

**REDACTED**

# **EXHIBIT B**

DOCUMENT NUMBER-DATE

**05917 AUG 19 =**

FPSC-COMMISSION CLERK

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Florida Power & Light Company  
Docket No. 110009-EI  
OPC's Third Set of Interrogatories  
Interrogatory No. 9  
Page 1 of 1

**Q.**

This interrogatory refers to the prefiled testimony of FPL witness Art Stall, at page 4, line 20 through page 5, line 15.

- a. Please identify the items representing estimated cost increases and quantify the amount of increases.
- b. Please identify the items representing estimated cost decreases and quantify the amount of potential decreases.
- c. How much was scope reduced in the fall of 2010? Identify the specific reduction in scope and quantify the impact of the reduced scope on the estimate of the cost of completing the uprate projects.

**A.**

The following relevant documents are attached:

1. PSL Potential Cost Increases and Decreases.
  2. PSL Bechtel Forecast Timeline.
  3. PTN Potential Cost Increases and Decreases.
  4. PTN Bechtel Forecast Timeline.
  5. PSL Scope Reductions – Fall 2009.
  6. PTN Scope Reductions – Fall 2009.
- a. Potential cost increases are identified and quantified in the attached St. Lucie and Turkey Point documents.
  - b. Potential cost decreases are identified and quantified in the attached St. Lucie and Turkey Point documents.
  - c. Attached are lists of the scope reductions implemented in the fall of 2009 at each site, and the estimated value of the scope deleted. Included on the PTN Scope Reductions is the Steam Generator Moisture Carryover scope which was evaluated for deletion in the fall of 2009 and subsequently deleted in January 2010.

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Bechtel Forecast Timeline for St. Lucie <sup>1</sup>:

**BECHTEL FORECAST TIMELINE**

MONTH	EVENT	NUMBER OF MODS	FORECAST (EPC, BECHTEL)	NOTES
May-09	BECHTEL PROVIDED INDICATIVE VALUES AS PART OF TOTAL PROJECT FORECAST	19	[REDACTED]	BASED UPON ORIGINAL BECHTEL "INDICATIVE STAFFING PLANS" Based on 19 EPC Modifications
May-09	INITIAL BECHTEL TOTAL PROJECT FORECAST	49	[REDACTED]	BECHTEL SUBMIT INITIAL TOTAL PROJECT ESTIMATE 49 Modifications with Bechtel Involvement (Based on [REDACTED] Scope Growth and [REDACTED] Clarification)  34 Mods 19 Original EPC Modifications Plus 15 New modifications added to Spec M-157  15 New items 5 MSP's, 4 new mods, 5 IAR Modifications and 1 support other vendors.
June-09	P-50 REV.0 ESTIMATE	49	[REDACTED]	P-50 ESTIMATE BASED ON PARAMETERS PROVIDED BY FPL 49 Modifications with Bechtel Involvement ([REDACTED] in staffing reductions)  34 Mods 19 Original EPC Modifications Plus 15 New modifications added to Spec M-157  15 New Items 5 MSP's, 4 new mods, 5 IAR Modifications and 1 Support other vendors.
June-09	P-50 REV.1 ESTIMATE	49	[REDACTED]	REDUCED CONTINGENCY IN FIELD NON-MANUAL STAFFING [REDACTED]
June-09	P-50 REV.2 ESTIMATE	40	[REDACTED]	SCOPE REDUCTIONS 40 Modifications with Bechtel Involvement [REDACTED] Scope shift and [REDACTED] Scope reduction)  9 Deleted scope
July-09	P-50 REV.3 ESTIMATE	40	[REDACTED]	SCOPE REFINEMENT 40 Modifications with Bechtel Involvement [REDACTED] in Scope & Mat'l)  9 Deleted scope  Based on scope refinement and Gap analysis

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<sup>1</sup> Source – 07/25/09 Executive Steering Committee presentations

The following represents the potential estimated cost increases and decreases for St. Lucie <sup>1</sup>:

TOTAL		ORIGINAL	CURRENT	VARIANCE	EXPLANATION / NOTES
DESCRIPTION					
<b>OVER-RUNS</b>					
HP / LP / GENERATOR TOTAL	\$				Primary contributor is implementation costs (Bechtel and Siemens )
PLANT SUPPORT	\$				Project Services not included in base. Includes Plant and plant craft support, Start-up services, Security, work controls, QA/QC, Construction craft from supplemental labor contract, offices and facilities maintenance.
LAR	\$				See Detailed LAR Analysis
PROJECT SUPPORT - 28 FPL CONTRACTORS	\$				Required support for original scope and additional scope underestimated 28 FTE's. Currently at 52 FTE's are required to manage LAR submittals, major procurements and multiple outage construction modifications. Approximately 3,000,000 man-hours to implement this project. 5% total project.
REPLACE 2 HP FW HTRS - # 5	\$				Heaters are larger than existing, additional impacts to structures and systems, includes FAC pipe replacement, Bechtel pre-outage ramp value excessive, includes Bechtel Implementation costs.
OUTAGE EXTENSION COSTS	\$				Original estimate used [redacted] per day, forecast based on [redacted] per day. Forecast will be adjusted based on final values from Business Operations and outage optimization determination
ALLOWANCE FOR MSR REPAIR / REPLACEMENT	\$				MSR's are larger than existing, additional impacts to structures and systems, includes Bechtel Implementation costs.
CONDENSER MODIFICATIONS	\$				Combined all other Condenser modifications, increased scope based on vendor recommendations for tube staking and air removal piping modifications, includes Bechtel Implementation costs.
CONTROL ROOM AC MARGIN ISSUE - PSL2 ONLY	\$				Original estimate was not sufficient for safety related installation and missile protection requirements, includes Bechtel Implementation costs.
MODIFY ISOLATED PHASE BUS DUCT COOLING SYSTEM	\$				Component inspections identified additional scope from linkage and bus damage, also due to increased temperatures at EPU conditions an auto transfer feature is now required. Includes Bechtel Implementation costs.
FEED PUMP MODIFICATION	\$				Revised scope from refurbish existing pumps to replace with new, includes Bechtel Implementation costs.
PROJECT SUPPORT - HOME OFFICE	\$				Required support for original scope and additional scope underestimated 5 FTE's. 1% total project.
REPLACE #2 HEATER DRAIN CONTROL VALVE	\$				Increase in scope from 2 to 10 valve replacements, includes Bechtel Implementation costs.
BOP INST. & CNTRL SETPOINT, RESCALING	\$				Based on clarification of scope as design evolves.
OFFICE TRAILER PARK / EQUIPMENT / CAPITAL PURCHASE	\$				Original estimate was not sufficient for rental of outside facility large enough to house the EPU project team and Bechtel, for 2 years and inclusion of Jupiter West facility.
UPGRADE CONDENSATE PUMPS	\$				Revised scope from refurbish existing pump rotating assemblies to replace with new, includes Bechtel Implementation costs.
FW REGULATING VALVE (FRV) REPLACEMENT	\$				Revised scope from refurbish existing valves to cut out and replace with new valves and actuators, includes Bechtel Implementation costs.
PROJECT RELATED O&M	\$				Allowance for O&M related accounting treatment
CONTROL ROOM HABITABILITY UPGRADES	\$				Bechtel Implementation costs.
MSIV ACTUATOR REPLACEMENT	\$				Revised scope from refurbish existing Actuators to replace with new actuators, includes Bechtel Implementation costs.
IMPLEMENT LEFM CHECK PLUS MUR	\$				Implementation costs were underestimated based on Shaw scoping study, includes Bechtel Implementation costs.
SIMULATOR UPGRADE	\$				Minor
ELEC BUS SYSTEM MARGIN IMPROVEMENT	\$				Minor
UPDATE CHECKWORK FOR FAC	\$				Minor
<b>TOTAL</b>					(\$264,096,533)

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<sup>1</sup> Source – 07/25/09 Executive Steering Committee presentations

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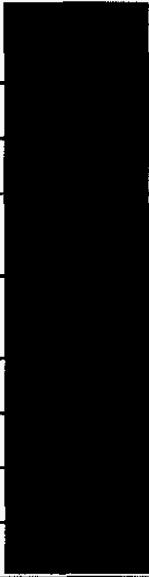
**TOTAL**

