

# **Mohawk Solar Project**

# **Preliminary Quality Assurance/Quality Control Plan**

**Prepared for:**



**Avangrid Renewables, LLC  
on behalf of Mohawk Solar, LLC  
7650 North State Street, Suite 1  
Lowville, NY 13367**

**June 2019**

## 1 PURPOSE

This document is intended to provide guidance on the general requirements of the Contractor's Quality Assurance & Quality Control (QA/QC Program) required for the execution and completion of Contractor's Scope of Work (SOW) associated with the Project.

Contractor shall provide a QA/QC Program to the Owner for review and comment prior to mobilizing for the Project. The Contractor's QA/QC Program shall utilize a fully encompassing reporting and tracking system that includes, but is not limited to, photographs, inspection checklists, Requests For Information (RFI), Non Conformance Reports (NCR) and Engineering Change Notices (ECN). The QA/QC Program shall be utilized to ensure that the Project will be constructed and delivered to Owner in full compliance with the Project Agreement, design, specifications and drawings.

## 2 RESPONSIBILITY

The Contractor is responsible for the quality of work performed under their contracted SOW including the work of its engineers, vendors and Subcontractors. The Contractor is responsible for performing their assigned scope of work in accordance with their approved QC Program and the policies, procedures and specifications applicable to their contracted work.

- 2.1 The Contractor and their Subcontractors performing work which could affect the quality of the Project are required to submit their QA/QC Procedures to the Owner for review and approval prior to beginning the applicable scope of work. Contractors and their Subcontractors with Owner approved QA/QC Procedures are expected to work in accordance with their own programs. Before beginning major tasks, a task review or procedural "page-turn" meeting will be conducted with all key personnel involved in the specific task.
- 2.2 Prior to start of on-site work, a Project Kick-off Meeting will be conducted to review Site specific restrictions, environmental and jurisdictional requirements and site communications and safety procedures. In addition, all personnel shall attend Project Specific Site Orientation covering these same topics. No personnel shall be allowed unescorted access to the project site without first completing Site Orientation.
- 2.3 Owner personnel will monitor and periodically audit Contractor activities to verify compliance with the Contractor's Quality Control Programs and their site specific Quality Assurance Procedures, as reviewed and approved by the Owner, to verify the work meets or exceeds the requirements of their QC Program, all drawings and specifications, and the contract.
- 2.4 In special circumstances, the Owner may require a Contractor performing specific work to utilize specific Owner forms to document the work.
- 2.5 The Contractor is charged with the duty to notify the Owner of any item not meeting the quality standards specified by the contract and applicable laws, rules, and regulations.
- 2.6 The Owner shall have the authority to issue a Stop Work Order applicable to any or all work on the Site if work being performed is thought to be detrimental to the safety or quality of the Project.
- 2.7 The Contractor shall be responsible for Document Control on site. The Contractor shall distribute specified quantities of documents and drawings to the Contractor's personnel, Subcontractors and the Owner. The Contractor shall be responsible for verifying the use of the most current revisions and disposal of outdated revisions of drawings and documents.

### 3 QUALITY CONTROL PROGRAM

The Contractor's QA/QC Program shall include QC Procedures, checklists and forms. Overall, the QC Program includes all drawings, specifications, procedures, policies, contracts, regulatory codes, standards and agreements applicable to Contractor's scope of work.

- 3.1 All project elements that require QA/QC verification shall be documented and verified by the first person or crew performing the work. Names shall be legible, printed, signed and dated. Subsequent verifications and inspections shall be similarly identified, signed, and dated. The Contractor shall maintain a signature log of those individuals signing Quality and Project documents.
- 3.2 The Contractor shall implement a Measuring & Test Equipment calibration and control procedure and calibration log. The instruments and special tools used to verify specified criteria shall be calibrated. When calibrated tools or instruments are used, the name of the tool or instrument, serial number and calibration date shall be documented on the QA/QC form. If a tool or instrument is found to be out of calibration, the previous work performed utilizing that tool shall be re-verified. The calibration log shall be maintained on site and available for review by the Owner.
- 3.3 The Contractor shall provide the Owner with an Inspection and Test Plan addressing all aspects of the Project and highlighting critical work processes. The Owner shall review the Inspection and Test Plan and identify processes to be witnessed by the appropriate Owner personnel. The Contractor shall provide at least 24 hours' notice to the Owner before performing any processes requiring Owner oversight.
- 3.4 The Contractor will ensure that only properly qualified Subcontractors and certified personnel perform the technical duties of the Project. The Contractor is solely responsible for the performance of its Subcontractors and ensuring the Subcontractor adheres to contract specifications and requirements. Any testing or examination activities shall be performed by qualified personnel with current certifications.
- 3.5 Upon receipt of items delivered to the job site, the Contractor will inspect items to ensure compliance to purchase documents for quantity, and possible shipping damage. When items are received they are checked for special storage or maintenance requirements. All items stored on the site shall be protected from weather, damage, and theft. The Contractor will ensure that the factory inspection and testing documentation is provided as required in the Project documents. The Owner will make periodic checks to ensure proper storage and maintenance.
- 3.6 A Nonconformance Report (NCR) shall be utilized to document and provide resolution or disposition when materials, equipment and or workmanship issues are identified. NCRs shall be communicated and documented in a timely manner to ensure proper disposition and to alert all parties if corrections are required. The Contractor's NCR form shall be utilized, as applicable, to document this process. A NCR log shall be kept and updated weekly (at a minimum).
- 3.7 When an item or activity is found to be nonconforming to the contract documents, the Contractor will record the nonconformity in accordance with the Contractor's procedure for reporting and disposition of nonconformance.
  - 3.7.1 NCR determination
    - Deviations from the design drawing or specification requires an NCR and engineering approval.
  - 3.7.2 Punch List determination
    - If the deviation can be corrected by reworking to match the original specification or drawing, or replaced, it can be tracked on a punch list.
  - 3.7.3 Disposition(s)

- Disposition determination between an NCR and a punch list item requires Owner review and concurrence.

#### 3.7.4 Logs

- An NCR log shall be kept and updated weekly (at a minimum)
- A Punch List log shall be kept and updated weekly (at a minimum)

3.8 A request for information (RFI) procedure shall be utilized to resolve questions regarding discrepancies or to provide clarification. RFI's shall be communicated and documented in a timely manner to ensure proper disposition and to alert all parties of any corrections or explanations.

3.8.1 Contractor shall utilize an RFI form to document this process.

3.8.2 An RFI log shall be kept and updated weekly (at a minimum).

## **4 DOCUMENTATION**

Contractor Quality Inspection Reports, Test reports, Calibration Records, redline drawings, As-built drawings, NCRs, RFIs, etc. shall be available for review on site by the Owner.

Clear readable photographs of the serial number nameplate of any permanently installed component or equipment shall be included in the inspection documentation.

All Contractor Design and Quality documents are to be compiled and included in Job Books.