placed (i.e. in upland, in wetlands on construction mats, etc.), and where equipment will operate.

8.2.7.2. Provide details on the proposed trench dewatering, including the method(s) that may be used (pumps, high capacity wells, etc.), how discharge will be treated, and where the dewatering structure will be located.

8.2.7.3. Duration and timing of the work in wetlands.

8.2.7.4. How the wetlands will be restored to pre-existing conditions.

8.2.8. For wetlands that will be directionally bored, provide the following:

No wetlands will be directionally bored for the Project Transmission Lines.

8.2.8.1. How bored wetlands and associated bore pits will be accessed.

8.2.8.2. The location and size of any temporary staging and equipment storage.

8.2.8.3. The location and size of bore pits and the distance from wetlands.

8.2.8.4. Provide a contingency plan for bore refusal and a plan for the containment and clean-up of any inadvertent releases of drilling fluid (e.g. a frac-out).

8.2.9. For wetlands that will be plowed, resulting in a discharge of fill (soil mixing and/or soil rutting), provide the following:

No wetlands will be plowed for the Project Transmission Lines.

8.2.9.1. Provide details on the total disturbance area in wetland, including how total wetland disturbance was calculated.

8.2.9.2. Duration and timing of the work in wetlands.

8.2.9.3. How the wetlands will be restored to pre-existing conditions.

Note: Plowing through saturated or wet/soggy wetlands would likely result in soil mixing and rutting, and thus the plowing would then be 281.36 Wis. Stats. regulated activity.

8.2.10. For wetlands that will be crossed/accessed by vehicle/equipment resulting in a discharge of fill (soil mixing and/or soil rutting), provide the following:

No wetlands will be crossed/accessed by vehicle without use of construction matting for the Project Transmission Lines.

8.2.10.1. Details on the total disturbance area in wetland, including how total wetland disturbance was calculated.

No wetlands will be crossed/accessed by vehicle without use of construction matting for the Project Transmission Lines.

8.2.10.2. Duration and timing of the work in wetlands.

No wetlands will be crossed/accessed by vehicle without use of construction matting for the Project Transmission Lines.

8.2.10.3. How the wetlands will be restored to pre-existing conditions.

Note: Vehicle/equipment access through saturated or wet/soggy wetlands would likely result in soil mixing and rutting, and thus the plowing would then be 281.36 Wis. Stats. regulated activity.

No wetlands will be crossed/accessed by vehicle without use of construction matting for the Project Transmission Lines.

8.2.11. For wetland vegetation that will be cleared or cut for construction, provide the following:

8.2.11.1. Justification for why wetland trees and shrubs are proposed to be cleared, and what construction activity the clearing is associated with (e.g. transmission line installation, off-ROW access road, staging area, etc.).

Wetland trees and shrubs are proposed to be cleared along the Proposed and Alternative 138 kV B-2 Project Transmission Line routes, the Proposed and Alternative 138 kV C-2 Project Transmission Line routes and the Alternative 345 kV 2-1 Project Transmission Line route for Project Transmission Line installation and operation.

8.2.11.2. The timing and duration of vegetation removal

Vegetation removal will preferably occur during frozen ground conditions and is anticipated to last less than one month.

8.2.11.3. Describe the type of equipment that will be used, and if the vegetation removal will result in soil disturbance, including rutting and soil mixing.

Standard forestry equipment such as chainsaws and feller-bunchers will be used to remove larger diameter woody vegetation. Forestry mowers may be used for smaller diameter vegetation. Vegetation removal will preferably occur during frozen ground conditions to minimize soil disturbance such as rutting and soil mixing.

8.2.11.4. The type of wetland and type of vegetation to be cleared.

Hardwood swamps and shrub-carrs are found along these Project Transmission Line routes. Typical woody species in these wetlands include American elm (*Ulmus americana*), black ash (*Fraxinus nigra*), northern pin oak (*Quercus ellipsoidalis*), white oak (*Quercus alba*), quaking aspen (*Populis tremuloides*), black cherry (*Prunus serotina*) and various willow (*Salix*) species.

8.2.11.5. State if tree and shrubs that are removed will be allowed to regrow or be replanted, or if cleared areas will be kept free of trees and shrubs long-term.

