SECTION 1 DEVELOPMENT DESCRIPTION

A. Introduction

Western Maine Renewables, LLC (Applicant), a joint venture between Patriot Renewables, LLC (Patriot) and Cianbro Development Corporation (Cianbro), proposes to construct the Western Maine Renewable Energy Project (Project), a 14 turbine utility-scale wind energy facility located in the Town of Moscow, Somerset County, Maine (Figure 1-1). The proposed Project is located approximately 5 miles (mi) northeast of the center of the village of Moscow on land currently comprised of forested timberland and the remnants of a former United States Air Force (USAF) long-range, over-the-horizon backscatter radar transmitter station (USAF Radar Station). The wind facility will have an installed capacity of 58.8 megawatts (MWs) of electricity.

The Project is designed to use Vestas V150-4.2 MW turbines on a 344-foot hub and a maximum turbine blade tip height of 591 feet. As described in greater detail below, other Project features will include: upgrades to existing roads and construction of new roads; an aircraft detection lighting system (ADLS); a series of 34.5 kilovolt (kV) electrical collector lines among the turbines; a 34.5/115 kV Project substation and a 115 kV interconnection substation (collectively the Substation); an operations and maintenance (O&M) building; and a 12.7 kV overhead electrical distribution line to provide power to the O&M building.

A substantial road network, primarily consisting of gravel logging roads and access roads associated within the former USAF Radar Station, currently exists within the Project area. The Applicant will use existing roads to the extent practicable to minimize Project impacts. Approximately 6.4 mi of existing access roads will be upgraded to provide construction and maintenance access to the Project areas and to connect turbine locations. Additionally, approximately 3.7 mi of new roads will be constructed to further connect turbine locations and access the ADLS towers, to be maintained by the Applicant.

The Project's ADLS is designed to minimize the effects of the nighttime safety lighting of the turbines. Such systems are approved by the Federal Aviation Administration (FAA) on a project-by-project basis and allow turbine obstruction lights to remain off unless an aircraft is operating in the vicinity of the Project, thus greatly reducing the time that nighttime lighting is visible. Standard turbine lighting will be installed and tied into the ADLS upon approval of the system by the FAA. Further detail on lighting is provided in Section 27 (Public Safety). The Project is designed so that one of two ADLS's can be constructed. The specific ADLS are:

- A two-radar transmitter system that will include the construction of two 100-foot permanent lattice towers containing radar transmitters, and approximately 4.85 mi of underground power and fiber optic cable; or
- A one-radar transmitter system that will include the construction of one 150-foot permanent lattice tower containing a single radar transmitter, and approximately 0.86 mi of underground power and fiber optic cable.

The underground electrical and fiber optic lines to service the ADLS will be installed in 2-inch conduits routed within existing roadways. Below grade boxes will be installed as needed (typically every 1,500 feet) to splice cables and will be installed immediately adjacent to roadways. Boxes will be sited to avoid natural resource locations.

The power from each turbine will be collected in approximately 5.45 mi of 34.5-kV electrical collector lines. The collector lines will primarily be underground, though aboveground lines will be installed in some areas. The underground electrical collector lines will be buried in trenches generally located within roadways. Below grade boxes will be installed as needed (typically every 1,500 feet) to splice collector cables and will be installed immediately adjacent to roadways. Boxes will be sited to avoid natural resource locations. Underground fiber optic communications cables will be installed in typical 2-inch conduits routed adjacent to the electrical collector lines,

and the fiber optic cables will require splice/pull boxes. Overhead collector lines will be installed on wood utility poles in some areas where practicable.

Power from the collector lines will be transmitted to a new Substation facility that includes a fenced 34.5/115 kV Project substation to "step up" the power from 34.5 kV to 115 kV, and an adjacent 115 kV interconnection substation to transmit directly into the Central Maine Power (CMP) Section 222 transmission line. The Section 222 transmission line is an existing 115 kV transmission line that can accept power from the Project.

The Project will renovate one of the existing USAF Radar Station buildings to serve as the Project's O&M building. The renovation will include the construction of new interior walls to create office, meeting and equipment storage spaces; the installation of new overhead doors to access the equipment storage area; and the construction of a new fenced gravel storage and parking area. The renovation will include the construction of a new wastewater disposal system for the building, which is described in more detail in Section 17 (Wastewater Disposal). Power to the O&M building will be provided by re-energizing a 0.46-mi section of the existing 12.7 kV overhead distribution line from the USAF Radar Station.

This application has been completed in accordance with the State of Maine Department of Environmental Protection (MDEP) Site Location of Development Act (Site Law) Permit Application requirements as outlined in Maine Revised Statutes (M.R.S.) Title 38, §§ 481-490,[1] and the Natural Resources Protection Act (NRPA) Title 38 M.R.S. §§ 480-A – 480-BB.[2]

The Applicant is seeking approval under NRPA to permanently fill 72,081 square feet of forested, scrub-shrub and wet meadow freshwater wetlands, permanently convert 18,098 square feet of forested wetlands to scrub-shrub and wet meadow wetlands, and cross three streams. A Permit-by-Rule Notification also will be submitted to cross an additional five streams in compliance with Chapter 305 standards. The results of environmental field surveys conducted on the site have been used to influence and inform the design of the Project to avoid and minimize impacts to wetlands and natural resources. Wetland impacts are further discussed in Section 7 (Wetlands, Watercourses, Wildlife and Fisheries). The Project design and construction plan also minimizes potential impacts to rare, threatened, or endangered (RTE) plants or animals, as they occur sparsely within the site. RTE species are further discussed in Section 9 (Unusual Natural Areas).

