

## **ATTACHMENT D: RFP 2025-28**

### **Specifications for the Art & Marion Ady PV Systems**

#### **General Requirements:**

1. The new arrays will be located as shown on the attached site plan (Attachment E).
2. The metal roof structure has been engineered to accommodate the added PV panel loads. A memo from the Structural Engineer-of-Record with detailed PV attachment requirements is attached to this RFP (Attachment H).
3. PV panels will be attached to the standing seam metal roof ribs with S-5 type panel clips.

#### **PV Racking Systems:**

1. Metal roof tilt angle: Match existing roof slope
2. Metal roof attachment: Basis-of-design is the S-5 PV Kit by Metal Roof Innovations, Ltd., the Snap-N-Rack Series 500 PV Mounting System or approved equal.
3. All racking components utilized for array equipment grounding shall be listed for that purpose and must be appropriately isolated to prevent galvanic corrosion and subsequent loss of array grounding continuity.
4. Shop Drawings: Provide layout and erection drawings showing dimensioned locations of all frames and roof attachments. Include erection drawings, elevations, and details where applicable.
5. Manufacturer Qualifications: Manufacturer with a minimum five years documented experience in producing pre-manufactured solar collector supporting steel framework.
6. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
7. Manufacturer's warranties. Provide a minimum 10-year manufacturer's workmanship warranty and minimum 5-year finish warranty for the racking system.

#### **Solar Modules:**

1. Orientation: East and Southeast. Refer to Site & Roof Plan (Attachment E).
2. Minimum 20-year warranty. Manufacturer must have been in business for at least 10 years under their current name and tax identification number. Warranty must be in the Owner's name. Minimum 80% power output or more, for a period of 20 years. Manufacturer agrees to repair or replace components of PV modules that fail to exhibit the minimum power output within the specified warranty period.
3. PV modules shall be listed and in compliance with UL standard 1703, Standard for Safety. Flat-plate Photovoltaic Modules and Panels. Entire assembly shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for electrical and fire safety, Class A, according to UL 1703.
4. PV modules must also meet or exceed IEC 61215 and all other relevant standards.
5. Modules by Silfab, Q-Cell, Canadian Solar, or approved equal. All electrical equipment must be U.L. listed.

#### **Inverter(s) and Monitoring:**

1. Inverter locations: Exterior wall mounted. (see Attachment E Drawings).
2. Basis of design: Solar Edge inverters, or approved equal.
3. Provide integrated AC/DC disconnects.

4. Provide necessary inverter communications (hardware and software) to enable SOU to remotely monitor the system output and performance.
5. Data cabling for the offsite monitoring will be provided by SOU.
6. Inverters must be listed with UL 1741SA, "Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources".
7. Installation must comply all elements of the IEEE 1547-2018 interconnection standards.
8. Warranty: The inverters shall have a minimum 10-year warranty. All warranties shall be in the Owner's name.

#### Electrical Interconnection:

1. Provide a solar system AC disconnect integrated with or adjacent to the existing PV disconnect. Comply with City of Ashland Electric Department requirements. The disconnect must be lockable in "ON" and "OFF" positions. Provide permanent labels at equipment per City requirements.
2. Furnish and install all wiring, conduit, combiner boxes, and junction boxes for a complete system designed to comply with all building code and local jurisdiction requirements. All exposed wiring must be UV resistant.
3. New AC conductors shall be sized so that voltage drop does not exceed 1% at full load. Provide the City required disconnect on the outside of each building. Connections to the facility electrical systems are design-build by the contractor. Refer to the Electrical Systems as-built drawing (Attachment E).
4. Furnish and install array equipment grounding hardware. Provide PV grounding conductors and Code required bonding hardware.
5. Refer to the specifications (Attachment D) and the drawings (Attachment E) for additional information.

#### Required Documentation:

- Roof plans drawn to scale showing all system components and confirmation/coordination with all existing conditions.
- One-Line diagram for entire system. Include all system component specifications and ratings, conductor sizes and types, conduit sizes, ratings of combiner boxes and series OCPD's.
- Location and rating of facility interconnection points.
- Electrical calculations including voltage drops and string sizing calculations.
- Solar collector roof support system design and load calculations including all dead and live (snow, wind, seismic, etc.) loads.

#### Permitting:

The Design/Builder will be responsible for the preparation of construction drawings and specifications, for submitting documents to the City of Ashland, and for procuring all required permits. At time of submittal for permitting, the Design/Builder shall provide to the Owner one complete set of permitting documents.

#### Project Closeout:

At completion of the project, the Design/Builder shall provide to the Owner one (1) Operation & Maintenance (O&M) Manual in a 3-ring binder. Include copies of all as-built drawings, diagrams, calculations, product information, specifications, warranties, maintenances instructions, etc. in

the O&M manuals. In addition to the printed O&M manuals, provide an electronic copy (pdf format) of all the O&M information prior to request for final payment.

The Design/Builder shall provide system instruction and training to SOU staff prior to final acceptance and payment.

The final product shall be a fully completed, fully functional, code compliant solar photovoltaic system with inverter(s), with all equipment and warranties in place, and all permits and approvals secured.

Pricing shall not be submitted where such pricing is contingent on the university's acceptance of a third party's agreement, including but not limited to third-party cooperative procurement agreements. No third-party financing or assigned leases will be associated with contract.