

**FLORIDA PUBLIC SERVICE COMMISSION
AUDIT DOCUMENT/RECORD REQUEST
NOTICE OF INTENT**

REDACTED

TO: Maritza Iacono

undktd

UTILITY: Progress Energy - Florida

Carl Vinson
AUDIT MANAGER

FROM: L. Fisher

REQUEST NUMBER: DR-1

DATE OF REQUEST: 3/11/08

AUDIT PURPOSE: Nuclear Uprate Controls Review

REQUEST THE FOLLOWING ITEM(S) BE PROVIDED BY: 3/21/08

REFERENCE RULE 25-22.006, F.A.C., THIS REQUEST IS MADE: INCIDENT TO AN INQUIRY

X OUTSIDE OF AN INQUIRY

ITEM DESCRIPTION:

1. a. Please provide current copies of all project planning documents for the CR3 uprate project.
b. Please list and describe the planning and design documents and/or systems used to support, develop and maintain the project plan for the CR3 uprate project.
2. a. Please provide current copies of all project management documents for the CR3 uprate project.
b. Please list and describe the project management documents and/or systems used to track work completion and schedule status for the CR3 uprate project.
3. a. Please provide current copies of all contractor evaluation and quality assurance documents for the CR3 uprate project.
b. Please list and describe the contractor evaluation and quality assurance documents and/or systems used to assess contract compliance, work completion and quality assurance for the CR3 uprate project.
4. a. Provide an organizational chart of the organizations and work units responsible for completing the CR3 nuclear uprate project.
b. Provide a description of the primary responsibilities for each group involved in the project's completion.
c. Provide the number of employees in each group.
5. Provide copies of the purchasing, bidding, and contracting procedures applicable to the CR3 uprate project.
6. Provide copies of any project management procedures applicable to the CR3 uprate project.
7. a. Please list and describe all reporting mechanisms used to provide project status reports and updates to company management, corporate Board of Directors and joint owners.
b. Please provide copies of all Board of Directors meeting minutes that pertain to the CR3 uprate project.
8. a. Provide a list of all internal or external audits of purchasing or competitive bidding for nuclear unit contracts and components conducted over the period 2005-2007.
b. Provide a list of all such audits planned for the period 2008-2010.

COM
ECR
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TO: AUDIT MANAGER Carl Vinson

DATE: 3/18/08

THE REQUESTED RECORD OR DOCUMENTATION:

- (1) HAS BEEN PROVIDED TODAY
- (2) CANNOT BE PROVIDED BY THE REQUESTED DATE BUT WILL BE MADE AVAILABLE BY _____
- (3) AND IN MY OPINION, ITEMS(S) 3a IS (ARE) PROPRIETARY AND CONFIDENTIAL BUSINESS INFORMATION AS DEFINED IN 364.183, 366.093, OR 367.156 F.S. TO MAINTAIN CONTINUED CONFIDENTIAL HANDLING OF THIS MATERIAL, THE UTILITY OR OTHER PERSON MUST, WITHIN 21 DAYS AFTER THE AUDIT EXIT CONFERENCE, FILE A REQUEST FOR CONFIDENTIAL CLASSIFICATION WITH THE DIVISION OF COMMISSION CLERK AND ADMINISTRATIVE SERVICES. REFER TO RULE 25-22.006, F.A.C.
- (4) THE ITEM WILL NOT BE PROVIDED. (SEE ATTACHED MEMORANDUM)

SIGNATURE AND TITLE OF RESPONDENT

Maritza N. Iacono
Supervisor - Regulatory Planning

NUMBER - DATE
 06569 JUL 29 08
 FPSC-COMMISSION CLERK

08/23/07

Progress Energy issued Request for Proposal No. KS12007, Engineering Services for Secondary Systems Upgrade on June 6, 2007. The bidders were Areva NP, Enercon Services, Sargent & Lundy, TechCom International and Worley Parsons. Three proposals were received on August 10, 2007. Proposals were received by Areva / Worley Parsons (combined proposal), Enercon Services and TechCom International.

The following proposal technical comments were developed by reviewing unpriced copies of each proposal. The RFP bid specification identified fifteen (15) major tasks. The RFP requested each major task be bid separately and include estimated manhours. Combined total work scope pricing and maximum not to exceed pricing was to be identified.

