Heritage Wind Project Preliminary Operations and Maintenance Plan

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Operational Plan Overview

An Operations and Maintenance Plan is a project-specific plan that is typically created based on the specific turbine selected, the turbine manufacturer, and other project-specific considerations. This Preliminary Operations and Maintenance Plan (O&M Plan) is intended to be the foundation of the Final O&M Plan that will be implemented at the Heritage Wind Project (the "Project" or "Facility") once it becomes operational and reflects typical O&M maintenance requirements based on the experience of Heritage Wind, LLC (Heritage Wind) and its affiliates.

Heritage Wind-affiliated workers at the Project ("Project Operators") will be responsible for the Plan's implementation. The objective of the O&M Plan is to optimize the Project's operational capacity and availability through best in class maintenance guidelines and inspections that are designed to pro-actively detect any significant safety or maintenance issues.

O&M Responsibilities

Wind turbine generators (WTGs) require periodic preventative maintenance as well as corrective maintenance in the event a material deficiency is identified within an individual generator that requires repair. In addition, the electric collection system that ties the generators together as well as the substation that steps up voltage for delivery to the bulk electric system, require periodic maintenance and may require corrective maintenance.

Balance of Plant

For balance of plant operations and maintenance (O&M), Apex will contract with qualified O&M services to operate the Facility in accordance with New York Independent System Operator (NYISO) Protocol Requirements. As a company with great experience bringing utility-scale wind generation to the market, Apex is comfortable with the regulatory hurdles necessary to commission and operate a wind power facility.

Turbines

The Project's turbines will require preventative maintenance at an average interval of twice annually with the exception of the first year, during which some components will require additional maintenance. Because each turbine will be limited to approximately 80 hours of service time per year, the maintenance cycle for a facility of this size may take up to 15 weeks to complete. During this time, one or more WTGs may be taken out of service. The general maintenance requirements and time intervals for wind turbine maintenance are outlined in the table below.

Summary of General Maintenance Requirements and Intervals for Turbines

Item and Interval	**120 Days ***	**6 Months**	**Annually**
Cleaning and General Inspection	X	X	X
Check Oil Levels, Yaw, Gearbox, Pitch Drives	X	X	X
Check Yaw Puck Depth	X	X	X
Check Anemometer and Wind Vane	X	X	X
Check Hub Pitch Battery Voltage	X	X	X
Perform Visual Blade Inspection	X	X	X
Gearbox Oil Filter and Sample	X	X	X
Pitch Control Slip Ring Inspect and Clean	X	X	X
Rotor Brake Inspect and Adjust	X	X	X
Hydraulic Brake Power Unit Filter and Bleed	X	X	X
Inspect or Adjust Generator Coupler and Alignment	X	X	X
Inspect, Clean, or Replace Generator Slip Ring and Brushes	X	X	X
Inspect Controllers, Cabinets, Converters, Connections		X	X
Inspect Blade Bearings		X	X
Inspect and Service Pitch Components		X	

Operations will schedule major maintenance on a 5-year frequency, which will require the Project to stay offline for 5 days. These maintenance periods are typically performed outside of high-wind season and are completed as quickly as possible by using on-site personnel, equipment, and regional resources, if necessary. All turbine vendors under evaluation will be responsible for service and repair under warranty contracts for a minimum of ten years. During this period, the turbine vendor will maintain on-site staff for on-call, emergency, and scheduled work. These personnel will work under the supervision and in addition to the Project's asset management and operations staff. All turbine vendors under consideration have a strong presence and operations capability

in the region and will be capable of augmenting on-site staff with technicians from nearby projects or regional service centers.

Following final design and selection of equipment, the Project will enter into multiple agreements with various support service vendors, including compliance planning, scheduling and settlement services, asset management services, forecasting, and operations and maintenance services. Many of these services will influence final outage scheduling and asset management.

The Project will use industry-standard Supervisory Control and Data Acquisition ("SCADA") system measurement and communications equipment to make information available in real time and enable coordination 24/7 between stakeholders regarding outage scheduling and status through systems integration. This coordination may generally include information as required by pertinent regulatory bodies and customers such as:

• Supplying low-side generator net-MW and MVAR output and other telemetry data

• Supplying meteorological data (wind speed and direction, temperature, pressure, humidity)

• Scheduling the operation and outages of facilities, including providing advanced notification

• Coordinating the synchronization and disconnection of the Project with NYISO, the transmission owner, and others in the power market

• Providing data required to operate the system and conduct system studies

• Providing documented start-up and shutdown procedures, including ramp-up and ramp-down times

Properly scheduled outages for plant maintenance and repairs are essential to overall efficiency and functionality. The Project will enforce standard operating procedures as part of a cross-functional program for outage planning that will coordinate necessary outages across procurement, asset management, operations and customers. Our goal is to maximize plant availability through efficient coordination of both preventive and corrective maintenance.

Electric Transmission, Gathering, and Interconnect Lines

Line inspections will be performed annually throughout the life of the Project to identify any issues and determine whether the vegetation needs to be cleared or trimmed in the right of way to maintain access and operability as needed. Prior to the inspection, Heritage Wind will notify affected property owners advising them that personnel will be on their property for the inspection of the collection line. Additionally, public notice will be posted in the local newspaper, advising the community of the inspection period if work needs to be conducted in the public right of way.

NERC Compliance Plan

A North American Reliability Corporation ("NERC") compliance program is a critical part of the construction, ownership, and operation of a wind farm connected to the bulk electric system. A wind power generating facility that is registered as a generator owner ("GO") and a generator operator ("GOP") is subject to dozens of NERC reliability requirements, with any compliance or documentation failures potentially resulting in monetary penalties against the facility.

As a company with experience bringing utility-scale wind generation to market, Apex is comfortable with the regulatory hurdles necessary to commission and operate a wind power facility.

Apex will select a company to develop NERC procedures for Heritage Wind. After procedures are drafted for the Facility, Apex will select an experienced provider of third-party O&M services for the Project. Apex considers it a priority that the O&M service provider ultimately selected for the Project have a strong track record of experience with NYISO.

Training and Notifications

New Heritage Wind-affiliated workers at the Project with O&M responsibilities will be provided with a copy of the Final O&M Plan and required to review it and comply with it in combination with their review of other Heritage Wind policies and plans such as the Emergency Action Plan and Health and Safety Plan. A copy of the Final O&M Plan and other key plans also will be available at the O&M building.

Beyond new hire orientation, the Project Operator or any Heritage Wind-affiliated worker's direct supervisor will provide training in accordance with the Final O&M Plan as needed to support the worker's specific job functions.

If maintenance activities have the potential to result in temporary impacts that may affect the local community (e.g., temporary transportation impacts), notification of such maintenance activities will be provided in accordance with the construction notification process outlined in the Preliminary Quality Assurance and Quality Control Plan and the Complaint Resolution Plan. If work within a public right-of-way is necessary to conduct maintenance in accordance with the O&M Plan, notification and any necessary work permit(s) will be discussed and obtained from the appropriate agencies prior to starting the work.