



"The Capital City of the Palm Beaches"

PROCUREMENT DIVISION

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**Addendum 2
ITB 11-12-103**

ECR EMERGENCY POWER PLANT UPGRADES – PHASE 1

Each recipient of this Addendum acknowledges all of the provisions set forth in the Invitation to Bid and agrees to be bound by the terms thereof.

This addendum shall modify, clarify, change or add information and become part of the above referenced solicitation.

This addendum shall:

1. Provide Answers to Questions received.
2. Provide New Sub-Section 1.11.

Question 1:

Is it permissible under the contract to submit a bid for more scope of supply than is called for if savings can be attained by doing so? Example: Making all the packages the same. (4 fuel systems instead of 2 etc).

Answer 1:

The Bid Form must be filled out "as-is" and all bids will be evaluated solely on the base bid as shown on the Bid Form. The bidder may submit additional pricing information as appropriate. However, any information beyond the scope of the base bid will only be considered after award of the contract.

Question 2:

Are the 4 Starter VFD's intended to be 2 + 2 redundant for Units 1 & 2, or are 2 additional VFD's for future use (units 3 & 4)?

Answer 2:

The 4 VFDs are for the 4 individual gas turbine generators. VFDs 1 and 2 will be put into service with A/C Start Motors 1 and 2 this phase of work, and VFDs 3 and 4 will be installed and tested during this phase of work for eventual use with future A/C Start Motors 3 and 4.

Question 3:

The current Generator excitation circuit incorporates a Series Boost Option (SBO) currently mounted in the existing Relay consoles and needed for large motor starting (this should be supplied new or reused for the NEW controls). Due to the amount of heat and EMI generated by this device it is not recommended by the OEM to locate this device in the new controls.

Will the contract be amended to show the new or preferred location of the SBO (new or reuse)?

Answer 3:

The preferred location of the generator excitation circuit and SBO for each generator is in the proposed VFD cabinet for each unit located within the new MCC #6. This Addendum shall serve as the amendment to the Contract Documents.

Question 4:

What is the Protocol for the communications to the existing SCADA system?

Is there a list of communications points that are to be sent via the Package controls Commutations module?

Answer 4:

The current communications between the existing generator system and the plant SCADA system (PLC-3 located within the generator building) are via individual dry contact discrete digital I/O. At a minimum, the communications signals for the generator controls shall include the existing I/O signals:

- Generator 1 Start/Stop – Digital Output
- Generator 1 Running – Digital Input
- Generator 1 Trouble – Digital Input
- Generator 2 Start/Stop – Digital Output
- Generator 2 Running – Digital Input
- Generator 2 Trouble – Digital Input
- Generator 3 Start/Stop – Digital Output
- Generator 3 Running – Digital Input
- Generator 3 Trouble – Digital Input
- Generator 4 Start/Stop – Digital Output
- Generator 4 Running – Digital Input
- Generator 4 Trouble – Digital Input

However, the intent of the project is that the generator control panels and load management panel shall be able to communicate with the existing plant SCADA system in such a way as to allow the entire Emergency Power Facility to operate in full automatic mode and to be monitored remotely from the control room.

Additionally, the Diesel Standby Generator control panel shall be capable of sending and receiving signals as described in Specification 16201.

Question 5:

Solar Turbines Incorporated is the OEM of the exiting Turbines at the facility. At this time Solar is not available to be the main contractor for this project.

Is it possible for CWPB to supply Solar with a list of acceptable bidders that would be interested in having Solar as a Sub Contractor for the OEM portion of this project?

Is it possible to only bid the Solar Turbines upgrade content and not the whole project scope of supply?

Answer 5:

"The project must be bid in its entirety. Any potential Bidder, whether a single entity or a team, that can demonstrate the ability to perform the Work and that meets the minimum experience requirements as listed in the

Contract Documents may bid the project. It is the responsibility of each Bidder to ensure that they, or their team, meet the minimum requirements prior to submitting a bid."

Question 6:

Can a functional description and I/O of existing Load Management system be obtained?

Answer 6:

A digital copy of the ASCO Services O&M Manual and I/O diagrams for the existing Load Management System has been placed on the City's FTP site. The FTP site may be accessed at: <ftp://ftp.wpb.org>

Username: ecrwrfid
Password: ercwrfpw

Question 7:

Are all the units going to be shut-in and not available during construction?

Answer 7:

As stated in the Contract Documents, there must be three (3) units in operation at all times. The Contractor may only take one (1) unit out of service at any time, and that unit must be brought back on-line and be fully operational before any other unit may be taken out of service.

Question 8:

Is there a time in the construction phase that the units will not be available for construction (IE Hurricane season)?

Answer 8:

The units will be available for construction at all times during the construction period provided that three (3) units remain fully operational at all times.

Question 9:

What is the expected time that the Bidders questions will be posted for review?

