

# Solar Proposal Evaluation Report

Union County Improvement Authority  
Series 2010 Renewable Energy Program

Prepared for:  
Union County Improvement Authority

Prepared by:  
Union County Evaluation Team

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**Union County Improvement Authority**  
**Renewable Energy Program**

**1. Executive Summary**

This Solar Proposal Evaluation Report (“Evaluation Report”) is being provided pursuant to the requirements of the competitive contracting provisions of the Local Public Contracts Law (N.J.S.A. 40A:11-4.1(k)) and the Public Schools Contracts Law (N.J.S.A. 18A:18A-4.1(k)) in connection with the Union County Improvement Authority’s Series 2010 Renewable Energy Program (“Series 2010 Program”).

The Series 2010 Program involves the following sixteen (16) local government units (individually, a “Local Unit” and collectively, the “Local Units”):

1. Township of Cranford
2. Hillside Board of Education
3. Township of Hillside
4. City of Linden
5. Winfield Township Board of Education
6. City of Plainfield
7. City of Rahway
8. Roselle Board of Education
9. Borough of Roselle
10. Township of Springfield
11. Union County
12. Union County College
13. Morris-Union Jointure Commission
14. Garwood Board of Education

15. New Providence Board of Education

16. Roselle Park Board of Education

The Authority, in combination with Union County (the “County”), created its “Union County Renewable Energy Program,” which seeks to develop photovoltaic and other renewable energy systems for certain local government buildings, structures and lands owned or controlled by participating local governments within and including the County (“Projects”).

The Authority intends to enter into a long-term (fifteen (15) year) Power Purchase Agreement (“PPA”) with the successful respondent (“Successful Respondent”) to purchase solar electric power produced from the Projects located within the Local Units identified above. In addition, the Authority proposed alternative transaction structures, one pursuant to which the Respondent is required to provide its own financing for the Projects, and another pursuant to which the Authority plans to provided partial financing for the Projects.

On November 3, 2010, the Authority received one proposal in response to the RFP from Tioga Energy, Inc. (“Tioga”). The Union County Evaluation Team (“Evaluation Team”), comprised of: Birdsall Services Group, Inc.; DeCotiis, FitzPatrick & Cole, LLP; and NW Financial Group, LLC, conducted a comprehensive evaluation of the Tioga Proposal on the basis of price and non-price criteria, in accordance with competitive contracting provisions of the Local Public Contracts Law (N.J.S.A. 40A:11-4.1(k)) and on behalf of the board of education Local Units, the Public Schools Contracts Law (N.J.S.A. 18A:18A-4.1(k)) of the State of New Jersey, all pursuant to (i) Local Finance Board Notice 2008-20, December 3, 2008, *Contracting for Renewable Energy Services*, (ii) the Board of Public Utilities protocol for measuring energy savings in PPA agreements (*Public Entity Energy Efficiency and Renewable Energy Cost Savings Guidelines, Dated February 20, 2009*), (iii) Local Finance Board Notice 2009-10, June

12, 2009, *Contracting for Renewable Energy Services: Update on Power Purchase Agreements* and applicable law.

The evaluation process was separated into three (3) distinct phases. After receiving Phase I approval (*a determination that Tioga has included all documentation and information in their Proposal required by the RFP*) approval, Tioga's Proposal was qualified to receive Phase II (*evaluation of the value provided by the proposal across several categories – financial benefits, technical design, experience, qualifications and financial strength*) and Phase III evaluation (*an interview and clarification of proposal contents*). The Evaluation Team has undertaken an economic and technical review of Tioga's Proposal to evaluate it in accordance with the established Evaluation Criteria, which consider:

- Financial benefits;
- Technical design;
- Project experience;
- Vendor qualifications; and
- Financial strength.

After reviewing all aspects of Tioga's Proposal, the Evaluation Team recommends that Tioga be designated as the Successful Respondent.

## **2. Overview and Goal**

The following is a brief synopsis describing the Authority's Series 2010 Program, as outlined in the RFP.

The Series 2010 Program seeks to develop Projects for certain local government buildings, structures and lands owned or controlled by participating Local Units within and including the County. Sixteen (16) Local Units, including forty-six (46) Local Unit Facilities are

involved in the Series 2010 Program. The Projects included in the Series 2010 Program will also include any related electrical modifications or other work required or convenient for the installation of such systems on the designated portions of the roofs, and where noted, the parking facilities and lands, of the forty-six (46) Local Unit Facilities.

