FLORIDA PUBLIC SERVICE COMMISSION
OFFICE OF COMMISSION CLERK

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CONFIDENTIAL

(CONFIDENTIAL) Hearing Exhibit No. 105 from 2/5/20 DOAH Hearing. [CLK Note: See DN 10935-2019 for Exh Nos. 1, 68-75, 80, 82, 100]

***This document number has been assigned to a confidential document.**
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EXHIBIT NO. 105

CONFIDENTIAL

DOCKET NO:	20190001-EI
WITNESS:	Jeffrey Swartz
PARTY:	Duke
DESCRIPTION:	Revised DEF response to OPC POD No. 31
DOCUMENTS:	Bates DEF-19-FUEL-06868-6962
PROFFERED BY:	Office of Public Counsel

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Fuel and Purchased Power Cost Recovery Clause and Generating Performance Incentive Factor	Docket No. 20190001-EI Filed: August 23, 2019

DUKE ENERGY FLORIDA, LLC'S REVISED RESPONSE TO CITIZENS' THIRD REQUEST TO PRODUCE DOCUMENTS (NOS. 30-33)

Duke Energy Florida, LLC ("DEF"), incorporates its objections filed on July 22, 2019, and submits a revised response to the Citizens of the State of Florida, through the Office of Public Counsel's ("Citizens" or "OPC") Third Request to Produce Documents (Nos. 30-33), specifically question 31, as follows:

DOCUMENTS REQUESTED

31. Please produce any and all documents that represent a business action plan or integrated project plan (or any functional equivalent, regardless of title or characterization) or portion of such business action plan that represents or serves as documentation of management's and/or any board of director's approval of the project prior to the construction of the Bartow plant.

Response:
Subject to and without waiving DEF's objections filed on July 22, 2019, please see the attached documents bearing bates numbers DEF-19FL-FUEL-006868 - DEF-19FL-FUEL-006962. DEF also notes that it appears these same documents were requested and produced in response to OPC's discovery in Docket Number 20090079-EI, specifically questions 21 and 208.

Phase Project Authorization Form

☒ Initial ☐ Revision (If checked, enter revision no.): ___ Phase: ☐ Study ☐ Design ☒ Implement

Project Title: Bartow Repowering Prioritization Category: Economic Benefit – New Asset

Department: Plant Construction Department Location: General Office Charge To: 60GZ7D

EESY Plus Record #: ___ Initiation Date: ___ Accounting System Phase #: 20051468 Accounting System Master Project #: 20051383

Account Class: O&M ___ Capital X Fuel ___ ☐ Emergency If Emergency, Authorized By: ___

Project Manager: Andy MacGregor Project Sponsor: Kevin Murray Benefit Assessment Date: N/A

Schedule	☐ Outage Required	Study	Design	Implementation	Source of Funds: X Budget ___ Other
	Start Date	6/2005	03/2006	1/2007	
	End Date	2/2006	12/2006	06/2010	Total Direct Cost
Direct Cost	Prior Years				
	2005	$1,050,708			$1,050,708
	2006	$338,151	$ 87,051,978		$87,390,129
	2007		0	$241,152,607	$241,152,607
	2008+			$196,054,541	$196,054,541
	Project Total	$1,388,859	$87,051,978	$437,207,148	$525,647,985

		Before- Tax $
Will there be obsolete inventory as a result of the project that will require the write-off of inventory* If yes, enter the $ value in the box.	☐ Yes ☐ No	
Will new inventory be added as a result of the project * If yes, enter the $ value in the box.	☐ Yes ☐ No	

* Notify Business Unit Financial Services support , Manager, Property Plant and Materials Accounting, Director-Supply Chain and CSD Salvage group. Discuss in detail on page 2.

Economic Analysis		BC Ratio	NPV	Discounted Breakeven Year
Base Case				
If > $5M	Best Case Scenario			
	Worst Case Scenario			
	Treasury Control #: 2006-1176		Note: Proforma for entire term must be attached to approval.	
Other metrics				

We, the undersigned, agree that the project assumptions are reasonable and key risks have been identified and accurately considered.
Approvals: Thresholds based on total project direct costs. All must sign in sequence.

