

# PIKE SOLAR LLC



Appendix AH- Operations and Maintenance Plan



## Operation and Maintenance Plan

### Pike Solar Project

Pike Solar LLC, in coordination with the Colorado Springs Utility will be responsible for all solar facility + BESS facility operations, managing all operational and reporting requirements, and performing inspections under the interconnection agreement, power purchase agreement, lease agreements, and permits. The unmanned site will utilize 24/7 supervisory control and data acquisition (“SCADA”) and energy storage management system (“ESMS”) on-site and remotely located equipment. Frequent on-site inspections will be carried out as described in this plan. Inspection reports will also be generated. Pike Solar LLC may designate qualified operations and maintenance (O&M) subcontractors to perform certain tasks.

Pike Solar LLC will perform scheduled equipment services and preventative equipment maintenance according to manufacturer’s specifications and warranty obligations. Equipment shall include, but is not limited to: PV modules, battery energy storage systems (“BESS”), tracker system and components, inverters, transformers, controllers, communication equipment, electrical collection and transmission equipment, protection systems, and instruments.

Pike Solar LLC will remotely monitor the solar and BESS facility daily, via data inputs from: (a) meteorological stations; (b) inverters; (c) trackers; (d) power station transformers; (e) direct current (“DC”) sub-system; (f) alternating current (“AC”) systems; (g) interconnection protection and metering; (h) BESS safety monitoring and management systems; and (i) system-wide protection equipment, relays, and breakers. If repair work is necessary and cannot be performed remotely, qualified and trained personnel will be dispatched to site to perform the repairs. If solar PV modules are damaged during commercial operation and off-site repairs are necessary, they can easily be maneuvered with a small loader and removed from the site on a flatbed truck. If battery modules are damaged during commercial operation, the decommissioning procedures specified in the Pike Decommissioning Plan will be carried out to safely dismantle and remove the damaged modules.

In addition to daily monitoring, the following operations and maintenance actions are planned for the facility:

#### **a) Monthly Inspections**

Monthly inspections will be conducted consistently during facility operation. The interval between services will not exceed seven (7) weeks. Each inspection shall include the following tasks: (a) inverters inspection, (b) BESS safety equipment, electrical controls and monitoring equipment, (c) perimeter security fence-line inspection, (d) combiner boxes inspection, (e) transformers inspection, and (f) landscape inspection.

As recommended by the Colorado Parks and Wildlife, the exterior fencing of the facility will be routinely inspected to prevent wildlife from entering the facility and minimize the risk of wildlife being injured by the exterior fencing.

Landscaping will be inspected to monitor plant growth. Vegetation is to be kept and trimmed to minimize encroachment at electrical enclosures, limit fire hazards, and mitigate potential effects on energy generation of the solar modules caused by shading. The Site will be mowed and maintained in compliance with the Noxious Weed Management Plan. Herbicide will be applied; vegetation will be maintained less than fifteen (15) inches in vertical height within the perimeter security fence. Within the footprint of the substation and within 10 feet of each BESS unit, the ground will be treated with herbicide and finished rock will be placed to prevent growth of vegetation.

**b) Annual Maintenance Work**

Annual maintenance work occurs every year, with the interval between services not to exceed fourteen (14) months and will include the following tasks: (a) inventory and maintenance of PV and battery modules, racks, cabling, electrical connection lines, combiner and re-combiner boxes, (b) inverter maintenance, (c) array tracking systems inspection and maintenance (d) transformer maintenance including oil sampling, (e) thermal imaging, (f) BESS management systems, climate control systems, fire protection, ventilation and gas detection systems testing and maintenance, (g) inventory of spare parts and (h) substation maintenance.

**c) Health and Safety Program**

A health and safety program will be created for the operational phase of the facility. This includes safe work practices, site security, emergency response procedures, fire control and transportation. The health and safety program will follow requirements under the federal Occupational Safety and Health Administration regulations; designed to protect workers and the public during construction and operational phases. Maintenance will be carried out by trained personnel. Material Safety Data Sheets will be posted within the site and made available to staff. Health and safety protocols will be followed during operation.