A preliminary feasibility assessment of the Local Unit Facilities was performed by the Authority's energy engineering consultants to identify the technical potential for the Projects at the forty-six (46) Local Unit Facilities. Based upon this preliminary assessment, the Projects to be implemented, in the aggregate, were estimated to have a total capacity of approximately 3.49 MW.

The PPA will require the Successful Respondent to design, permit, acquire, construct, install, own, operate and maintain the Projects at each of the Local Unit Facilities. The Authority intends to enter into a Site License Agreement with the Successful Respondent and each Local Unit.

In evaluating Tioga's Proposal, the Evaluation Team used an evaluation process including three phases:

1. Phase I is a checklist to determine if the Respondent has included all documentation and information in their Proposal required by the RFP. Once all requirements have been met, a Respondent qualifies to move to Phase II of the evaluation.
2. Phase II is a determination of the value provided by the proposals across several categories – financial benefits, technical design, experience, qualifications and financial strength.

3. Phase III is an interview of the Respondent and clarification of the Respondent's proposal.

The purpose of this Evaluation Report is to provide the Authority with a full evaluation of Tioga's Proposal and to recommend to the Authority whether the Proposal provides the appropriate value to the Local Units, the Authority and the County.

### **3. Financial Structure**

The following is a brief synopsis of the financial structure, as required in the RFP:

The Authority proposed alternative transaction structures, one pursuant to which the Respondents provide their own financing for the Projects, and another pursuant to which the Authority provides partial financing for the Projects. Potential Respondents were encouraged, but not required, to bid on both transaction structures. Potential Respondents were also permitted to submit an additional Proposal, which may include a variation of one of the below structures, but such alternative submission was not required. The transaction structures are summarized below:

- **Company Financing Structure:** The Company (Respondent) will finance, design, permit, acquire, construct, install, operate and maintain the Projects. The Company will own the Renewable Energy Projects. The respective Local Units will own the Capital Improvement Projects.
- **Authority Financing Structure:** The Authority provides financing (both construction and permanent) for up to seventy percent (70%) of the costs of the Projects through the issuance of its County of Union Guaranteed Renewable Energy Program Lease Revenue Bonds, Series 2011 (the "Series 2011 Bonds"), issued pursuant to an Authority "Resolution Authorizing the Issuance of County of Union

Guaranteed Renewable Energy Program Lease Revenue Bonds, Series 2011, and any Additional Bonds of the Union County Improvement Authority,” expected to be adopted in December, 2010 (the “Authority Bond Resolution”). The Company will design, permit, acquire, construct, install, operate and maintain the Projects. Proceeds of the Series 2011 Bonds will be drawn on a requisition basis to pay the costs of the Projects. The Authority will retain title to the Renewable Energy Projects, but upon acceptance will lease the “Renewable Energy Property” (*i.e.*, property qualifying for the federal Energy Credit under Section 48 of the Internal Revenue Code of 1986, as amended (“Code”)) to the Company pursuant to a capital lease (the “Company Lease Agreement”). The Company Lease Agreement will be designed to transfer tax ownership, for federal income tax purposes, of the Renewable Energy Property to the Company. Lease payments payable by the Company will be a pass through of the Authority’s financing costs for its Series 2011 Bonds. The Company will purchase the Renewable Energy Property for \$1 at the end of the lease term. It is expected that Authority financing will be at a lower cost of capital than the Respondent’s financing, and that the resulting savings will be passed on to the Local Units through a reduced PPA Price. The respective Local Units will own the Capital Improvement Projects, if any. The Authority Financing Structure will require that the Company execute certain agreements, including the “Company Lease Agreement,” “Company Pledge and Security Agreement” and a “Company Continuing Disclosure Agreement” (together, the “Company Financing Documents”).

#### **4. RFP Preliminary Solar System Size**

Prior to issuance of the RFP, preliminary feasibility assessments necessary to estimate Project size potential were conducted by the Authority's energy consulting engineer at each of the Local Unit Facilities included in the RFP. These feasibility assessments included such parameters as shading analysis, location of existing obstructions, roof condition and azimuth angle (north-south orientation).

Historical electric usage and rate data for these Local Unit Facilities was not available for comparison at the time of RFP issuance; therefore adjustments to the final Projects sizes are expected upon the receipt of this data. Historic rate data and electric usage data has been received for a portion of the Local Unit Facilities involved in the Series 2010 Program, and this data has been included in the calculations set forth in this Report. In situations where the expected Projects outputs are greater than the Local Unit Facility's actual energy usage, the Projects will be downsized accordingly to a maximum of 95% of the Local Unit Facility electricity usage.

