Acknowledgment of Addenda

The undersigned acknowledges receipt of the following addenda to the bidding document:

THE COMPLETED ACKNOWLEDGEMENT OF ADDENDA FORM SHOULD BE RETURNED WITH BID RESPONSE PACKAGE: NOT SENT TO RIPTA SEPARATELY

NOTE: Failure to acknowledge receipt of all addenda may cause the bid to be considered non-responsive to the solicitation. Acknowledged receipt of each addendum must be clearly established and included with the bid.

_____
Name of Bidder

_____
Street Address

_____
City, State, Zip

_____
Signature of Authorized Official

_____
Date

Invitation for Bids Number 13-01
Addenda Two: July 27, 2012

Attached please find the following documents:

Requests for Approved Equals and RIPTA Responses

Fall River Electrical Associates
Spotts Brothers
Vanguard Energy Partners

Response to Questions/Requests for Clarifications from Spotts Brothers

Revisions to the Technical Specifications.

Revisions to the Construction Drawings

REVISIONS TO TECHNICAL SPECIFICATIONS

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
Invitation for Bids Number 13-01

VI. REQUEST FOR APPROVED EQUAL FORM

This form must be submitted electronically IN MICROSOFT WORD FORMAT TO RIPTA CONTRACTS MANAGER

REQUEST FOR APPROVAL EQUAL QUALIFICATION OR CLARIFICATION

Page:_____ Ref: RFP NO. 13-01

Project No. Solar Roofing Project

To: Rhode Island Public Transit Authority

From: Fall River Electrical Associates Co., Inc.

Page & Reference: 16240-5 2.05

Request Description

Use SolrenView by Solectria Renewables for the monitoring system. See attached information and ARRA documentation.

Use Additional Sheet If More Space is Required

Accepted:_____ Rejected: _____X_____

See Addendum # _____

Explanation: Solectria does not have 10 years' experience in PV systems.

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
Invitation for Bids Number 13-01

VI. REQUEST FOR APPROVED EQUAL FORM

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REQUEST FOR APPROVAL EQUAL QUALIFICATION OR CLARIFICATION
Page:_____ Ref: RFP NO. 13-01
Project No. Solar Roofing Project
To: Rhode Island Public Transit Authority
From: Fall River Electrical Associates Co., Inc.
Page & Reference: 16240-4 2.02B

Request Description
Use Panel Claw Ballasted Racking system. Please see attached information and ARRA documentation.

Use Additional Sheet If More Space is Required
Accepted:_____**X**_____ Rejected: _____
See Addendum # _____
Explanation:

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
Invitation for Bids Number 13-01

VI. REQUEST FOR APPROVED EQUAL FORM

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REQUEST FOR APPROVAL EQUAL QUALIFICATION OR CLARIFICATION
Page:_____ Ref: RFP NO. 13-01
Project No. Solar Roofing Project
To: Rhode Island Public Transit Authority
From: Fall River Electrical Associates Co., Inc.
Page & Reference: 16240-5 2.03

Request Description
Use Solectria Inverters. They are made in Massachusetts and are National Grid approved. The service department for Solectria is much better than the Satcon service department. Please see attached information and ARRA documentation.

Use Additional Sheet If More Space is Required
Accepted:_____ Rejected: _____**X**_____
See Addendum # _____
Explanation:
Solectria does not have 10 years' experience in PV systems.

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
Invitation for Bids Number 13-01

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REQUEST FOR APPROVAL EQUAL QUALIFICATION OR CLARIFICATION
Page:_____ Ref: RFP NO. 13-01
Project No. Solar Roofing Project
To: Rhode Island Public Transit Authority
From: Fall River Electrical Associates Co., Inc.
Page & Reference: 16240-3 2.01

Request Description
Use either Solar World 245, 250, or 255 watt panels. Please see attached cut sheets and ARRA documentation.

Use Additional Sheet If More Space is Required
Accepted:_____X_____ Rejected: _____
See Addendum # _____
Explanation:

REVISIONS TO TECHNICAL SPECIFICATIONS

VI.. REQUEST FOR APPROVED EQUAL FORM

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REQUEST FOR APPROVAL APROVED EQUAL QUALIFICATION OR CLARIFICATION

Page: E3.0 **Ref: IFB NO. 13-01**
Project No.

To: Rhode Island Public Transit Authority

From: Spotts Brothers, Inc.

Page & Reference: Module Spec is on Prints Page E3.0

Request Description

Requesting an approved equal for solar modules. Requesting ability to use Suniva OPTXXX-60-4-100. This module is a high quality monocrystaline module made
with power ratings of 250, 255, 260, and 265 respectively. All these modules will put
out more power than the Solar World 230. In addition they all cary higher efficiency ratings than the Solar World 230, meaning they will convert more sunlight to power. The Solar World 230 has an efficiency rating of 13.72%, meaning that percentage of sunlight will be converted to power. The Suniva modules cary the following efficiency
ratings:

250 watt = 15.40% efficient
255 watt = 15.71% efficient
260 watt = 16.02% efficient
265 watt = 16.33% efficient

Spec sheets, warranty, and ARRA compliance documentation, and certification documentation are all included with this email. The Power Output and Limited Product
Warranty are both on par with the Solar World module spec'd.

