

November 16, 2020

Tom O’Hern, Business Administrator
Ramsey Board of Education
25 North Franklin Turnpike
Ramsey, New Jersey 07446



SOLUTIONS
ARCHITECTURE
FRANK A. MESSINEO • AIA

RE: Solutions Architecture in association with HereComestheSun.net
Bid Evaluation - 20.192 – Ramsey District-wide Solar PPA RFP

Mr. O’Hern:

Bids were solicited by the Ramsey Board of Education and Solutions Architecture for the above referenced project. A request for proposals (RFP) was issued by the BOE seeking bids from qualified energy services firms to provide a Solar Energy System (SES) power purchase agreement (PPA) to generate electricity for the aggregate of the 5 (five) district sites that constitute the Base Bid; as well as for an Add/Alternate Bid:

Site	SES Number
Smith Middle School	SES 1
Dater Elementary School	SES 2
Hubbard Elementary School	SES 3
Ramsey High School	SES 4
Tisdale Elementary School	SES 5

The Add/Alternate Bid requested that the Bidder’s remove 85 KW dc of solar energy capacity from their Base Bid in order to accommodate the installation and operations of a Combined Heat and Power system at the BOE facilities.

THE BACKGROUND:

Bids were received in a, “Competitive Contracting format”. Of the twelve (12) providers that purchased documents, only six (6) submitted bid proposals. Bids were received for the project on November 5th at 10:00 a.m. at the District Offices. The bids have been reviewed by Solutions Architecture and then must be reviewed by the District’s Evaluation Committee, which consists of the Business Administrator, Superintendent of Schools, Director of Facilities and District Counsel.

It is the charge of the evaluation committee to select either the Base Bid or the Add/Alternate Bid based on the most advantageous set of proposals and in concert with the comprehensive set of measures incorporated into the Energy Savings Improvement Plan (ESIP).

The (6) six proposals received were collected from the following companies:

1. Advanced Solar Products in partnership with Spano Partners Holdings (ASP)
2. Concord Management Company in partnership with Infiniti
3. Brightcore Energy In Partnership with North Electric (BRIGHTCORE)
4. ECA Solar (ECA)
5. Eznergy in partnership with Greenskies Clean Energy (EZENERGY)
6. HESP Solar (HESP)

In evaluating the bids, the goals and objectives of the Board of Education were carefully considered, and each proposal was evaluated against the criteria established in the RFP:

- Price per solar kWh, as well as total long-term savings (35%);
- Quality of the proposed equipment and the technical design (35%);
- Qualifications and experience of the vendor (vendor teams) (30%).

Based on our review of the submissions, (4) four out of the (6) six proposals are recommended for the evaluation committee to consider for award. Each of these 4 bidders had a reasonable pricing structure, proposed design and reasonable projected 15-year savings. Their experience with solar construction is acceptable and they have a fair amount of experience in providing solar energy systems; including New Jersey public works projects specifically. All (4) four proposals included the Base Bid and the Add Alternate pricing forms.

While these proposals have been reviewed by BOE Representative Solutions Architecture for compliance with public bidding requirements, it is recommended that the District Counsel review these from a legal perspective.

The remaining (2) two proposals submitted by both CMS and BRIGHTCORE included non-conforming conditions and additional price factors (qualifications) specifically on their proposal forms. In both cases, these conditions would expose the BOE to too much financial risk. These two proposals are NOT recommended for consideration by the evaluation committee due to these deficiencies and risk to the BOE. We have included an explanation of these issues and exposures in the General Summary of Bids section. Also, these proposals would not be more advantageous to the BOE versus the other submitted proposals.

GENERAL SUMMARY OF BIDDERS & SUBMISSIONS:

ADVANCED SOLAR PRODUCTS: This team submitted an excellent proposal. They have extensive experience both in terms of New Jersey solar, public works solar energy systems and specifically solar on New Jersey schools. Their Proposal includes premium and high-efficiency equipment and the design optimizes the total capacity feasible on the roof areas.