Cleared areas will be managed as utility ROWS and kept free of trees and shrubs long-term to maintain compliance with NERC standards.

8.2.11.6. Indicate the plan for handling and disposing of the debris (brush piles, tree trunks, wood chips, etc.) resulting from vegetation clearing in wetlands. State if debris would be removed from all wetlands to be cleared and disposed of in upland or other non-wetland locations.

Large diameter trees will be removed from the wetlands and either disposed of in non-wetland locations or sold for timber or firewood if commercially viable. Shrubby debris from forestry mowing of small diameter shrubs may remain in wetlands.

8.2.11.6.1. If debris is not proposed to be removed from all wetlands during clearing, explain why disposal in non-wetland areas is not feasible.

Shrubby debris from forestry mowing of small diameter shrubs may remain in wetlands because

forestry mowers do not have built-in receptacles to receive debris.

8.2.11.6.2. If debris is not proposed to be removed from all wetlands during clearing, state how debris left in wetland will not restrict re-vegetation growth, will not alter surface elevations, and will not obstruct water flow. If wood chips will be placed in wetlands, state the depth (in inches) proposed.

Shrubby debris from forestry mowing of small diameter shrubs will result only in minimal amounts of debris that will not restrict re-vegetation, alter surface elevations or obstruct water flow. This debris will not create a uniform layer.

8.2.11.6.3. If debris is not proposed to be removed from all wetlands during clearing, state how these wetlands will be monitored to ensure re-vegetation growth, surface elevations, and water flow are not impacted, and that the proposed depth of chip cover is adhered to. If re-vegetation growth becomes impeded, surface elevations become altered, and/or water flow becomes obstructed from wood chip placement, state how these impacts will be addressed and corrected, if they should occur.

Shrubby debris from forestry mowing of small diameter shrubs will result only in minimal amounts of debris that will not restrict re-vegetation, alter surface elevations or obstruct water flow. This debris will not exceed two inches and will be evenly spread. Woody debris will be re-positioned or removed if it is determined to impede revegetation, alter surface elevations, or obstruct water flow.

8.2.12. Provide the methods to be used for avoiding, minimizing, and mitigating construction impacts in and near wetlands. This discussion should include, but is not limited to, how wetland impact was first avoided then minimized by shifting the project boundary, relocating structures and/or fill outside of wetland, minimizing construction ROW through wetland, by installation methods (i.e. directional bore versus open-cut trenching, soil segregation during trenching, etc.), equipment crossing methods (i.e. use of construction matting, frozen ground conditions, etc.), sediment and erosion controls, invasive species protocols for equipment, etc. Additional guidance to prepare this discussion can be found here: https://widnr.widen.net/s/fxdd8pmqgg/paasupp3utility.

All Project Transmission Line routes were designed to avoid and minimize impacts to wetlands. The first step was to attempt to design routes completely around wetlands. Where this was not feasible, span length was modified to minimize placement of poles in wetlands. Access paths were designed to go around wetlands where possible. Silt fences will be placed around wetlands where necessary to reduce impacts from erosion.

During construction, wetlands will be marked with signs to prevent construction equipment from driving through the wetlands. Frozen ground conditions and construction matting will be used to minimize impacts from construction access.

8.2.13. Indicate if an environmental monitor will be employed during project construction and restoration activities. If so, describe the monitors roles and responsibilities, frequency of visits, etc.

The impacted wetlands will be inspected after mat removal to document site conditions and then regularly, as necessary. Proposed restoration objectives, along with remedial restoration options, are outlined below.

8.2.14. Describe how all wetlands within the project area will be restored. This discussion should include details on the seeding plan, maintenance and monitoring, restoring elevations and soil profiles, restoring wetland hydrology, etc.

The impacted wetlands will be inspected after mat removal to document site conditions and then regularly, as necessary. Proposed restoration objectives, along with remedial restoration options, are outlined below. If other restoration techniques are proposed, their reasoning and implementation will be documented by monitoring personnel.

