

OPERATIONS AND MAINTENANCE (O&M) AND PERFORMANCE GUARANTEE TERMS FOR AN INSTITUTE OWNED PROJECT

All Proposers must offer a comprehensive Operations and Maintenance Contract to service the solar energy Systems for the specified term. A detailed description and any associated costs of the proposed O&M services must be included in the Proposal and Cost Forms, Attachments B1 and B2. The selected Proposer (referred to herein as "Contractor") shall include the following terms in their O&M contract or adhere to the following requirements in preparation of their O&M contract. The Institute is referred to herein as "Customer".

1. <u>General</u>

- 1.1. Customer intends to use Contractor's standard O&M Contract, modified to include all terms outlined in this document, and any other changes required by Customer.
- 1.2. The O&M services shall cover all components of the systems that are installed under the Master Energy Services Agreement.
- 1.3. All fees for monitoring software, maintenance and calibration, and cellular/data fees included in O&M fee.

2. Operations and Maintenance Contract Services

Table 1 - Outline of Maintenance Services to be Provided and Frequency

Service De	Service Frequency	
a. Pro b. Sup	ner Service Support: wide Technical support contact (24 hours per day, 7 days per week) oport technicians specialized in remote troubleshooting and providing p-by-step diagnosis instructions	Continuous
a. Arr i. ii. iii.	tative Maintenance, Inspections & Testing: ay Inspect photovoltaic (PV) modules for damage, discoloration or de- lamination Inspect mounting system for damage or corrosion Spot check 25% of structural bolts for torque erter Clean all filters and fans Inspect inverter pad and container Tighten wire terminations inside inverter All other preventive maintenance required by original equipment manufacturer (OEM) warranty	Annual

ATTACHMENT C2: O&M and PeGu TERMS

RFP for Design Build Contract: Solar Power Generation Systems at

OCEAN DISCOVERY IN STITUTE

Ocean	Discovery	Institute –	Living Lab
-------	-----------	-------------	------------

Servic	e Description	Service Frequency
	 Electrical Balance of System (BOS) i. Inspect ground braids, electrodes and conductors for damage ii. Perform thermo-graphic analysis of combiner boxes, inverters, transformers, and conductor connections to buses, breakers or disconnects iii. Test and record all circuits, open circuit voltage and short circuit current and repair any fault circuits 	Annual
d.	iv. Inspection of all terminal connections for torque	
e.	ii. Clean pyranometers and reference cells	
f.	 iii. Inspect safety conditions and proper signage Maintenance Reporting Record results of all inspections Take photographs of any damage or defects identified Inform Owner and warranty providers of all deficiencies identified Provide Owner with recommendations for corrective action 	
g.	 Sensor Calibration Every twenty-four (24) months, O&M Contractor will have the pyranometer calibrated by the manufacturer of each sensor. Field comparison of pyranometers and reference cells to calibrated sensor Adjust field sensor to within ±3% of calibrated sensor and record changed parameters 	
a. b. c.	Pressure washer settings not to exceed 1,500 PSI or manufacturer's recommendation, whichever is less	Annual/As needed
a.	Inverter and Data Acquisition System resets	As needed

ATTACHMENT C2: O&M and PeGu TERMS

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



Service Description	Service Frequency	
 Full scope repair and replacement of environment warranty term and any additional years Agreement is in effect 		

3. Monitoring and Performance Reporting

Table 2 - Outline of Monitoring and Performance Reporting to be Provided and Frequency

Ser	vice Description	Service Frequency
1.	 Performance Monitoring Website: a. Separate PV production and consumption meters to measure PV system production and on-site consumption of electricity (separate from net consumption). 	Continuous
	b. Customer website updated every 15 minutes with operational performance from the beginning of operation.	e
	c. Cellular data connection or other data connection maintained by the Contractor. System may not use Customer's internet connection.	
	d. Internet-based monitoring and reporting portal with full data access to Customer, including weather parameters.	
	e. Synchronized clock intervals for all site meters, including production and consumption meter. Clock intervals shall be synchronized with utility meters where feasible.	
	f. All site data must be able to be downloaded to Customer's computer in Microsoft Excel format	
	g. Customer will be provided with login credentials for use during the term of the O&M Agreement	F
2.	Daily Performance Monitoring and Notification:	Daily
	 Continuous monitoring of Customer's System via experienced solar monitoring technicians 	
	 Deperational status (inverter and system on/off) and performance alerts (actual vs. expected performance) continuously monitored by O&M Contractor 	
	c. Monitoring technicians identify and respond to system alerts including contacting Customer's system administrator	
3.	Performance Review and Reports: a. Actual vs. expected performance of the System for the period	Annual

