



# **Matinicus Isle Plantation Board of Assessors Matinicus Plantation Electric Company**

## **REQUEST FOR PROPOSALS**

**New Energy Generation Project: Multi-Mode Operation of  
PV/Battery Energy Storage/Diesel Architectures Supporting a  
Community Microgrid**

Released April 10, 2020

Administered By:

Island Institute  
386 Main St  
Rockland, ME 04841



## ***NOTICE***

This Request For Proposal (“RFP”) to provide a comprehensive, new energy generation plant incorporating; solar photovoltaics, energy storage, and new diesel generation, was prepared by Bryan Carroll (Isle au Haut, Maine) for the Matinicus Isle Plantation Board of Assessors (“BOA”), and the Matinicus Isle Plantation Electric Company (“MPEC”). His work is sponsored by The Island Institute. Neither the BOA, MPEC, or the Island Institute, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by any of the agencies listed above. The views and opinions of the author expressed herein do not necessarily state or reflect those of any agency thereof. MPEC, or any stakeholder or representative of the Plantation of Matinicus or the Island Institute, providing assistance or expertise, shall not be responsible in any way in connection with erroneous information or data provided to it by any third party, or for the effects of any such erroneous information or data whether or not contained or referred to in this document. MPEC reserves the right to not proceed with the initiative as well as the right not to discuss the initiative further with any respondent without reason.

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## ***PREFACE***

Matinicus Isle Plantation, Matinicus Isle Plantation Electric Company and the Island Institute have prepared this Request for Proposal document to invite qualified organizations, wishing to submit qualifications and proposals to develop, finance, build, operate and maintain a turnkey new community-scale energy plant, highlighting the use of new solar photovoltaic (“PV”) and battery energy storage (“BESS”) technologies. This RFP represents a landmark opportunity for the Plantation and winning bidder to demonstrate a resilient energy solution, in the face of a rapidly changing climate, for ratepayers, both past and present, as well as all the working families, school children, and part-time residents that call Matinicus Isle their home. The author would like to acknowledge the continued efforts of the Matinicus Isle Plantation Board of Assessors and Matinicus Isle Electric Company for their continued support of new energy projects, and securing a sustainable cost of energy for their ratepayers, as well as the Island Institute for their leadership and support of island communities seeking to better understand and confront their unique energy challenges.

### **1.0 Executive Summary**

MPEC, located in Matinicus Isle Plantation, is issuing this RFP for the design of a new community (grid-scale) solar energy and energy storage plant, all related rights to generation output, including but not limited to, energy, capacity, environmental attributes, and ancillaries, stemming from standalone solar-powered generation or solar plus storage generation project. MPEC’s generation, transmission and distribution system is a wholly owned and restricted transmission system, with no interconnection to ISO-New England (“ISO-NE”), which oversees the operation Maine’s bulk electric power system and transmission lines generated and transmitted by its member utilities.

MPEC and BOA will accept proposals from any electric utility, independent power producer, solar/storage developer, or electric power marketer that has solar and storage facilities available, existing and/or planned, and operates within the ISO-NE transmission system (“Respondents,” “Bidders”). MPEC requires proposals for Third- Party Power Purchase Agreements (“PPA,” “Agreements”), and PPAs with Step-in Purchase Rights, as an option to the Base Proposal. MPEC is soliciting proposals meeting the following criteria :

<b>TECHNOLOGY</b>	Base Proposal: New Solar Photovoltaic Base Proposal: New DC- or AC-Coupled Battery Energy Storage System (“BESS”) with MPPT Base Proposal: New EPA Tier 4 diesel generator, or equivalent, (<70db outside), with generator optimization software
<b>SOLAR ARRAY SIZE</b>	Minimum: 300 kWDC, Minimum: 200 kWAC
<b>BESS SIZE AND DURATION*</b>	To be proposed by respondent (≥1000 kWh, or 12 hours)
<b>SITE AND GRID INFRASTRUCTURE IMPROVEMENT**</b>	Base proposal: site clearing, grading, access to proposed site, staging area, site and wire protection Base proposal: sub-station, generator, control upgrades
<b>CONSTRUCTION SCHEDULE</b>	Proposed construction milestones with dates
<b>COMMERCIAL OPERATION DATE</b>	To be proposed by respondent with submittal of construction schedule
<b>CONTRACT</b>	Base Proposal: PPA for entire energy generation Base Proposal Option: PPA with step-in purchase rights, or ownership flip
<b>PRODUCTS</b>	Base Proposal Solar: Premium solar modules (mono or multi) Base Proposal Racking: Driven pile, ground screw, or ballast. Base Proposal BESS: lithium ion or similar chemistry, graphene supercapacitor (excluding lead acid)
<b>PPA TERM</b>	Base Proposal Solar production: 20 - 25 years Base Proposal BESS: 15 – 20 years with options to oversize or augment and capacity guarantee