Approval Levels	Approval Signatures	Date	Approval Levels	Approval Signatures	Date
All 3 Phase Projects require these approvals	☑ Project Manager: Andy MacGregor	10/12/06	Project direct cost > $1M	☐ Senior Vice President Mike Williams	10/31/06
	☑ Project Sponsor: Kevin Murray	10/13/06		☐ PEC or PEF President & CEO | Pres. – Progress Ventures | Exec. VP Diversified Ops: Jeff Lyash	10/26/06
	☐ PRG Chairperson: Sydney G. Chaffin Dept Head	N/A		☐ Subsidiary Director or Progress Energy Service Co. Pres. & CEO | Subsidiary Director or Progress Energy, Inc. Pres. & COO: Bill Johnson	11/20/06
	☐ Business Services Mgr. or Supervisor Financial Services: Sue Hardison	10/16/06		☐ Subsidiary Treasury or Progress Energy, Inc. Treasurer: Tom R. Sullivan	11/15/06
Project direct cost >$250K	See pg 3 for additional signoffs for multiple charge by's or charge to's ☐ Department Head – DH:		Project direct cost > $5M	☐ Subsidiary Director or Progress Energy, Inc. CFO: Peter Scott	11/20/06
	☐ Department Head – DH, Charge By Org. (required for facilities projects): Joel Kamya	10/16/06		☐ Subsidiary Chairman or Progress Energy, Inc. Chairman & CEO: Robert B. McGehee	11/22/06

Return original to PRG Administrator who must maintain a file of the signed original:
Executed Lease Evaluation Form, FRM-SUBS-01110 must be attached to approval if the recommended project includes a lease. Signatures as Subsidiary Directors or Officers based on legal entity sponsoring project.
Capital Planning and Control Review (initial & date): ___ ___ 11/10/06

Keywords: accounting; capital budgeting; three-phase project management; ACT-SUBS-00261; project approval
Applies to: Progress Energy Carolinas, Inc.; Progress Energy Florida, Inc., Progress Energy Service Company, LLC; Progress Energy Ventures, Inc. Progress Fuels subsidiaries (including corporate employees)

FRM-SUBS-00690 Rev. 10 02/06

Project Authorization Revision
Variance Analysis Form

Attach completed PAR form to revised PPA form and submit both forms to the Project Review Group

Note: This form should be used to notify management of changes in the schedule of a project and/or for changes in the cost of a project based on the following guidelines:

Authorized Amount	Percentage Variance **AND** Dollar Amount
Up to or equal to $1M	10% **AND** $100K
Over $1M	5% **AND** $150K

Project Title Bartow Repowering

Project # 20051467 **Accounting System Master Project # 20051383**

Study ☐ Design ☒ Implementation ☐

Direct Costs

	Current Authorized Amount	Actual	Proposed Authorized Amount	Variance	
				$	%
Current Phase	$103,193,000	$ 87,051,978**	$ 87,051,978	$-16,141,022	-15.64%
Total Project	$516,153,000	$525,647,985*	$525,647,985	$9,494,985	1.85%

Variance: ☐ **Schedule** ☒ **Cost** ☐ **Other:**

Original Total Project (Authorized Cost at the Design phase): 516,153,000

Reason for Revision:

The increase in the total project relates to the contingency. See attached BAP & PAF for explanation. The decrease in the design relates to the dollar being shifting between the design and implementation phases. The work and scope have not changed. See the attached BAP for explanation of project scope.

* This denotes the actual costs that are being requested in the attached PAF.
**Actual denotes – projected $$ by end of phase as of 12/31/2006

Reviewed by PRG: Joel Y Kuntz
PRG Chairperson (initial & date)

Return Original to: Elizabeth Murray

Bartow Repowering
Business Analysis Package

Sponsoring Business Unit: Progress Energy Florida

Funding Legal Entity: Progress Energy Florida

Date Prepared: February 1, 2006; Updated October 10, 2006

Key Project Contacts:

Role, Dept/Grp	Name	Phone #
Plant Construction	Andy MacGregor	vnet 770-2427
Plant Construction	Kevin Murray	vnet 770-5046
Plant Construction	Sue Hardison	vnet 770-3062
Plant Construction	Joel Kamya	vnet 770-7428
Environmental Services	Jamie Hunter	vnet 230-5764
Community Relations	Nancy Loehr	vnet 220-2430
Legal	Alex Glenn	vnet 230-5587
CT Operations	David Sands	vnet 280-6105
Fossil Operations	Rufus Jackson	vnet 220-6111
Transmission	John Goff	vnet 280-2526
Fuels	Pam Murphy	vnet 770-4553
Treasury	Mike Brennan	vnet 770-3484
Corporate Communications	Scott Sutton	vnet 240-6420
Regulatory Affairs	Paul Lewis	vnet 230-5095
Resource Planning	Dan Roeder	vnet 770-7966

Executive Summary

(This document contains transmission information which is subject to the FERC Standards of Conduct and should not be distributed or discussed with any merchant function employees.)

Project Basic Information

The original configuration of the Bartow Repowering Project called for three, 1x1x1 units. During the study phase, it was determined that a more cost-effective and practical design would be a 4x4x1 configuration. This new configuration consists of site re-powering the Bartow Steam Units with F-Class combined cycle technology and utilizes natural gas as the primary fuel with distillate fuel oil as a back-up fuel. The proposed unit design consists of installing four (4) combustion turbines (CTs), four (4) heat recovery steam generators (HRSGs) and one (1) steam turbine that replace the existing boilers and steam turbines. The present plant will be placed in cold stand-by mode after commercial operation of the new units. This 4CT x 4HRSG x 1ST unit design will be used along with auxiliary duct firing for the HRSGs and steam power augmentation for the CTs to provide optimum peaking capacity. By-pass stack dampers on all four CTs will provide added flexibility and reliability and will allow two of the CTs to be operated in simple cycle during the winter of 2008/2009 to provide generation as required to support winter peak demand.

The 4x4x1 configuration will have a winter capacity of 1279 MW, increasing system capacity by 827 MW compared to 598 MW of the original 1x1x1 configuration. The additional capacity from the 4x4x1 configuration eliminates two CTs from the resource plan (summer 2010 and summer 2012 additions).

Recommendation and High Level Discussion

We recommend proceeding with the Implementation Phase of the Bartow Repowering Project for the following reasons:

- Repowering the Bartow plant will add approximately 820MW of capacity over the June 2009 – Dec 2009 time period. The additional capacity is needed to support the growing population in our Florida service territory and will allow PEF to satisfy its Reserve Margin and loss of load probability criteria while maintaining an appropriate level of physical reserves for the system.
- Repowering the Bartow plant will reduce system wide NOx and SO_2 emissions as part of the Company's plan for compliance with the Clean Air Interstate Rule (CAIR).
- Repowering Bartow provides additional system reliability benefits by increasing the amount of generation in Pinellas County. There is currently significantly more load than generation in the peninsula, at times resulting in low voltage during peak periods. To alleviate these low voltage conditions, combustion turbines in the area are operated out of merit order. Repowering the Bartow oil units with gas-fired combined cycle technology can reduce the amount of uneconomic dispatch, thereby saving fuel costs.

Current Status (Generation)

The Design Phase PAF was approved in March 2006, changing the original three, 1x1x1 configuration to the new 4x4x1 plant configuration. Since that time, most of the major equipment has been placed under contract including the combustion turbines (Siemens), heat recovery steam generators (Vogt), steam turbine (Mitsubishi), generator step-up transformers (Siemens) and condenser (Holtec). Field erected tanks have been released under an LOI and auxiliary transformers have been bid and these bids are currently under review.

The main engineering, procurement and construction (EPC) contract has been awarded to a joint venture partnership comprised of TIC and Bibb & Associates. Preliminary site work under PEF site management is now underway involving the relocation of utilities serving the current Bartow facilities to make way for the new powerblock.

The air permit application was submitted to DEP in July and the project team has received and responded to a request for additional information (RAI) from the agency and will schedule further meetings with the agency during October and November to work on the final permit. The environmental resource (ERP) application was submitted to FDEP in August and an RAI received mid September. Our response is being prepared and meetings will be scheduled during October to review final design of our stormwater management system. FDEP has stated that they have an extremely heavy workload and that issuance of our final permit may not be until early January 2007, one month later than the scheduled start of construction for our EPC contractor. Our EPC contractor has been notified of this potential delay and discussions are underway to determine what impact, if any, this will have to the overall project completion date.