ATTACHMENT C2: O&M and PeGu TERMS

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



 b. Environmental benefits will be estimated and included c. Weather adjustment calculations d. Optional custom reports can be supplied, upon Customer request e. Review of the following System performance data with an O&M Contractor performance engineer and proposal of a recommended action plan where applicable: 	
 i. Expected vs. Actual system production (kWh) ii. System Availability iii. Recoverable Degradation iv. Performance Index v. Operation and Maintenance Records vi. Safety, Accidents and Environmental Reporting vii. Proposal of Recommended Actions f. Annual Performance Review Report provided to Customer within sixty (60) days of each anniversary of the Commercial Operation Date as defined in the MDBC g. Operation and Maintenance Records must be provided to Customer upon request 	

4. Term and Termination

- 4.1. The initial term of the O&M Contract shall be five (10) years. The initial term shall automatically renew for an additional five (10) year term ("renewal term") unless the Institute provides written notice of termination prior to the end of the initial term.
- 4.2. A minimum of three (3) additional five (5) year terms shall be offered at the conclusion of the renewal term.
- 4.3. Either Customer or Contractor may terminate the contract immediately by notifying the other party in writing for the following reasons:
 - A. Failure to perform any material obligation under the agreement;
 - B. Either party becoming insolvent or bankrupt;
 - C. Either party ceasing to carry on business or disposing its undertaking.
- 4.4. Customer may, at any time, with or without reason, terminate the O&M Agreement with thirty (30) day notice and compensate Contractor only for services satisfactorily rendered to the date of termination. Written notice by Customer shall be sufficient to stop further performance of services by Contractor.

5. Billing, Payment & Reporting

5.1. Contractor shall bill for O&M services on an annual basis.



- 5.2. Initial annual fee shall not be adjusted upward on an annual basis by more than three percent (3%).
- 5.3. Contractor shall charge no additional fees for standard payment methods such as check, ACH or credit card payments.
- 5.4. Contractor's billing shall include an annual report provided within 30 days of the anniversary of the COD, as described in Section 2, above.

6. Labor Code

- 6.1. To perform the work required by this agreement, the contractor performing the work under the O&M contract must maintain the contractor license specified in the MDBC and the RFP throughout the duration of the construction component of the O&M.
- 6.2. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Contractors will be required to enter certified payroll reports directly into the DIR electronic eCPR system.
- 6.3. No contractor or subcontractor may be listed on a bid proposal for a public works project 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)]. No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.
- 6.4. The Contractor has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this work is to be performed for each craft, classification or type of worker needed to execute the Contract. These per diem rates, including holiday and overtime work, as well as employer payments for health and welfare, pension, vacation, and similar purposes, are on file at the Customer, and are also available from the Director of the Department of Industrial Relations. Pursuant to California Labor Code Sections 1720 et seq., it shall be mandatory upon the Contractor, and upon any subcontractor under such Contractor, to pay not less than the said specified rates to all workers employed by them in the execution of the O&M. The following are hereby referenced and shall be made a part of the O&M and the Contractor stipulates to the provisions contained therein.
 - A. Chapter 1 of Part 7 of Division 2 of the Labor Code (Section 1720 et seq.)
 - B. California Code of Regulations, Title 8, Chapter 8, Subchapters 3-6 (Section 16000 et seq.)
- 6.5. Any worker employed to perform work on the Project and such work is not covered by any classification listed in the published general prevailing wage rate determinations or per diem wages determined by the Director of the Department of Industrial Relations, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the employment of such person in such classification.
- 6.6. Holiday and overtime work, when permitted by law, shall be paid for at the rate set forth in the prevailing wage rate determinations issued by the Director of the Department of Industrial



Relations or at least one and one-half (1½) times the specified basic rate of per diem wages, plus employer payments, unless otherwise specified in the O&M or authorized by law.