<b>GENERATION SHAPE</b>	Base Proposal Solar: As-Generated Base Proposal Solar: Fixed Shape Base Proposal BESS: Extend the as-generated solar into the evening peak hours Base Proposal BESS: smooth the as-generated solar into more expected solar blocks during daylight hours, or, Base Proposal BESS: create a dispatchable solar resource
<b>OPERATIONS AND MAINTENANCE</b>	To be proposed by respondent. A proactive approach, with scheduled testing, maintenance and equipment replacement
<b>PERFORMANCE GUARANTEE</b>	To be proposed by respondent
<b>PRODUCT AND WORKMANSHIP WARRANTIES</b>	To be proposed by respondent, but minimum workmanship warranties of 5-year, and product warranties, and extended warranties, with minimum of 15 years
<b>REFERENCES AND RELATED PROJECTS</b>	List of similar projects (3). Include client name, a brief summary of the work, and the name, address, phone number, and email address of a responsible contact person
<b>VALUE SERVICES</b>	To be proposed by respondent but intended to drive down the cost of construction and operation
<b>PRICE</b>	Base Solar + BESS Proposal: Fixed rate (\$/MWh) with or without an annual escalator

**Table 1** Project proposal base criteria.

\*Historical reports highlighting high interval usage and production data provided upon request.

\*\*Detailed site dimensions, restrictions, and covenants to be provided by MPEC upon request.

**Respondents are encouraged to attend a scheduled site visit prior to submittal. Scheduled site visits will be posted on <https://matinicussolar.org>.**

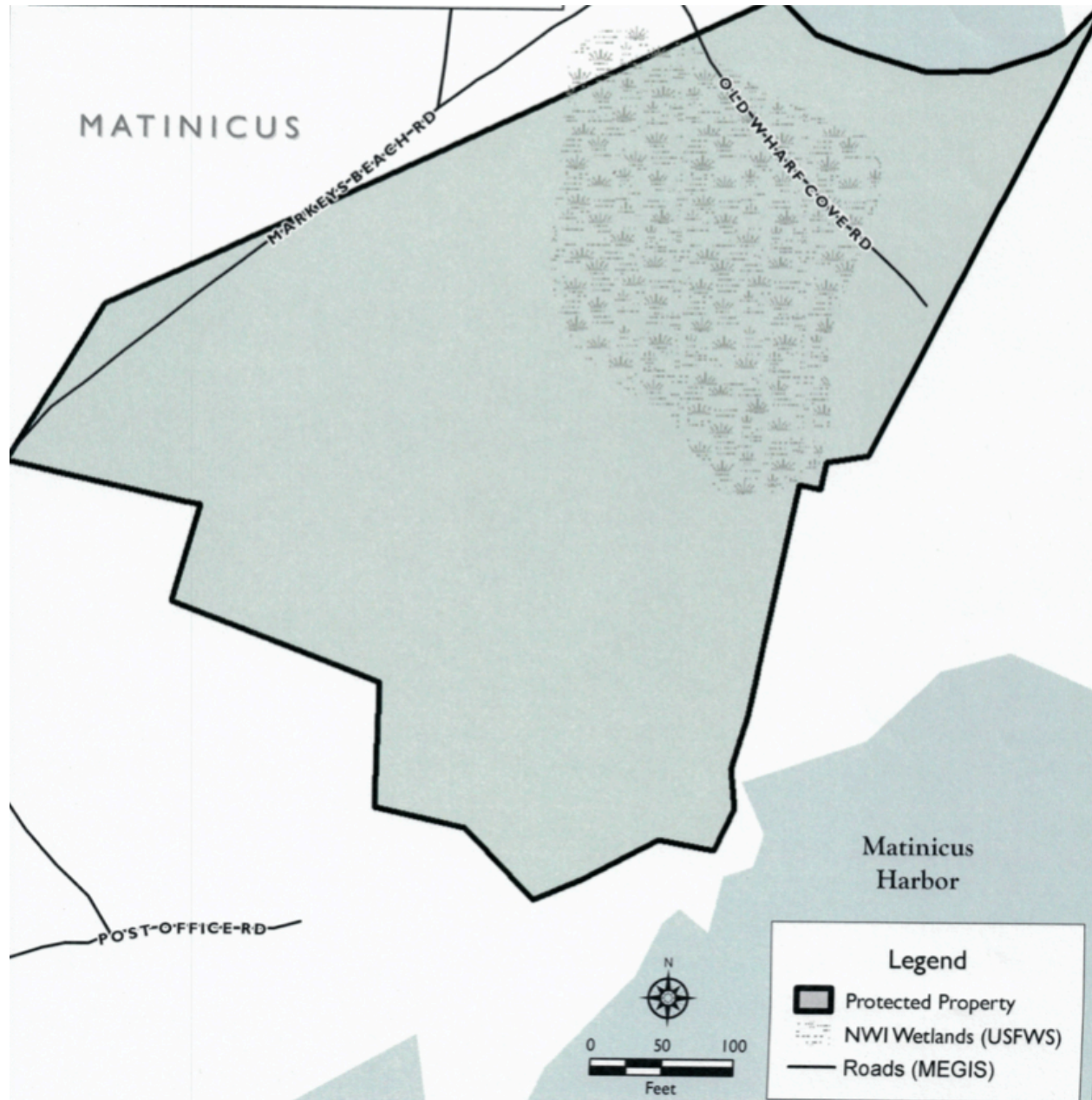


**Figure 1** Matinicus Isle Plantation Electric Company approximate solar site location with conservation easement baseline courtesy Maine Coast Heritage Trust. Map Scale: 1:1200, 1 inch=100 feet. Not a survey. Do not rely on boundaries. Note wetlands bisecting site.





