

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

undktd

TO: Maritza Iacono

UTILITY: Progress Energy Florida

Carl Vinson
AUDIT MANAGER

FROM: Carl Vinson

REQUEST NUMBER: DR-5

DATE OF REQUEST: 5/28/08 - Due 6/09/08

AUDIT PURPOSE: Nuclear Controls Review

REQUEST THE FOLLOWING ITEM(S) BE PROVIDED BY: Maritza Iacono

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 To the extent not previously provided in a document request response, please provide copies of all Levy plant and CR3 Uprate bid evaluations and selection recommendations for all contracts of \$1,000,000 or more that have been awarded to date.

b. Please provide copies of all written justifications for sole source selection of Levy plant and CR3 Uprate contractors for all contracts of \$1,000,000 or more that have been awarded to date.

2) a. Please list and briefly describe any "lessons learned" from Progress Energy's North Carolina nuclear unit uprates that have been incorporated into the planning, design or implementation of the CR3 uprate.

b. Please indicate for each of Progress Energy's North Carolina nuclear unit uprates whether the project was completed on schedule and within budget.

c. Please provide the original cost estimate and the final completed cost for each of Progress Energy's North Carolina nuclear unit uprate projects. If applicable, provide a brief description of why completion costs exceeded the estimate(s).

3) Please describe in detail how the company is maintaining awareness of the status of the Westinghouse AP1000 unit under construction in China.

4) Please provide a copy of the March 28, 2008 Westinghouse/Shaw-Stone & Webster Letter of Intent and any transmittal correspondence.

COM _____
ECR _____
GCL _____
OPC _____
RCP I
SSC _____
SGA _____
ADM _____
CLK _____

TO: AUDIT MANAGER Carl Vinson

DATE: 6/6/08

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) 1a 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 H. Iacono
Supervisor - Regulatory Planning

DOCUMENTALMERK DATE

06614 JUL 29 8

FPSC-COMMISSION CLERK

Crystal River #3 Electric Power Uprate – BOP Engineering

Executive Summary

AREVA Contract # 101659 - 093

October 18, 2007

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BOP Contract Summary: Scope (Slide b)

- ◆ Belly Drain Heat Exchangers (recover heat)
 - ◆ Estimated Cost REDACTED
 - ◆ 34MWth gain, 4MWe Recovery
 - ◆ Cost Benefit REDACTED yr < 2 years payback)

- ◆ Turbine Generator Upgrade (developing EC's)
 - ◆ Low Pressure Turbine (3% efficiency gain, 28MWe)
 - ◆ High Pressure Turbine (1% efficiency gain, 9Mwe)
 - ◆ Main Generator and Exciter (1200MVA, 430 MVAR, 0.93 pf)
 - ◆ Contract costs REDACTED
 - ◆ Cost Benefit 2009 at 2609 MWth (REDACTED yr < 8 yr payback)

BOP Contract Summary: Scope (Slide f)

- ◆ Condensate Pumps and Motors
 - ◆ Existing flow Margin of 1.5%
 - ◆ EPU requirements increase of 17%
 - ◆ New pumps and motors will provide 4% margin above EPU requirements
 - ◆ Direct Drive Digital control Single Failure Proof Control System.
 - ◆ Removes inefficiency of mag coupling
 - ◆ Reduces environmental noise hazard
 - ◆ Removes single point vulnerability

BOP Contract Summary: Scope (Slide g)

- ◆ Feed Water Booster Pumps and Motors
 - ◆ Existing flow margin 9.4%, No margin for 17% EPU
 - ◆ Recommend maintain existing margin (10%) for feed water transients
 - ◆ Convert from 4160V to 6190V removes load from Aux XFMR low load tap (existing margin on low load tap < 15%, margin on high load tap > 35%)
- ◆ Condenser Performance and FIV calculations
 - ◆ Determination of Circ water flow rate and tube staking and baffle/impinge plate requirements
 - ◆ Condenser Baffle Plate Installation EC

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BOP Contract Summary: Scope (Slide h)

- ◆ Electrical Distribution System calculations
 - ◆ Verify load center margin and protective relaying
- ◆ Mechanical Ultimate Heat Sink Calculations
 - ◆ Verify adequacy of ECCS heat exchangers and pumps (EDG margin impact)
- ◆ Turbine Building Structural Evaluation
 - ◆ Verify increased loading of LPT/HPT adequate for Turbine pedestal and floor loading evaluations for new MSRs and Heat Exchangers
- ◆ Turbine Building Internal Flooding
 - ◆ Increase Cir Water flow of 22%
- ◆ LAR Support

