

ATTACHMENT A1: SCOPE OF WORK

RFP for Design Build Contract: Solar Power Generation System at
Ocean Discovery Institute



Project Scope

The project scope shall include, but not be limited to, the following:

I. DESIGN PHASE

1. Preliminary design of the PV systems to meet the targeted electrical production or to the maximum system size limits allowed by the footprint available or to an agreed upon size with the Institute. Sizing shall include accurate and detailed modeling of system production for each specific site based on shading, available tariffs and other site constraints using industry standard modeling tools. Preliminary design shall include plans sufficient for presentation and discussion with the Institute.
2. Detailed design and complete construction drawings of the PV systems and all ancillary work sufficient for permitting and construction. Drawings must fully describe all aspects of the construction work including fencing, directional boring/trenching, excavations, racking and mounting systems, electrical systems, signage, foundations, lighting, ADA, etc. Conceptual siting and layout of the canopies are provided as Attachment D1.1 and design drawings for the Living Lab are provided as Attachment D1.2. The design and construction of the PV system must adhere to the specification provided with this RFP as Attachment A and to the specifications included with the Living Lab design documents. Contractor may suggest changes to the drawings provided, and will provide final Electrical, Structural and all other required Engineers of Record to provide a complete, stamped bid package as required to permit and construct a complete photovoltaic Project for DSA submittal. The electrical construction drawings shall show and include all conduit below and above finished grade/finish. All plans and specifications must meet the approval of DSA, the Institute, the Institute's representative, Local Fire Authority and/or any other agency deemed as having jurisdiction over Project.
3. All permitting and permitting fees required to complete the project, including DSA, except for CEQA. The Institute is the lead agency for CEQA permitting. Contractor must support the Institute in preparing any required CEQA documentation (including any exemption materials), adhere to applicable CEQA requirements, and implement any CEQA mitigation identified by the Institute.
4. Complete structural and electrical engineering services including diagrams and stamped drawings.

II. CONSTRUCTION PHASE

1. Installation of all equipment necessary for a complete, interconnected and operational solar PV system, including, but not limited to:
 - Solar PV modules (SunPower X-Series modules or equivalent high efficiency module)
 - String Inverters
 - All electrical switch gear modification necessary to interconnect the PV system
 - All electrical connectors, cabling & components necessary for a complete solar system
 - All mounting systems, including single-column canopy structures

ATTACHMENT A1: SCOPE OF WORK

RFP for Design Build Contract: Solar Power Generation System at
Ocean Discovery Institute



- All monitoring equipment necessary to remotely access and download real-time and historical PV energy production, with capability to provide reporting sufficient for WREGIS REC registration, and to remotely access and download real-time and historical site energy consumption data. Historical data on 15-minute interval shall be readily available for the full operating history of the PV system. Monitoring system shall be capable of incorporating a future array at the same site on the same platform.
 - Any balance of system items for a complete, interconnected and operational solar PV system
 - Permanent fencing for all pad mounted equipment
 - All lighting, security or other ancillary equipment described in the Contract documents
 - The Contractor shall include all equipment identified in Attachment D3 as part of the solar project scope. The Attachment details existing infrastructure, and the scope of work to be performed by the Contractor. Note: underground conduits between the electrical room and the solar PV system locations have been installed. The contractor shall extend these conduits up to the solar PV system.
2. Utility interconnection applications, including tariff change requests, processing costs and coordination with the local utility(ies) necessary to achieve interconnect and permission to operate.
 3. Identification of all Americans with Disabilities Act (ADA) compliance issues that are directly associated with the PV project. The Contractor shall be responsible for parking lot restriping, covered parking space ratios, signage, and any other compliance issues that are located under the footprint of any PV array single-column canopy, including canopies not located in parking lots. The Institute shall be responsible for all other ADA compliance improvements outside of single-column canopy areas (i.e. path of travel access issues that fall outside of the single-column canopy footprint).
 4. Coordinate and schedule weekly project meetings from Notice to Proceed (NTP) through project closeout with all stakeholders. Contractor to maintain formal meeting minutes and a project schedule and distribute to all attendees no later than the next scheduled project meeting. Frequency of meetings can change upon the stakeholder availability and approval from the Institute.
 5. Coordination with and support of inspectors, the Institute and their consultants during construction, commissioning and close-out.
 6. Any significant changes to Institute property (i.e. re-striping of parking areas, removal/trimming of trees, light standard removal, new lighting, parking islands, etc.) that are required as a result of the installation of the PV project, with the exception of ADA path of travel outside of single-column canopy footprints as outlined in Item 6 above, are the sole responsibility of the Contractor.
 7. Project Commissioning, including all associated tasks and documentation related to successfully commissioning the system. Commissioning shall include assisting any third-party commissioning agents/inspectors with their process and providing documentation as requested.
 8. Final PV system “as-built” Construction Documents clearly conformed with all changes during construction.

ATTACHMENT A1: SCOPE OF WORK

RFP for Design Build Contract: Solar Power Generation System at Ocean Discovery Institute



9. Provision of a comprehensive Operations & Maintenance Manual, per requirements listed in Attachment A3 – Submittals and Process Requirements.
10. Conduct a training for Institute staff, with orientation to the Operations & Maintenance Manuals, systems and safety procedures.
11. Secure storage facility at job Site for all PV system equipment and supplies, including any required security.
12. Legal toilet and hand wash sink facilities at job Site.
13. Daily cleanup to “broom clean” conditions.
14. Return disturbed areas to pre-construction conditions including repair of all pavement/concrete, restriping, landscape restoration, irrigation restoration, equipment track marks & scuffs on finished concrete surfaces and removal of USA markings.
15. Installation of Institute approved project information signage and removal at completion of project.
16. Project closeout, inclusive of obtaining DSA closed and certified status for all project associated DSA applications.
17. Provide temporary ADA parking stalls during construction, if construction activities make existing facility ADA parking stalls unusable. Quantity and location of temporary stalls shall be coordinated with Institute.
18. Provide temporary lighting in place of removed overhead lighting until under-single-column canopy lighting is fully operational.

III. OPERATIONAL PHASE

1. All Contractors must offer a comprehensive onsite training to facility staff in PV system operations, safety and maintenance, regardless of whether the Institute elects to pursue an O&M agreement with the Contractor. Training shall be consistent with the System Warranty, O&M manual and any O&M/Performance Guarantee contract provisions.
2. All Contractors must offer a comprehensive Operations and Maintenance Contract and Performance Guarantee consistent with the provisions outlined in Attachment C.

IV. CONSTRUCTION MILESTONES

(To be negotiated with selected Firm)

Site	Design Complete, DSA Package Submitted	Substantial Completion	Final Completion
Living Lab Building	[TBD]	[TBD]	[TBD]