**Figure 2** Matinicus Isle Plantation Electric Company approximate solar site location with conservation easement baseline courtesy Maine Coast Heritage Trust. Map Scale: 1:4800, 1 inch=400 feet. Not a survey. Do not rely on boundaries.



**Figure 3** Matinicus Isle Plantation Electric Company approximate solar site location map showing protected property and wetlands. Map Scale: 1:1200, 1 inch=100 feet. Not a survey. Do not rely on boundaries.

## ***2.0 Background***

Situated approximately 29 miles, due east of Bristol, in the middle of the Gulf of Maine, lies Matinicus Island, a 750-acre outcrop populated by a year-round community of 30. Since filing for incorporation with the Maine Public Utilities Commission (MPUC) in 1975, MPEC, a municipally-owned electric utility, has been providing quality generation, transmission and distribution services to all ratepayers. With no physical utility connection to the mainland, MPEC generates all of its electricity on-island. Even though population on the island increases over threefold in the summer, the number of MPEC customers connected to the system remains stable throughout the year, with an average of 130 utility service meters.

With the increase in population during the summer months, MPEC is considered to be a summer-peaking utility, with approximately 50 percent of its sales occurring during the June – October period. Regardless, annual sales have seen a remarkable decrease by over 40,000 kilowatt-hours since 2009; even with a slight increase in the number of customers over that period. Recent conservation programs, line losses, or equipment may have led to this decrease.

The project seeks to increase the efficiency and reliability of MPEC's power generation and provide a model for a renewable microgrid system that could be replicated on other islands and in other small, remote communities. It is expected that the project will replace the outdated, analog switchgear, allowing the generators to seamlessly mate with BESS, and run at maximum efficiency. Increased system efficiency will reduce the island's costly dependence on diesel fuel and ensure a consistent power supply for decades.

### ***2.1 Generation, Transmission, and Distribution Facilities***

As a utility that is electrically and physically isolated from the mainland grid, MPEC must rely on alternate forms of generation. To date, the sole source of power has been diesel internal combustion generators. This type of generation is relatively inexpensive to install, but expensive to operate and maintain. Historically, however, the combined fuel, operating, and maintenance costs have been less than alternative sources such as solar and wind.

A 2016 study of the financial impact of line losses in the distribution system determined that ratepayers have had to cover the cost of approximately \$260,000 in electricity generated but not consumed in the preceding 10 years. Historically, generation losses are high and have averaged approximately 24% since 2009. While higher losses are expected for smaller systems, such as those under control of MPEC, these losses are still too high. Losses on a monthly basis have proven to be seasonal, with higher losses during the off-peak months. Furthermore, the higher generating requirements during the summer months skews the annual average toward those months, and losses during the winter months can be at least 30% or higher.

Current generation on island is accomplished through the following inventory of equipment:

- (2) Detroit Diesel 471, rated at 100 kW, 480V
- (1) Detroit Diesel 371, rated at 80 kW, 480 V
- (1) Detroit 671, rated at 150 kW, 480 V

Due to the bespoke nature of a new solar generating and battery energy storage facility, and due to the expected proposed costs to integrate to the existing diesel generating infrastructure, proposals inclusive of a new generator, solar, battery energy storage and/or demand side management, with seamless integration into existing transmission and distribution, will be considered.

