

Report from Evaluation Committee  
RFP No. 3380, Design-Build Solar Energy Facility

**REPORT FROM EVALUATION COMMITTEE  
REQUEST FOR PROPOSAL FOR  
DESIGN-BUILD SOLAR ENERGY FACILITY**

**COMMITTEE MEMBERS:**

Stephen Hogg, Assistant Director, Department of Public Utilities  
Raul Gonzalez, Professional Engineer, Department of Public Utilities  
Kevin Norgaard, Supervising Professional Engineer, Department of Public Utilities  
Todd Eischen, Electrical Supervisor, Department of Public Utilities  
Shannon O'Connell, Professional Engineer, Parsons Water & Infrastructure  
Randy Britt, Professional Engineer, Parsons Water & Infrastructure  
Sowmya Venkatasubramanian, Parsons Water & Infrastructure

Jean Thomas-Runnels, Senior Buyer, City of Fresno, Purchasing Facilitator

**BACKGROUND:**

The goal of this Request for Proposal (RFP) was to solicit proposals to provide a design-build for a 2 Megawatt (MW) solar energy facility at the Regional Wastewater Reclamation Facility (RWRF). Eleven prospective proposers downloaded the specifications and a single proposal was received and opened on May 5, 2015. Outreach was performed to determine why only a single proposal was received. Proposer's reasons ranged from *the requirements in the RFP were too strict to not having enough resources to cover a project of this size*. This 2 MW solar energy facility will help offset the electricity needs of the Tertiary Treatment and Disinfection Facility (TTDF), currently under construction. The TTDF project is approved to receive a State Revolving Fund (SRF) loan. The 2 MW Solar Energy Facility is a part of the same loan package.

The proposal was evaluated by the City of Fresno's Purchasing Division and Parsons Water & Infrastructure. The results of this two part review are summarized below. Compliance with contract requirements is summarized in the matrix contained in Appendix A.

## **CONTRACT COMPLIANCE**

The proposal package was reviewed by the City of Fresno, Purchasing Division to verify compliance with bonding, licensing, and DBE Good Faith Effort.

A letter from OneBeacon Surety Group stating that MD Energy's parent company (Solar3D) is a client in good standing. The project's construction cost is within the range of the normal scope for bonding for Solar3D. MD Energy holds the requisite licensing requirements for this project.

The proposal was evaluated by the City's Disadvantaged Business Enterprise (DBE) Program Coordinator and found to be in compliance in all areas.

## **EVALUATION COMMITTEE**

The review by the Evaluation Committee, principally Parsons Water & Infrastructure staff, reviewed technical compliance aspects – design, technical expertise, comparable experience, performance record, proposed equipment, value to the City, Life Cycle Cost, Performance Guarantee, and Operations and Maintenance contract. This initial review is presented in Appendix A. Although Parsons recommended acceptance of MD Energy, a number of concerns were raised. These concerns were related to financial strength of the company, experience with similar sized solar facilities, and design deviations. It was decided to conduct an interview of MD Energy, and their principal subcontractors, to address these concerns. The interview was conducted on June 4, 2015 at the RWRf. The interview panel consisted of the members of the Evaluation Committee, either in person or by telephone conference.

The financial strength of MD Energy was supported by its recent acquisition by the publically traded parent company, Solar 3D. Design deviations such as using a single 2-MW inverter instead of two 1-MW inverters were well supported during the interview. It was evident that MD Energy made design deviations because they had a thorough knowledge of the industry. They understood RWRf's concern for system redundancy and equipment compatibility. Additional equipment data was requested during the interview by Committee members and has been provided. All Committee concerns have been addressed satisfactorily.

## **RECOMMENDATION**

The Evaluation Committee recommends award of a design-build contract to MD Energy, Inc. for the 2 Megawatt Solar Energy Facility.

May 22, 2015

Mr. Raul S. Gonzalez  
Department of Public Utilities  
Wastewater Management Division  
5607 West Jensen Ave  
Fresno, CA 93706  
(559) 621-5290

**Subject: Proposal Evaluation for Design-Build of a 2 Megawatt Solar Photovoltaic System at the Fresno/Clovis Regional Wastewater Reclamation Facility**

Dear Mr. Gonzalez:

The purpose of this letter is to summarize Parsons' evaluation of the proposal received for the design-build of a two megawatt (MW) solar photovoltaic system at the Fresno/Clovis Water Reclamation Facility (WRF) in Fresno, California and to make recommendations for the selection of the system based on the qualifications of the proposer and the cost-effectiveness of the technical proposal. In response to the Request for Proposals (RFP) issued by the City of Fresno (City), the following solar installer submitted a proposal:

MD Energy, Inc.  
9291 9<sup>th</sup> Street  
Rancho Cucamonga, CA 91730

### **Preliminary Screening of Proposal**

The City conducted the preliminary screening of proposals to determine if the general criteria set forth in the RFP, particularly compliance with the SRF and GFE requirements, were met and consequently if the proposal was responsive. Based on this preliminary screening, the MD Energy, Inc., proposal was deemed eligible for further evaluation as it satisfactorily met the necessary screening criteria.