The preliminary Project sizes which were included in the RFP are as follows:

Local Unit - Facility	System Size (kW)
1 Cranford Community Center	56.49
Cranford Public Library	54.6
Cranford Public Library Parking	92.4
2 Garwood BOE- Lincoln School	59.64
3 Hillside BOE -Calvin Coolidge	36.33
Hillside BOE - APM	132.09
Hillside BOE- WOK	57.12
Hillside BOE High School	247.17
4 Hillside Municipal	60.9
Hillside Community Center	24.78
Hillside DPW	37.8
5 Linden Firehouse 1	18.06
Linden Firehouse 2	21.21
Linden Firehouse 3	26.88
Linden Public Library	23.94
Linden City Hall Garage	258.51
Linden Public Works Garage	162.12
Linden Municipal Garage	88.41
Linden Memorial Field	153.3
6 Morris Union JC Transportation Dept	71.19
Morris Union JC DLC	52.08
7 New Providence BOE - Salt Brook School	165.48
New Providence BOE - Allen W. Roberts	108.15
8 Plainfield Police Headquarters and Mun. Court	34.02
Plainfield Fire Station Headquarters	18.27
Plainfield Public Works Facility	37.17
9 Rahway City Public Library	62.16
Rahway City Public Library Open Space	193.2
10 Roselle Borough Hall	49.56
Roselle Firehouse	17.22
11 Roselle BOE- Polk School	56.49
Roselle BOE- Wilday School	128.52
12 Roselle Park High	168.63

	Roselle Park Middle	55.44
	Roselle Park Sherman	38.85
	Roselle Park EJP	30.24
	Roselle Park Robert Gordon	13.44
13	Springfield Municipal Bldg	18.9
	Springfield Municipal Bldg Open Space	25.2 *
	Springfield DPW Garage	24.78
	Springfield Hirshey Bldg	25.41
	Springfield Public Library	41.37
	Springfield Chisholm Rec. Center	12.6
14	Union County Admin	14.7
	Union County Arts Center	34.44
15	UCC Cranford Campus	276.78
16	Winfield Township BOE	107.31

<b>Total System Size and Output</b>	<b>3.493 MW</b>
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*\*This Local Unit Facility was removed from the Series 2010 Program post receipt of the Tioga Proposal.*

**5. PPA Pricing Design**

The Authority requested one PPA Price and index from the Respondents for Projects. Respondents were required to ensure that every Local Unit Facility is included in the response. Respondents were also required to provide a price adjustment factor to be used to adjust PPA Price upward or downward based on the final interest rate determined at the closing of project financing.

**6. Respondent Response to RFP**

**A. Tioga Proposal**

The Authority received a Proposal from Tioga and the key information from Tioga’s Proposal is summarized below:

The Tioga Proposal was found to be administratively complete and technically conforming by the Evaluation Team.

The Tioga’s Propopsal included a PPA Price of \$0.068/kWh with an annual escalation rate of 2.75%. The proposed contract length of this PPA is fifteen (15) years. The overall Project size is 3.35 MW dc with a guaranteed output of 3,675,799 kWh/yr and a capital cost of \$20,693,166. Tioga’s Proposal contains an overall system size of 4.054 MW dc (4,400,000 kWh), but due to the removal of 4 facilities (634 kW dc) from the RFP (via Addendum in the RFP process), and the on-going refinement of Project sizing related to actual Local Unit Facility electric usage data, the total Project size was reduced to 3.35 MW dc. All data set forth within this Report has been calibrated to reflect these Project size modifications.

Tioga also included a 30% SREC sharing option in years 11 through 15. The Authority would have the option of purchasing 30% of the SRECs produced by the Project for \$200 each. This option offers the Authority the opportunity to resell the SRECs at price above \$200 if the SREC market permits.

The proposed Tioga Renewable Energy Project would be installed on forty-six (46) Local Units Facilities.