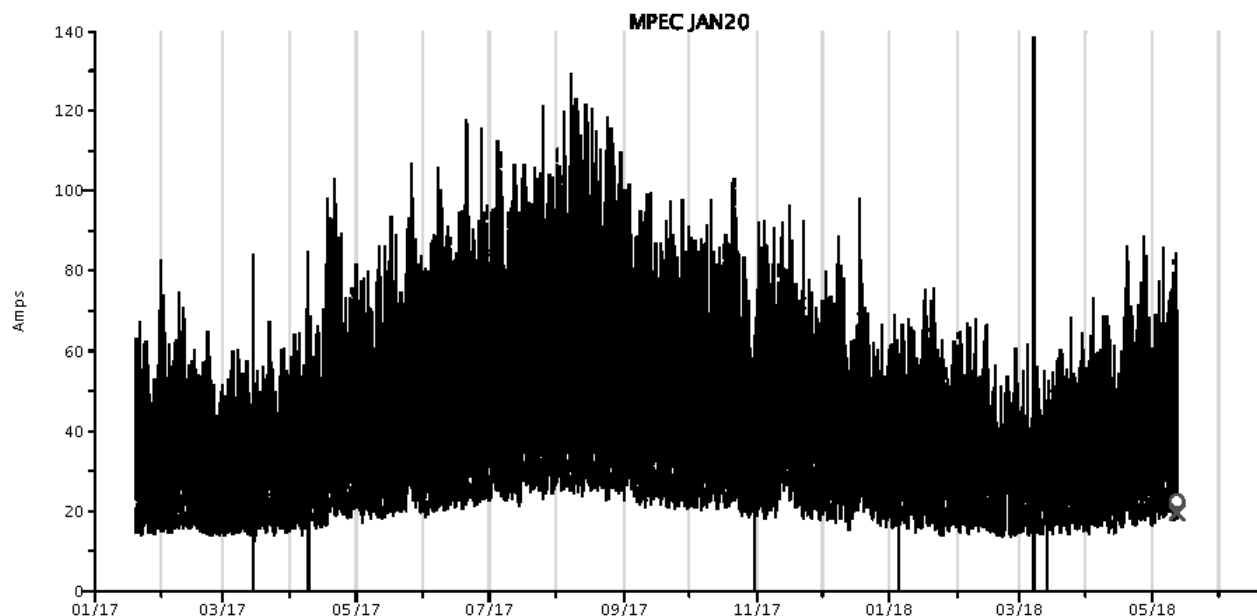
### ***2.2 Electricity Usage, Rates, and Costs***

Due to the nature of generation on island, and the cost of bulk fuel, the five-year average kWh rate is \$0.68/kWh (including the base rate), but it has been as high as \$0.80/kWh; almost 200% higher than the threshold for federally defined high energy costs

The island consumes about 245,000 kWh of electricity per year and most of this usage is in the summer (Figure 2). MPEC operating expenses, due to high overhead and maintenance of a rural generation and distribution infrastructure, cost the Plantation approximately \$200,000/year, which includes approximately \$100,000 in fuel purchases alone.

The current rate structure, for ratepayers, is based on the following three conditions:

- Fixed customer charge of **\$25.00/meter/month**
- Energy charge of **\$0.3045/kilowatt-hour**
- Fuel surcharge based on a per kilowatt-hour basis that reflects the cost of generating fuel above \$1.00/gallon



**Figure 4** Six-month load profile (2017-2018) courtesy Matinicus Isle Plantation Electric Company.

### ***3.0 Solar Proposal***

In 2018, and in part due to a land donation by the Maine Coast Heritage Trust (“MCHT”), with an exception granted for energy generation and transmission on this donated portion of land, the

BOA committed to drive down the cost of energy on island and secure a fixed cost of energy through an innovative solar and energy storage facility. See Table 1 for sizing requirements.

### **3.1 Solar Site**

All respondents will need to contact [Maine Department of Agriculture, Conservation and Forestry](#) and seek permitting requirements for use of the MCHT land, as this agency has jurisdiction on land use matters for the Plantation of Matinicus. According to the quitclaim deed on the property, where the proposed solar site will be located, portions of the protected property other than the intertidal area and wetlands or marshes may be used for energy generation and transmission .

*Maine Department of Agriculture, Conservation, and Forestry  
Land Use Planning Commission  
106 Hogan Road; Suite 8  
Bangor, Maine 04401*

To accurately determine the permitting procedures, when contacting the above agency, please be advised that you will have to answer the following questions regarding the project:

- Is the application a grid-scale solar energy generation facility?
- Is the purpose of this project, primarily, or solely intended to generate electricity for commercial sale or use?
- Does the size of the project occupy an area of one or more acres, and has a nameplate capacity of more than 250 Kilowatts?

### **4.0 Technical Requirements and Reference Materials**

Respondents proposals for installation and equipment shall be fully code compliant; complying with all applicable building, mechanical, fire, seismic, structural and electrical codes. Only products that are listed, tested, identified, or labeled by UL, ETL, or another Nationally Recognized Testing Laboratory shall be used as components in the project. Non-listed products are only permitted for use as project components when a comparable useable listed component does not exist. Non-listed products proposed for use as components must be identified as such in all submittals.

The contractor shall use project components that are or are made of materials or finishes that are to last a minimum of 40 years.