BRIGHTCORE ENERGY: The proposal submitted by this team included a Bid Price (\$/KWh) as well as additional price adders based on expectation of additional costs incurred by the Bidder. These price adders are not allowed in accordance with the specific requirements in the RFP. Additionally, the total eventual cost to the BOE that they are requesting and the resulting total Bid Price cannot even be estimated/calculated. Further, this Bidder's has included financial terms of "Unforeseen Costs" and "Project Development Costs" which are not defined nor are the specific costs that would be included in these ambiguous categories. For these reasons, it is not recommended that the evaluation committee include the proposal of this Bidder in their review for award of the Solar PPA. These non-compliant financial terms expose the BOE to too much financial risk.

CONCORD MANAGEMENT SERVICES: This team submitted a Base Bid with an extremely high Bid Price (11.2 cents). This price would receive extremely low score for their Base Bid and is the highest price of all bids by a significant amount. Further, in their Add/Alternate proposal form, they included a set of restrictions to their Bid Price, as well as a Bid Price Adder for roofing expenses. Finally, they failed to subtract the 85 KW dc solar capacity from their Base Bid; which was the specific required for the Add Alternate Bid in the RFP. Due to all of these non-conformance issues and the potential financial exposure to the BOE from their conditions; it is not recommended that the evaluation Committee include this Bidder's proposal in their review for award of the Solar PPA.

ECA SOLAR: This team submitted an excellent proposal. They have good experience both in terms of New Jersey public works solar energy systems and specifically solar schools. Their Proposal includes premium and high-efficiency, equipment and the design optimizes the feasible areas of the roof.

EZENERGY/GREENSKIES: This team submitted an excellent proposal. They have very, good experience both in terms of New Jersey public works solar energy systems and specifically solar on New Jersey schools. Their Proposal includes premium and high-efficiency, equipment and the design optimizes the feasible areas of the roof. No racking system was specified for the sloped roof areas of the roof and should be confirmed for compliance with RFP requirements.

HESP SOLAR: HESP submitted a good proposal. They specified a premium quality and high efficiency solar panel and a high quality and high efficiency inverter. The racking system fully complies with the RFP requirements. While their proposed design is good, they have far overestimated the potential for total solar capacity and thus the savings listed on their Proposal Form would be less substantially less if calculated correctly. They have a lot of public works experience including school districts in New Jersey and other states. This company is vertically integrated and thus would be the contractor and the PPA financing company.

PROPOSAL EVALUATION EXPLANATION:

Solar kWh Pricing and Total Saving Comparison

The Price/Savings is 35% of the evaluation criteria; as such 35 points, out of 100 are assigned to the evaluation of this aspect of the recommended proposals.

Pricing and Savings Calculations and allocation of Points:

- In this category there is an evaluation of the average 15-year Bid Price (\$/KWh), as well as the projected savings based on the vendor's overall design.
- The price factor is allocated 17.5 out of a total 35 points for this part of the evaluation criteria and the savings is allocated 17.5 points out of the 35 points.
- In determining the **allocation of 17.5 points based on 15-year average Price** for each Bidder, the following calculation is used:
 - The lowest price Bidder is given 17.5 points. Each of the other bidders are given points based on the differential between their price and the lowest bidder's price.
 - $(\text{Low Price Bidder price}) / (\text{Bid Price from other Bidder}) \times 17.5 \text{ points}$
- In determining the **allocation of 17.5 points based on Savings** for each bidder, the following calculation is used:
 - The highest Savings Bidder is given 17.5 points. Each of the other bidders are given points based on the differential between their Savings and the Bidder with the highest savings.
 - $(\text{Savings from other Bidder}) / (\text{Savings for Highest Savings Bidder}) \times 17.5 \text{ points}$