- 6.7. These per diem rates, including holiday and overtime work, and employer payments for health and welfare, pension, vacation, and similar purposes, are on file at the administrative office of the Customer, located as noted above and are also available from the Director of the Department of Industrial Relations. It is the Contractor's responsibility to ensure the appropriate prevailing rates of per diem wages are paid for each classification. It shall be mandatory upon the Contractor to whom the O&M is awarded, and upon any subcontractor under such Contractor, to pay not less than the said specified rates to all workers employed by them in the execution of the O&M.
- 6.8. In accordance with the provisions of Labor Code Section 3700, the Contractor shall secure payment of compensation to all employees. The Contractor shall certify in the O&M as follows: *"I am aware of the provisions of Section 3700 of the Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."*
- 6.9. It is the policy of the Customer that in connection with all work performed under contracts, there be no discrimination against any prospective or active employee engaged in the work because of race, color, ancestry, national origin, religious creed, sex, age, or marital status. The Contractor agrees to comply with applicable federal and California laws, including, but not limited to, the California Fair Employment and Housing Act, beginning with Government Code section 12900 and Labor Code section 1735. In addition, the Contractor agrees to require like compliance by any subcontractors employed on the work by such Contractor.
- 6.10. The Contractor and all Subcontractors shall comply with the provisions of California Labor Code including, but not limited to sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices. The Contractor and any Subcontractor under him shall comply with the requirements of said sections, including applicable portions of all subsequent amendments in the employment of apprentices; however, the Contractor shall have full responsibility for compliance with said Labor Code sections, for all apprenticeable occupations, regardless of any other contractual or employment relationships alleged to exist.
- 6.11. The Contractor shall provide a Drug-Free Workplace Certification pursuant to the requirements mandated by Government Code Sections 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any State agency must certify that it will provide a drug-free workplace by performing certain specified acts.
- 6.12. The Contractor agrees that it will abide by and implement the Customer's Alcoholic Beverage and Tobacco-Free Premise Policy, which prohibits the use of alcoholic beverages and tobacco products, of any kind and at any time, on Customer-owned or leased buildings, on Customer property and in Customer vehicles. The Contractor shall procure signs stating "ALCOHOLIC BEVERAGE AND TOBACCO USE IS PROHIBITED" and shall ensure that these signs are prominently displayed at entrances to work areas at all times.
- 6.13. Contractor shall provide certification signed under penalty of perjury that it has performed one of the following:



- A. Pursuant to Education Code Section 45125.1, Contractor has conducted criminal background checks, through the California Department of Justice, of all employees and employees of subcontractors providing services to the Customer, pursuant to the O&M, and that none have been convicted of serious or violent felonies, as specified in Penal Code Sections 1192.7(c) and 667.5(c), respectively.
- B. As further required by Education Code Section 45125.1, Contractor shall attach a list of the names of the employees and employees of subcontractors of the undersigned who may come in contact with pupils.

OR

- C. Pursuant to Education Code Section 45125.2, Contractor will ensure the safety of pupils by one or more of the following methods:
 - i. The installation of a physical barrier at the worksite to limit contact with pupils.
 - ii. Continual supervision and monitoring of all employees and employees of subcontractors of the entity by an employee of the entity whom the Department of Justice has ascertained has not been convicted of a violent or serious felony.

7. System Damage and Insurance

- 7.1. Contractor shall obtain insurance from a company or companies acceptable to Customer. All required insurance must be written by an admitted company licensed to do business in the State of California at the time the policy is issued. All required insurance shall be equal to or exceed an A VIII rating as listed in Best's Insurance Guide's latest edition. On a case-by-case basis, the Customer may accept insurance written by a company listed on the State of California Department of Insurance List of Eligible Surplus Lines ("LESLI List") with a rating of A VIII or above as listed in Best's Insurance Guides' latest edition. Required documentation of such insurance shall be furnished to the Customer within the time stated in the Notice of Award. Contractor shall not commence work nor shall it allow its employees or Subcontractors or anyone to commence work until all insurance required hereunder has been submitted and approved by the Customer and a notice to proceed has been issued.
- 7.2. Contractor shall take out and maintain at all times during the life of this Contract, up to the date of acceptance of the work by the Customer, the following policies of insurance:
 - A. <u>General Liability Insurance</u>: Personal injury and replacement value property damage insurance for all activities of the Contractor and its Subcontractors arising out of or in connection with this Contract, written on a comprehensive general liability form including contractor's protected coverage, blanket contractual, completed operations, vehicle coverage and employer's non-ownership liability coverage, in an amount no less than either:
 - \$2,000,000.00 combined single limit personal injury and property damage for each occurrence and \$2,000,000.00 annual aggregate with a \$2,000,000.00 umbrella/excess; or
 - ii. \$4,000,000.00 annual combined single limit.