The publications and technical codes listed below are for reference, and form a part of this document and are hereby incorporated:

- NFPA 70, National Electrical Code (NEC) 2020, sets the foundation for electrical safety.
- UL 1703 Flat – Plate PV Modules and Panels
- UL 1741 – Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems
- FM Approved – Fire Protection Tests for Solar Component Products

- NFPA 855 – Fire Protection Standard For The Installation Of Stationary Energy Storage Systems, 2020
- IEC 62446 Grid Connected Photovoltaic Systems- Minimum Requirements for System Documentation, Commissioning Tests, and Inspections

Other technical codes that shall apply include:

- ASME PTC 50 (solar PV performance)
- ANSI Z21.83 (solar PV performance and safety)
- NFPA 853 (solar PV systems near buildings)
- IEEE 1547 (interconnections)

### ***5.0 Roles and Responsibilities***

The respondent is required to provide:

- Design concepts, including similarly scaled solar+storage project as reference
- Construction documents and engineering calculations that are signed and sealed by a licensed architect or engineer in State of Maine
- Submittals for materials and products
- Construction materials, equipment and labor
- Design and construction supervision / contract management
- Quality control plan (QCP)
- Safety plan
- Inspections and tests (per QCP)
- Manuals (design calculations, operation/maintenance, shop drawing, etc.)
- Commissioning of project
- Training of MPEC operating staff for operation and maintenance
- Operation and Maintenance for first year and optional service plan after the first year
- Web-based monitoring system for 20 years
- Seek approval of interconnection with utility

MPEC and BOA will:

- Review for approval design submittals and QCP, seeking outside engineering, or third-party, expertise as necessary
- Witness inspections and test witnesses to verify attainment of performance requirements
- Make progress payments for design / construction as agreed upon and mandated by proposal criteria design and construction milestones.

### ***6.0 Utility Interconnection Agreement***

The respondent shall independently coordinate with MPEC to ensure that the project satisfies all utility criteria for interconnection of the project to the electric distribution system. This includes

coordinating all negotiations, meeting with MPEC, design reviews, and participating in any needed interaction between the two parties.

Unlike most projects in Maine, the respondent is not responsible for preparing required submissions for obtaining Net Energy Billing (NEB) and interconnection agreements from the utility and Maine Public Utilities Commission, including exclusion from Distributed Generation Procurement Process

The respondent shall manage interconnection and startup of project in coordination with the site and MPEC. The contractor shall at its own expense pay any interconnection, processing, and other fees and expenses as may be required by MPEC for interconnection and operation of the project.

### ***7.0 Quality Assurance/Quality Control***

For each performance and installation requirement, the QCP shall identify item/system to be tested, exact test(s) to be performed, measured parameters, inspection/testing organization, and the stage of construction development when tests are to be performed. Each inspection/test shall be included in the overall construction schedule. The contractor is not relieved from required performance tests should these not be included in the plan.

The QCP is intended to document those inspections and tests necessary to assure MPEC, or its representatives, that product delivery, quality and performance are as required. It also serves as an inspection coordination tool between the contractor and MPEC or its representatives. An example of these inspections/tests is the final test/inspection for overall performance compliance of the system. Results from tests and inspections shall be submitted within 24 hours of performing the tests and inspections.

At a minimum, the QCP should conform to “IEC 62446 Grid Connected Photovoltaic Systems - Minimum Requirements for System Documentation, Commissioning Tests, and Inspections (2009)”.

**Submissions.** The QCP shall be prepared and submitted within 21 calendar days of the post award conference meeting and prior to any construction on-site. The QCP may be rejected as incomplete and returned for resubmission if there is any performance, condition or operating test that is not covered therein.

**Updating.** During construction, the contractor shall update QCP if any changes are necessary due to any changes or schedule constraints. MPEC shall be notified immediately of any schedule and/or procedural changes.

### ***7.1 Performance Testing***

Test will be conducted at the final commissioning/acceptance testing, and one year after the acceptance date at no additional cost. Performance tests will include I-V curve traces for all PV strings, meg-ohm testing, and string voltage testing for each individual string at a combiner point.

### ***7.2 Project Acceptance***

For project acceptance, measured performance at maximum power point must be at least 90% of expected performance, which will be adjusted for concurrently measured cell temperature and plane of array (POA) irradiance. This can be accomplished using a current industry standard I-V curve tracer with capability to compare measured PV string I-V curves with nameplate performance of PV string compensated for concurrent cell temperature and POA irradiance measurements.

If performance is less than 90% at the one-year performance tests (measured using the same method as for project acceptance), contractor shall promptly troubleshoot and correct any malfunction or issues as necessary to return project to 90% measured performance or better. The contractor shall supply MPECT with detailed documentation of malfunction or errors and all corrective actions taken.

### ***8.0 Solar Array***

PV modules shall be a commercial, premium mono- or poly-crystalline module, with a minimum efficiency of 18%, and shall be UL listed, and shall be properly installed according to manufacturer's instructions, NEC, and as specified herein.

The PV modules shall be installed at an azimuth and tilt angle, such that the maximum amount of solar radiation, year-round, and on a daily basis, is made available. At a minimum, the PV array shall be shade free from 9 a.m. until 3 p.m. (solar time), on the Winter Solstice for the project latitude. All bids must include documentation of the impact from any obstruction on the seasonal or annual performance of the solar photovoltaic array, and provide a shade analysis.

