

## ATTACHMENT A2: CRITERIA & CODES

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



### I. GENERAL CRITERIA

1. Contractor shall be responsible for compliance with all applicable laws and regulations applicable to any and all work, operations and sales of electrical energy related to the Proposal and any resulting PV system(s). The following details are for informational purposes, only, and are not a comprehensive or limiting list of legal compliance areas or measures.
2. All Project construction is to be completed by the dates specified in Table 1-1 of the RFP, Project Milestone Schedule.
3. Contractor is responsible for obtaining, adhering to, and closing out all required permits. The Institute will act as the lead agency for CEQA, Contractor is responsible for supporting the Institute with CEQA documentation and implementing any mitigation requirements.
4. The Contractor is responsible for locating and protecting all underground utilities. Contractor shall utilize Ground Penetrating Radar (GPR) for all areas with underground construction. Purchaser to assist by providing As-built information, as available.
5. The Contractor shall be responsible for DSA closeout and certification of all project-related DSA applications.
6. Contractors are responsible for ensuring ADA compliance under the single-column canopy footprint. This shall include design work necessary for DSA plan check and construction costs within the canopy area.
7. The Contractor is responsible for maintaining fire lane access and clearances at all easements and fire separations at all times.
8. The Contractor shall coordinate site access through all phases of the project with key stakeholders and Institute identified staff at least 24 hours prior to any personnel arriving on site. The Contractor shall coordinate with and provide access and support to all inspectors, Institute staff or consultants during testing and inspections of all systems. Exclusive of local ordinances, Institute shall not restrict access to construction site during standard working hours (7 am – 5 pm, Monday-Friday). Institute and Contractor shall provide 24/7 unrestricted access to existing electric utility meter and the utility lockable disconnect location. Institute to permit using on site water and power as available for construction at no charge to Institute, with the exception of fire hydrants. Institute to permit use of onsite power or temporary diesel generator during construction activities, subject to local ordinances.
9. The Contractor shall coordinate closely with the Institute to ensure all construction activities minimize impact on operations and events at the sites. Construction zone access points shall be limited to EVA entrance locations. Vehicle entrance to work zone shall occur outside of Institute hours. Entrance to construction zone outside of Institute hours.
10. Access during regular weekday working hours.
11. Contractor is responsible for on-site installation supervision throughout the duration of the project.
12. All active work areas must be fenced off from start of work at that area until completion or until area is safe for entry, whichever is longer. Temporary fencing and access control layouts shall be

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submitted to the Institute and approved for each site prior to commencing construction. Temporary fencing shall also be installed to protect trees and vegetation adjacent to work areas from construction damage.

13. Storm Water Pollution Prevention (SWPPP), if applicable based on disturbance. Contractor shall ensure implementation and monitoring of a Storm Water Pollution Prevention Plan (SWPPP) for the purpose of preventing the discharge of pollutants from the construction site as required by the local Authority(s) Having Jurisdiction (AHJs).
14. Contractor is to meet applicable codes and specifications with regard to dust during construction and seek to minimize dust migration from the construction site.
15. Contractor acknowledges that adjacent facilities may remain in operation during all or a portion of the Work, and it shall take all reasonable precautions to minimize noise as required by applicable laws and the Contract Documents. Notice of proposed noisy operations, including without limitation, operation of pneumatic demolition tools, concrete saws, and other equipment, shall be submitted to Institute a minimum of forty-eight (48) hours in advance of their performance. Contractor shall further prevent any of its employees or its Sub-Contractor employees from playing any recorded music devices or radios or wearing any radio headphone devices for entertainment while working on the project.
16. Drugs Tobacco, and Alcohol - Contractor shall take such steps as are reasonably necessary to ensure that employees of Contractor or any of its Sub-Contractor's employees do not use, consume, or work under the influence of any alcohol, tobacco or illegal drugs while on the project. Likewise, Contractor shall prevent its employees or Sub-Contractor's employees from bringing any animal onto the project. Contractor shall not violate any written Institute policies provided to Contractor.
17. Contractor is responsible for patching and repairing all building penetrations performed by the Contractor during installation. Conduit installed on the exterior of Institute structures shall be painted to match.
18. Contractor is responsible for all generated trash. Institute owned dumpsters and trash bins may not be used for storage or disposal.
19. Contractor shall clean all work areas on a daily basis and equipment after project completion. Contractor shall ensure that work areas are clear of construction debris, spoils and that all demolition and repair has been completed prior to releasing work areas to public access.
20. All staff are to wear identifying clothing at all times when on-site.
21. All staff or Sub-Contractors are to wear Institute-provided badges during construction.
22. Driving on the Premises shall be limited to periods when students and public are not present. If driving or deliveries must be made during the Institute hours, two (2) or more ground guides shall lead the vehicle across the area of travel. In no case shall driving take place across pedestrian paths during recess, lunch, and/or class period changes. The speed limit on-the Premises shall be five (5) miles per hour (maximum) or less if conditions require. Institute shall designate a construction entry point to each site.
23. During the operational phase, all staff or Sub-Contractors must check in at the Institute office upon arrival at the site.