- B. <u>Workers' Compensation Insurance:</u> Covering any liability, loss, claim or proceedings whatsoever, whether arising by virtue of common law or any statute relating to workers' compensation or employers' liability, by any person employed by the Contractor for the purpose of executing the Scope of Work in an amount of not less than \$1,000,000 per occurrence or such lesser amount if limited by statute.
- C. <u>Automobile Liability Insurance</u>: Covering bodily injury and property damage in an amount no less than \$1,000,000 combined single limit for each occurrence. Such insurance shall include coverage for owned, hired, and non-owned vehicles and be included on the umbrella/excess policy.
- 7.3. The certificate(s) for both the General Liability Policy(ies) and the Automobile Liability Policy specified above must state that the insurance is under an occurrence based, and not claims made, policy(ies) and shall be endorsed with the following specific language:

"Ocean Discovery Institute is named as additional insured for all liability arising out of the operations by or on behalf of the named insured, and this policy protects the additional insured, its officers, agents and employees against liability for bodily injuries, deaths or property damage or destruction arising in any respect directly or indirectly in the performance of the Contract."

- 7.4. The certificate(s) for both the General Liability Policy and the Automobile Liability Policy shall be endorsed with the following specific language:
 - A. The inclusion of more than one insured shall not operate to impair the rights of one insured against another insured and the coverages afforded shall apply as though separate policies have been issued to each insured.
 - B. The insurance provided herein is primary and no insurance held or owned by the Customer shall be called upon to contribute to a loss.
 - C. Coverage provided by this policy shall not be reduced or canceled without thirty (30) days written notice given to the Owner by certified mail.
 - D. This policy does not exclude explosion, collapse, underground excavation hazard, or removal of lateral support.
 - E. The certificates must state that the insurance is under an occurrence based, and not a claimsmade, or "modified occurrence," policy (policies).
- 7.5. Within ten (10) days following issuance of the Notice of Award of the Contract, the following documentation of insurance shall be submitted to Customer for approval prior to issuance of the Notice to Proceed: Certificates of insurance showing the limits of insurance provided, certified copies of all policies, and signed copies of the specified endorsements for each policy. At the time of making application for an extension of time, the Contractor shall submit evidence that the insurance policies will be in effect during the requested additional period of time.
- 7.6. If the Contractor fails to maintain such insurance, the Customer may take out such insurance to cover any damages of the above mentioned classes for which the Customer might be held liable on account of the Contractor's failure to pay such damages, and deduct and retain the amount of the premiums from any sums due the Contractor's under the Contract.



