

**CITY OF MARIANNA  
COMMISSION AGENDA MEMO  
REGULAR MEETING  
June 4, 2019**

**ADMINISTRATIVE STAFF REPORT**

- Subject:** Waste Water Treatment Plant (WWTP)  
Solar Project – Maintenance Agreement
- Subject Background:** The City received funding from FDEP, State Revolving Fund for the construction of a solar farm at the City’s WWTP and Spray Field. The project is under construction with completion estimated for early July.
- City staff requested its consulting engineer research and provide a recommendation for a company to perform annual maintenance and monitoring for the two (2) locations. The work is performed as part of the contract for engineering services the City has with the Engineer for this project.
- Recommendation:** The City’s Engineer has researched and interviewed prospective maintenance firms on behalf of the City. The Engineer identified a contractor then performed an interview, in which the City participated. The City’s Engineer has recommended and Staff concurs awarding the Annual Maintenance Contract to Renew Petra.
- Potential Motion:** I move to approve the recommendation of the City’s Engineering Firm David H. Melvin, Inc. and award an Annual Maintenance Contract to Renew Petra.

Approved for agenda by:



May 28, 2019

Jim Dean, City Manager  
City of Marianna  
2898 Green Street  
Marianna, FL 32446

**RE: City of Marianna WWTP & Sprayfield Solar Plants Project  
Renew Petra Annual Maintenance Agreement for Approval  
Agenda Item for June 4, 2019 City Commission Meeting**

Dear Mr. Dean:

Please find attached for your approval an Annual Maintenance Agreement for the subject project offered by Renew Petra at a cost of \$7,000.00 per year, including the following services:

- Daily project site monitoring of inverters and meter output data for issues and alarms as provided by the Also Energy solar performance monitoring system.
- Preparation of an Annual Maintenance Plan including baseline schedule for all maintenance services planned for the year.
- Preparation of semi-annual and annual operating and maintenance reports.
- Provide incident reports for any unplanned services that may be required.
- Provide recommended spare parts list.
- Perform DC and AC systems and monitoring system annual maintenance inspections.
- Perform annual inverter preventative maintenance per manufacturer's recommendations.
- Annual testing as described in the attached proposal.

The Renew Petra company, located in Huntersville, NC, currently has 15 solar plant sites with a total power production of 53 MW under a maintenance agreement. All 15 of the solar facilities that they currently monitor are equipped with Also Energy performance monitoring systems, which is the same type system as used to monitor the City of Marianna solar projects. Renew Petra performs daily performance monitoring of the solar sites via the Also Energy web-based system. If problems are identified they trouble-shoot the problem and can provide corrective maintenance. However, the cost of replacement parts and service calls not covered by the Annual Maintenance Agreement will be the responsibility of the City of Marianna.

Bay4 Energy Services, located in Safety Harbor, Florida, also provided a proposal for similar annual maintenance services for annual fee of \$19,027.00. Since Renew Petra is well qualified and their proposal is competitively priced, we recommend Renew Petra to perform the required annual maintenance services for the City of Marianna solar plant facilities.

*DAVID H. MELVIN, INC.*  
*Consulting Engineers*

We understand these services are considered by the funding agency (FDEP-SRF) to be operating and maintenance costs which are not be eligible for funding under the current WWTP & Sprayfield Solar Plants construction project. Therefore, the cost of these services should be included in the annual maintenance budget for the City's solar plant facilities.

If you have any questions or require additional information or assistance, please do not hesitate to call our office.

Sincerely,



William Nobles, P.E.  
Project Engineer

cc:  
Joe Richey



**RENEW PETRA**

11330 Vanstory Drive | Suite 101  
Huntersville, NC 28078  
www.thinkrenew.com

**Name: Jim Dean, City Manager - City of Marianna**

**Address: 2898 Green Street, Marianna, FL 32446**

**Email: jdean@mariannafl.city**

**Re: Proposal to Provide Operations and Maintenance Services for WWTP Solar & Sprayfield Solar Plants**

**Dear Mr. Dean:**

We are pleased to present this proposal to provide operations and maintenance services for WWTP Solar Plant located at 2832 Davey St., Marianna, FL and Sprayfield Solar Plant located at 810 Pittman Hill Rd., Marianna, Florida. This proposal dated **May 2, 2019** includes the detailed scope of services that ReNew Petra Integrators O & M, LLC ("RPIOM" or "Provider") will provide to the City of Marianna ("Company"), highlights of the reporting that RPIOM will provide as well as our rates for non-covered services. All detailed terms and conditions, beyond these summary terms will be included in a formal Operations and Maintenance Contract mutually agreed upon between the Provider and Company. These services would be delivered over the Term of the Operations and Maintenance Agreement. Further details of RPIOM's services are highlighted below.