Respondent	Total System Size (kW)	Expected Annual Output (kWh)	Guaranteed Annual Output (kWh)	Capital Cost (\$)	Unit Cost (\$/watt)	Year 1 PPA Rate (\$/kWh)	PPA Annual Escalator
Tioga Team	3,419.49	3,760,219	3,384,197	\$20,693,166	\$6.177	\$0.068*	2.75%

*\*Note that actual PPA Price will be dependent upon the interest rate at the time of the sale of Series 2011 Bonds by the Authority.*

**B. Post RFP Project Size Adjustments**

Information affecting the proposed Project sizes of five (5) of the Local Unit Facilities included in the Series 2010 Program has recently been presented to the Authority’s professionals. This information included historical usage data, roof condition details and Local Unit preferences regarding placement of a pole-mounted systems. Tioga will attempt to redistribute

excess system size to other locations at the affected facilities or within other Local Units included in the Series 2010 Program if feasible and acceptable to the Authority and the Local Unit. If it is not possible to relocate these modules to other areas, the resulting effect of these size adjustments will be a reduction of 69.5kW, generating the total Project size referenced in this Report of 3.3 MW. There are Local Unit Facilities included in the Series 2010 Program that for which historical usage data must still be obtained. Until this data has been obtained, the proposed preliminary Project sizes can not be confirmed. A list these facilities have been included in **Appendix 1** of this Report. The table below summarizes the confirmed preliminary Project size adjustments on each affected Local Unit Facility.

<b>Facility Name</b>	<b>Reason for Change</b>	<b>Size of Change (kW)</b>
Hillside BOE - High School	Roof Condition	-61.30
Linden - Public Works Garage	Annual Usage	-113.80
Linden - Memorial Field	Annual Usage	-68.18
Springfield - Muni Bldg Open Space	Town	-23.03
New Providence BOE – Salt Brook	High School Replaced Salt Brook	196.77
	<b>Net Total Change</b>	<b>-69.55</b>

## **7. Financial Benefits Evaluation**

### **A. NPV of Benefits**

The installation of the Projects can result in substantial economic benefits to the Local Units. Energy output from the Projects is purchased from Tioga by the Local Units at a PPA Price of \$0.068 (which is lower than the Local Electric Utility rates), thus providing a cost savings.

In calculating energy cost savings, the Evaluation Team compares a forecast of the cost of electricity delivered by the local electric utility that is avoided by purchasing the solar generation from the Projects at the PPA rate proposed by Tioga multiplied by the expected solar output from the Projects. This yields the projected savings in energy costs realized through the installation of the Projects.

A primary factor in the calculation of the avoided cost of electricity is historical usage and rate data. Because the data for all Local Unit Facilities is not available for comparison at this time, an average rate of \$0.145/kWh has been chosen for those Local Unit Facilities for which electricity usage data is not yet available based upon the present New Jersey utility sales rates to model the projected savings in energy costs for each of the Local Units. Section 8 - B of this Report contains a chart setting forth the savings calculation for each Local Unit Facility. Those Local Unit Facilities for which the estimated \$0.145/kWh rate was utilized to model savings because actual utility rate/electric usage data was not yet available are noted with an asterisk. When actual historical rate data becomes available for the affected facilities, an update to this Report will be issued which will provide an individualized and more precise financial savings forecast.

The Tioga proposal expects a total net present value (“NPV”) savings of approximately \$3.43 Million. Total Energy savings for the fifteen (15) year PPA period is expected to be approximately \$6,283,202. Tioga’s proposal references an exponential Compound Annual Growth Rate (“CAGR”) for utility energy costs of 4.41% to model annual future utility price increases, for the purposes of this Report, the 4.41% CAGR has been equated to a linear escalation rate for future utility price increases of approximately 5.26%.

The following two tables provide a financial savings summary based upon the variables and assumptions included in the Tioga Proposal. These calculations use all available historical electric utility rate data available at this time and all known Project size adjustments in an attempt to provide an accurate result.