- Restoration within wetland areas will include removal of all construction-related materials (e.g. timber matting) and the restoration of significant ruts and depressions.
- The ROWs will be restored to pre-existing topography as much as practicable. Areas with significant rutting in wetlands will be repaired using hand tools, back dragging, or other appropriate means to restore topography while reducing additional disturbance.
- Erosion controls will be maintained, and bare soils stabilized (if present), to be compliant with Wis. Admin. Code Ch. NR 216 and 151 technical standards. A temporary cover crop may be installed over disturbed soils following ground disturbance.
- If conditions are adequate, this wetland will be allowed to revegetate with existing seed bank before alternative seeding is used. Under certain circumstances, a cover crop or a native wetland seed mix may be necessary.
- Where woody vegetation will need to be cleared, brush/smaller branches will be placed in close contact with the ground and scattered evenly (lop and scatter method, not left in large piles). The depth of wood chips left in wetlands will not exceed two inches and wood chips will be evenly spread. The placement of brush/smaller branches and wood chips will not restrict revegetation, alter surface elevations or obstruct water flow.
- The vegetation composition objective is to match pre-existing dominant species with no new invasive species.
- Wetlands will be monitored to document germination success and community composition. Sites will be revisited regularly to note vegetative cover response until objectives are met. Woody debris will be re-positioned or removed if it is determined to impede revegetation, alter surface elevations, or obstruct water flow.
- If adequate, uniform cover is not achieved within a growing season then the site will be reseeded.
- Match pre-existing hydrology or take measures to restore pre-existing hydrology.

Closeout Monitoring reports detailing the inspections of matted wetland areas will be maintained through the life of the Project. Project areas will be considered closed out when all restoration objectives are met. If monitoring personnel determine that the site should be closed out despite the lack of meeting part, or all of the final objectives, reasoning for this decision will be documented and provided to the agencies upon request.

8.3. Mapping Wetland and Waterway Locations, Impacts, and Crossings

Provide the following map sets, as described below, for each proposed and alternative sites/routes (if applicable) and their associated components. Each map set should include an overview or index page that includes page extents for the corresponding smaller-scale map pages within the remainder of the map set. The smaller-scale map pages should show the project and resources in greater detail, include pages numbers to reference to the overview page, and have consistent scales throughout the pages.

8.3.1. Aerial Map Imagery showing the following:

- **Delineated wetlands, labeled with the feature unique ID,**
- **Wisconsin Wetland Inventory ("Mapped Wetlands" SWDV layer) and hydric soils ("Wetland Indicators & Soils" SWDV layer), if a delineation was not conducted,**
- **DNR-mapped waterways, labeled with the feature unique ID,**
- **Field identified waterways, labeled with the feature unique ID,**
- **Vehicle crossing method of waterways for both permanent and temporary access, labeled by the crossing method (i.e. TCSB, installation of culvert, installation of bridge, installation of ford, use of existing culvert, use of existing bridge, use of existing ford, driving on the bed),**
- **ROW,**
- **Locations of temporary and permanent structures,**
- **Transmission line route,**
- **Segment names and nodes,**
- **Access paths (both on and off-ROW). Off-ROW access roads should be labeled with an identifying name or number,**
- **Staging areas, laydowns, and any temporary workspaces, such as crane pads(labeled with identifying name or number),**
- **Footprint of new substations and/or footprint of existing substations to be expanded, and associated driveways and permanent storm water management features to be built (ponds, swales, etc.),**
- **Placement of construction matting in wetlands,**
- **Underground line installation only: symbolize the line route to indicate installation method (directional bore, open-cut trench, plow etc.). This includes the excavation areas in wetlands (i.e. bore pits, open-cut trench, etc.), and;**
- **Locations of any other waterway or wetland impacting activity regulated under Wis. Stats. Chapter 30 and 281.36.**

These features are shown on the Project Transmission Line Environmental Features Maps Figures 3a through 3d in Appendix A – Figures.

8.3.2. A map showing which method(s) were used to identify wetland presence and boundaries within the project area (i.e. wetland field delineation, wetland field determination, conservative desktop review).

Maps showing which methods were used to identify wetland presence and boundaries with the Project Area are found in the Project Transmission Line Delineation Method Maps Figures 6a through 6d in Appendix A Figures.

9 Endangered, Threatened, Special Concern Species, and Natural Communities

Please refer to Section 5.8 of the Vista Sands Solar CPCN application for a discussion of Endangered, Threatened, Special Concern Species and Natural Communities. The Endangered Resource Review, IPaC review, results of field surveys and coordination with WDNR staff are included in Appendix L Endangered Resource Review.