The Pricing and Saving chart below is based on the proposals for the BASE BID

Ramsey School District Solar PPA RFP Bid Price/Savings Comparison						
BASE BID			15 Year Savings Comparison			
Proposers:	ASP	BRIGHTCORE	CMS	ECA	EZENERGY	HESP
Total Savings	\$3,056,166	\$3,023,790	\$736,579	\$2,190,050	\$3,337,943	\$3,309,139
Savings Ranking	2	3	6	5	4	1
Points based on savings	16.0	15.9	3.9	11.5	17.5	17.3
BASE BID			\$/KWh Price Comparison			
Proposers:	ASP	BRIGHTCORE	CMS	ECA	EZENERGY	HESP
Year 1	\$0.0155	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0080
Year 2	\$0.0158	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0081
Year 3	\$0.0160	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0082
Year 4	\$0.0163	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0082
Year 5	\$0.0166	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0083
Year 6	\$0.0169	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0084
Year 7	\$0.0172	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0085
Year 8	\$0.0175	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0086
Year 9	\$0.0178	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0087
Year 10	\$0.0181	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0087
Year 11	\$0.0184	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0088
Year 12	\$0.0188	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0089
Year 13	\$0.0191	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0090
Year 14	\$0.0194	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0091
Year 15	\$0.0198	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0092
Average Price	\$0.0176	\$0.0140	\$0.1120	\$0.0450	\$0.0000	\$0.0086
Escalation Rate (Annual %)	1.75%	0.00%	0.00%	0.00%	0.00%	1.00%
Price Ranking	4	3	6	5	1	2
Points based on Average Price	15.0	15.5	1.7	11.1	17.5	16.3
Price/Savings Criteria Total Points out of 35 points	31	31	6	23	35	34
OVERALL RANKING PRICE/SAVINGS	3	3	5	4	1	2

The Pricing and Savings chart below is based on the proposals for the ADD/ALTERNATE

Ramsey School District Solar PPA RFP Bid Price/Savings Comparison						
ADD ALTERNATE			15 Year Savings Comparison			
Proposers:	ASP	BRIGHTCORE	CMS	ECA	EZENERGY	HESP
Total Savings	\$2,848,588	\$2,830,247	\$2,716,152	\$2,190,050	\$2,336,870	\$3,135,114
Ranking	2	3	4	6	5	1
Points based on savings	15.9	15.8	15.2	12.2	13.0	17.5
ADD ALTERNATE BID			\$/KWh Price Comparison			
Proposers:	ASP	BRIGHTCORE	CMS	ECA	EZENERGY	HESP
Year 1	\$0.0167	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0080
Year 2	\$0.0170	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0081
Year 3	\$0.0173	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0082
Year 4	\$0.0176	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0082
Year 5	\$0.0179	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0083
Year 6	\$0.0182	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0084
Year 7	\$0.0185	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0085
Year 8	\$0.0189	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0086
Year 9	\$0.0192	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0087
Year 10	\$0.0195	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0087
Year 11	\$0.0199	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0088
Year 12	\$0.0202	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0089
Year 13	\$0.0206	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0090
Year 14	\$0.0209	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0091
Year 15	\$0.0213	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0092
Average Price	\$0.0189	\$0.0140	\$0.0310	\$0.0450	\$0.0000	\$0.0086
Escalation Rate (Annual %)	1.75%	0.00%	0.00%	0.00%	0.00%	1.00%
Ranking	4	3	5	6	1	2
Points based on Average Price	14.8	15.5	13.1	11.1	17.5	16.3
Price/Savings Criteria Total Points out of 35 points	31	31	28	23	31	34
OVERALL RANKING PRICE/SAVINGS	2*	2*	3	4	2*	1
Note: ECA Savings should be reduced to:				\$2,045,796		
NOTE: Ezenergy miscalculated the energy production on the proposal form for the Add Alternate. Year 1 production should be:				1,465,372.8 KWh/year = increasing their savings to \$2,962,235		

BASE BID OR ADD/ALTERNATE PRICING SELECTION

Based on an evaluation of the Bid Prices and the projected solar savings; it is recommended that ***the Base Bid proposals and pricing be selected in order to optimize the comprehensive energy saving measures throughout the district facilities in accordance with the incorporated measures in the ESIP.*** The ESIP professional team evaluated the increase in solar KWh production and savings, the corresponding interest rate reduction for proceeding with a 15-year term for the financing versus a 19-year financing model with the corresponding natural gas and electricity savings for the installation of the CHP. After evaluating the two scenarios based on the solar PPA proposals received and the corresponding financial and energy savings from the actual bid price and savings; ***the ESIP team recommends that the best financial benefits for the District would be to proceed with the Base Bid pricing from the solar PPA proposals and removing the CHP system from the overall ESIP plan.***

CONCLUSIONS AND RECOMMENDATIONS

Each of these 4 bids would provide viable solutions and substantial savings to the BOE. However, based on all of the evaluation criteria; the recommendation for the awarded vendor would be to select the Eznergy team. They are the lowest price vendor; they have excellent experience and qualifications for this type of project - especially on New Jersey schools; and their technical design and high-quality solar energy components are excellent and will provide long term savings to the BOE.