**Service Price:**

\$7,000 per year, paid in four \$1,750 four quarterly payments. On the first calendar day of the quarter following the Projects' one-year anniversary of its receipt of services provided by Provider, the Maintenance Services Fee for the successive year would be increased by two-percent (2%) annually. Any further changes to the Maintenance Services Fee would be agreed upon in writing by Company and Provider.

**Services:**

Provider would provide operations and maintenance services and routine repair labor to the solar projects. O & M services are further detailed in **Exhibit A**. Provider may provide services other than the Maintenance Services with respect to the system (such other services "Non-Covered Services"). Company would be invoiced separately for such services within thirty (30) days following Company's performance of such services. Additional Non-Covered Services are attached as **Exhibit B**.

**Term:**

The initial term for the services would be five (5) years. At the end of five (5) years, the term would be extended by mutual written agreement of the Parties thereafter.

**Maintenance Reports:**

RPIOM would maintain an electronic database to document track and manage service activity. Within five (5) days following completion of any particular unplanned Service, RPIOM would provide Company with the updated electronic maintenance log referencing such Service. Maintenance log would include a description of the Services, recommendations for follow-up Services (if any), material and equipment costs (if any), and other information relevant to such Service or as reasonably requested by Company.

**Title:**

Provider would provide Company with title to all items, parts, materials and equipment supplied under or pursuant to an executed services agreement involving the parties. Title would transfer to Company upon the earlier to occur of (i) payment by Company to Provider for such items, parts, material and equipment, or (ii) installation of such items, parts, materials and equipment into the facility.

We look forward to having the opportunity to work with you and are available to answer any questions. I can be reached at [kbrown@renewpetra.com](mailto:kbrown@renewpetra.com).

Sincerely,

Kizzie Bozeman Brown  
President  
ReNew Petra Investment Fund, I

## EXHIBIT A

### MAINTENANCE SERVICES

During the term, Provider shall provide the services at the frequency indicated, in accordance with the terms and conditions of this Agreement (as set forth in further detail below). It is expected that Provider shall make every best effort to note items of concern outside the scope of scheduled visits; inspecting and assessing items that seem to be problematic even if not part of the scheduled visits and later discussing with the Company to seek remedy.

Item #	Service	Service Description	Frequency
<b>1. Monitoring, Reporting, and Inventory</b>			
1.1	Active Project Site Monitoring	Monitor generator inverters and meter output data for issues and alarms.	Daily
1.2	Annual Maintenance Plan	Provision of Annual Maintenance Plan, including baseline schedule for all maintenance services contemplated to occur in such year.	Annually
1.3	Semi-annual Reporting	Provide semi-annual operating report for the project including a summary of (i) operations; (ii) <del>weather</del> data, power and environmental attributes; (iii) Project performance; (iv) reports of any environmental or Project site disturbances; (v) safety/accident reports; (vi) Non-Covered Services; (vii) maintenance and inspection reporting; and (viii) any proposal of recommended maintenance for the upcoming month.	Semi-annually
1.4	Annual Reporting	Provide annual maintenance/inspection reports for the project for the preceding calendar year.	Annually
1.5	Incident and Maintenance Reporting	Provide written report (in .pdf format) on any event involving unplanned Services, personnel injury associated with the project or material damage to the project or any part thereof.	As needed after occurrence.

Item #	Service	Service Description	Frequency
1.7	Spare Parts	Provide recommended list of spare parts to store, maintain, and replenish spare parts inventory at Company's expense. Inventory will be stored either on-site in an O&M storage structure or off-site at a centralized storage facility or warehouse.	As Needed
<b>2. DC Systems</b>			
2.1	Racking Inspection	Inspect all racking, racking mounts and conduits on racking for damage, corrosion, settling and stability	1 X per year
2.2	Module Inspections	Visually inspect 25% sampling of modules for soiling, breakage, delamination, discoloring, hot spots (only via aerial thermal audits), rotating sample areas annually to achieve 100% inspection every 4 years. Inspections may be done either on the ground or via aerial visual analysis and aerial thermal imaging. If systemic issues are identified, notify Company and propose a corrective action plan to be implemented as needed.	1 X per year
2.3	Broken Module Replacement	Replace modules that have previously been identified as broken (within reason), or identified as broken at the time of inspection. The cost of replacement modules (either for immediate use or to replenish spare parts) will be paid for by the Company as needed. The procurement of replacement modules is conditional to Company approval.	As Needed
2.4	Wire Inspection	Visually inspect for proper wire management and any possible damage on exposed conductors.	1 X per year
2.5	Combiner Inspection	Electrical/mechanical inspection of combiners & disconnects. Visually inspect bonding bushings and grounding, check for wire damage especially at entrance/exit locations, terminal corrosion, any discoloration, and	1 X per year