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### II. SOLAR PV CRITERIA

1. The Contractor shall be responsible for identifying the appropriate conductor route in coordination with the Institute.
2. Contractor is responsible for all interconnection applications and work required to achieve Permission to Operate (PTO) with the local utility.
3. The Contractor shall work with the Institute as-needed to provide visualizations of proposed systems and assessment of potential glare or reflectivity issues.
4. The Institute is specifying SunPower X-Series modules or equivalent due to the high efficiency of these modules and the small footprint available to meet production targets. Equivalent modules may be proposed, however Contractor must demonstrate with industry standard modeling that equivalent modules can meet production requirements.
5. The Institute may add additional solar at the site in the future. The monitoring system installed as part of the single-column canopy project shall be capable of incorporating additional arrays on the same platform at a future time with minimal modification.
6. Warranties - The Contractor shall be required to provide the following minimum warranties consistent with Net Energy Metering requirements and the California Public Utility Code 387.5(d)(4), the Contractor shall provide a warranty of not less than 10 years to protect against defects and more than a 15% degradation of electrical generation output that may occur as a result of faulty installation. Standard warranty coverage should be at least twenty-five (25) years for any PV modules, at least ten (10) years for all inverters, or consistent with current Net Energy Metering Requirements for PV System warranty requirements, whichever is greater. Meters must have a 1-year warranty to ensure against defective workmanship, system or component breakdown, or degradation in electrical output of more than 15% from their originally rated electrical output during the warranty period. For meters that are integrated into the inverter, the meter warranty period must be 10 years.

### III. GENERAL CODES, GUIDELINES AND STANDARDS

The Contractor shall be required to comply with all applicable California public works and project requirements including, but not limited to:

1. Americans with Disabilities Act (ADA).
2. American National Standards Institute (ANSI).
3. American Society for Testing and Materials (ASTM)
4. California Building Code (CBC).
5. California Electrical Code (most recent).
6. California Environmental Quality Act (CEQA).
7. California Fire (CalFire) Solar Photovoltaic Installation Guidelines.
8. California Geological Survey (CGS).
9. California Labor Code
10. California Title 20 and 24.
11. Federal Communications Commission (FCC).

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12. Department of State Architects (DSA).
13. Local and State Fire Code.
14. Institute of Electrical and Electronics Engineers (IEEE) 1547: Standard for Interconnecting Distributed Resources with Electric Power Systems.
15. International Electrotechnical Commission (IEC) Technical Committee 82 (TC82).
16. National Fire Protection Association (NFPA), National Electric Code (NEC), Including NFPA 70 and NEC Article 690
17. National Electrical Manufacturers Association (NEMA).
18. Occupational Safety and Health Administration (CAL-OSHA).
19. Local Utility requirements including Net Energy Metering Rules, Interconnection Requirements and Tariffs.
20. Storm Water Pollution Prevention Plan (SWPPP).
21. Underwriters Laboratories (UL) Standards, including 1703: Flat-plate Photovoltaic Modules and Panels and 1741: Standard for Inverters, Converters, Controllers, and Interconnection System Equipment for Use with Distributed Energy Resources.
22. Uniform Solar Energy Code – ICC.
23. All applicable State and Local Codes and Ordinances.
24. Institute Specifications and Requirements.
25. DSA IR-16-8 (most recent) Guidelines.
26. DSA PL 07-02 (most recent) Guidelines.

Contractor shall be solely responsible for any and all tax law compliance, including, without limitation, compliance with the requirements related to any use of the Investment Tax Credit. Institute shall not make, or cause to be provided any legal guidance or opinions related to taxation matters.

### IV. EQUIPMENT AND INSTALLATION STANDARDS

All system design, equipment and installation must conform to the following codes, standards and rating methodologies.

1. All design, equipment and workmanship must comply with the requirements of the local electrical utility. The Contractor must ensure all proposed equipment is acceptable to the local electrical utility and meets the interconnection and code requirements.
2. If any equipment using hazardous materials (i.e. Cadmium or other hazardous materials) are included in the Project, then the environmental impact of the hazardous material usage must be discussed, including any special maintenance requirements and proper disposal/recycling of the equipment at the end of its useful life. Equipment containing hazardous materials must comply with the EPA Landfill Disposal Requirements. Any additional costs related to equipment containing hazardous materials must be clearly identified.
3. CPUC approved Electric Rule 21 – Generating Facility Interconnections.
4. UL1741 (Inverters, Converters and Controllers for Independent Power Systems).
5. UL1703 (Standard for Flat Plate Photovoltaic Modules and Panels).
6. IEEE 929 (2000) – Recommended Practice for Utility Interface of Photovoltaic (PV) Systems.