The proposed Project can be seen on a set of drawings, the first of which is titled "Project Area Map," prepared by Engineering & Management Services and dated May 25, 2021. (Exhibit 1-1 [Civil Engineering Plan Set])

B. Construction Plan

The Applicant is committed to construction of the Project in a manner that minimizes environmental impacts and in compliance with regulatory requirements and agency recommendations. The Applicant's owners have extensive experience constructing wind energy facilities in Maine.

Prior to the start of construction, an environmental monitor will be employed by the Applicant. The environmental monitor will advise the construction team on avoiding disturbance to water resources and other natural resources within the Project area during construction. The environmental monitor may be a qualified Professional Wetland Scientist, who also is a Certified Professional in Erosion and Sediment Control, or someone with demonstrated experience as an environmental monitor on construction sites.

[1] Maine Department of Environmental Protection (MDEP), Site Location of Development Act, Title 38 M.R.S. §§481-490, Permit Application. Bureau of Land and Water Quality. Revised October 2015.

[2] MDEP. Natural Resources Protection Act (NRPA). Title 38 M.R.S. §§480-A et seq. 2007.

Below is a list of approaches that may be implemented during construction to prevent soil disturbance, limit impacts to wetlands, and provide the construction team with the tools they need to effectively build this Project while staying within the requirements of the permits received:

- Clearing will occur during the winter under frozen conditions to reduce the amount of soil disturbance that could occur from construction equipment;
- Additionally, construction swamp mats will be used as needed to reduce soil disturbance;
- Low ground pressure tracked construction equipment will be used as needed in wetland areas to prevent rutting and minimize soil disturbance; and
- Best management practices (BMPs) for erosion and sediment control will be implemented, including possible stoppage or delay of work for rain events, regularly checks of erosion control barriers, and proactively adjusting erosion and sediment controls throughout construction.

Construction of the Project is expected to begin as early as October 2022, pending the issuance of a Final Permit from MDEP, and is expected to be completed prior to December 2024. The following narrative provides a general overview of the construction sequence; however, adjustments may be implemented, as necessary, to account for weather and environmental conditions.

The Project will be accessed via Stream Road and Chase Pond Road, as well as a network of existing logging roads. Construction will primarily be sequential, with multiple construction-related activities expected to be ongoing concurrently.

Once the site or portions of the site have been cleared, such areas will be grubbed, and earthwork completed to build crane paths and pads. When an area has sufficient roads and pads built to accommodate foundation construction, foundations will be built in place with concrete delivered from a redi-mix concrete plant.

Concurrently to earthwork and foundation installations, the electrical system will be installed. Underground collection systems along turbine strings will be constructed in conjunction with the earthwork activities in those areas. Underground collection lines located along existing access roads, as well as the overhead collection system, will be constructed at a time that accommodates the overall Project schedule.

Turbines will be delivered to the site and may be temporarily staged at a laydown area adjacent to the O&M building or delivered directly to the turbine pads. Whether turbines are staged or delivered directly to turbine pads will depend on the final construction and component delivery schedules. Any laydown area needed for the Project will be in place for less than 12 consecutive months and all disturbed area will be returned to original grade and vegetative cover upon completion of construction. Turbine erection will generally proceed linearly, but this also will be dependent upon the final construction schedule. Components will be erected by several crews, with each crew focusing on certain components (i.e., one crew for lower level components and other crews focusing on mid- and high-level components). As individual turbines are completed, internal electrical work will occur.

Substation construction will occur concurrently with other work on the site. The site will be prepared to provide sub-grade for foundation construction. Foundations will be constructed either as pre-cast foundations delivered to the site or foundations cast on-site with concrete from a redi-mix plant (or combination of both). Once foundations are constructed, structural steel will be installed to support Substation components. Other control buildings in the Substation, as needed, will either be constructed on-site or prefabricated and delivered. If necessary, the Substation will be energized for back feeding the site collection system and the turbines for final testing and commissioning. A perimeter safety fence will be installed prior to energization of the Substation.

O&M building renovation will occur concurrently with other site work. The site will be prepared to provide all necessary gravel parking and storage areas. There will be no physical expansion to the existing building. The construction of a new subsurface wastewater system will occur concurrently with other work on the site.

Construction is anticipated to take approximately 1 year. The proposed construction schedule for the Project is provided below in Table 1-1.

Table 1-1 Proposed Construction Schedule.