Current Status (Transmission)

Design of the underground duct bank and cables is nearing completion; contracts for furnishing and installing the cables, and installing the duct bank and manholes will be awarded in December 2006. General layouts for the cable terminations at Bartow and Northeast substations are completed, and the transformers will be ordered by the end of 2006. Preparation of permit submittals is underway. Preliminary design of the system reinforcements has been started, as well as real estate acquisition for the substation expansion at 51st St.

Funding Requirements

The capital expenditures for Bartow Repowering are included in the table below.

Funding Requirements

$ Thousands

	2005	2006	2007	2008	2009	2010	Total
Generation	$1,051	$87,390	$241,153	$171,892	$19,922	$4,241	$525,649
Transmission	$0	$1,373	$86,059	$40,749	$5,835	$0	$134,016
Total	$1,051	$88,763	$327,212	$212,641	$25,757	$4,241	$659,665

The capital expenditures for Generation at Design Phase approval were forecast to be $516 million, which included approx $30 million contingency for material and labor escalation. Forecast cost for EPC at Design phase approval was $200 million however the final EPC contract value is $236 million. In addition to the increased costs due to escalation within the EPC contract, certain items of major equipment, including generator step-up transformers have seen material escalation resulting in almost 100% increase in pricing.

Current forecast costs for generation are ~$515 million *excluding* any contingency. Although the majority of equipment is now under contract, the project has some risk for material and labor escalation for those items still to be procured and for certain engineered equipment under the EPC contract for which both PEF and the EPC contractor have shared procurement risk. The decision was made during the Design phase to re-use existing intake cooling water structures which had been constructed as part of the original Bartow plant construction and which had always been intended for future expansion. Dewatering and inspection of these structures is scheduled for the end of October and it is likely that some degree of remedial work will be required on these structures but at this time the extent of that remedial work is unknown. For these reasons, Plant Construction is seeking approval for additional generation costs of $10.2 million – or ~2% of forecast project capital expenditure – for contingency.

Transmission estimates are $37 million higher due to increased costs of transformers, conductor, and poles; an increase in equipment and material required to accommodate the additional load; a better understanding of the system reinforcements included in the project.

Summary of changes in total project capital requirements from Design to Implementation

	$ Millions		
	Generation	**Transmission**	**Total Project**
Design Phase Estimate, 2/1/06	$516.2	$97.2	$613.3
Implement Phase Estimate, 10/3/06	$525.6	$134.0	$659.8
Increase/(Decrease)	$9.4	$36.8	$46.5

Project Capital Allocation Metric Summary Table

As this is a least cost analysis, standard B/C and DBEY calculations cannot be calculated. Please see the Economic Analysis Detail below for the detailed financial analysis.

Strategic Fit

There is no change to the Strategic Fit of the project. Repowering Bartow will enable the Company to (1) increase capacity to serve customer growth, (2) reduce air emissions, (3) meet air emission compliance requirements cost effectively and without adding expensive emission controls on oil-fired units, (4) increase system reliability by providing additional voltage support for the Pinellas County area, and (5) reduce the need to run certain generating units out of merit order to alleviate low voltage periods.

Key Risk Analysis

Natural gas pipeline – PEF has entered into an agreement with Gulfstream Natural Gas System for Firm Pipeline Transportation (FT) capacity to access gas supply for the Bartow plant. The total FT capacity contracted for is 155,000 Dths/day for a term of 23 years. This is roughly equivalent to the total gas demand of the re-powered plant at full load for 16 hours. Gulfstream's project will consist of constructing approximately 17 miles of 24" pipeline in the Tampa Bay from their existing pipeline to the Bartow site, additional compression at Gulfstream's existing station in Coden, AL, and constructing a new compressor station in Manatee County, FL. The contract provides for 80,000 Dths/d to be available to support testing and startup of the first two CTs and then the full 155,000 Dths/d to be available to commission the additional two CTs and four HRSGs. The in-service schedule for the Gulfstream project is as follows:

- 9/1/08 New pipeline and M&R station complete providing 80,000 Dths/d of FT
- 1/1/09 Additional compression complete providing 155,000 Dths/d of FT

See the Gulfstream Firm Pipeline Transportation Bartow Re-Power BAP (1/3/2006) for more details.