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7. IEEE 1262 (1995) – Recommended Practice for Qualifications of Photovoltaic (PV) Modules.
8. NEC Article 690.
9. All applicable Utility Guidelines and Standards for PV Systems, electrical utility systems and metering requirements, including net energy metering requirements.
10. Conform to the Utility’s Distribution Interconnection Handbook
11. Wind uplift requirements per the American Society of Civil Engineers Standard for Minimum Design Loads for Buildings and Other Structures (ASCE 7), and must be able to withstand applicable design wind speeds for that location (at least 85 mph or 105 mph, as applicable (3-second gusts)).
12. All other applicable codes.

### V. CALIFORNIA PUBLIC WORKS COMPLIANCE

The Contractor shall be required to comply with all applicable California public works and project requirements including, but not limited to:

1. Department of Industrial Relations Notice and Registration. This project subject to compliance monitoring and enforcement by the Department of Industrial Relations (DIR):
  - a. No Contractor or Sub-Contractor may perform any work in relation to a Proposal or resulting Contract unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].
  - b. No Contractor or Sub-Contractor may perform any work in relation to a Proposal or resulting Contract unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 throughout the time such Contractor or Sub-Contractor performs any work. The Institute is required to, and shall have the right to terminate any agreement in the event of non-compliance with this requirement, or require termination of any Contractor or Sub-Contractor not in compliance with this requirement.
  - c. Every Contractor or Sub-Contractor performing any work in relation to a Proposal or resulting Contract will be required to comply with all certified payroll recording and reporting requirements, including, without limitation, entering certified payroll reports directly into the DIR electronic eCPR system for any “new” projects awarded after the effective date, April 1, 2015.
2. Prevailing Wages. The entire project is subject to State prevailing wage laws, pursuant to San Diego Municipal Code section 22.3019 and sections 1720 through 1861 and 3070-3098 of the California Labor Code, and all other City and State requirements that apply. In addition, given that Project funding is being provided by Federal Community Development Block Grant (CDBG), this project is also subject to Davis-Bacon Federal prevailing wages. The Director of Industrial Relations has determined the general prevailing rate of per diem wages in the locality in which this work is to be performed for each craft or type of worker needed to execute the Contract which will be awarded to the Contractor, copies of which are on file and will be made available to any interested party upon request at the Institute’s Records Management Department at or online at

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<http://www.dir.ca.gov/dlsr>. A copy of these rates shall be posted by the Contractor at the job site. The Contractor and all Sub-Contractors under him, shall comply with all applicable Labor Code provisions, which include the payment of not less than the required prevailing rates to all workers employed by them in the execution of the Contract and the employment of apprentices.

3. Ineligible Contractors. Pursuant to Public Contract Code § 6109, a Contractor, who is ineligible to perform work on the public works project pursuant to Section 1777.1 or 1777.7 of the Labor Code, may not perform any work on this Project.
4. Contractor License. Each Contractor providing any work on the public works project shall be properly licensed pursuant to the Business and Professions Code and shall be licensed in the following appropriate classification(s) of Contractor's license(s), for the Project, and must maintain the license(s) throughout the duration of the Project: Class B.
5. Non-Collusion Declaration. Contractors shall execute the "Non-Collusion Declaration" included in Attachment C.
6. Bonding. The Contractor will be required to furnish the Institute with a Payment and Performance Bond equal to 100% of the installation contract price, prior to commencement of project work for all financing options. All bonds are to be secured from a surety that meets all of the State of California bonding requirements, as defined in Code of Civil Procedure Section 995.120. Proposals shall include the cost of obtaining such bonds.
7. Fingerprinting Requirements. The Contractor, all its employees and Sub-Contractors shall comply with the applicable requirements of California Education Code Section 445125.2 with respect to fingerprinting of employees who may have contact with students visiting the Institute. In no event shall any employees of the Contractor or any of its Sub-Contractors come into contact with the students visiting the institute before complying with the fingerprinting requirements of California Education Code section 45125.2.

The Contractor shall ensure the safety of the pupils by one or more of the following methods:

- a. The installation of a physical barrier at the worksite to limit contact with pupils. None of Contractor's or Sub-Contractors' personnel may interact or converse with students.
  - b. Submission to the California Department of Justice of fingerprints of all employees of the Contractor and Sub-Contractors who will have more than limited contact with the students.
  - c. Continual supervision and monitoring of all employees of the Contractor and its Sub-Contractors by an employee of the Contractor whom the Department of Justice has ascertained has not been convicted of a violent or serious felony. For purposes of this paragraph, an employee of the Contractor or its direct Contractor may submit his or her fingerprints to the Department of Justice pursuant to subdivision (a) of Education Code Section 45125.1 and the Department shall comply with subdivision (d) of Section 45125.1. Prior to allowing worker contact with students, the Contractor or its direct Contractor shall receive a determination from the Department of Justice that the employee has not been convicted of a violent or serious felony as defined in Education Code section 45122.1.
8. DSA Approval. The Contractor shall comply with all provisions of the Field Act, Education Code sections 17280 et seq., including, without limitation, the mandate that no construction, or

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alteration of Institute building, commence prior to the receipt of the written approval of the plans by DSA.

9. All other applicable California Public Works Code requirements.