The major task areas included:

- 1) Computer models.
- 2) MSR replacement and MSR belly drain heat exchanger addition.
- 3) Turbine generator modifications.
- 4) Deaerator bypass line addition.
- 5) Isophase bus duct cooling system.
- 6) Feedwater heater and heater drain system modifications.
- 7) Secondary service closed cycle cooling system modifications.
- 8) Circulating water system modifications.
- 9) Condensate pumps and motors.
- 10) Feedwater booster pumps and motors.
- 11) Feedwater control valves and control system stability analysis.
- 12) Condenser evaluations.
- 13) Electrical distribution calculations.
- 14) Mechanical ultimate heat sink calculations.
- 15) Turbine building structural evaluation.

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A request for proposal # KS12007 addendum letter was issued on August 14, 2007. The addendum letter added two (2) additional work scopes and responded to questions by the bidders.

The additional work scope items included:

- 1) Internal flooding analysis due to increased circulating water flow.
- 2) Plant operating license amendment support.

TechCom International (TCI) Proposal Review Notes:

- TCI proposed to perform 9 of the 15 tasks (task # 4, 5, 7, 8, 10, 11, 13, 14 and 15) and the 2 additional tasks. The proposal estimates a total of 41,780 man hours to complete the proposed work scope. Estimated man hours are provided for each major task area proposed.
- Proposal includes no references to TCI similar previous work experience.
- Proposal identifies a project organization of 20 people. The proposal identifies 19 engineering support staff at TCI main office in Irvine, CA. 17 resumes were attached. Several of the resumes indicate that TCI "proposed staff" are presently employees of other companies. I verified one person is presently employed by Southern California Edison and another is presently employed by Areva. Several additional resumes appear to be suspect.
- Proposal includes only 10 new or revised drawings for task 4, 5, 7, 8, 10 and 13.
- Proposal does not include changes to the electrical distribution system.

Areva / Worley Parsons Proposal Review Notes:

- Proposal includes total work scope and is teaming effort by both companies.

Redacted

- Areva (formally Babcock and Wilcox) is NSSS OEM. Worley Parsons (formally Gilbert Commonwealth) is CR3 AE. These companies provide the most capability. This is expected require less PE project management support and should reduce project risk.
- Pg.2, background, states "BOP phase 2 evaluations and implementation will be defined later and are not part of this proposal scope". Verify this is not an accurate statement. All EPU BOP identified work is to be in scope of proposal. BOP Piping Analysis Scope does not appear to be included. Areva scoping study report # 51-9043794-000 Section 3.4.1.3 "pipe support / water hammer" identifies 16 piping calculations (ref. App. J) and the main steam pipe hammer calculation M73-1002 need developed or revised.
- Pg.4, Table 1.4-1; add "Iso-Phase Bus Duct Electrical Evaluation" to engineering evaluation list.
- Pg. 4, Table 1.4-1; add "Condense Steam Impingement Plate Mods" to EC list. This is an expected output of the HES condenser tube vibration analysis. This modification should be scheduled during the 2009 LP turbine modification.
- Pg.5, Table 1.4-1; add "Feedwater Heater CDHE-3A/B" to equipment specification list.
- Pg.19, EPU PEPSE Model; add MSR belly drain, add deaerator bypass mod, add YUBA estimated feedwater heater TTD's and DCA's for retained heaters.
- Pg.19, PEPSE Model; validate MUR PEPSE model against plant data following MUR implementation. PEPSE model will be used as equipment design input.
- Pg.19, PEPSI Model; Siemens will provide preliminary turbine PEPSE model input in September 2007 as requested. PEPSE model to be updated with final turbine PEPSE model input after final turbine design is established.
- Pg.20, FATHOM model; add Secondary Cooling System (SC) to list of systems. Need to verify uprated SC system will provide sufficient cooling water to specific locations in the system (i.e. Generator H2 coolers). System flow control valves should be evaluated. The LO Cooler temperature control valve may need to be enlarged. The SC system header pressure control setpoint can be increased 10-15 psi due to increasing the generator H2 gas pressure from 60 psig to 75 psig. Ref.Pg.43, SC Pump EC section.
- Pg.22, Condenser Evaluation; Required output of the HES flow induced vibration analysis is to identify tube bundle locations where steam impingement plates should be installed. Impingement plate additions were recommended by HES during the CR3 previous condenser tube failure analysis.
- Pg.23, Feedwater Heater Evaluation, add "feedwater heater relief valve setpoints and relieving capacity evaluation" to scope of work.
- Pg.24, Secondary Cooling Maximum; add logistical evaluation for removing existing SC coolers and installing larger heat exchangers into turbine building.
- Pg.28, Turbine Building Structural Evaluation; Turbine Pedestal Foundation Evaluation will NOT be performed by the turbine manufacturer. The turbine manufacturer will provide the increased loading data. The Turbine Generator Pedestal Structural Analysis, S95-0021, must be revised under this scope of work. Analysis S95-0021, dated June 20, 1995, was performed by Gilbert Commonwealth.
- Pg. 30, Engineering Change Packages; Areva shall perform all work in accordance with current revision to EGR-NGGC-0005, Engineering Change. Same comment Pg.51.