**B. Financial Savings Summary**

Local Unit – Facilities †	1st Year Nominal Savings (\$)	15 Year Nominal Savings (\$)	15 Year Total Savings (\$)	NPV 15yrs at 8% (\$)
Cranford Community Center	\$6,852	\$10,599	\$129,058	\$70,459
Cranford Public Library	\$5,308	\$8,137	\$99,482	\$54,362
Cranford Public Library Parking	\$10,253	\$15,717	\$192,152	\$105,002
Hillside BOE -Calvin Coolidge	\$6,216	\$9,567	\$116,748	\$63,771
Hillside BOE - APM	\$21,193	\$32,280	\$395,768	\$216,409
Hillside BOE- WOK	\$4,798	\$7,354	\$89,908	\$49,131
Hillside BOE High School	\$20,922	\$32,204	\$392,989	\$214,660
Hillside Municipal	\$7,251	\$11,161	\$136,206	\$74,399
Hillside Community Center	\$4,367	\$6,635	\$81,441	\$44,544
Hillside DPW	\$5,119	\$7,880	\$96,156	\$52,523
Linden Firehouse 1	\$2,437	\$3,722	\$45,579	\$24,915
Linden Firehouse 2	\$1,034	\$1,638	\$19,734	\$10,747
Linden Firehouse 3*	\$1,820	\$2,843	\$34,469	\$18,800
Linden Public Library*	\$1,683	\$2,629	\$31,872	\$17,383
Linden City Hall Garage	\$16,336	\$25,624	\$310,087	\$169,051
Linden Public Works Garage	\$4,230	\$6,583	\$79,944	\$43,618
Linden Municipal Garage	\$11,682	\$17,980	\$219,420	\$119,853
Linden Memorial Field	\$10,037	\$15,621	\$189,688	\$103,495
Winfield Township BOE	\$9,329	\$14,573	\$176,680	\$96,362
Plainfield Police Headquarters and Muni Ct*	\$2,557	\$3,994	\$48,419	\$26,408
Plainfield Fire Station Headquarters*	\$1,788	\$2,793	\$33,864	\$18,470
Plainfield Public Works Facility*	\$2,208	\$3,450	\$41,822	\$22,810
Rahway City Public Library	\$6,660	\$10,251	\$125,099	\$68,332
Rahway City Public Library Open Space	\$19,992	\$30,772	\$375,518	\$205,117

Local Unit – Facilities †	1st Year Nominal Savings (\$)	15 Year Nominal Savings (\$)	15 Year Total Savings (\$)	NPV 15yrs at 8% (\$)
Roselle Borough Hall*	\$3,910	\$6,108	\$74,050	\$40,387
Roselle Firehouse*	\$682	\$1,065	\$12,911	\$7,042
Springfield Municipal Bldg*	\$876	\$1,376	\$16,639	\$9,070
Springfield Municipal Bldg Open Space	\$0	\$0	\$0	\$0
Springfield DPW Garage*	\$2,549	\$3,985	\$48,299	\$26,340
Springfield Hirshey Bldg*	\$1,513	\$2,374	\$28,724	\$15,659
Springfield Public Library*	\$2,579	\$3,970	\$48,445	\$26,462
Springfield Chisholm Rec Center*	\$963	\$1,535	\$18,444	\$10,038
Union County Admin*	\$1,686	\$2,633	\$31,925	\$17,412
Union County Arts Center*	\$1,117	\$1,745	\$21,159	\$11,540
UCC Cranford Campus*	\$29,692	\$46,382	\$562,307	\$306,684
MUJC Transportation Dept	\$7,181	\$11,176	\$135,716	\$74,048
MUJC DLC	\$3,890	\$6,054	\$73,512	\$40,109
Garwood BOE- Lincoln School	\$6,038	\$9,339	\$113,716	\$62,083
New Providence BOE - High School*	\$36,075	\$55,802	\$679,464	\$370,952
New Providence BOE - Allen W. Roberts	\$7,146	\$11,053	\$134,586	\$73,477
Roselle Park High	\$16,507	\$25,534	\$310,912	\$169,742
Roselle Park Middle	\$5,707	\$8,828	\$107,488	\$58,683
Roselle Park Sherman*	\$2,683	\$4,252	\$51,221	\$27,895
Roselle Park EJF	\$3,694	\$5,686	\$69,382	\$37,898
Roselle Park Robert Gordon*	\$1,255	\$1,961	\$23,776	\$12,968
Roselle BOE- Polk School*	\$2,853	\$4,457	\$54,031	\$29,469
Roselle BOE- Wilday School*	\$10,793	\$16,860	\$204,397	\$111,478
<b>Totals</b>	<b>\$333,461</b>	<b>\$516,185</b>	<b>\$6,283,202</b>	<b>\$3,430,053</b>

†This information shall be updated based upon the interest rate at the time the Authority sells the Series 2011 Bonds and the availability of electric rate/usage data for certain Local Unit Facilities.

\*Utility rate / electric usage data for this Local Unit Facility was not available at the time this Report was published. Savings for the Local Unit Facility has been calculated based upon an average utility rate of \$0.145/kWh. Once utility rate / electric usage data has been obtained for this Local Unit Facility, this Report will be updated.