The solar electric system shall produce the minimum annual AC energy output. If the system is proposed to produce more than the minimum required energy output to reduce the cost per delivered kWh, then the system shall produce the "proposed" energy. The output will be adjusted if the actual yearly solar insolation received is less than that indicated by PVWatts, or PVSyst. A normalizing calculation will be made to correct the output, so a contractor is not penalized for an extremely cloudy year.

### ***8.1 Solar Modules and DC Scope***

System wiring shall be installed in accordance with the provisions of the NEC.

All modules installed in a series string shall be installed in the same plane/orientation, and maximize available solar radiation by being installed at most beneficial array azimuth angle and tilt. **Trackers will not be considered for this project.**



PV modules shall have a 25-year limited warranty that modules will generate no less than 80% of rated output under STC. PV modules that do not satisfy this warranty condition shall be replaced.

Module installation design shall allow for the best ventilation possible of panels to avoid adverse performance impact (eg. ground mount, fixed-tilt).

Provide MPEC with 1% extra PV modules.

Warranty. Provide a module manufacturer's warranty as a minimum: No module will generate less than 90% of its specified minimum power when purchased. PV modules shall have a 25-year limited warranty guarantying a minimum performance of at least 80% of the original power for at least twenty-five (25) years. Measurement made under actual installation and temperature will be normalized to standard test conditions using the temperature and coefficients published in the module specifications. DC voltage drop within the array and to the inverters shall be no more than 5%.

### ***8.2 Inverters and Controls***

Each inverter and associated controls shall be properly installed according to manufacturer's instructions. Any proposed inverter(s) shall be commercial inverters, listed to UL 1741 and IEEE 1547.

The inverter shall have at a minimum the following features:

- UL/ETL listed
- Peak efficiency of **96%** or higher
- Inverter shall have operational indicators of performance and have built-in data acquisition and remote monitoring.
- The inverter shall be capable of parallel operation with the existing AC power. Each inverter shall automatically synchronize its output waveform with that of the utility upon restoration of utility power.

Warning labels shall be posted on the control panels and junction boxes indicating that the circuits are energized by an alternate power source independent of utility-provided power.

Operating instructions shall be posted on or near the system, and on file with facilities operation and maintenance documents.

Provide detailed lock out/tag out instructions for all equipment.

Power provided shall be compatible with onsite electric distribution systems.

Inverters should be installed in most optimum locations with appropriate environmental protections and access. If inverters are mounted outside, they shall be shaded from direct sun from 10 a.m. to 6 p.m. in the months of June to August.

Warranty supplied in should be a minimum **15-year manufacturers'** warranty shall be provided and no additional cost.

### ***8.3 Control Panel to Solar Electric Array Wire Runs***

Areas where wiring passes through ceilings, walls or other areas of any new or existing buildings accommodating inverters, charge controllers, storage and ancillary equipment, shall be properly restored, booted, sealed and returned to their original condition.

All wiring between ground-mounted array and the point of interconnection shall be meet all applicable codes. If conditions on ground do not permit burial, alternative methods will be allowed.

All field electrical devices shall have the capability to be locked as appropriate.

### ***8.4 Monitoring***

The PV systems installed shall provide for monitoring by MPEC as well as by the general public on a vendor provided website. The public site is intended for education and outreach regarding renewable energy production and information on avoided greenhouse gas production. The public site shall be maintained for ten years.

Monitor by an IP addressable device and displayed graphically in a user-friendly manner the following parameters:

- AC energy
- AC amps
- Solar irradiance
- Show status of all equipment

Data shall be available both in real time and in archived in 15-minute averages (minimum). All monitoring hardware and monitoring equipment shall be provided by the contractor.

System performance shall allow display during different monitoring periods from one hour to one year.

Provide networking equipment, engineering, programming, wiring, and software to allow remote connection by MPEC to the local area network.

Meters utilized for the project shall be UL listed and should be revenue-grade in nature.

Meters shall be installed in the main distribution panel (MDP) when possible. Meters shall not be mounted to the transformer housing without prior approval when there is no other reasonable place to mount it.

## ***9.0 Project Closeout***

The following steps shall be taken to assure the project is in a condition to receive inspections and tests:

Finalize record drawings and manuals, indicating all "as-built" conditions.

Record Drawings. The contractor shall maintain on site the working record drawings of all changes/deviations from the original design. Notations on record drawings shall be made in erasable red pencil or other color to correspond to different changes or categories of work. Marked-up drawings shall always be maintained at the contractor's on-site construction office, available for MPEC to review. Record drawings shall note related change order designations on impacted work. When shop drawings indicate significant variations over design drawings, shop drawings may be incorporated as part of record drawings. Review of record drawings may be required before monthly payments can be processed.

### ***9.1 As-Built Drawings and Specifications***

The Contractor shall provide "as-built drawings" and documents based upon actual site installation. Should MPEC determine that variations exist between finished construction and the as-built drawings, the contractor shall correct drawings to the satisfaction of MPEC.