CR3 Extended Power Uprate, Secondary Systems Upgrade Bid Proposal Technical Evaluation

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- Pg. 30, Engineering Change Packages; include "mark-up" of FSAR for each EC to support consolidated EPU FSAR revision.
- Pg. 30, Engineering Change Packages; Separate EC packages will be issued for equipment procurement specifications.
- Pg.35, LP Turbine Replacement; The turbine vendor will not perform turbine foundation calculations or revise design basis foundation calculations. Calculation S95-0021 shall be revised under this workscope. Same comment Pg. 37, Pg.55, Pg.60 and Pg.61.
- Pg.35, LP Turbine Replacement; Turbine Generator Instrument calibration or range changes, including AEH controller scaling, provided by the turbine generator OEM shall be included in the EC package. Same comment Pg. 37. Anticipated instrument changes are identified on Pg.60 and 61.
- Pg.35, LP Turbine Replacement; Turbine EC shall include turbine performance test procedure in accordance with ASME PTC 6 – 2004, Alternate test for nuclear plant. Same comment Pg. 37.
- Pg.38, MSR Replacement, add "MSR relief valve evaluation" to scope of work.
- Pg.39, MSR Belly Drains, Evaluate 2 new heat exchangers (2 MSR drain inlets each) rather than 4 new heat exchangers. If feasible, this may be less expensive and tie into condensate system better (less piping required).
- Pg.42, Isolated Phase Bus Duct, include evaluation of bus duct electrical capacity (bus duct rating) in conjunction with the bus duct cooling EC.
- Pg.47, Circulating Water Pump EC, include C/D water box flow straighteners and expansion joints.
- Pg.49, Equipment Specifications, reliance on original equipment specifications should not be assumed. There should be no additional scope to develop the equipment specifications identified. Same comment Pg.60.
- Pg.51, Deliverables, review of deliverables should not be limited to 10 working days nor limited to one review. Depending on the quantity and complexity of the deliverable more than one review may be required to support owner acceptance.
- Pg.53, Condenser Evaluation, HES shall provide the condenser evaluation CFD analysis. HES stated the HES CFD analysis is an input to the condenser tube bundle tube vibration analysis which is subcontracted by HES. The condenser tube bundle tube vibration analysis should be identified as an additional deliverable and should include recommended locations where tube bundle steam impingement plates should be installed.
- Pg.53, SC Maximization, final report should include verification of system flow balance and heat loads satisfied. SC system flow control valves shall be evaluated.
- Pg.57, PEPSI model, Siemens to provide initial turbine inputs in September, 2007. Siemens to provide final turbine inputs following turbine design and submittal of turbine thermal kit. PEPSI model to be verified with plant operating data following MUR power uprate. YUBA estimated EPU condition feedwater heater TTD's and DCA's to be included in EPU model. Should the EPU model be validated and corrected following EPU implementation?
- Pg.57, Electrical Calculations, impact assessment of 54 electrical calculations is included. Revision of these calculations is not included. Review optional workscope for ETAP electrical system modeling consolidation.
- Pg.58, Updates. Design Basis Documents and applicable FSAR sections should be "marked up" and included in each EC package.
- Pg.61 / 62, MSR assumptions, New MSR vessels will be longer. Modifications to piping supports may be required and will not be extra work. MSR vendor is to provide revised piping drawings.