Task	Timeframe
Preliminary layout and staking of new road segments, turbine clearings, and laydown areas	Weeks 1–2
Install erosion control measures in areas to be disturbed	Weeks 2–4
Clearing for roads, collection system, turbines, and laydown areas	Weeks 4–8
Grubbing and initial grading for roads, turbines, and laydown areas	Weeks 8–16
Blasting (as needed) and on-site stockpiling of reusable blasted bedrock	Weeks 16–24
Hauling and stockpiling of aggregate from local borrow pits	Weeks 16–24
Construct turbine foundations and Substation transformer pads	Weeks 20–34
Construction of radar-assisted lighting towers	Weeks 20–45
Underground trench/conduit work	Weeks 22–30
Final grading of roads and turbine areas	Weeks 24–32
Turbine delivery, assemble rotors, erect towers, lift nacelles and rotor assemblies, construct aboveground and underground collection systems, permanent met towers	Weeks 26–34
Install transformers and activate turbines	Weeks 28–36
Commission and test wind turbine generators and electrical interconnections	Weeks 36–40
Remove temporary erosion and sedimentation control measures upon final site stabilization and reseeding	Weeks 36–40
Begin commercial operation	Week 40

Figures

- Figure 1-1 Project Layout and Location

Exhibits

- Exhibit 1-1 Civil Engineering Plan Set

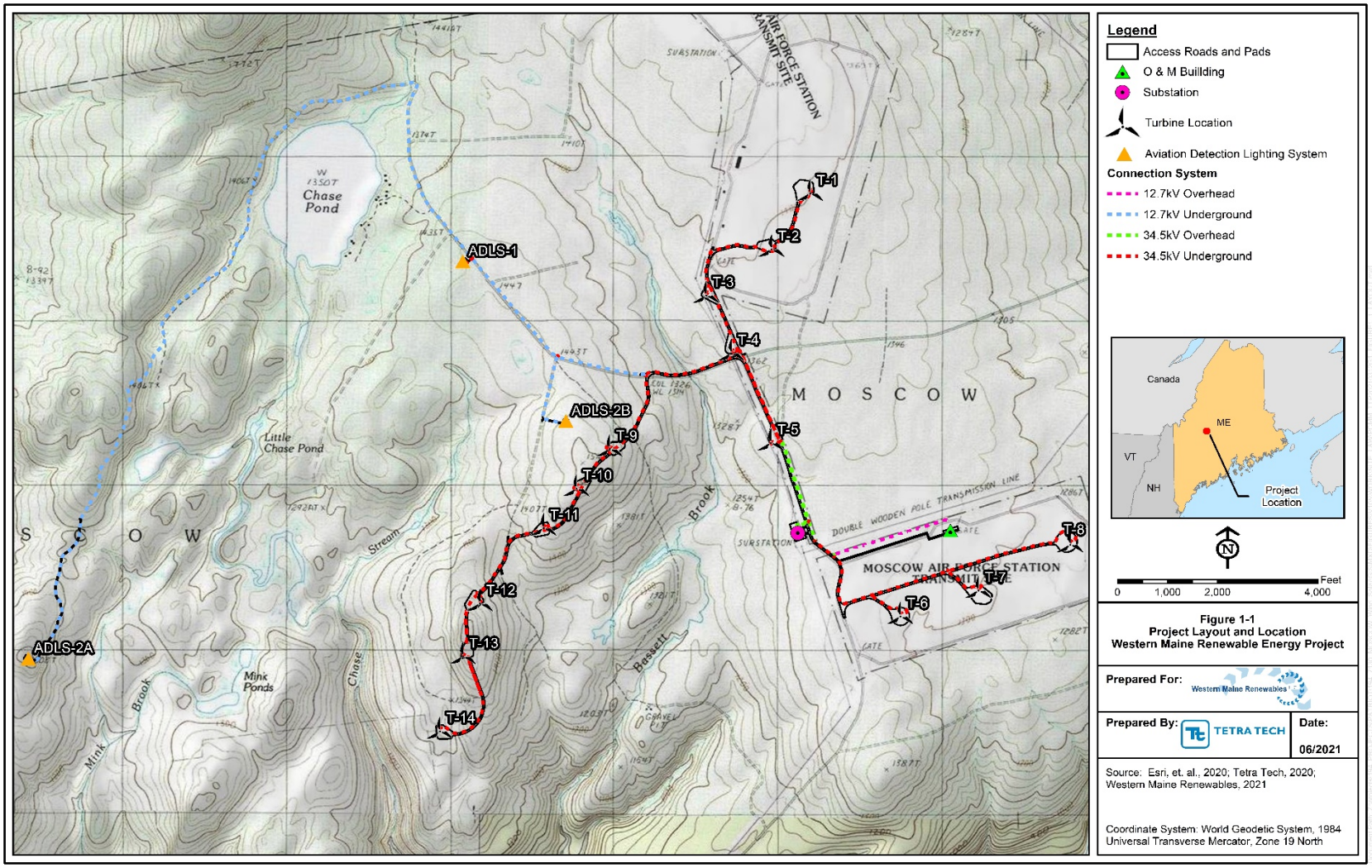

Figure 1-1 Project Layout and Location.

This page intentionally left blank.