The contractor shall submit six (4) hard copies and two (2) USB storage devices containing the "as-built" drawings and specifications as CAD and PDF files, including equipment elevations, all specification sheets and operation manuals associated with construction and operation.

### ***9.2 Warranties and Guarantees***

Submit specific warranties and guarantees, final certifications and similar documents to MPEC upon substantial completion and prior to final payment. Include copies with operations and maintenance manual. All warranties, performance guarantees and close-out documents shall be signed by a principal of the contractor's firm and sealed.

### ***9.3 Maintenance and Operators Manual***

Provide a detailed operation and maintenance manual including diagram of system components, description of normal operation; description of operational indicators and normal status of each, table of modes of operation, safety considerations, preventative maintenance requirements, troubleshooting and corrective actions; sources of spare parts and cut-sheets for all components. The contractor shall prepare six (6) hardcopies and two (2) CDs containing the detailed Maintenance Manual. Submit to Gary Peabody.

Spare Parts. The contractor shall provide a recommend list of spare parts. At the minimum a set of combiner box fuses for each array shall be provided along with the required spare panels noted in Section 8.

#### ***9.4 Demonstration and Training***

Provide MPEC approved training for designated personnel in the operation of the entire photovoltaic energy system, including operation and maintenance of inverter(s), transfer switches, panel board, disconnects and other features as requested by MPEC. Instruct the designated MPEC personnel in removal and installation of panels, including wiring and all connections. Provide MPEC with written instructions and procedures for shut-down and start-up activities for all components of the system.

#### ***10.0 Operations and Maintenance Service***

Although not a requirement for the winning bidder, the offer to provide comprehensive, proactive Operations and Maintenance Service should be included as it would be expected that winning bidder provide operation and maintenance of the solar array systems for one year. Work shall include all manufacturer recommended maintenance as well as a 12-month performance commissioning test as outlined in QCP. MPEC shall be invited to witness all performance commissioning's. A maintenance log shall be maintained to note dates, equipment and issues being resolved. Local contractors, or local subcontracted labor are preferred, as a Contractor should be available within 48 hours to respond to natural disasters (extreme storm, hail, wind events) to inspect array, wiring and balance of system for damage.

#### ***11.0 Submission Instructions***

Each Respondent should complete and submit a Notice of Intent ("NOI") to Respond form by May 1, 2020 in order for the Respondent to directly receive any subsequent information related to the RFP distributed prior to the proposal due date. The Notice of Intent to Respond form and all other RFP documents will be posted on the [Matinicus Solar](#) project website, but an example is provided in Appendix A.

Respondents need to provide electronic copies of their responses to the Request for Qualifications to the bid evaluation team no later than 2:00 p.m. Eastern, Friday, May 8, 2020. Electronic submissions can be emailed to [info@matinicusolar.org](mailto:info@matinicusolar.org).

Proposals are considered complete upon the submission of Respondent's indicative pricing and clear delineation as to the products being offered to BOA and MPEC. This solicitation and related processes imply no obligation on the part of the BOA or MPEC to accept any proposal. All expenses incurred by the Respondent in the development of their proposal are the sole responsibility of the Respondent. When responding, please provide information relating to:

- the availability of, and Bidder's access to, the equipment and components proposed / to be utilized for construction and operation of the Project
- procurement lead times
- list of the manufacturers of the storage system and major individual balance of plant equipment
- description and equipment specifications of the proposed Project, including storage modules, power converter, meters, communications equipment and

protocols, disconnect devices, point of interconnection voltage, and any other related facilities necessary to interconnect the proposed project

**12.0 RFP SCHEDULE**

This RFP is a selective tendering process and is being issued to support both the requirements of MPEC to provide customers with safe, reliable electricity in a most cost-efficient manner, as well as the initial phase of renewable energy transition for the island of Matinicus. The schedule and deadlines set out below apply to this RFP. MPEC the right to revise this schedule at any time and at its sole discretion. The proposed schedule and timetable are as follows:

<b>NO.</b>	<b>ACTIVITY</b>	<b>SCHEDULE</b>	<b>DATE</b>
1	ISSUE OF REQUEST FOR PROPOSAL		04/10/2020
2	DEADLINE FOR NOTICE OF INTENT (NOI)	21 DAYS AFTER NO.1	05/01/2020
3	REQUEST FOR QUALIFICATIONS (RFQ) SUBMITTAL	7 DAYS AFTER NO. 2	05/08/2020
4	DEADLINE FOR SUBMITTAL OF QUERIES AND CLARIFICATION BY BIDDER	7 DAYS AFTER NO. 3	05/15/2020
5	DEADLINE FOR MPEC FOR ANSWERING OF QUERIES AND CLARIFICATIONS	14 DAYS AFTER NO.4	05/29/2020
6	DEADLINE FOR SUBMISSION OF PROPOSAL BY BIDDER	30 DAYS AFTER NO.5	06/29/2020
7	REQUEST FOR CLARIFICATIONS BY MPEC TO BIDDER (AS NEEDED)	14 DAYS AFTER NO.6	07/13/2020
8	COMPLETE EVALUATION OF PROPOSALS	14 DAYS AFTER NO.7	07/27/2020
9	NOTIFICATION OF PREFERRED BIDDER(S)	7 DAYS AFTER NO.8	08/03/2020
10	COMPLETE NEGOTIATIONS OF PROJECT FINANCING, TAX AND SCHEDULE WITH PREFERRED BIDDER(S)	60 DAYS AFTER NO.9	10/01/2020
11	SIGNING OF TERM SHEET WITH PREFERRED BIDDER(S)	7 DAYS AFTER NO.10	10/08/2020
12	ISSUE OF FULL NOTICE TO PROCEED WITH MPEC	7 DAYS AFTER NO.11	10/15/2020