**C. Financial Analysis Variable Comparison**

The selection of variables used in the financial savings analysis can significantly impact the financial forecast results. The following tables provide a comparison of net present value calculations (8%, 5% and 3%) and fifteen (15) year total savings with variable electric utility annual escalation rates (0.5%, 3.3% and 5.26%). The financial benefits analysis provided in this Report reflects an NPV of 8% and an electric utility annual escalation rate of 3.3% (shown as bold in the tables below). The Tioga Proposal uses an NPV at 8% and an electric utility annual escalation rate of approximately 5.26% (CAGR 4.41%), the result of these combinations of assumptions are shown in the tables below.

**NPV Variable Comparison (8%, 5% and 3%)**

<b>Electric Utility Annual Escalation Rate (%)</b>	<b>NPV 8% (\$)</b>	<b>NPV 5% (\$)</b>	<b>NPV 3% (\$)</b>
0.50%	\$2,561,274	\$3,072,423	\$3,506,543
3.30%	<b>\$3,430,053</b>	\$4,226,480	\$4,915,351
5.26%	\$4,163,058	\$5,207,937	\$6,119,719

**15 Year Total Savings Comparison**

<b>Electric Utility Annual Escalation Rate (%)</b>	<b>15 Year Total Savings (\$)</b>
0.50%	\$4,352,591
3.30%	<b>\$6,283,202</b>
5.26%	\$7,946,313

**D. END OF CONTRACT PROVISIONS**

The Authority requested that the Respondents include the following end of contract provisions in their Proposals: (a) renegotiation of an extension of the PPA if allowable by law, (b) removal of the Projects at no cost to the Authority or the Local Units, and (c) purchase of the Projects by the Local Units at fair market value. Tioga's Proposal complies with all of the end of contract provisions included in the RFP.

**E. Option – Sharing of Benefits**

Tioga has offered SREC sharing option in years 11-15 of the contract. The Authority could purchase 30% of the total SRECs produced by the Projects in these years at a price of \$200/SREC, which equates to \$0.20/kWh system production, and potential resell these SRECs for prices above \$200/SREC.

The economics of the New Jersey SREC market in years 11 through 15 is somewhat uncertain at this time. Should the SREC price drop to \$200/SREC or below a zero or negative revenue could be realized with this sharing option and the Authority would not likely exercise the option. Tioga has proposed to enter into mid to long-term (3-10yr) SREC contracts for a portion of the SRECs that they anticipate generating, which should have a stabilizing effect on the SREC revenue in the first 10 years of the PPA. Currently these mid to long term SREC contracts may realize revenues between (\$300 - \$475/SREC), while open market New Jersey

SREC trading is currently above \$600/SREC. The following table summarizes the possible financial outcome of three SREC trading prices.

**30% SREC Sharing (Years 11-15)**

<b>SREC Trading Price (\$)</b>	<b>SREC NPV 8% (\$)</b>	<b>Total SREC Value (YRS 11-15) (\$)</b>
\$250	\$96,089	\$259,585
\$350	\$288,267	\$778,754
\$450	\$480,445	\$1,297,924

**8. Technical Design Approach**

The evaluation of technical design/approach has several elements including output guarantees, equipment warranties, construction schedules, project term, approach and operation and maintenance plans.

**A. Output Guarantee (MWH)**

Tioga’s Proposal provides the output guarantees required in the RFP of 90% of anticipated Project output.

**B. Equipment Warrantees**

Tioga's proposed warrantees are as follows:

<b>Major System Components</b>		
<b>System Component</b>	<b>Manufacturer</b>	<b>Compliance with Project Technical Specifications</b>
<b>PV Modules</b>	Solar World 235 Watt or Kyocera 235 Watt	Yes
<b>Inverters</b>	SMA, PV Power and/or Satcon	Yes
<b>Mounting Systems</b>	Power-Fab Powertube CRS, DPW and Schletter	Yes
<b>Canopy System</b>	Baja Solar Parking Canopy 7 deg	Yes
<b>DAS</b>	eXpertPower or Energy Recommerce	Yes

**C. Construction Schedule**

A written construction schedule and project timeline was included in Tioga's Proposal. The timeline is applicable to this multi-site program and showed a logical progression of construction to the completion of the RFP stated goal of completion of the Projects in February 2012.