### **Comprehensive Screening of Proposal**

Once the preliminary screening determined the proposal was eligible for further evaluation, a comprehensive screening of the proposal was conducted to evaluate the proposal against the pre-established criteria, as summarized in the table below:

APPENDIX A

CRITERIA	EVALUATION RESULT
<b>Design/Build Team Personnel and Organization</b>	<i>(see below)</i>
Technical competence and experience of project team members on projects with similar scope and performance requirements.	Comply
Experience of team working together on previous projects and on development, design/build and operation projects similar in scope and performance to this project.	Comply
Adequacy, related experience and availability of staffing and in-house or subconsultant resources.	Comply
Ability to provide performance bond and other security for performance for the project.	Comply
Financial capability to guarantee cost and bear expenses above that cost.	Comply
<b>Technical Design and Construction Expertise</b>	<i>(see below)</i>
Technical soundness to approach, scope of work and understanding of the City's performance requirements.	Comply (with some deviations noted)
Satisfactory record of performance on similar projects.	Comply (with some deviations noted)
<b>Proposed Work Plan and Schedule</b>	<i>(see below)</i>
Ability to meet the identified schedule.	Comply
Conformance with the proposal guidelines and format outlined in this Request for Proposals.	Comply
<b>Safety Record</b>	Submitted
<b>Life Cycle Cost</b>	Submitted
<b>Performance Guarantee Terms and Conditions</b>	Comply
<b>Design/Build Contract Terms and Conditions</b>	Comply
<b>Operations and Maintenance Agreement Terms and Conditions</b>	Do Not Comply (Negotiation Recommended)
<b>Value Engineering/Alternatives</b>	Not Submitted
<b>Oral Presentation (if used)</b>	Not Used
<b>Price</b>	Submitted
Base Price	\$9,435,374.00
Deductive Alt (Optional 10 Year O&M)	\$589,052.00
Base and Deductive Alt	\$10,024,426.00
<b>Proposer's Location</b>	Rancho Cucamonga, CA
<b>Exceptions Taken</b>	None

Table 1 - Comprehensive Screening Evaluation of MD Energy, Inc., Proposal

## Evaluation of Proposal

MD Energy, Inc. was evaluated according to the Evaluation Criteria provided.

### A. Design/Build Team Personnel and Organization

Based on the documents submitted, it appears that the organization previously operated for 20 years under the name Mitchell Construction, more recently (last two years) operated as MD Energy, LLC, and was subsequently acquired in February 2015 by its now parent company, Solar 3D, Inc., and currently operates as MD Energy, Inc. One Beacon Surety Group provided a letter indicating Solar 3D is a client in good standing.

The proposer (MD Energy, Inc.) will be the project designer, but will not self-perform any of the construction. As such, strong general contracting and construction management skills will be necessary to coordinate the multiple subcontractors that will be working on this project. The proposer appears to have formed a complete team of necessary subcontractors to complete this project; MD Energy, Inc. will act as the general contractor for this project.

### B. Technical Design and Construction Expertise

The projects listed as completed 'major relevant projects' in the proposal indicate contract values of under \$1MM, indicating that MD Energy, Inc., likely acted as only the designer on these projects rather than the design/builder. Several active projects are listed where MD Energy, Inc. appears to also only be the designer. None of the projects listed are greater than \$2.5MM in contract value, indicating that the Fresno 2MW project will be larger than any project this company has completed to date. Additionally, many of the active projects are listed as less than 10% complete.

MD Energy, Inc. is proposing to use SunPower E20-327-COM panels and a single centralized inverter. SunPower panels generally out-produce most other currently commercially available panels and come with a 25 year warranty.

Parsons phoned all references listed in MD Energy, Inc.'s proposal and was able to speak with the following two contacts listed for the below solar projects:

- Randy Viegas - Rancho Mirage Public Library
- Frank Rose - Santa Fe Apartments, LLC

Both references indicated they have had positive experiences with MD Energy, Inc. and would work with them again in the future. MD Energy, Inc. is currently acting as the designer on the Rancho Mirage Public Library project and is a subcontractor to Nobell Energy Solutions. The project is still in the initial phase, so only minimal details were available at this time. On the Santa Fe Apartments project, MD Energy, Inc. conducted both the design and installation of carport systems.