8. Indemnification and Limitations of Liability

- 8.1. The Contractor shall defend, indemnify and hold harmless Customer, Customer's Consultants, Inspectors, the State of California and their officers, employees, agents and independent contractors from all liabilities, claims, actions, liens, judgments, demands, damages, losses, costs or expenses of any kind arising from death, personal injury, property damage or other cause based or asserted upon any act, omission, or breach connected with or arising from the progress of Work or performance of service under the O&M. As part of this indemnity, Contractor shall protect and defend, at its own expense, Customer, Customer's Consultants, Inspectors, the State of California and their officers, employees, agents and independent contractors from any legal action including attorney's fees or other proceeding based upon such act, omission, breach or as otherwise required by this Article.
- 8.2. Furthermore, Contractor agrees to and does hereby defend, indemnify and hold harmless Customer, Customer's Consultants, Inspectors, the State of California and their officers, employees, agents and independent contractors from every claim or demand made, and every liability, loss, damage, expense or attorney's fees of any nature whatsoever, which may be incurred by reason of:
 - A. Liability for (1) death or bodily injury to persons; (2) damage or injury to, loss (including theft), or loss of use of, any property; (3) any failure or alleged failure to comply with any provision of law or the O&M; or (4) any other loss, damage or expense, sustained by any person, firm or corporation or in connection with the Work called for in the Agreement or this O&M, except for liability resulting from the sole or active negligence, or the willful misconduct of the Customer.
 - B. Any bodily injury to or death of persons or damage to property caused by any act, omission or breach of Contractor or any person, firm or corporation employed by Contractor, either directly or by independent contract, including all damages or injury to or death of persons, loss (including theft) or loss of use of any property, sustained by any person, firm or corporation, including the Customer, arising out of or in any way connected with Work covered by this Agreement or the O&M, whether said injury or damage occurs either on or off Customer property, but not for any loss, injury, death or damages caused by the sole or active negligence or willful misconduct of the Customer.
 - C. Any dispute between Contractor and Contractor's subcontractors/suppliers/laborers/Sureties, including, but not limited to, any failure or alleged failure of the Contractor (or any person hired or employed directly or indirectly by the Contractor) to pay any Subcontractor or Materialman of any tier or any other person employed in connection with the Work and/or filing of any stop payment notice or mechanic's lien claims.
- 8.3. Contractor, at its own expense, cost, and risk, shall defend any and all claims, actions, suits, or other proceedings that may be brought or instituted against the Customer, its officers, agents or employees, on account of or founded upon any cause, damage, or injury identified herein and shall pay or satisfy any judgment that may be rendered against the Customer, its officers, agents or employees in any action, suit or other proceedings as a result thereof.



PERFORMANCE AGREEMENT (PEGU) TERMS

All Proposers must offer a solar PV performance guarantee. A detailed description and any associated costs of the proposed Performance Guarantee must be included in the Proposal and Cost Forms, Attachments B1 and B2. Performance Guarantees should have the following characteristics:

1. <u>General</u>

- 1.1. The Performance Guarantee shall cover the entire term of the O&M Contract including any extensions of the O&M Term.
- 1.2. Provided on a site-by-site basis, not in aggregate.
- 1.3. Start date is the Commercial Operation date for each PV system at each site. Each year of the Performance Guarantee shall begin on the anniversary of Commercial Operation.
- 1.4. Guarantee shall be adjusted for Force Majeure events which impact performance. Force Majeure shall be as defined in the Master Energy Services Agreement.

2. <u>Performance</u>

2.1. The following minimum Performance Guarantee shall be provided with the O&M contract. Provider may select the term of their true-up period with a maximum duration of five (5) years.:

True-up Period	Minimum Guarantee
One to Three Years	90%
Four or Five Years	95%

- 2.2. No greater than 0.75% degradation loss per year.
- 2.3. Provider shall provide annual reporting of System performance on a site-by-site basis. Reporting shall include annual totals by site and true-up period totals clearly indicating performance under this agreement. Report shall be delivered within thirty (30) days of the COD anniversary.
- 2.4. If Performance Guarantee is weather-adjusted, weather adjustment calculations shall be clearly shown in annual reporting.
- 2.5. Overproduction credit may carry forward into subsequent years during each true up period. Overproduction credit shall not carry forward into subsequent true up periods.
- 2.6. Adjustment of the annual guaranteed kWh site production for years where system performance at that site is less than anticipated due to factors outside of Provider's control.



3. <u>Reimbursement</u>

- 3.1. Reimbursement for the full value of loss of energy production should guaranteed performance not be met. Duration covering the full term of the O&M contract, including any extensions of the O&M term.
- 3.2. Compensation for energy value loss is calculated as the kWh generated during the true-up period less the guaranteed true up period production multiplied by the Guaranteed Energy Price for that true up period. This calculation is meant to approximate energy avoided cost savings vs. purchasing electricity from the local electrical utility:

(Guaranteed Performance kWh – Actual Performance kWh) x Guaranteed Energy Price/kWh

3.3. Guaranteed Energy Price is the dollar value per kWh as calculated and shall be shown in the format of the table below:

True Up Term	Guaranteed Energy Production (kWh)	Guaranteed Energy Price (\$/kWh)
Year 1-XX	[TBD]	[TBD]
Year XX-XX	[TBD]	[TBD]

Table 1: Guarantee Energy Price per True Up Period