**D. Operation and Maintenance**

A written Safety, Operations and Maintenance section was provided in Tioga's Proposal which addressed the Safety and O&M of the Projects. Each Local Unit Facility will be provided with an individualized O&M manual and a training session will be provided to instruct the onsite staff on safety, basic O&M procedures and use of the data acquisition software.

**9. Respondent Experience**

Tioga exemplified extensive project experience with respect to similar types of projects, number of projects, years of experience and New Jersey experience. Specifically, Tioga was

selected in Morris County to develop a similarly sized regional renewable energy program for multiple local and county entities. That project is currently in the midst of construction and is progressing on schedule.

## **10. Respondent Qualifications**

Tioga provides well qualified management, supervisory, key staff and contractors, which meets the requirements of the RFP.

## **11. Financial Strength**

As noted in section 3 above, the Authority is providing financing (both construction and permanent) for up to seventy percent (70%) of the costs of the Projects through the issuance of its Series 2011 Bonds. Tioga will design, permit, acquire, construct, install, operate and maintain the Projects. Proceeds of the Series 2011 Bonds will be drawn on a requisition basis to pay the costs of the Projects. The Authority will retain title to the Projects, but upon acceptance will lease the “Renewable Energy Property” (*i.e.*, property qualifying for the federal Energy Credit under Section 48 of the Internal Revenue Code of 1986, as amended (“Code”)) to Tioga pursuant to a capital lease (the “Company Lease Agreement”). The Company Lease Agreement will be designed to transfer tax ownership, for federal income tax purposes, of the Renewable Energy Property to Tioga. Lease payments payable by the Tioga will be a pass through of the Authority’s financing costs for its Series 2011 Bonds. Tioga will purchase the Renewable Energy Property for \$1 at the end of the lease term. The respective Local Units will own the Capital Improvement Projects, if any. Tioga will be relying on two revenue streams to provide sufficient funds to make the lease payments;

- 1) Power Purchase Agreements (PPA)

## 2) Solar Renewable Energy Credits (SRECs)

The PPA provides approximately 20% of the recurring project revenue while the SRECs represent 80% of the Project revenue. The PPA Price will produce an exact cash flow based on the number of kWh produced by the Projects. The SRECs are a publicly traded instrument. The value of the SRECs is connected to the alternative compliance payments (“ACP”) that are set for utilities by the New Jersey Board of Public Utilities. As an alternative to the ACP, utilities purchase SRECs at some discount to the ACP. The SRECs currently trade at approximately 90% of the ACP. The market prices for SRECs would have to fall below 60% of the ACP in the future before there would be insufficient revenue for Tioga to make a lease payment.

### **A. Performance and Payment Bond**

Tioga will provide a construction performance and payment bond that will guaranty completion of the Project.

### **B. Additional Warranty**

Tioga and its subcontractors will provide warranties for the Project, including work, materials and equipment to be free of defects, in compliance with applicable laws and regulations, fit for commercial use, and in compliance with performance guarantees. Components shall be warranted at a minimum for 10 years in general, 20 years for modules and mounting and support structures.

### **C. Guaranty of Minimum kWh Output**

Tioga agreed as part of their Proposal to provide no less than 90% of the expected kWh production over the fifteen (15) year life of the PPA. This is important as both the PPA revenue and the SREC revenue relies on the consistent production of electricity.

**D. Financial Guaranty**

Tioga or an entity of equal or better financial strength will provide a guaranty of \$4 million to support lease payment obligations for the first three years of the Projects operations. After three years, Tioga can replace the guaranty with a \$1,000,000 cash reserve.

**12. Phase III Evaluation**

Tioga was interviewed by the Evaluation Team and the information and Proposal clarification provided by Tioga to the Evaluation Team during the interview process has been incorporated into this Report.

**13. Recommendation – Successful Respondent**

Based upon the financial, technical and administrative reviews that were conducted by the Evaluation Team, the Proposal submitted by Tioga in response to the Series 2010 Program RFP with respect to certain Local Government Facilities in the County of Union, New Jersey, issued August 31, 2010, complies with the requirements prescribed in this RFP.

The Tioga Proposal yields an estimated fifteen (15) year cumulative savings of \$6.3 million with NPV economic benefits of over \$3.4 million. These benefits will be recalculated after the sale of bonds and the review of the individual Local Unit Facility's actual utility rates has been completed.

Accordingly, the Evaluation Team recommends that the Authority designate Tioga as the Successful Respondent.