Table 1 – Comparison of Major Equipment specified in RFP documents with MD Energy, Inc proposed equipment

Item	RFP Specified Equipment	MID Energy Inc Proposed Equipment
Solar Inverter	1. (2) 1 MW inverter, 480 V AC output voltage. 2. Inverter shall be listed on the list of CSI approved inverters	1. (1) 2 MW inverter, 12 kV output voltage. 2. Inverter is not on the list of CSI approved inverters
Tracker System	Tracker shall have remote monitoring capability for tracker system failure	Information for remote monitoring of tracker system was not included
Medium Voltage Switchgear	Manufacturer shall be Eaton (or Approved Equal)	Switchgear is assembled by IEM and equipment/ device data sheets were not included
Step up transformer`	(1) 2 MVA step up transformer	Proposer did not include the 2 MVA step up transformer in their single-line diagram and material costs.

Per detailed Scope of Work Item 1B and drawing E-02 on the MD Energy, Inc. proposal, a single 12 kV inverter is being proposed. This contradicts SMA Sunny Central 2200-US solar inverter data sheets which indicate output AC voltage is rated at 385 V AC instead of 12kV. MD Energy, Inc shall provide data sheets for the 12 kV inverter for consideration or shall provide a 2 MW step up transformer between inverter and 15 kV class output power breaker.

Also per RFP document (electrical single line diagram drawing E-02), contractor shall provide two (2) 1 MW solar inverters so that the entire 2 MW solar facility will not be shut down if one of the inverters is out of service. MD Energy, Inc is proposing only one (1) 2 MW central inverter; which is a deviation from RFP documents. The proposed configuration will shut down the entire PV system when the inverter is shut down for maintenance/repair.

Per RFP documents, Specification 16552 Section 1.04 A2c1 & c2, automatic tracking system shall have monitoring capability to report tracking system failure. Contractor proposed Dura Track HZ tracking system did not indicate remote monitoring capability.

Per RFP document, Specification 16350 Section 2.18, medium voltage switchgear shall be provided by Eaton (or approved equal). MD Energy, Inc is proposing IEM assembled medium voltage switchgear. IEM assembled 15 kV class medium voltage switchgear shall be manufactured to comply with Eaton specification.

Per RFP document, Specification 13384 Section 1.01 B3, fiber optic installer shall be a member in good standing with the Corning Network of Preferred Installer (NPI) program to qualify for Corning's 25 year extended product warranty. Proposer did not include in the proposal, certification indicating whether Alessandro Electric Inc is a member of the

NPI program. Contractor shall provide certification to confirm Alessandro Electric, Inc is a member in good standing with the NPI program.

#### C. Proposed Work Plan and Schedule

The Proposer indicates they will complete this project in 204 working days (i.e. roughly 40 weeks). This is a reasonable estimate of time to completion for this scope of work. However, the pdf schedule provided was also cut off and of low quality so a complete review of the listed activities and durations could not be fully completed.

The equipment proposed was generally acceptable. The proposed SunPower panels are CSI-listed. The SMA Sunny Boy 2200 inverter proposed is not listed on the CSI approved inverter list. However, the inverter was tested by UL and complies with UL 1741 inverter safety standards. Further, a letter of warranty from the manufacturer for this equipment was not included in the proposal.

#### D. Safety Record

The proposer has a documented safety plan and has not been cited for violations of OSHA standards in the last five years. The table of contents of an Injury and Illness Prevention Program was provided in the proposal.

#### E. Life Cycle Cost

While the initial capital cost is slightly higher than Parsons' original estimate, the guaranteed production is also higher, creating a comparable return on investment to the original estimate. The proposer extended the pro forma to both 25 and 40 year projections, indicating that they system will have a longer expected life span than the industry standard of 20 years.

Using the same assumptions provided in the previous Preliminary Engineering Report and RFP for a 2% utility rate escalation and the guaranteed production (i.e.90% of the highest expected production) with the proposed system rating, the City is estimated to realize \$11,197,983 in utility bill savings from offset energy costs. The production estimate was rerun using the PV Watts calculator and the equipment specified in the proposal and the production estimate is reasonable for the equipment proposed. See Attachment 2 for an updated pro forma.

#### F. Performance Guarantee Terms and Conditions

MD Energy, Inc. proposed a performance guarantee of 90% of the highest expected production for 10 years, which may be extended to up to a 25 year term, if desired by the City. The production estimate listed is reasonable for the system size and panels proposed.

#### G. Design/Build Contract Terms and Conditions

The Proposer did not take exception to any of the design/build contract terms and conditions provided in the RFP.

#### H. Operations and Maintenance Agreement Terms and Conditions

MD Energy, Inc.'s warranty commitment only covers workmanship and defective material for 10 years, and does not ordinarily include wear and tear. Additionally, the proposal indicates that all equipment warranties will be transferred to the City. It is recommended that the O&M terms and conditions be negotiated to include all required service and repairs, including equipment warranty claims, for the first 10 years of operation.