How and where will they be posted?

Answer 9:

All questions received will be posted on the procurement website as an addendum.

Question 10:

Please provide a detailed IO list from the Siemens load management PLC to help us determine the incremental IO requirement for managing the plant load - unload function.

Answer 10:

This information was originally provided with "Answer 6" from Addendum 2. A digital copy of the ASCO Services O&M Manual and I/O diagrams for the existing Load Management System has been placed on the City's FTP site. The FTP site may be accessed at: <ftp://ftp.wpb.org>

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Question 11:

HI V Switchgear has the transformer installed inside, (noted in the specs as requiring replacement); Please provide one line diagrams, interface drawings, 3 line drawings and equip descriptions. It may be that the Switchgear itself will require replacing as this switchgear will power the VFDs to be installed for the 2 GTGs. Requested drawings will need to be provided to determine how the new transformer can be interfaced to this existing Switchgear and where the disconnects/breakers will be installed for the VFDs. These requested drawings are not part of the spec package for the project. We could not look inside the cabinet during the pre-bid conference as it cannot be opened when energized and this is the incoming power for the entire building.

Answer 11:

The transformer to be replaced is not located inside any of the High Voltage switchgear cabinets. Substation #6 contains only the 480V step-down transformer and disconnect switches and shall be replaced in its entirety per

Specification 16621 and drawings E-01-0 and E-01-DEMO. A Single Line Diagram for the new Substation (#6A) and MCC (#6) is provided on Sheet E-01-0 of the drawings and descriptions of the equipment are provided in Section 16621-2.01 of the Specifications. The new transformer (located in the new Substation #6A) shall be connected to the same existing 5KV feeder that the existing transformer will be disconnected from during demolition. The disconnect switches and circuit breakers for the new VFDs need to be located downstream of the ATS and shall be installed in the new MCC #6.

Question 12:

As a follow on to the above, it needs to be determined how to interface the new transfer switch and VFDs into this existing, “substation” and to aid in determining whether this substation equipment itself would require replacement. The drawings mentioned above are critical to bidding this project element.

Answer 12:

The existing substation will be replaced as part of this project. As shown in the Single Line Diagram on Sheet E-01-0, 480V grid power from the new Substation #6A (normal) and from the new diesel standby generator (emergency) will feed into the new ATS/distribution panel. The new ATS will then distribute power to both the existing MCC #5 and the proposed MCC#6.

Question 13:

On Specification Drawing sheet C1-1, we would require drawings of what conduits contain that are to be relocated in order to bid the new cables and conduit to be installed.

Answer 13:

The 4 existing conduits are the following:

- Two (2) 3/4 inch conduits with three (3) #10 and one (1) #10 Ground wire each feeding the Fuel Transfer pumps 1&2 and combination Starters.
- One (1) 3/4 inch conduit with a 2-conductor cable and 1 shielded cable to a measuring station close to the Fuel pumping station.
- One (1) 3/4 inch conduit with 120/208 Volt feeding equipment or lights from Lighting Panel "LH" in the Generator control room to outside the Generator Building.

Question 14:

Same Specification Drawing, assume 2” Diesel piping is to be considered hazmat and we would like to know what measures must be utilized to remove this piping per local codes and standards.

Answer 14:

It is the Contractor’s responsibility to perform the work in accordance with all applicable laws, ordinances, and codes by whatever means and methods the Contractor deems necessary. Links to the Florida Building Code as well as local West Palm Beach Amendments to the Code can be found at:

http://www.wpb.org/construction/building_code_amendments.php

Question 15:

Please advise definitive Load Shedding capabilities requirements as all were not utilized in the old system. Additional to the controls upgrade there may be electrical switching upgrades to various field devices which must be known prior to bidding.

Answer 15:

This information was originally provided with “Answer 6” from Addendum 2. A digital copy of the ASCO Services O&M Manual and I/O diagrams for the existing Load Management System has been placed on the City’s FTP site. The FTP site may be accessed at: <ftp://ftp.wpb.org>

Username: ecrwrfid
Password: ecrwrfpw

Question 16:

Please provide package/skid mechanical arrangement and PID drawings in order to determine mechanical/electrical termination points & boxes.

Answer 16:

As-Built record information for the Emergency Power Plant has been placed on the City's FTP site. The FTP site may be accessed at: <ftp://ftp.wpb.org>

Username: ecrwrfid
Password: ercwrfpw

Question 17:

Please provide a list of WPB approved general/electrical contractors.

Answer 17:

There are no pre-approved contractors for this project. Any potential Bidder, whether a single entity or a team, that can demonstrate the ability to perform the Work and that meets the minimum experience requirements as listed in the Contract Documents may bid the project.

Question 18:

Does WPB consider any value in seeing an optional Siemens PLC based control system, as the plant seems to be dedicated to Siemens based controls. WG can do both AB and Siemens if that has added value to WPB's plant operations.