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BOP Contract Summary: Contract Bidders

- ◆ AREVA
 - ◆ Completed CR3 MUR
 - ◆ Performing CR3 NSSS
 - ◆ Team very capable of completing BOP and integrating complete study
 - ◆ Areva partnered with Worley Parsons, the Original A/E for CR3 BOP
- ◆ ENERCON
 - ◆ Conducted Waterford BOP
 - ◆ NSSS Set points only in conjunction with Westinghouse
- ◆ TCI
 - ◆ No real experience in the conduct of a similar study, helped to develop the Specification
 - ◆ Did not bid all Tasks

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BOP Contract Summary: Technical Evaluation of Bid

Summary of Technical Evaluation

- ◆ Concern for Enercon not Understanding scope and increasing cost
 - ◆ Served as A/E for RNP's ISFI. Initial Bid **REDACTED** final cost \$ **REDACTED**
 - ◆ Watertord BOP – Requested **REDACTED** in funding to handle overruns. Ultimately eaten by Westinghouse
 - ◆ Enercon's price for the lead COLA was 2x our JVT. On numerous occasions our JVT has bailed out Enercon even after Enercon receiving additional funding.
 - ◆ TCI did not have any bench depth, plans to sub contract engineering support.

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BOP Contract Summary: Technical Evaluation of Bid

Quality

◆

REDACTED

- ◆ AREVA has full time employees with strong history of the B&W design plants.
 - ◆ Proven performance on MUR and NSSS
 - ◆ Stronger interfaces with vendors
 - ◆ Teamed with original A/E for BOP at CR3

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BOP Contract Summary: Bid Price Comparison (\$000's)

AREVA

Enercon

Initial Bid

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Bid Clarification - 1*

REDACTED

Bid Clarification – 2**

*Bidders were asked to review organization, set scope, convert T&M work to Fixed Price electrical calculations, Condensate Speed Control Drives equipment, etc.

**Bidders were asked to review hours for Tasks 3 (T/G Mods) and 9 (Condensate Speed Drives) to determine their alignment with the Toshiba design reviews for the equipment.

BOP Contract Summary: AREVA Negotiations

Price Reduction

REDACTED

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Risk Reduction*

REDACTED

Royalties

REDACTED

Note:

BOP Contract Summary: AREVA Negotiated Price (\$000's)

REDACTED

REDACTED

BOP Contract Summary: Bidder Selection Basis

Technical

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AREVA has a proven track record with Progress for this work
Enercon has had issues on this type work and other recent major projects

Commercial

Progress has ultimate control of Contingency Funding and should be able to control at the lower quartile.

REDACTED

Conclusion

AREVA is best from a Technical perspective and on average equal cost

REDACTED

BOP Contract Summary: Payment Milestones/Dis-incentive

Payment Milestones are designed to provide an incentive to complete scheduled work on time and a dis-incentive for failure to meet schedule.

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BOP Contract Summary: Limit of Liability

Per the Master Agreement #101659, the LOL
will be

REDACTED

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Siemens Contract #145569

Work Authorization #50

Executive Summary

August 8, 2007

Turbine Generator Retrofit
Purchase & Installation

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Progress Energy

Siemens Contract Summary:

Contents:

- Scope
- Schedule
- Comparison of Bid Price
- Negotiated Savings
- Comparison of BNP Pricing
- System Bundling
- Performance Incentives
- Warranty
- Liquidated Damages/Dis-Incentive
- Limits of Liability/Extension of Insurance
- 2009 Performance Guarantee
- 2011 Performance Guarantee
- 100 Day Performance Guarantee
- Project Review Team



Siemens Contract Summary:

Scope of Work

Contractor shall provide all labor, supervision, materials, equipment, and tools to supply, replace and install the High Pressure Turbine Rotors, Low Pressure Turbine Rotors, Generator, and Exciter at Crystal River Unit #3.



Siemens Contract Summary:

Project Schedule

- ◆ Siemens has a ^{REDACTED} clearance window for the 2009 refueling outage scope of work and a ^{REDACTED} clearance window for the 2011 refueling outage scope of work.
- ◆ The Project Schedule consists of three distinct schedules:
 - ◆ Engineering Deliverable Schedule
 - ◆ Manufacturing Schedule
 - ◆ Installation Schedule
- ◆ All three shall be submitted for owner review and approval within 60 days of contract award.