Use Additional Sheet If More Space Is Required

Accepted: **Rejected: X** **See Addendum #**

Explanation: *Suniva was founded in 2007, therefore does not qualify due to lack of 10 years' experience in PV systems as specified in drawing E3.0, Scope of Work Summary.*

REVISIONS TO TECHNICAL SPECIFICATIONS

RHODE ISLAND PUBLIC TRANSIT AUTHORITY

Invitation for Bids Number 13-01

VI. REQUEST FOR APPROVED EQUAL FORM

This form must be submitted electronically IN MICROSOFT WORD FORMAT TO RIPTA CONTRACTS MANAGER

REQUEST FOR APPROVAL EQUAL QUALIFICATION OR CLARIFICATION

Page: 79 Ref: RFP NO. 13-01

Project No., ___

To: Rhode Island Public Transit Authority

From: __Vanguard Energy Partners, LLC_____

Page & Reference:, ____79_____

Request Description:

On Page 79, Section XXXIV – Project Description, Section E states that, “Solar work includes but is not limited to a Base Bid system of 794 panels on ballasted rack systems with two inverters and all necessary system components to generate 184KW as a power producer.”

After calculation, the above information indicates the use of a panel with an approximate size of 230 watts

In order to reflect latest technology, VEP proposes MoTech IM60+ series 255 watt multicrystalline solar modules.

Use Additional Sheet If More Space Is Required

Accepted:, __ _ Rejected: _ X_ See Addendum # _ _

Explanation: _____

For bidding, this panel does not qualify as an equal due to its higher rate of performance degression.

REVISIONS TO TECHNICAL SPECIFICATIONS

RHODE ISLAND PUBLIC TRANSIT AUTHORITY

Invitation for Bids Number 13-01

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REQUEST FOR APPROVAL EQUAL QUALIFICATION OR CLARIFICATION

Page: 79 Ref: RFP NO. 13-01

Project No., ___

To: Rhode Island Public Transit Authority

From: __Vanguard Energy Partners, LLC_____

Page & Reference:, ____79_____

Request Description:

On Page 79, Section XXXIV – Project Description, Section E states that, “Solar work includes but is not limited to a Base Bid system of 794 panels on ballasted rack systems with two inverters and all necessary system components to generate 184KW as a power producer.”

After calculation, the above information indicates the use of a panel with an approximate size of 230 watts

In order to reflect latest technology, VEP proposes Suniva OPT 60 cell 255Watt panels.

Use Additional Sheet If More Space Is Required

Accepted:, __ _ Rejected: _X_ See Addendum # _ _

Explanation: _____

Suniva was founded in 2007, therefore does not qualify due to lack of 10 years’ experience in PV systems as specified in drawing E3.0, Scope of Work Summary.

REVISIONS TO TECHNICAL SPECIFICATIONS

RHODE ISLAND PUBLIC TRANSIT AUTHORITY

Invitation for Bids Number 13-01

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Page: 79 Ref: RFP NO. 13-01
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After calculation, the above information indicates the use of a panel with an approximate size of 230 watts

In order to reflect latest technology, VEP proposes Suniva OPT 60 cell 255Watt panels.

Use Additional Sheet If More Space Is Required
Accepted:, __ _ Rejected: _X _ See Addendum # _ _
Explanation: __ *Suniva was founded in 2007, therefore does not qualify due to lack of 10 years’ experience in PV systems as specified in drawing E3.0, Scope of Work Summary.*

REVISIONS TO TECHNICAL SPECIFICATIONS

Questions for RIPTA Solar Roofing Project.

From:
Steven M. Spotts
Spotts Brothers, Inc.
42 Berger Street
Schuylkill Haven, PA 17972
steve@gridsmartsolar.com

Questions:

1. The spec shows Solar World 230 watt Monocrystaline modules being used, would a stronger concentrated module be accepted? Example, a Solar World 250 watt Monocrystaline module? ***Only substitutions approved during bidding will be accepted.***
2. Can we substitute with other monocrystaline modules? ***Only substitutions approved during bidding will be accepted.***
3. Do we need to specifically have a manufacturers product approved to us it in our bids? ***Yes.***
4. If we can substitute an equal or greater product, are there efficiency ratings that we must meet? ***If the efficiency ratings are below that of the products specified, the substitution is not equal or greater.***
5. Must the cells be monocrystaline silicon? ***Not if the project specifications can be matched or exceeded.***
6. Would monocrystaline modules from Suniva (spec sheet included) that are 100% American Made and more efficient that Solar World's modules be acceptable? ***No, Suniva does not have a 10 year record yet.***
7. If a Suniva module would be acceptable, can we upgrade to a stronger concentrated module (250, 255, 260 or 265 watt 60 cell modules)? ***Suniva is not an approved substitution.***
8. Helios is another US manufacturer that makes high quality monocrystaline modules (spec sheet attached). Would their 245, 250, 255, or 260 watt modules be acceptable? ***No, Helios does not have a 10 year record yet.***
9. Is there a specific tilt angle or range of angles the modules should be mounted at? ***Ideally the angle will maximize power production. However, the ballasted system and wind ratings lower the angle. The angle of the final roof must also be considered.***