DISTRICT EVALUATION COMMITTEE

Based upon the information contained herein and discussions with the District Evaluation Committee which consists of the Superintendent, the Business Administrator, the Director of Facilities and the Solutions Architecture Team – the Committee concurs that EZnergy’s submission would provide the most beneficial option for the District.

Solutions Architecture recommends that you forward a copy of this evaluation and the bid packages for the (4) recommended bidders to the Board Attorney. It is recommended that the Board Attorney review all aspects of bidder proposals for compliance with regulations and procedures of the bidding laws.

Should you have any questions or require additional information, please call me at [\(973\) 484-4800](tel:9734844800) or e-mail me at fm@solutions-arch.com.

Respectfully submitted,



Frank A. Messineo, AIA
Principal

Cassandra Kling
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DETAILED ANALYSIS:

Below you will find detailed summaries of the top 4 (four) proposals recommended for consideration for award by the evaluation committee. These 4 (four) proposals are further delineated based on the price, savings, technical design, proposed equipment and provided documentation of the bidder’s qualifications and experience in delivering solar PPA services.

ASP Technical Proposal Evaluation				
SES #	Solar Panel Type	Warranty	Description	Additional Comments
Base Bid	Boviet HC=450W dc	25-year warranty on linear power and 12 product warranty	144 cell mono-crystalline module with rated efficiency at 20.4%.	High efficiency panels; premium module. Product warranty is more protective than most solar panels.
	Inverter Type	Warranty	Description	Additional Comments
Base Bid	SMA Sunny Tripower Inverters	15 years up to 20-year option	98.1% efficiency rating. String inverters with power optimizer included	Fully complies and exceeds RFP requirements. High Efficiency Inverter. Monitoring system is included in inverter package.
	Mounting System Type	Warranty	Description	Additional Comments
Base Bid	Panel Claw Ballast-mounted Claw FR 5-degree slope	25 years	Ballasted mounted "pan", non-penetrating system. rubber roof protection pads	Fully complies with RFP requirements.
	Design Capacity (KW dc)	Tilt	Additional Comments	
Base Bid	1,380.60	5	good capacity density; compared to other proposals	
Add/Alternate	1,302.30	5	""	
	15 Year Average Price		15 Year Savings	Additional Comments
Base Bid	\$0.0176		\$3,056,166	
Add/Alternate	\$0.0189		\$2,848,588	
<p>NOTES: This team has very good experience both in terms of New Jersey public works solar energy systems and specifically New Jersey schools. The design includes very high-efficiency equipment including exceeding some warranty requirements as well as power optimizers to increase production. The technical design is very good as well. Premium modules and high performing system components optimize of solar energy production in the feasibility roof areas utilized.</p>				

ECA Technical Proposal Evaluation				
SES #	Solar Panel Type	Warranty	Description	Additional Comments
Base Bid	Jinko JKM 460 W dc 460 W dc	25-year warranty on linear power and 12 product warranty	Tiling ribbon technology monocrystalline module with rated efficiency at 20.93%.	High efficiency panels. Premium module. Product warranty is more protective than most solar panels.
	Inverter Type	Warranty	Description	Additional Comments
Base Bid	SMA Sunny Tripower 24000	12 years up to 20- year option	98.5% efficiency rating.	Fully complies with RFP requirements. High Efficiency Inverter. Monitoring system is included in inverter package.
	Mounting System Type	Warranty	Description	Additional Comments
Base Bid	Panel Claw Ballast mounted ClawFR 10 degrees.	25 years	Ballasted mounted "pan", non-penetrating system. rubber roof protection pads. ZAM coated.	Fully complies with RFP requirements.
	Design Capacity (KW dc)	Tilt	Additional Comments	
Base Bid	1,290.46	10	less capacity density by design; compared to other proposals. Estimated capacity and thus production is overestimated based on a review of their design and equipment.	
Add/Alternate	"Same as above"	10	The add alternate bid is meant to reduce the capacity by 85 KW dc however the sheet was not filled in. While they may have meant that the price remained the same, the savings calculation needs to be compared accurately in accordance with the RFP requirements.	
	15 Year Average Price		15 Year Savings	Additional Comments
Base Bid	\$0.0450		\$2,190,050	
Add/Alternate	\$0.0450		\$2,045,796	Calculated to estimate savings compared to other vendors.
<p>NOTES: This team has good experience both in terms of New Jersey public works solar energy systems and solar on schools' experience. The design includes very high-efficiency equipment including exceeding some warranty requirements as well as power optimizers to increase production. The technical design is very good as well. Premium modules and high performing system components optimize of solar energy production in the feasibility roof areas utilized.</p>				