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- Pg.62, MSR Belly Drain assumptions, location of new heat exchangers as stated in not correct. Need to consider piping runs and strategically locate the new heat exchangers. Consider one new heat exchanger for each condensate train each receiving two MSR drains.
- Pg.64, Main Generator and Exciter assumptions, SC water piping to the H2 coolers may be impacted; Generator instruments shall be reviewed for impacts; turbine supervisory instrument probe mounting brackets shall be reviewed and modified if required; EH tubing mounted to the MSR's will be impacted. Siemens shall provide all turbine generator vendor drawings to PE for review. How should turbine generator VTI be coordinated?
- Pg.67, Mechanical Inputs, A "preliminary" turbine thermal kit should be provided by Siemens in September, 2007. Turbine Generator and MSR structural load inputs may not be available in September, 2007. This should not impact schedule.
- Schedule Attachment, review for equipment specifications / procurement EC's needed by end of October, 2007. Too much equipment is identified to be specified by October, 2007. The feedwater heaters (CDHE-3A/B) and the SC heat exchangers are priority components.

Enercon Proposal Review Notes:

- Proposal includes total work scope.
- Proposal includes estimated man hours per major task. Proposal includes cost per major task as well as total not to exceed cost for full work scope.
- Enercon appears qualified to perform work scope based on work references and personnel resumes included in proposal. Recommend to review Enercon project management team for power uprate project experience.
- BOP Piping Analysis Scope does not appear to be included. Areva scoping study report # 51-9043794-000 Section 3.4.1.3 "pipe support / water hammer" identifies 16 piping calculations (ref. App. J) and the main steam pipe hammer calculation M73-1002 need developed or revised.
- Schedule Comment: Prioritize the 2007 procurement of the 2 feedwater heaters (CDHE-3A/B), the 2 SC heat exchangers and the SC pumps / motors. All other equipment procurement EC can be postponed to 2008.
- Verify existing design basis documents and affected FSAR sections will be "marked up" for each EC.
- Pg.5, PEPSE Model, add YUBA estimated feedwater heater TTD's and DCA's for retained heaters; validate MUR PEPSE model against plant data following MUR implementation. Siemens will provide preliminary turbine PEPSE model input in September 2007. PEPSE model to be updated with final turbine PEPSE model input after final turbine design is established.
- Pg.5, FATHOM model; add Secondary Cooling System (SC) to list of systems. Need to verify uprated SC system will provide sufficient cooling water to specific locations in the system (i.e. Generator H2 coolers). System flow control valves should be evaluated. The LO Cooler temperature control valve may need to be enlarged. The SC system header pressure control setpoint can be increased 10-15 psi due to increasing the generator H2 gas pressure from 60 psig to 75 psig.
- Pg.9, Commercial and Resource Proposal; review "billing in accordance with master service agreement for T&M" vs. the not to exceed prices stated in the proposal.
- Pg.10, Item 7; CHECWORKS program at CR3 will be utilized.
- Pg.10, Item 8; Final PEPSE model after all new equipment is specified is not in scope.