DESCRIPTION	ORIGINAL	CURRENT	VARIANCE	EXPLANATION / NOTES
<b>UNDER-RUNS</b>				
ALLOWANCE FOR SCOPE	\$	\$		Allocated to other modifications
CONDENSER MODS - MATERIAL CONDITION	\$	\$		Scope moved to Condenser Upgrade Modification
DEH COMPUTER REPLACEMENT	\$	\$		Material costs less than estimated based on PTN bids for similar scope, includes Bechtel Implementation costs.
REPLACE TRANSFORMERS	\$	\$		Revised scope from replacing 4 transformers to replace 2, upgrade coolers, and swap spare, includes Bechtel Implementation costs.
MISC MATERIALS AND SERVICES	\$	\$		Allocated to other mods
COMMUNITY OUTREACH	\$	\$		Allocated to other mods
UPDATE EQ QUALIFICATION DOC PACKAGES	\$	\$		Allocated to other mods
<b>TOTAL</b>			<b>\$14,212,899</b>	
<b>SCOPE INCREASES</b>				
TCW HEAT EXCHANGERS	\$	\$		New scope not in feasibility evaluation - Identified in Shaw scoping study
ROD CONTROL UPGRADE	\$	\$		New scope - Reliability and margin improvement
HEATER DRAIN PUMPS REPLACEMENT & SPARE	\$	\$		New scope resulting from Shaw BOP hydraulic modeling.
HEATER DRAIN / MSR SYSTEM DIGITAL CONTROLS	\$	\$		New mod resulting from elimination of Feedwater Heater Digital controls.
TURBINE GANTRY CRANE	\$	\$		New scope - Reliability and margin improvement
IMPROVE HOT LEG INJ FLOW	\$	\$		New scope - LAR
SHAW NON LAR ENGINEERING	\$	\$		Additional support and analysis, bid specifications and design interface with EPC vendor
INCREASE STEAM BYPASS FLOW TO CONDENSER - PSL1	\$	\$		New scope - LAR
STRENGTHEN PARTITION PLATES 4A & 4B FW HEATERS	\$	\$		New scope - LAR
RESIZE MSR FLOW ORIFICES	\$	\$		New scope resulting from Shaw BOP hydraulic modeling.
INCREASE MSR / HP EXHAUST RELIEF CAPACITY	\$	\$		New scope resulting from Shaw BOP hydraulic modeling.
<b>TOTAL</b>			<b>(\$80,330,991)</b>	
<b>SCOPE DELETIONS</b>				
ADD FW HEATER LEVEL DIGITAL CONTROLS	\$	\$		Modification not required for EPU after Engineering review
MAIN STEAM SAFETY VALVE ORIFACE CHANGE	\$	\$		Modification not required for EPU after Engineering review
REWIND CONDENSATE PUMP MOTORS FOR 6.9 KV	\$	\$		Modification not required for EPU after Engineering review
CIRCULATING WATER PUMP REFURBISHMENT	\$	\$		Modification not required for EPU after Engineering review
DEH CONSTANT PRESSURE PUMPS	\$	\$		Modification not required for EPU after Engineering review
MAIN STEAM SAFETY VALVES / PIPING MODIFICATIONS	\$	\$		Modification not required for EPU after Engineering review
<b>TOTAL</b>			<b>\$10,663,952</b>	
CONTINGENCY	\$	\$		
ESCALATION	\$	\$		
<b>TOTAL</b>			<b>\$251,665,504</b>	
Unallocated Escalation	\$	\$		<b>(\$11,840,000)</b>
<b>GRAND TOTAL</b>			<b>(\$79,535,169)</b>	

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<sup>1</sup> Source - 07/25/09 Executive Steering Committee presentations

**EPU PSL SCOPE DELETIONS - Fall 2009**

Deleted Item Description	2009 Rough Order of Magnitude Estimate (\$M)
Add Dedicated power Supply for 1C/2C Condensate Pumps – replace exist 1C/2C 4.16 kV motors, install 6.9kV Switchgear cube and remove transfer switch	
Main Steam Safety Valve/ Tailpipe Mods	
Main Steam Safety Valve Orifice Change	
Replace DEH Constant Pressure Pumps – Replace exist centrifugal pps with constant pressure	
Circulating Water Pp Refurbishments – refurb pumps to original design condition	
Condensate Suction Piping U2 & Strainers	
Main Steam ADV Trim Change out	
Exciter Upgrade / Rewind	
Condenser Material Upgrades	

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**Bechtel Forecast Timeline for Turkey Point <sup>1</sup>:**