Eznergy and Greenskies Technical Proposal Evaluation				
	Solar Panel Type	Warranty	Description	Additional Comments
Base Bid	Hanwha Q cells Q Peak Dou L-G5.2	25 Year/50-year workmanship	480 W dc 144 split cells. 19.9% efficiency rating.	High efficiency panel and complies and exceeds the rfp requirements. Premium Module.
	Inverter Type	Warranty	Description	Additional Comments
Base Bid	Chint Inverters CPS 277/480 50 and 60 KW	15 years	98.8% efficiency rating.	High efficiency inverter, complies with RFP requirements.
	Mounting System Type	Warranty	Description	Additional Comments
Base Bid	Genmounts LT Ballasted Solar Racking	25 years	Aluminum Z rack non penetrating racking system.	Fully complies with the RFP requirements for flat roof installations. <u>The sloped roof racking is not specified and should be verified to ensure compliance with the RFP requirements.</u>
	Design Capacity (KW dc)	Tilt	Additional Comments	
Base Bid	1,309.00	5	good capacity density; compared to other proposals	
Add/ Alternate	1,224.00	5	""	
	15 Year Average Price		15 Year Savings	Additional Comments
Base Bid	\$0.0000		\$3,337,943	
Add/ Alternate	\$0.0000		\$2,336,870	Due to a miscalculation on the proposal form the actual savings would be increased to approximately \$2,962,235
<p>NOTES: This team has particularly good experience both in terms of New Jersey public works solar energy systems and specifically New Jersey schools. The design includes very high-efficiency, equipment including exceeding some warranty requirements as well as power optimizers to increase production. The technical design is very good as well. Premium modules and high performing system components optimize of solar energy production in the feasibility roof areas utilized.</p>				

HESP Solar Technical Proposal Evaluation				
	Solar Panel Type	Warranty	Description	Additional Comments
Base Bid	Canadian Solar HIDM 420 W dc Monocrystalline PERC panel	25-year warranty on linear power and 15 product warranty	Mono-crystalline module with rated efficiency at 20.4%.	High efficiency panels. Premium module. Product warranty exceeds RFP requirements.
	Inverter Type	Warranty	Description	Additional Comments
Base Bid	Yaskawa/Solectria PVI inverters and TL	10-year option for 15 and 20 years	98.6% efficiency rating.	Complies with RFP requirement provided extension is included as required. High efficiency inverter. Proposal includes the option of a kiosk.
	Mounting System Type	Warranty	Description	Additional Comments
Base Bid	Solar Mount model Atlantis ballast mount for flat roofs and Iron Ridge Flush Mount System for sloped areas.	20 years	Aluminum components ballasted mounted "pan", non- penetrating system. Aluminum rails and connectors for sloped roofs.	Fully complies with RFP requirements.
	Design Capacity (KW dc)	Tilt	Additional Comments	
Base Bid	1,539.30	5	good capacity density; compared to other proposals, however overestimated capacity in the layouts.	
Add/Alternate	1,454.90	5	""	
	15 Year Average Price		15 Year Savings	Additional Comments
Base Bid	\$0.0086		\$3,309,139	Savings are overestimated
Add/Alternate	\$0.0086		\$3,135,114	Savings are overestimated
NOTES: This team has very good experience both in terms of New Jersey public works solar energy systems and specifically New Jersey schools. The design includes very high-efficiency equipment. The technical design overestimates the solar capacity substantially by placing modules too close to shading elements and roof edge. This design would have substantial shading and production losses compared to their estimated savings.				