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- Pg.10, Item 9; Enercon site liaison is expected to obtain design basis information. Reliance on site engineering to provide design basis information is not desired.
- Pg.11, Item 12; The proposal does not include a PEPSE model for the 2009 plant condition. The 2009 plant configuration heat balance model will be performed by Siemens to support turbine performance guarantee and performance testing. Add, "Enercon shall support this effort as needed to accurately model the plant configuration". Evaluate having Enercon perform an independent 2009 model to compare with Siemens model.
- Pg.20, Assumption item 3 and 4; all valves on piping associated with the new MSR belly drain heat exchangers shall be evaluated. New valves shall be specified for procurement however a procurement EC should not be required.
- Proposal requires CR3 plant cable databases will be updated by plant engineering.
- Pg.24, Turbine Vendor Information; will not be as extensive as described in the proposal. The turbine vendor will provide new complete turbine generator instruction manuals and the turbine generator installation instructions. The existing turbine generator vendor drawing file will have to be reviewed for impact. A turbine performance test procedure shall be developed and shall be in accordance with ASME PTC 6 – 2004, Alternate test for nuclear plant.
- Pg.28, Turbine Generator Assumptions; The SC piping to the generator H2 coolers may be impacted; Turbine Generator instrument and control setting changes will be provided by Siemens and shall be included in the turbine EC; Generator Instruments will be impacted and shall be evaluated; Turbine Generator support systems will be evaluated by Siemens. Any impacts identified by Siemens shall be included in the turbine EC.
- Pg.29, Turbine Generator Assumptions 17; Calculation S95-0021, Turbine Generator Pedestal Structural Analysis, shall be "updated" using the methodology contained in the analysis. A three dimensional analysis model of the turbine pedestal structure is included.
- Pg.39, Bus Duct Deliverables; Verify evaluation of bus duct electrical capacity (bus duct rating) will be performed in conjunction with the bus duct cooling EC.
- Pg.59, SC System Workscope Item 10; Verify hydraulic evaluation includes system flow balance, system heat loads are satisfied and system flow control valves are evaluated. Note the SC system pressure setpoint can be increased due to increasing generator H2 pressure.
- Pg.59, SC System Workscope Item 11; The turbine lube oil temperature control valve should be replaced with a larger valve.
- Pg.60, SC System Work Performed by Others; Enercon should interface with equipment vendors to obtain design input information and not rely on PE to perform this function. This comment applies to all equipment and all "work by others" sections of the proposal.
- Pg.64, SC system Assumptions; defined work scope does not address interferences to replace the major SC components. EC installation instructions must address these issues.
- Pg.94, FW Booster Pump Assumption 15; A larger pump / motor will be specified. Impacts to the support pedestal and piping can be expected.
- Pg.99, Condenser Evaluation, HES shall provide the Condenser Evaluation CFD Analysis. The HES CFD analysis is an input to the condenser tube bundle tube vibration analysis which is subcontracted by HES. The Condenser Tube Bundle Tube Vibration Analysis should be identified as a deliverable and shall identify tube bundle locations where steam impingement plates should be installed. Impingement plate additions were recommended by HES during the CR3 previous condenser tube failure analysis. Steam impingement plates should be installed during the 2009 LP turbine replacement.

CR3 Extended Power Uprate, Secondary Systems Upgrade Bid Proposal Technical Evaluation

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- Pg.115, Electrical Distribution Calculations; Review proposal to consolidate existing electrical calculations into new ETAP. Evaluate cost of converting vs. updating existing electrical calculations.

Appendix B, Consolidated Project Schedule Comments:

- October 07 PEPSE model is "initial" EPU model. Final PEPSE model shall be submitted after all plant design changes have been specified and inputted into the model.
- MSR drain mod procurement EC can be postponed to 2008.
- All turbine generator and MSR schedules shall be compared to and coordinated with the equipment vendor's engineering deliverable schedules. The schedule for issuing the installation EC packages shall be determined by the owner.
- The turbine pedestal calculation schedule shall be accelerated and will support final calculation expeditiously upon receiving final input data from Siemens.
- Deaerator procurement EC can be postponed to 2008.
- Isophase Bus Duct procurement EC can be postponed to 2008.
- Isophase Electrical Capacity Calculation shall be performed in conjunction with designing the bus duct cooling system.
- Turbine Building Structural Evaluation is scheduled to complete by 12/12/07. This does not appear feasible.

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Crystal River Unit 3 Extended Power Uprate Project, Turbine Generator Retrofit Proposal Evaluation

Progress Energy issued Crystal River Unit 3 (CR3) Turbine Generator Retrofit Request for Proposal # SD22007 on February 16, 2007. The request for proposal was issued to Siemens Power Generation, Alstom Power Systems, Mitsubishi Heavy Industries and Westinghouse Nuclear (Toshiba). The CR3 turbine generator was originally supplied by Westinghouse Power Generation (i.e. Siemens). The CR3 low pressure turbines were retrofit in 1996 with Brown Boveri (i.e. Alstom) turbines. CR3 Turbine Generator Retrofit Proposals were received from Siemens Power Generation (Siemens) and Alstom Power Systems (Alstom) on April 16, 2007.

The Siemens and Alstom proposals were very detailed. Proposal review meetings were held with both vendors to clarify scope details of each proposal. Both vendors amended their proposal based on the proposal review meeting clarifications. The Siemens proposal amendment letter was received on May 18, 2007. The Alstom proposal amendment letter was received on May 30, 2007.