#### I. Value Engineering/Alternatives

The proposer did not propose any value engineering or alternatives.

#### J. Oral Presentation (if used)

The City did not elect to have the proposer conduct an oral presentation.

#### K. Price

The MD Energy, Inc. proposal indicated a cost of \$9,435,374 for design/build, which comes out to roughly \$4.72 per watt installed. The typical cost is around \$ 4.25 per watt installed. The higher cost could be attributed to site specific conditions as the site grading cost on the proposal is about \$ 0.92 million.

Schedule 1 – Base Material and Equipment on the MD Energy, Inc. proposal does not include material cost for a 2 MVA step up transformer and 480 V switchboard.

MD Energy, Inc. indicated a cost of \$589,052 for the deductive alternative of 10 years of operations and maintenance (O&M) and performance guarantee, which comes out to \$58,905 per year. This is competitive with performance guarantee pricing Parsons' has reviewed on similar projects.

#### L. Exceptions Taken

The Proposer did not take exception to any of the design/build contract terms and conditions provided in the RFP.



**Evaluation of Cash Purchase**

The pro forma shown below provides an evaluation of the cash purchase proposal.

**Conclusions**

Based on their submitted proposal, MD Energy, Inc. appears to have sufficient experience and an acceptable technical approach to execute the design and construction of a 2 MW single-axis tracking system. Using the same assumptions provided in the previous Preliminary Engineering Report and RFP for a 2% utility rate escalation, the City is estimated to realize \$11,197,981 in utility bill savings from offset energy costs.

**Recommendations**

Overall, Parsons recommends that the City consider approving MD Energy, Inc.'s proposal for the design/build of the 2 MW solar photovoltaic system at the Fresno/Clovis Regional Water Reclamation Facility in Fresno, California. If possible, Parsons also recommends the City consider:

- Interviewing the proposer to verify experience and planned construction management approach of subcontractors.
- Negotiating the performance guarantee and/or operations and maintenance agreement terms to include ordinary wear and tear and all equipment replacements needed in the first 10 years of operation.
- Reviewing the proposer's full Injury and Illness Prevention Program to ensure sufficient risk mitigation and prevention of safety incidents related to electrical work.

Sincerely,



Satish Kamath, P.E., BCEE  
Principal Project Manager

Attachment 1 – Updated Pro Forma

## APPENDIX A

2 MW Solar Project Pro Forma City of Fresno				
Year	kWh Production Degradation Rate Set at .5% Annually	Utility Rates Escalation Rate Set at 2% Annually	Estimated Cost Savings	Operation Maintenance and Repair Costs
1	4,178,811	\$ 0.1160	\$ 484,742	\$ 58,905
2	4,157,917	\$ 0.1183	\$ 491,965	\$ 58,905
3	4,137,127	\$ 0.1207	\$ 499,295	\$ 58,905
4	4,116,441	\$ 0.1231	\$ 506,734	\$ 58,905
5	4,095,859	\$ 0.1256	\$ 514,285	\$ 58,905
6	4,075,380	\$ 0.1281	\$ 521,948	\$ 58,905
7	4,055,003	\$ 0.1306	\$ 529,725	\$ 58,905
8	4,034,728	\$ 0.1332	\$ 537,618	\$ 58,905
9	4,014,554	\$ 0.1359	\$ 545,628	\$ 58,905
10	3,994,482	\$ 0.1386	\$ 553,758	\$ 58,905
11	3,974,509	\$ 0.1414	\$ 562,009	\$ -
12	3,954,637	\$ 0.1442	\$ 570,383	\$ -
13	3,934,863	\$ 0.1471	\$ 578,882	\$ -
14	3,915,189	\$ 0.1501	\$ 587,507	\$ -
15	3,895,613	\$ 0.1531	\$ 596,261	\$ -
16	3,876,135	\$ 0.1561	\$ 605,145	\$ -
17	3,856,754	\$ 0.1592	\$ 614,162	\$ -
18	3,837,471	\$ 0.1624	\$ 623,313	\$ -
19	3,818,283	\$ 0.1657	\$ 632,600	\$ -
20	3,799,192	\$ 0.1690	\$ 642,026	\$ -
<b>TOTALS</b>	<b>79,722,949</b>		<b>\$ 11,197,983</b>	<b>\$ 589,052</b>

Summary	
Initial Capital Cost	\$ 9,435,374
Estimated Cost Savings	\$ 11,197,983
Equipment Replacement Cost	\$ 4,163,900
Year of Replacement	20
Remaining Life (in years)	15
Residual Value	\$ 14,092,572

### Legend

Blue	Cells to be completed by Design Build Contractor
Red	Cells to remain unfilled
White	Cells completed by the District that are protected and cannot be altered