Community Acceptance – Meetings with community members and organizations began in November 2005 and have continued through 2006. The overall community relations plan focuses on communicating with several important stakeholders, such environmental groups and homeowner associations near the Bartow Plant. The initial public response toward the project and Progress Energy's proactive communications has been positive. The project team is working closely with Gulfstream Natural Gas, LLC, to ensure its participation in public meetings. Representatives from Progress Energy attended a series of three Gulfstream public meetings in July 2006. The partnership has been beneficial and provides customers with a more comprehensive understanding of the entire project. Progress Energy has also written a communication piece for use in home owner association newsletters. This was published by the Venetian Isles HOA in September. Below is a list of Progress Energy community meetings:

- Friends of Weedon Island, 11/05
- Friends of Weedon Island, 5/20/06
- Pinellas County Environmental Forum, 8/10/06

- CONA (Council of Neighborhood Associations-St. Pete), 8/16/06
- Venetian Isles HOA, 9/21/06
- Progress Energy General Public Meeting, scheduled 10/26/06
- Riveira Bay HOA, scheduled 11/14/06

Construction Cost Escalation – With most of the major equipment under contract and the EPC contract awarded, much of the risk associated with material and labor escalation has been reduced. However, certain items of equipment such as the field erected tanks and the engineered equipment within the EPC contract carry some risk for escalation due primarily to material escalation. The secondary market Mitsubishi steam turbine procured from Tenaska was designed and fabricated for a project with different design criteria from that of the Bartow repowering project. Therefore items such as pedestal design, steam piping, turbine enclosure, etc. are undergoing review and changes will be required to make this unit fit the requirements of the Bartow project. The overall design of the once-through cooling system for Bartow will utilize existing, spare intake structures situated adjacent to the existing intake bays. The structural integrity of these spare bays has yet to be fully inspected and repairs and some modifications will be required to ensure that these will last for the lifetime of the new facility.

EPA/DEP Permitting Risks – As stated above, the configuration change will require modification to the existing cooling system. This modification will require updating the cooling water intake structure to meet new EPA standards. This process also has the risk of reducing the present temperature discharge limits. In order to mitigate this risk, a small "helper" cooling tower may be required to lower the discharge temperature of the cooling water returning from the condenser to the bay. Due to the complexity of the stormwater management system for the repowering project, and the heavy workload of DEP, there exists the potential for receipt of the Environmental Resource Permit (ERP) to be delayed until January 2007. Start of construction under the EPC contract is currently scheduled for December 2006. Under the EPC contract, the Contractor is entitled to both schedule relief and direct costs associated with any delay, based on a demonstrable impact to the project's critical path. The Contractor has been advised of the potential permitting delay and workarounds are being discussed to mitigate any impact to the overall project schedule.

Transmission Risks - The transmission estimate of $134M includes $119M of equipment, material, and construction contracts, all of which are at risk until committed. By the end of 2006, contracts and purchases estimated at $78M will have been awarded. The balance of commitments will be made throughout 2007 and into the first quarter of 2008. FDEP and other permit requirements may result in additional costs for substation and line construction, as well as delayed construction starts.

Key Assumptions

Please see Appendix A for key assumptions used in the Design phase BAP economic analysis.

Project Alternatives Analysis

Alternatives Considered

The original Bartow Repowering project involved adding three gas-turbine generators and Heat Recovery Steam Generators (HRSG) to the site to provide steam to the existing three steam turbines. The existing #6 fuel oil furnaces would be taken out of service and natural gas would be used as the primary fuel. Light fuel oil (#2) would be used as a back up fuel when natural gas is unavailable. System Planning determined during the study phase that the load growth in Florida demanded that an increase in generation would be needed. The feasibility of adding another gas turbine to the Unit #3 steam turbine combined cycle configuration was investigated. System Planning investigated the value based upon the construction and performance values provided by Plant Construction. The estimate for constructing the combined cycle using the existing turbines and providing steam with four gas turbines and HRSGs was $498.6 million. The economic analysis of this configuration was found to be break-even compared to the original configuration plus two additional simple cycle CTs, one installed in 2010 and one in 2012.

It was determined that the highest uncertainty and schedule risk to the project was centered in the existing steam turbines. The final output (MW) that could be achieved was uncertain. In addition, a firm estimate of the capital needed to extend the life of the turbine was difficult to obtain before the point in construction when the old steam turbines were opened up and inspected. Startup times for the existing steam turbines also provided another level of uncertainty to the repowering option. These uncertainties lead the investigation into determining the possibility of using a new steam turbine.

A secondary market 400 megawatt steam turbine was found. The use of this turbine was investigated and proved to be a very good fit for the 4 CT and 4 HRSG combinations. In fact, it provided more operating flexibility (see Operational Analysis Detail, below). In addition, the uncertainty in project schedule and cost was reduced.

In the Design phase analysis, the 4x4x1 configuration was shown to be favorable to the other two configurations by $51 million after-tax NPV. In addition, it was shown to be favorable to the initial alternative to Bartow Repowering (a fifth combined cycle at Hines in December 2009 and a 150 MW capacity purchase for the summer of 2009) by $171 million.

Economic Analysis Detail

Update

The Design phase economic analysis compared Bartow Repowering to a Hines 5 alternative, including a fifth combined cycle (CC) at Hines and a 150 MW capacity purchase for the summer of 2009. This comparison showed an NPV advantage of $171 million for Bartow. The project cost increases (and acceleration of some of the spending) reduce this NPV by ~~$44 million~~ $42 million LB 11/15/06. However, it is likely that the cost of the CC required in the Hines 5 alternative has also increased. Since the Design phase analysis, the corporate standard assumption for CC costs has increased from $202 million (EPRI TAG) to $312 million (Burns & McDonnell) overnight costs in 2006 dollars. If this new cost assumption had been used for the Hines 5 alternative in the Design phase analysis, it would have increased the NPV by approximately $100 million, more than offsetting the impact of the Bartow project cost increases. Also, additional emissions equipment (SCRs) was required in the Hines 5 alternative. The cost of this emissions equipment has increased since the Design phase, again adding more value to the Bartow alternative.

The Design phase economic analysis also showed the NPV of the 4x4x1 design compared to the other configurations considered. This comparison showed an NPV advantage of $51 million for the 4x4x1 configuration. Even with the current project cost estimates, the NPV would have still been positive (~~~$7 million~~ ~$9 million LB 11/15/06). In addition, a significant part of the value added by the 4x4x1 configuration was due to its lower heat rate. Since the current gas price forecast (Nov 06 GFF) is higher than the forecast used in the Design phase analysis (Nov 05 GFF), the value of this benefit is even higher now. Also, the significant cost and schedule risk associated with using the existing steam turbines was eliminated with the 4x4x1 configuration.

At this point, there are no feasible alternatives to the current project that could meet the scheduled in-service dates of December 2008 and June 2009. Consequently, a full economic analysis with Prosym and Strategist runs was not performed. However, at a high-level, the major components of the Design phase analysis were reviewed. The review showed at a directional level that, even with the increased project costs, Bartow Repowering is still the least cost alternative.

Appendix A contains the Economic Analysis Detail section from the Design phase BAP (February 2006).

Operational Analysis Detail

In order to provide increased reliability, bypass stacks have been included in the design allowing these units to operate in simple cycle mode if there are steam turbine or condenser problems that would preclude operation in combined cycle mode. By-pass stack dampers on CT Unit #1 and CT Unit #2 will provide generation needed in 2008 and provide added flexibility and reliability for the new plant. In addition, by-pass stack dampers will also be installed on CT Unit #3 and CT Unit #4. This design provides maximum output, operational ease and system dispatch reliability and flexibility. The 4x4x1 configuration also allows operation in basic 1x1x1, 2x2x1and 3x3x1 providing maximum response to system dispatch needs.