<b>PTN EPC Scope and Forecast Evolution</b>									
Approx. Date	5/15/2008	Prior to contract (10/15/08)	11/07/08	06/03/09	06/30/09	7/1/2009 ??	07/02/09	07/02/09	07/14/09
Item	FPL Project Forecast prior to EPC (Shaw Estimates) We only have dollars	FPL Project Forecast based on Bechtel indicative staffing.	Contract Award date, FPL Project Forecast based on Bechtel Manning Submittal	Original Bechtel P50 Submittal	Most likely P50	Same as previous submittal with clarification of scope	P50 with reduced scope (Changes to MODS scope from Mid-cycle scope review)	P50 with reduced scope (Consolidation of Procurement & Reduction in Management Services)	P50 with reduced scope and reduced Eng. & Craft Hrs after MOD by MOD Estimate Reviews
Total NM Man-hours	[REDACTED]								
Total Craft Hrs	[REDACTED]								
Total Dollars	[REDACTED]								
Scope	Based on 43 MODS per Unit.	33 EPC Modifications Identified in Spec M-156.	Based on 43 EPC Modifications Identified in Spec M-156 Rev.1	Based on 43 EPC Modifications Identified in Spec M-156 Rev.1 plus additional scope for AST MOD's and Wraparound MOD's	Based on 43 EPC Modifications Identified in Spec M-156 Rev.1 including scope revision's to MOD plus additional scope for AST MOD's and Wraparound MOD's	Based on 43 EPC Modifications Identified in Spec M-156 Rev.1 including scope revision's to MOD plus additional scope for AST MOD's and Wraparound MOD's	Based on 43 revised/eliminated EPC Modifications Identified in Spec M-156 Rev.1 including scope revision's to MOD's along with Reduction to Design Engr & Supv. And FE hours hrs. based on Area and NSR strategy.	Based on 43 EPC Modifications Identified in Spec M-156 Rev.1 including scope revision's to MOD's, Reduction on Design Engr & Start up hrs and removing Management Service	Based on 43 EPC Modifications Identified in Spec M-156 Rev.1 including scope revision's to MOD's, Reduction on Design Engr & Start up hrs and removing Management Service & reductions due to MOD estimates

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<sup>1</sup> Source – 07/25/09 Executive Steering Committee presentations

The following represents the potential estimated cost increases and decreases for Turkey Point<sup>1</sup>:

DESCRIPTION	ORIGINAL	FORECAST	VARIANCE	EXPLANATION / NOTES
<b>OVER-RUNS</b>				
Condenser Replacement/Amertap				Balance of Plant material cost, heavy haul, Amertap replacement, Cathodic protection and Bechtel indirects
HP Internals & Rotor/Generator Rew ind, Rotor/ Hi-Lift Valves				Siemens' proposal greater than original estimate
License Amendment Request Engineering, Licensing and Support				NSSS/Fuel, BOP Engineering, Licensing, LAR Support, NRC Fees
New Turbine Controls DEH/EHC				Implementation costs, includes capital spare replacement components - not in base scope
Allow ance for Additional Cooling Mods to TPCW/ICW				Heat Exchanger Costs, Original Scope - Valve installation
Install Condensate Pumps - Replace Internals				New Pumps, Re-wind Motors, Recirc Piping, HVAC
Replace 2 HP FW Htrs - #5 (4 Total For 2 Units)				Heater Cost, Increased work based on implementation details
Allow ance For Replacement Of Gravity Drain Piping - #5 Heater				Increased work based on detailed field walkdow ns
Implement LEFM Check Plus MUR				Based on preliminary estimates
Replace 2 HP FW Htrs - #6 (4 Total For 2 Units)				Based on preliminary estimates
Main Steam Piping Support Mods And / Or New Supports				Engineering identified additional supports required
BOP Instrumentation & Control Setpoint, Rescaling & Hardw are Mo				Increased work scope due to better scope definition
Add New Fast closing FW Isolation Valves Outside Containment				Based on preliminary estimates
Add FW Htr # 5 & # 6 Digital Level Controls				Reduced scope for LP Heaters
Steam Dump Valves/piping Modifications				Increased work scope due to better scope definition
Simulator				Reactor Core Simulator model / versus entire EPU parameter change model
FW Regulating Valve (FRV) Trim Replacement				Increased material costs
<b>"Total Walk-Thru" Over-Runs Sub-Total</b>	<b>\$240,603,600</b>	<b>\$463,174,382</b>	<b>-\$222,570,782</b>	
<b>UNDER-RUNS</b>				
Containment Cooling Mods - Chilled Water (NCC's)				Scope reduced from Supplemental Chillers on Aux roof to NCC's
Main Steam Safety Valve / Piping Modification				Based on preliminary estimates
<b>"Total Walk-Thru" Under-Runs Sub-Total</b>	<b>\$11,325,000</b>	<b>\$9,968,686</b>	<b>\$1,356,314</b>	

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<sup>1</sup> Source – 07/25/09 Executive Steering Committee presentations



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DESCRIPTION	ORIGINAL	FORECAST	VARIANCE	EXPLANATION / NOTES
<b>SCOPE DELETIONS</b>				
Rx Vessel Upper Head Temp Conver.				Engineering Evaluation; not required
Replace The Main Transformers				Scope reduced from replacement to cooler replacement
Addition of Trim Coolers to Exciter				Not required due to turbine plant cooling water replacement
Alternate SFP Cooling System				Reduced cooling capacity for incremental heat load (Risk item)
Replace 2 LP FW Htrs - #4 (4 Total For 2 Units)				Not required for 3 Condensate Pump option
Replace 2 LP FW Htrs - #3 (4 Total For 2 Units)				Not required for 3 Condensate Pump option
24 Month Fuel Cycle				Engineering Evaluation; not required
Cooler Replacement to Support Gen Hydrogen Cooling				Part of Generator scope
Replace 2 LP FW Htrs - #1 (4 Total For 2 Units)				interferences
Pressurizer Loop Seal Removal				Engineering Evaluation; not required
Replace 2 LP FW Htrs - #2 (4 Total For 2 Units)				Not required for 3 Condensate Pump option
FW Pump Thrust Bearings				Mid Cycle scope review reductions
LP Turbine - Analysis				Engineering Evaluation; not required
Allowance For New Jet Impingement Shields And / Or Pipe Whip R				Engineering Evaluation; not required
Community Outreach				Mid Cycle scope review reductions
Update EQ Qualification				Engineering Evaluation; not required
Update Checksum Software For FAC				Engineering Evaluation; not required
Emergency Containment Filter Removal				Mid Cycle scope review reductions (Abandon in place)
Upgrade MSIV Internals				Engineering Evaluation; not required
Increase Aux FW Pump Capacity & CST Volume				Engineering Evaluation (Risk items to replace rotating element)
<b>"Total Walk-Thru" Scope Deletions Sub-Total</b>	<b>\$80,902,200</b>	<b>\$25,407,411</b>	<b>\$55,494,789</b>	
<b>OTHER</b>				
Station Electrical Load Study (ETAP)				
Project Support - 5 FPL Home Office				
Escalation				Original escalation included in individual line items
NSSS Material / Mainstream Check Valve Implementation				
Project Escalation (Shaw)				
Project Contingency (Shaw)				
<b>"Total Walk-Thru" Other Sub-Total</b>	<b>\$301,738,410</b>	<b>\$36,827,649</b>	<b>\$264,910,761</b>	
<b>TOTAL EPU PTN PROJECT COSTS</b>	<b>\$749,181,110</b>	<b>\$832,585,838</b>	<b>-\$83,404,728</b>	

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<sup>1</sup> Source – 07/25/09 Executive Steering Committee presentations

**EPU PTN SCOPE DELETIONS - Fall 2009**

Deleted Item Description	2009 Rough Order of Magnitude Estimate (\$M)
Replace the Feedwater Pumps- no longer required	[REDACTED]
Add an Intake Cooling Water System (ICW) booster pump (partial scope reduction as TPCW heat exchangers will be replaced)	[REDACTED]
Add cooling to the C electrical bus switchgear – no longer required	Not Estimated
Replace feedwater heaters (12/unit) partial reduction – cancel 1-4 hrs	[REDACTED]
Upgrade MSSV outlet Piping	[REDACTED]
Upgrade the Actuators to the Atmospheric Dump Valves	Not Estimated
Replace Steam Dump to Condenser Valves – 2/unit	Not Estimated
Upgrade remaining Steam Dump to Condenser Valve internals (2/unit)	[REDACTED]
Replace FAC Identified Piping – Substantial scope change: deletion of 1,2, 5 extraction steam piping and crossunder pipe manway installation	[REDACTED]
Add additional trim coolers for the Generator Exciter – exciter coolers and TPCW heat exchangers being replaced instead	[REDACTED]
Increase AFW Capacity and CST Volume	[REDACTED]
Replace the 'B' Bus Current Limiting Reactor Coils – no longer required	Not Estimated
Pressurizer Loop Seal Removal: Piping will not be modified; settings on existing PSV's will be changed.	[REDACTED]
ECF removal: ECF's will be abandoned in place	[REDACTED]
Replace AFW valve position controls – will not be done	[REDACTED]
Implement FW Htr Drain Digital Controls Modification – scope revised to just No.5 and 6 fw htr drains	[REDACTED]
Increasing size of condensate and feedwater pump motors will require electrical bus, cabling, and relay modifications	Not Estimated
Replace SJAE Gland Steam Condenser	Not Estimated
Steam Generator Moisture Carryover	[REDACTED]