REVISIONS TO TECHNICAL SPECIFICATIONS

Add to Specification Section 16240

2.08 Maintenance and Monitoring

A. Maintenance:

10. Once per year

a. Hose wash all solar modules before March 21 each year. Rinse the array to remove the accumulated dust, dirt, and other debris, according to the manufacturer's instructions. Some debris, such as bird droppings, may need to soak a bit to fully remove it.

b. Reseal system components and building penetrations.

c. At each Combiner Box: Open the combiner box and look for and correct any dirty, loose, or broken connections. Test the tightness of each connection and tighten all loose ones. Note any problems that should be corrected at a later time or at the next scheduled inspection. Check that all conduit connections are tight. Use a voltmeter and DC ammeter to measure and record the array's operating voltage and current level on the output side of the combiner box. Note the relative sun conditions at the time (i.e., full sun, partly cloudy, heavy overcast). Remove the fuses and then check and record each string's open circuit voltage and current levels. Note any deviation between strings for future correction. You can also use the open circuit measurements to determine if the array's output is degrading over time. Return the fuses and close the combiner box.

d. At the Inverter: Use a voltmeter and a DC ammeter to check and record the inverter's operating DC input voltage and current level and on the AC side, and the inverter's output voltage and current levels. Check that the appropriate LEDs are lit up to indicate proper operation of the inverter. Record the total kWh produced since it first started up,. Use this number to compare the PV system's production since the last inspection. Confirm settings on the inverter. Turn the inverter off and check for dirty, loose, or broken wires and connections. Power the system up. Check for normal start up operation and that the inverter produces AC electricity. Verify proper cooling to the electronics and a proper weather tight seal against environmental elements.

e. Open all disconnect switches. Use an ohmmeter to check the grounding system connections. Greater than 25 ohms indicates that corrosion or a poor connection is present, which must be located and corrected. If opening the disconnect switch breaks the ground, rewire the switch to correct the problem. Check each of the disconnected sections for a ground-fault condition and correct.

f. Check to see that the sealants around all building penetrations are in good condition and repair if necessary.

11. Twice per year (before winter and after winter)

a. Inspect the system to make sure all wiring and supports are intact and have not shifted.

b. On a sunny day near noon on March 21 and September 21, review the output of the system to see if the performance of the system is close to the previous year's reading. Maintain a log of these readings so you

can identify if the system performance is staying consistent, or declining too rapidly, signifying a system problem.

c. Note and record by location the condition of the modules. Look for signs of degradation (for example, color changes, fogged glazing, de-lamination, warping, or water leaks), cracked glazing, and bent frames. Note any damage from storms, wind, snow, and ice.

d. Tighten all loose nuts and bolts holding the modules to the mounting rack and to the mounting clips.

e. Secure any loose wiring under the modules.

f. Check the wiring for signs of damage by squirrels, birds, or other animals, and look for cuts, gashes, or worn spots in the wiring's insulation.

g. Check the frame ground connections between modules and from the modules to the combiner boxes.

h. Check all connections of all wires.

i. Inspect components for moisture ingress.

j. Test SCADA and meteorological systems communications.

k. Provide a written report of all findings along with site pictures and any recommendations.

B. Monitoring:

1. Collect, back up, and process the photovoltaic system's operating data. Compare the currents, voltages, and power changes with weather data measured at the site. Detect deviations from the expected performance and make any necessary adjustment to ensure the photovoltaic system is properly adjusted to deliver the optimal yield.
2. Automate system monitoring and supplement by reviewing system reports at least once each morning and once each afternoon.
3. Identify core factors that determine the economic tradeoffs of monitoring resolution and include this information in a yearly report.
4. Provide centralized monitoring, reliable and secure data storage, and immediate access to alerts, updates, and current conditions at the site.
5. Provide continuous viewing of pertinent data at a glance including power, current, voltage, and irradiation.
6. Detect various problems and indicate (to the Owner) alerts signaling the need for inspection, locating the issue down to the string.
7. In the case of a significant problem, guarantee an emergency response time to the site to get it operating optimally as fast as possible. Include cost estimates for any issues not covered under warrantees.

C. Include in Bid: Base bid shall be based on a minimum 182.39kW DC nameplate system. Provide a preliminary one-line diagram indicating the total number of solar modules, their nameplate wattage, and manufacturer's name and model number; the number of modules per string; the number of strings per combiner box; the number of combiner boxes per inverter; and the number of inverters and their AC power output.

REVISIONS TO TECHNICAL SPECIFICATIONS

Drawing Changes –

A1.1

Item 1 - At the largest Exist. AC on the lower roof, change keynote 13 to 14.

Item 2 - Add NOTE 3. (To center of page.)

"3. Keynotes 18 and 19 refer to type of penetration flashing details required. A/C and fan units may have more than one of each type of penetration. Contractor to review in field to determine exact quantity."