The turbine generator retrofit bid specification (issued with RFP # SD22007) identified the expected main steam conditions and the expected turbine backpressure following the CR3 extended power uprate. The generator minimum operating capability was specified as 1080 MW concurrent with 430 MVAR lagging reactive power (i.e. 1162.5 MVA). The goal if the CR3 EPU is to produce 1080 MW at a turbine backpressure of 2.7 In. HGA. The CR3 turbine generator is to be retrofit during the 2009 plant steam generator replacement outage. The 2009 outage is expected to be approximately 72 days in duration.

The Siemens and Alstom proposals were evaluated based on the following criteria:

- HP and LP turbine material scope of supply and cost.
- Generator and Excitation System scope of supply and cost.
- Moisture Separator Reheater (MSR) scope of supply and cost.
- Electrical Output Guarantee.
- 2009 Outage Schedule Duration.
- Generator MVA rating.
- Total Project Cost.

Siemens Proposal Summary:

- All hardware scope of supply requirements were met. The proposed LP turbines were large 18M2 exhaust annulus design with 56 inch last stage blades. A new generator rotor and generator core iron replacement was proposed. The generator stator would be rewound with a H2 inner cooled rigi-flex design winding. A new brushless exciter was proposed.
- The guaranteed electrical output is 1083 MW.
- The 2009 turbine generator retrofit outage schedule is ^{Redacted} days.
- The generator will be rated at 1200 MVA.
- The total project cost as proposed by Siemens was ^{Redacted}. The Siemens proposal included MSR's provided by Thermal Engineering (TEI). The TEI MSR hardware cost was ^{Redacted}.

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Alstom Initial Proposal Summary:

- All hardware scope of supply requirements were met. The proposed LP turbines were small 13M2 exhaust annulus design with 47 inch last stage blades. The proposed small LP turbines negatively impact the performance guarantee by 4MW. The proposed generator stator rewind is a water cooled stator design. The proposed excitation system is a static exciter. The water cooled generator stator and static excitation system require new plant support systems to be installed at an estimated additional cost of [REDACTED].
- The guaranteed electrical output is 1076 MW. The estimated cost of lost generation of 4 MW for the life of the rotors is \$ [REDACTED] based on replacement power costs of [REDACTED] / day for 1000MW and a 30 year rotor life.
- The 2009 turbine generator retrofit schedule proposed by Alstom is [REDACTED] days driven by offsite generator rotor rewind. The [REDACTED] day outage schedule is impacted by an estimated additional 10 days at an estimated cost of [REDACTED] based on [REDACTED] day replacement power cost.
- The generator will be rated at 1162.5 MVA, limited by reuse of the stator core iron which meets the minimum requirements, but allows no margin.
- The total project cost was [REDACTED]. The TEI MSR hardware cost of [REDACTED] was substituted in place of the Alstom proposed MSR cost of [REDACTED].

The initial Alstom proposal did not support the 2009 outage schedule of [REDACTED] days. The Alstom proposal does not meet the desired electrical output of 1080 MW. The Alstom proposal provides a marginal generator capability rating of 1162.5 MVA due to reuse of the stator core iron.

Alstom amended their proposal to include larger LP turbines and a new generator rotor to address the electrical output and outage schedule issues.

Alstom Amended Proposal Summary:

- Hardware scope of supply revised to include larger 16.8M2 exhaust annulus design LP turbines with 57 inch last stage blades and a new generator rotor.
- The guaranteed electrical output is 1080 MW.
- The 2009 turbine generator retrofit outage schedule is [REDACTED] days.
- The generator will be rated at 1162.5 MVA, limited by reuse of the stator core iron.
- The total project cost was [REDACTED]. The TEI MSR hardware cost of [REDACTED] was substituted in place of the Alstom proposed MSR cost of [REDACTED].

The amended Alstom proposal provides a marginal generator capability rating of 1162.5 MVA due to reuse of the stator core iron. To improve the generator capability rating a generator mid-section replacement is required. The Alstom proposal identified an additional cost of [REDACTED] to replace the generator mid-section to enable a generator capability rating of 1250MVA. The proposed Alstom water cooled stator winding and static excitation systems require additional new plant support systems to be installed at an estimated additional cost of [REDACTED]. The amended Alstom proposal turbine generator retrofit schedule of [REDACTED] days is approximately [REDACTED] days shorter than the Siemens schedule. If the outage were extended by [REDACTED] days the incremental outage cost of \$ [REDACTED] / day replacement power cost) is less than the additional cost of a new generator rotor [REDACTED] to support a [REDACTED] day schedule.