Siemens Contract Summary:

Comparison of Pricing from Bid Submittals (\$000's)

Equipment Prices

Alstom

Siemens

HP & LP Turbines

REDACTED

Generator

Exciter

Field Installation

REDACTED

Total Cost



Siemens Contract Summary:

Negotiated Savings (\$000's)

Discounts

Alstom Siemens

Price with Labor

Bundled Discount

REDACTED

Price after Discount

Evaluated Added Scope

- HP turbine gland steam spillover valve
- Machining steam lead inlet flanges
- Rotor lifting beam
- Extended warranty
- Extended property insurance

Total Evaluated Price

REDACTED





Siemens Contract Summary: Corporate Bundling- 11 Rotors

REDACTED

Siemens Contract Summary: Performance Incentives (\$000's)

REDACTED

Siemens Contract Summary:

REDACTED

Siemens Contract Summary:

REDACTED

Siemens Contract Summary:

REDACTED

Siemens Contract Summary:

REDACTED

Siemens Contract Summary:

REDACTED

Siemens Contract Summary:

REDACTED

Siemens Contract Summary:

Project Review Team

Project Manager – Ted Williams

Project Technical Lead – Scott Deahna

Legal – Dave Conley

Tax – Paul Matthews

Financial – Gerry Dowd

Audit – Elwyn Wood

Contracts – Tony Owen

Executive Sponsor – Danny Roderick

Siemens Contract Summary:

Negotiated Savings (\$000's)

Discounts

Alstom Siemens

Price with Labor

Bundled Discount

REDACTED

Price after Discount

Evaluated Added Scope

- HP turbine gland steam spillover valve
- Machining steam lead inlet flanges
- Rotor lifting beam
- Extended warranty
- Extended property insurance

Total Evaluated Price

REDACTED

Thermal Equipment Incorporated (TEI)
Contract #XXXXXXX

Executive Summary
August XX, 2007

Moisture Separator Reheaters (MSRs)



Progress Energy

TEI Contract Summary

Contents:

- Scope
- Payment Milestones
- Performance Incentives
- Warranty
- Performance Liquidated Damages
- Delivery Liquidated Damages
- Limits of Liability
- Project Review Team

TEI Contract Summary

Scope of Work:

Contractor shall provide the necessary management, personnel, material and facilities (except as specified to be furnished by Owner) and do all things necessary or incidental to the design, engineering, fabrication, testing, furnishing, delivery to Owner, of four Moisture Separator Reheaters (MSRs) with two stages of reheat.

TEI Contract Summary

Payment Milestones:

REDACTED



TEI Contract Summary Performance Guarantees:

REDACTED

TEI Contract Performance Guarantees

REDACTED

TEI Contract Summary

Performance Liquidated Damages:

REDACTED

TEI Contract Summary

Delivery Liquidated Damages:

REDACTED

TEI Contract Summary Warranty:

REDACTED



TEI Contract Summary

Warranty continued:

REDACTED

TEI Contract Summary

Limits of Liability:

REDACTED

TEI Contract Summary: Project Review Team

Project Manager

Ted Williams

Project Technical Lead

Scott Deahna

Legal

Dave Conley

Tax

Paul Matthews

Financial

Gerry Dowd

Audit

Elwyn Wood

Contracts

Tony Owen

Executive Sponsor

Danny Roderick

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Contract #355217

YUBA HEAT TRANSFER, LLC

Executive Summary

February 11, 2008

*Design, Fabrication, and Delivery of
Feedwater Heaters & Heat Exchangers for
Crystal River Unit #3*



Progress Energy

YUBA Contract Summary:

Contents:

- ♦ **Scope**
- ♦ **Payment & Schedule**
- ♦ **Comparison of Bid Price**
- ♦ **Negotiated Savings**
- ♦ **Performance Guarantee**
- ♦ **Warranty/Liquidated Damages**
- ♦ **Limits of Liability**
- ♦ **Project Review Team**

YUBA Contract Summary:

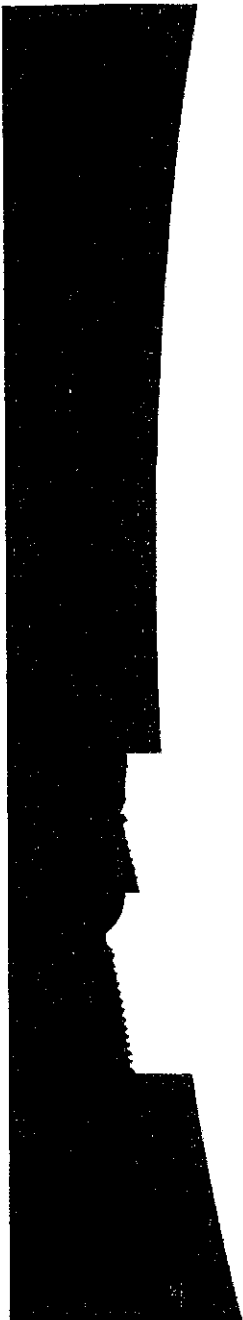
Scope of Work

Contractor shall design, fabricate, test, prepare for shipment, and deliver two (2) Condensate Heaters (Nos. CDHE-3A/3B) and two (2) Secondary Plant Component Cooling Water Heat Exchangers (Nos. SCHE-1A/1B) for the Crystal River Nuclear Power Station.

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YUBA Contract Summary:

Payment & Project Schedule



REDACTED



YUBA Contract Summary:

Comparison of Pricing from Bid Submittals



REDACTED

YUBA Contract Summary:

Negotiated Savings

YUBA

TEI

Bid Price

REDACTED

*Negotiated Cost Reductions and
Added scope*

REDACTED

Total Contract Price

\$2,655,680

\$4,021,875

Negotiated Cost Avoidances

REDACTED

Total Evaluated Price



Progress Energy



YUBA Contract Summary:

REDACTED



REDACTED

YUBA Contract Summary:

REDACTED

REDACTED

YUBA Contract Summary:

Limits of Liability

REDACTED

REDACTED

YUBA Contract Summary:

Project Review Team

Project Manager – Ted Williams

Designated Rep & Technical Lead – Larry Sexton

Legal – Dave Conley

Contracts – Tony Owen / Adrien Surin

Executive Sponsor – Danny Roderick

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**PAGES 1 - 3
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**Thermal Equipment Incorporated (TEI)
Contract #342253**

**Executive Summary
October 1, 2007**

Moisture Separator Reheaters (MSRs)



Progress Energy

Note: RFP + Commercial
Evaluations performed
as part of T/G RFP for 1
CR3.

TEI Contract Summary

Contents:

- Scope of Work
- Bid Price Comparison
- Negotiated Savings/Discount
- Payment Milestones
- Performance Guarantees
- Performance Guarantees Based on MWe
- Warranty
- Delivery Liquidated Damages
- Limits of Liability
- Project Review Team

TEI Contract Summary

Scope of Work:

Contractor shall provide the necessary management, personnel, material and facilities (except as specified to be furnished by Owner) and do all things necessary or incidental to the design, engineering, fabrication, testing, furnishing, delivery to Owner, of four Moisture Separator Reheaters (MSRs) with two stages of reheat.

Comparison of New & Current MSRs

	New	Current
No. of Tubes	8,144 (1018x8)	4,368 (546x8)
Heat Transfer Surface	315,496 (39,437x8)	144,032 (18,004x8)
Chevron	Stainless Steel*	Carbon Steel

* Improved moisture removal

**PAGES 4 - 12
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TEI Contract Summary: Project Review Team

Project Manager	Ted Williams
Project Technical Lead	Scott Deahna
Legal	Dave Conley
Tax	Betsy Dorset
Audit	Loyd Graves
Contracts	Tony Owen
Executive Sponsor	Danny Roderick

**Thermal Equipment Incorporated (TEI)
Contract #342253**

**Executive Summary
October 1, 2007**

Moisture Separator Reheaters (MSRs)



Progress Energy

TEI Contract Summary

Contents:

- Scope of Work
- Bid Price Comparison
- Negotiated Savings/Discount
- Payment Milestones
- Performance Guarantees
- Performance Guarantees Based on MWe
- Warranty
- Delivery Liquidated Damages
- Limits of Liability
- Project Review Team

TEI Contract Summary

Scope of Work:

Contractor shall provide the necessary management, personnel, material and facilities (except as specified to be furnished by Owner) and do all things necessary or incidental to the design, engineering, fabrication, testing, furnishing, delivery to Owner, of four Moisture Separator Reheaters (MSRs) with two stages of reheat.

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TEI Contract Summary: Project Review Team

Project Manager	Ted Williams
Project Technical Lead	Scott Deahna
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Tax	Betsy Dorset
Audit	Loyd Graves
Contracts	Tony Owen
Executive Sponsor	Danny Roderick