Answer 18:

While the overall controls systems for the plant are standardized on Siemens, it is the City's intention that the Emergency Power Plant remain on an OEM-supported control system. The Emergency Power Plant remains a dedicated system with limited integration into the overall SCADA system. The City sees more value in maintaining the integrity of an OEM-supported system. The OEM for the Gas Turbine Generators and control systems is Solar Turbines and Solar only supports Rockwell. Therefore, the PLC based controls system shall be Allen-Bradley as manufactured by Rockwell Automation, Inc.

Question 19:

What are WPB's requirements, control points and direction to facilitate grid power entrance isolation in order to maintain functional capability of the emergency power plant? During the pre-bid conference discussions, there seemed to be some question as to when the contractor will be able to take the power to the building down to replace or modify the switchgear. The requirement that the new black start must be in place before the old one can be removed necessitates access to the "substation" or main switchgear to interface the new circuitry as well as install the new MCCs.

Answer 19:

The sequence for demolition of the existing Substation #6 and installation of the new Substation #6A is outlined in Section 16621-1.04-B. During the time grid power to the existing MCC #5 is off-line, power will be supplied to the MCC through the existing diesel generator. The single, limited instance that the Emergency Power Plant may be taken off-line is during the swap of the existing MCC incoming lugs and the new Substation #6A feeder lugs from the existing ATS to the new ATS. Once this is complete, the existing diesel generator and ATS may be removed.

Question 20:

In light of the detailed information requirement listed above, and WPB expectations of having thorough, concise, detailed and cost competitive bids for this project, we respectfully ask for the bid date to be extended by 4 weeks after the required information above is supplied. We believe that the information and the extended time will allow Wood Group and the other bidder's adequate time to evaluate, pre-engineer, and gather external contractor quotes thus meeting and exceeding the expectations of WPB.

Answer 20:

The bid date has already been extended an additional 4 ½ weeks to January 13, 2012. The City believes this gives potential bidders adequate time to prepare and submit their Bids.

Question 21:

Since we are one of the two bondable contractors that attended the prebid meeting, we wanted to ask how we can bid this job if the equipment costs are in the millions of dollars and the labor costs are no more than a half a million dollars?

Shouldnt the City buy the equipment directly from the manufacturer and then bid out of labor?

We understand your warranty issues but when you are looking at way more than two million dollars in equipment costs, the bid as it is written is not workable.

Unless you allow the manufacturers to Prime, if it is possible, we can't see who will bid this job as the prime contractor.

Answer 21:

"While the City acknowledges that there could be some potential tax benefit to direct purchase of equipment, it is the intent of the project that a fully operational plant upgrade be sourced, installed, delivered and warranted by the bidder. The City does not wish to assume ownership of or responsibility for any equipment prior to installation and testing."

NEW SUB-SECTION 1.11:

Section 16621 of the Contract Documents shall be amended to include new Sub-Section 1.11 STARTUP AND INSTRUCTION. The cost of operator training shall be included in the Bidder's price for Mobilization/Demobilization, Item I-1 of the Bid Form. The new sub-section shall read as follows:

1.11 STARTUP AND INSTRUCTION

- A. *As referenced in section 1.04-D-28b of this Specification, the Contractor shall review the proper operation of the equipment with the Owner's designated personnel prior to final completion.*

- B. *A minimum of two (2) man-days shall be provided for instructing the Owner's designated personnel in the operation, care, and maintenance of the system.*

- C. *Provide all instruction required to ensure understanding of all operating and maintenance procedures by the Owner's designated personnel. Instruction shall include at a minimum:*
 - 1. Explain use of Operating and Maintenance Manuals
 - 2. Identify control locations and control equipment
 - 3. Explain operating sequences. Demonstrate operation through complete cycle(s) and full range of operation in all modes.
 - 4. Explain trouble shooting procedures; Demonstrate commonly occurring problems and note procedures which must be performed by factory personnel.

- 5. Explain maintenance procedures and requirements; Identify items requiring periodic maintenance, demonstrate typical preventive maintenance procedures, recommend typical maintenance intervals, and identify maintenance materials to be used.
- D. Furnish all tools and/or test equipment required for proper instruction of the Owner's designated personnel.

All other information remains the same.

Bidders must acknowledge receipt of this Addendum 2 in the space provided below. This Addendum forms an integral part of the bid documents and therefore must be executed. Failure to return this addendum with your bid submittal may be cause for disqualification.

Issued By: City of West Palm Beach
Procurement Division
December 27, 2011

Issued By: Althea Pemsel
Althea Pemsel, MA, C.P.M.
Procurement Official

BIDDER: _____

Signed By: _____

Print Name: _____

Title: _____

Date: _____

End of Addendum 2