Table 2. RFP schedule

### 13.0 Company Qualifications, Licenses, & Experience

When responding to this RFP, please include a separate cover letter with company qualifications, and representative projects, including those in which a single scope of work may have been provided. Having qualifications in multiple disciplines is extremely helpful when comparing bidders. It also ensures that this solar project is aligned with MPEC departmental objectives. Disciplines and qualifications to be highlighted:

- Finance
- Facilities
- Engineering
- Utilities
- Legal
- Procurement
- Risk Management

Please submit three hard copies, and one digital copy of qualifications (“RFQ”). All copies shall be clearly labeled with RFQ title, date, and firm name. Submit by Friday, May 8, 2020 to: 17 South Road, Matinicus, Maine 04851 and [info@matinicussolar.org](mailto:info@matinicussolar.org).

### 14.0 Financial

In setting financial goals, it is important for the bidder to establish clear valuations and standard metrics to allow MPEC to make accurate comparisons. This alleviates confusion that might come with a proposal which only discusses total installed watts, and/or price-per-watt while another proposal shows total energy production and price-per-kWh. Bidders should respond with the following conditions in mind:

- Positive net present value (NPV)
- Internal rate of return (IRR)
- Lowest levelized cost of energy (LCOE)
- Greatest energy production

FINANCE TYPE	SOURCE	AMOUNT (\$)	% TOTAL
EQUITY FINANCING	PROJECT SPONSOR		
	CONTRACTOR/SUPPLIER		
	OTHER (PLEASE LIST)		
	TOTAL EQUITY		
DEBT FINANCING	COMMERCIAL		
	FEDERAL		
	OTHER		
	TOTAL DEBT		
TOTAL FINANCING			

**TABLE 3** Proposed project financing rubric (PLEASE HIGHLIGHT SOURCE AND PROPOSED AMOUNT).

### ***15.0 Evaluation Criteria***

The BOA and MPEC bid evaluation team will review submitted qualifications and may request a meeting with the firm. Firms will be evaluated based on technical understanding of the project scope and will include the evaluation of the proposed solar generation equipment, solar energy storage technology, installation criteria, and financing. Most importantly, it is the sole intent of the bidder to provide a bespoke energy solution, designed specifically to meet the unique new energy generation needs of the island; dated generation, transmission and distribution infrastructure, low meter density, predictable seasonal peaking in energy demand and reliance on fossil fuels.

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*Appendix A*

**Notice of Intent to Bid Form**

*New Energy Generation Project: Multi-Mode Operation of PV/Battery Energy Storage/Diesel Architectures Supporting a Community Microgrid*

This form confirms the interest of your organization to provide a response for the design, build and operation of a new energy and energy storage plant; including innovative financing and maintenance of such plant. Submission of this form does not require the bidder to submit a proposal.

Please submit the completed form by May 1, 2020 at <https://matinicussolar.org/respond/> or by emailing a completed form to [info@matinicussolar.org](mailto:info@matinicussolar.org).

Company Name:
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Yes: My company intends to submit a response to this Request for Proposal.

Designated Single Point of Contact for this Proposal:

Name:
Title:
Email:
Phone:

*Appendix B*

**Request for Qualifications Cover Letter**

Date:

[Name of Respondent][d/b/a]

[Address]

Attention: Matinicus Board of Assessors, Matinicus Plantation Electric Company  
17 South Road, Matinicus, Maine 04851

Cc: Island Institute c/o Emma Wendt  
386 Main St #3345, Rockland, ME 04841

Subject: Request for Qualifications

**NOTE: Amendments and additions will be posted to the [Matinicus Solar](#) website. It is the Respondent's sole responsibility to check for amendments and additional information.**

The enclosed Response is submitted in response to the above-referenced Request for Qualifications as outlined in Section 13 and will be submitted by May 8, 2020 to [info@matinicussolar.org](mailto:info@matinicussolar.org).

We have carefully read and examined the Request for Qualifications and have conducted such other investigations as were prudent and reasonable in preparing the Response. We are authorized to submit this Response on behalf of the Respondent.

Yours truly,

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Date*

Legal Name:

Title:

Telephone:

Email:

Date: