

**Three Corners Solar Project**

MDEP Natural Resources Protection Act Permit

Application **ATTACHMENT 1. PROJECT DESCRIPTION**

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Three Corners Solar, LLC (Applicant), a wholly owned subsidiary of Longroad Energy Holdings, LLC (Longroad), proposes to construct the Three Corners Solar Project (Project), a utility scale solar energy facility in Unity Township (Unity Twp) and the Towns of Clinton and Benton, Maine (Figure 3-1, Attachment 3). The proposed Project solar arrays, consisting of photovoltaic (PV) panels, and supporting infrastructure (i.e., collection substation and operations and maintenance [O&M] building) are located north of Route 139 (Unity Road) between Bessey Lane in Benton and Palmer Road in Unity Twp. The PV panels will have a rated capacity of approximately 110 megawatts alternating current (MWac). Power from the Project will be transmitted to the existing Central Maine Power (CMP) Albion Road substation in Benton, located southwest of the Project, via the construction of an approximately 5.2 mile long 115-kilovolt (kV) generator lead line (Genlead).

The Project area primarily consists of mixed (coniferous and deciduous) forest predominantly managed for commercial timber production. Small portions of the Project area adjacent to Palmer Road in Unity Twp consist of agricultural land. The Project PV arrays will be constructed on unnamed rises north of Unity Road. Topography within the array areas generally consists of elevations between 170 and 275 feet (ft) above sea level. Topography along the proposed Genlead includes gentle to moderate slopes with elevations between 130 and 275 ft above sea level.

The Project is designed to use PV panels mounted on a tracking system to maximize solar energy production throughout the year. Modules will be mounted on steel frames supported by ground screws or pilings. In compliance with applicable codes and standards, the frames will be capable of withstanding wind speeds of up to 100 miles per hour. The panels will stand up to approximately 7 ft from the ground at their highest point. Based on the 110-MWac capacity, the Project is expected to generate enough clean electricity to power the equivalent of approximately 30,000 Maine homes.

As described in greater detail below, other Project infrastructure will include upgraded existing and new access roads, up to 39 paired central inverters/transformers mounted on skids, a series of overhead and underground 34.5-kV electrical collector lines (Collector) connecting to a new collection substation west of Bessey Lane and south of an existing CMP distribution line, and a new O&M building located between the collection substation and Unity Road. A 7-ft-tall perimeter fence will surround the segments of solar arrays, totaling approximately 688-acres. The total disturbed area associated with the arrays is approximately 860 acres, and the total disturbed area for the Genlead right-of-way (ROW) and access roads is approximately 71 acres. Detailed civil site plans for the solar array area, Collector, collection substation, and O&M building are provided in Attachment 5-1. Genlead site plans are provided in Attachment 5-2.

A substantial road network, primarily consisting of gravel logging roads, currently exists within the Project area and will be utilized to the extent practicable to minimize Project impacts. Approximately 6.7 miles of new or upgraded Project access roads are proposed to provide construction and maintenance access to the Project arrays. Access roads will range between 24-ft-wide primary and 16-ft-wide as roads reach the periphery of the network and anticipated vehicle use decreases. To allow access to several outparcels located interior to the Project, the Applicant is constructing 1.7 miles of 12-ft-wide access roads.

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The solar power generated from the Project will be transmitted through a series of Collector lines, the majority of which will run underground in trenches adjacent to the Project access roads or interior to proposed solar arrays, with approximately 1.3 miles of above-ground Collector proposed between the eastern and central array areas. Power from the Collector lines will be transmitted to the proposed collection substation to "step up" the voltage from 34.5-kV to 115-kV and transmit it to the CMP Albion Road substation via an approximately 5.2-mile-long 115-kV Genlead. The approximate cleared ROW width for the overhead Collector and Genlead is 100 ft. The Albion substation has sufficient capacity to accept power from the Project without substantial upgrades.

As part of the site layout and permitting process, the Applicant has completed studies of the natural resources and wildlife in the Project area. As currently designed, the Project will result in approximately 19.16 acres of wetland impacts, of which approximately 18.63 acres will be indirect impacts associated with vegetation clearing and approximately 0.53 acres will be direct impacts associated with access road crossings, grading within the arrays, and overhead Collector/Genlead poles. No temporary or permanent in-stream impacts are associated with the Project. Project-associated wetland impacts are summarized in Table 1-1 below and impacts to natural resources are further discussed in Attachment 2, Section 2.5.

**Table 1-1. Summary of Wetland Impacts**

Project Area	Component	Wetland Impacts		
		Permanent Fill/Grading (acres)	Temporary Fill (mats, acres)	Vegetation Clearing (acres)
Solar Arrays	PV Panels	0.14	0	2.89
	Access Roads	0.39	0	0.19
	Collector	<0.01	0.07	1.31
Genlead	Right-of-Way Access, Poles, Clearing	<0.01	1.32	14.24
<b>TOTAL</b>		<b>0.53</b>	<b>1.39</b>	<b>18.63</b>

Natural resource impacts proposed require approval from the Maine Department of Environmental Protection (MDEP) pursuant to the Natural Resources Protection Act (NRPA) and a 401 Water Quality Certification. This Individual NRPA permit application has been filed to address the proposed wetland, stream, and Significant Wildlife Habitat (SWH) impacts. The Project occurs within SWH including mapped Inland Waterfowl and Wading Bird Habitat (IWWH) and significant vernal pool (SVP) habitat. A separate permit application is being submitted to satisfy the Site Location of Development Act (Site Law) and the Maine Construction General Permit.