Item #	Service	Service Description	Frequency
		inspect fuses for proper functionality. Remove insects/pests debris from all enclosures.	
2.6	Combiner Torque Inspection	Confirm and correct terminal torque settings for both sides of all fuse holders, grounded (negative) terminal bar, grounding bar, PV output circuit and DC Disconnects.	1 X per year
<b>3. AC Systems</b>			
3.1	Inverters	Perform annual inverter preventative maintenance work for all inverters per manufacturer's recommendations and manufacturer's warranty requirements.	Per Manufacturer's Recommendations and Manufacturer's Warranty Requirements
3.2	Transformers	Visually inspect and clean all transformers per manufacturer recommendations, including but not limited to oil level measurement and clearing heat sink of debris.	1 X per year
3.3	AC Disconnect (if applicable)	Inspection of latches and seals on enclosure, verify proper operation of disconnect, visually inspect terminations and confirm and correct terminal torque settings. Check for signs of arcing.	1 X per year
<b>4. DAS/SCADA Inspections</b>			
4.1	General DAS Inspection	Perform monitoring system maintenance per manufacturer's specifications; verify orientation and attachment of pyranometers and module temperature sensors and MET station, and verify back up power supply functionality.	1 X per year



Item #	Service	Service Description	Frequency
4.2	Pyranometer Inspection	Inspect cable quality, inspect cable glands, inspect mounting position, inspect cable, clean instrument, clean cable, inspect levelling, change instrument tilt in case tilt is out of specification, inspect mounting connection, inspect interior of dome for condensation.	All scheduled & unscheduled Project site visits
4.3	Pyranometer Calibration	Coordinate with Company to cause calibration of pyranometers per manufacturer's specifications.	Per manufacturer specifications
4.4	Data/Instrument Accuracy and Communications Verification	Test MET station sensors (GHI and POA pyranometers, ambient temperature, back-of-module, anemometer, Revenue Grade Meter (including current transducers), and inverter direct.	1 X per year
<b>5. Testing</b>			
5.1	IV Curve String Testing or Module Level Thermal Audits	100% IV Curve Testing on strings, or 100% Module Level Thermal Audits.	Provided at additional cost (recommended once a year)
5.2	Thermal Imaging	Thermal imaging of all: overcurrent protection devices (OCPD) and bolted electrical connections including terminations in combiners and all disconnects, inverters and transformers.	1 X per year
5.3	Point-to-Point Testing	For 5% random sampling of combiner boxes, inspect grounding from modules & rack to combiners for wear, corrosion, and secure connections, and test the point-to-point resistance between modules, rack and EGC per NETA-ATS 2013 <u>Section 7.13</u> ; document location, measure resistance and record results. Investigate point-to-point resistance readings that exceed 0.5 ohms. Notify Company of any issues identified and propose a corrective action plan to be implemented as needed.	1 X per year

## **EXHIBIT B**

### **NON-COVERED SERVICES**

Charges for Non-Covered Services that can be completed during the annual inspection shall be chargeable and invoiced as follows:

Applicable rates for each man hour of such service is as follows:

- 1) Specialized Labor: \$150 per Hour.
- 2) General Labor: \$50 per Hour.
- 3) Materials: Cost + 15% markup.
- 4) Transformer Testing: Rate to be provided upon Company's request for service. RPIOM recommends having transformer oil testing annually.
- 5) Reasonable mileage reimbursement and travel expenses.
- 6) Vegetation management is assumed to be provided by the City of Marianna and is not covered in this proposal.

IN WITNESS WHEREOF, RPIOM and [Marianna Solar] have each duly agreed to the terms of this proposal on the Effective Date.

[Marianna Solar]

By: \_\_\_\_\_

Name:

Title: Authorized Person

RENEW PETRA INTEGRATORS O & M, LLC

By: \_\_\_\_\_

Name:

Title: Authorized Person