The Siemens Proposal provided the best overall proposal in terms of material supply, plant support system impact, performance guarantee, generator capability rating and total project cost.

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June 6, 2007

Attention:

PROGRESS ENERGY FLORIDA, INC.
CRYSTAL RIVER NUCLEAR PLANT, UNIT 3
ENGINEERING SERVICES FOR SECONDARY SYSTEMS UPGRADE
REQUEST FOR PROPOSAL NO. KS12007

Dear Bidder:

You are invited to submit a proposal for providing engineering services on secondary system components, including preparation of design specifications, equipment specifications, Engineering Change Packages and calculations for work necessary to increase the electrical generation by 20% (EPUR). Three per cent of the increase in generating capacity is to be achieved by improvements to the secondary plant performance (see the Scope attached for additional details). This EPUR will occur at Progress Energy's Crystal River Nuclear Power Station, Unit 3 located at 15760 West Powerline Street, Crystal River, Florida 34428.

You are requested to provide two (2), signed copies of the proposal (one priced and one unpriced) plus one electronic copy of each shall be sealed and marked "CONFIDENTIAL" and submitted to Tony Owen, Progress Energy Service Company, LLC, P. O. Box 1551 (PEB 2C1), Raleigh, NC 27602. Overnight delivery should be sent to 410 S. Wilmington Street (PEB 2C1), Raleigh, NC 27601. The proposal must be sealed and marked as noted above in a separate envelope inside the overnight envelope. No copies of the proposal shall be distributed to any other Progress Energy personnel by the bidder. Your proposal must be received no later than **12:00 noon, August 6, 2007**. If your proposal is received after that day or time, it will not be considered for the described work. Telephoned or faxed proposals or proposal information are unacceptable and will not be considered. No modifications to the bidder's proposal will be accepted after the bid due date and time specified above unless specifically requested by Progress Energy in writing.

Bidder is requested to complete, sign, and return the General Information form attached in its entirety and to furnish all information requested on this form. Bids will not be considered when submitted on forms other than those provided.

It is intended that a contract in the form of the attached specimen contract will be awarded for this work and quotations shall be made accordingly, unless the successful bidder has an existing Master Contract with Progress Energy, in which case a Work Authorization will be released against that Master Contract incorporating the details of this Inquiry.

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Progress Energy does not obligate itself to accept the lowest or any other bid and specifically reserves the right to reject any and all bids. Bidders are advised that all bids will be opened and evaluated solely by Progress Energy. All information contained in the bids submitted to Progress Energy and Progress Energy's evaluation, including any bidder's relative position to the successful bidder, is considered exclusive information of Progress Energy and will not be made available to any of the bidders. All unsuccessful bidders will be notified by Progress Energy in writing of the award of the work to another firm.

All requests for clarifications, interpretations or decisions on discrepancies pertaining to the commercial aspect of the proposal documents or related project data furnished as part of the proposal documents shall be made directly to Tony Owen via e-mail at tony.owen@pgnmail.com or by phone at (919) 546-2933 by the bidder only.

All requests for clarifications, interpretations or decisions on discrepancies pertaining to the technical aspect of the proposal documents or related project data furnished as part of the proposal documents shall be made directly to Ted E. Williams at the Crystal River Nuclear Plant (CNP) at (352) 563-2943, extension 4356, or email address ted.williams@pgnmail.com by the bidder only.

It is the bidder's responsibility to advise his potential subcontractors, suppliers, and other subvendors that information will be available only through the bidder and that no direct contacts with Progress Energy by sub-tier firms shall be initiated. Information exchange shall be between Progress Energy and bidder, and bidder and his potential subcontractors. No work shall be subcontracted without the approval of Progress Energy. Subcontract work and proposed subcontractors must be identified in bidder's proposal.

As a prerequisite for consideration of a bidder's proposal, bidder must contact the site of the proposed work, discuss job conditions with Progress Energy's designated representative, become acquainted with the technical requirements of the work and all available information and local conditions which may possibly occur in the course of the work, and make his choice of methods and equipment accordingly. Contact appointments must be made with Ted Williams at the Crystal River Nuclear Plant. No site visits will be allowed without prior appointment with the above named person.

Please acknowledge receipt of this proposal and your bidding intentions by completing the attached Acknowledgement Form and faxing it to Tony Owen at (919) 546-6750 within two business days.

PROGRESS ENERGY SERVICE COMPANY, LLC

By: _____

Tony Owen
Manager, NGG Major Projects

Attachments to this RFP:

Acknowledgement
General Information
Scope and Other Requirements
Sample Contract (if applicable)
Bid Specification
Table of Conformance
Contractor Safety Checklist

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ACKNOWLEDGEMENT

Mr. Tony Owen
Progress Energy Service Company, LLC
P. O. Box 1551 (PEB 2C3)
Raleigh, NC 27602
Fax: 919-546-6750

PROGRESS ENERGY FLORIDA, INC.
CRYSTAL RIVER NUCLEAR PLANT, UNIT 3
ENGINEERING SERVICES FOR SECONDARY SYSTEMS UPGRADE
REQUEST FOR PROPOSAL NO. KS12007

I acknowledge receipt of the subject proposal package and have indicated my bidding intentions as follows:

_____ I have reviewed the proposal documents and will not be submitting a bid for this work. Proposal documents are being returned under separate cover.

_____ I have reviewed the proposal documents and intend to submit a bid for this work and will make arrangements to contact or visit the site as requested.

(Signature)

(Name)

(Title)

(Company)

(Date)

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GENERAL INFORMATION

PROGRESS ENERGY FLORIDA, INC.
CRYSTAL RIVER NUCLEAR PLANT, UNIT 3
ENGINEERING SERVICES FOR SECONDARY SYSTEMS UPGRADE
REQUEST FOR PROPOSAL NO. KS12007

Contractor visited the site [] and/or contacted [] the site on _____ and discussed job conditions with _____ to acquaint himself with the technical requirements of the work and all available information and local conditions which may impact pricing of the subject Inquiry No. _____.

In the event that your Proposal is accepted and a Contract is awarded to the firm whose full legal company name appears herein below, Mr./Ms. _____, whose title is _____, will be executing the Contract on behalf of the firm. Should this person's title not indicate that he/she is a corporate officer (president, vice president, or corporate secretary), an affidavit signed by a corporate officer shall be provided along with the bid, stating that the person whose name appears above is duly authorized to execute contracts on behalf of the firm.

The Contractor is: (select appropriate line and complete information)

- An Individual: _____
- A Corporation of the State of _____
- A Partnership consisting of _____
- A Joint Venture comprised of _____

Full Legal Company Name _____

Business Address _____

Mailing Address _____
(if different) _____

Contact Name _____

Contact Phone _____

Contact E-Mail _____

Company Website _____

Federal Tax ID Number _____

Contractor's License Number (if applicable) _____

State of Issuance _____

CONFIDENTIAL

In accordance with the Federal Acquisition Regulation section 52.219, please check all that apply to your company. Please provide supporting documentation or certification to confirm the status for any categories checked under Small/Diverse Vendors.

- | | |
|---|---|
| <input type="checkbox"/> Certified small business* | <input type="checkbox"/> HUBZone, 8(a) or disadvantaged business* |
| <input type="checkbox"/> Veteran-owned business* | <input type="checkbox"/> Minority-owned business * * |
| <input type="checkbox"/> Service-disabled veteran-owned business* | <input type="checkbox"/> Women-owned small business * * |
| <input type="checkbox"/> Not a Small Business | |

* As defined by the Small Business Administration (SBA): www.sba.gov

* * Certified by Progress Energy and as defined by SBA.

Register online at www.progress-energy.com/supplierdiversity

BY: _____

NAME (printed): _____

TITLE: _____

DATE: _____

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LIST OF BIDDERS:

1. AREVA NP, Inc.
7207 IBM Drive
Charlotte, NC 28262
Attention: Tom Doering

2. Enercon Services, Inc.
500 Town Park Lane
Suite 275
Kennesaw, GA 30144
Attention: Jim Gannon

(770) 919-1930
jgannon@enercon.com

3. Sargent & Lundy, LLC
55 East Monroe St.
Chicago, IL 60603-5780
Attention: Chris Sward

4. TechCom International Corporation
11 Redondo
Laguna Niguel, CA 92677
Attention: Bob Katebian

(949) 453-0660 ext 222
katebian@tci-corp.com

5. WorleyParsons
2675 Morgantown Road
Reading, PA 19607-9676
Attention: John Ioannidi