The Bartow plant is very important to the integrity of the Pinellas area and the entire system. The plant design must allow a steam turbine trip without the loss of the gas turbines. Condenser by-pass and/or atmospheric vents are included to address this concern. The addition of exhaust by-pass stacks on each unit provides an additional level of reliability protection.

Regulatory Impact Analysis

Florida Department of Environmental Protection (FDEP) – Florida Department of Environmental Protection has been contacted to determine the applicability of the Power Plant Siting Act to the Bartow Site. Progress Energy has received confirmation that since the amount of electricity generated by steam will not exceed the present steam generation, the Florida Power Plant Siting Act does not apply to the Bartow project.

Wrap-up Conclusion and Recommendations

Repowering Bartow is a cost-effective way to increase the generating capability of the PEF system and reduce SO_2 and NOx emissions as a part of the Company's CAIR compliance plan. We recommend approval of the Implementation phase of this project.

Appendix A – Excerpt from Design Phase BAP, 2/1/2006

Key Assumptions

Standard Assumptions	
Tax Rate	38.58%
Escalation Rate	2.5%
WACC	8.17%
Property Tax Rate	1.20%
Property Insurance Rate	.05%

Other Assumptions:

- Load and Energy Forecast: September 2005 forecast, which is included in the November 2005 GFF. The September forecast has higher loads after 2008 compared to the January forecast included in the original Bartow Repowering BAP.
- November 2005 GFF Resource Plan, which reduced term of CP Lime purchase from 2015 to 2010.
- Fuel Prices Forecasts: September 2005 forecast for natural gas and oil from Treasury & Enterprise Risk Management (consistent with the November GFF).

Assumption Changes Since Original BAP

A number of assumptions have changed since the original Bartow Repowering BAP. The impacts of most of the changes have been captured in the updated analysis and are reflected in the savings figures provided above. The primary analysis performed for this BAP update was to determine the economic impact of changing the configuration of the Bartow repowering project from one 2x2x1 and two 1x1x1s to a 4x4x1. Three significant assumption changes require examination outside of the current analysis to determine if repowering Bartow continues to be a cost-effective project.

- Pipeline reservation fee – The assumption in the original BAP analysis for the cost pipeline reservation fee was $0.70/mmBtu-day. This assumption was at the upper end of the range of $0.60 – 0.70/mmBtu-day and was used to be conservative. The current estimated price is $0.59/mmBtu-day. At 155,000 mmBtu/day, this translates into over $6 million in savings per year, and an increase of $29 million net present value (after tax) over the study period compared to the original BAP.
- Anclote SCRs – In the original BAP analysis, it was anticipated that if Bartow was not repowered, selective catalytic reduction controls for NOx would have to be installed on both Anclote units as part of the Company's CAIR compliance plan. The assumed capital cost estimate for the SCRs was $105 million per unit. Subsequent analysis of control technologies for Anclote found the cost to install SCRs at Anclote would be approximately $64 million per unit. This is less than the $80 million "best case" estimate sensitivity analysis discussed in the BAP. As explained in the BAP, an $80 million/unit cost decreased the savings from repowering Bartow by $35 million NPV. Using this information, the $64 million/unit reduces the savings of repowering Bartow by approximately $58 million.
- Transmission scope - The scope of the transmission work at the Bartow plant has increased from two circuits to three circuits. This is due to the desire to have one spare circuit for reliability purposes and to allow possible future expansion at the Bartow site. This change in scope increases the capital costs by approximately $12 million and decreased the NPV of the project by $9 million.

The net impact of these three changes in assumptions decreases the overall net present value of repowering Bartow by $38 million. Thus, a more up-to-date value of repowering Bartow (prior to the configuration change) is $120 million (NPV).

Project Alternatives Analysis

Alternatives Considered
The economic analysis of the proposed 4x4x1 configuration was compared to a configuration that included two 1x1x1 units (using existing Unit 1 and Unit 2 steam turbines) and one 2x2x1 unit (using Unit 3 steam turbine). A previous analysis determined this configuration resulted in essentially the same NPV as the original configuration and two future simple cycle CTs, which are called for in the PEF resource plan in 2010 and 2012. The two cases are shown in the table below:

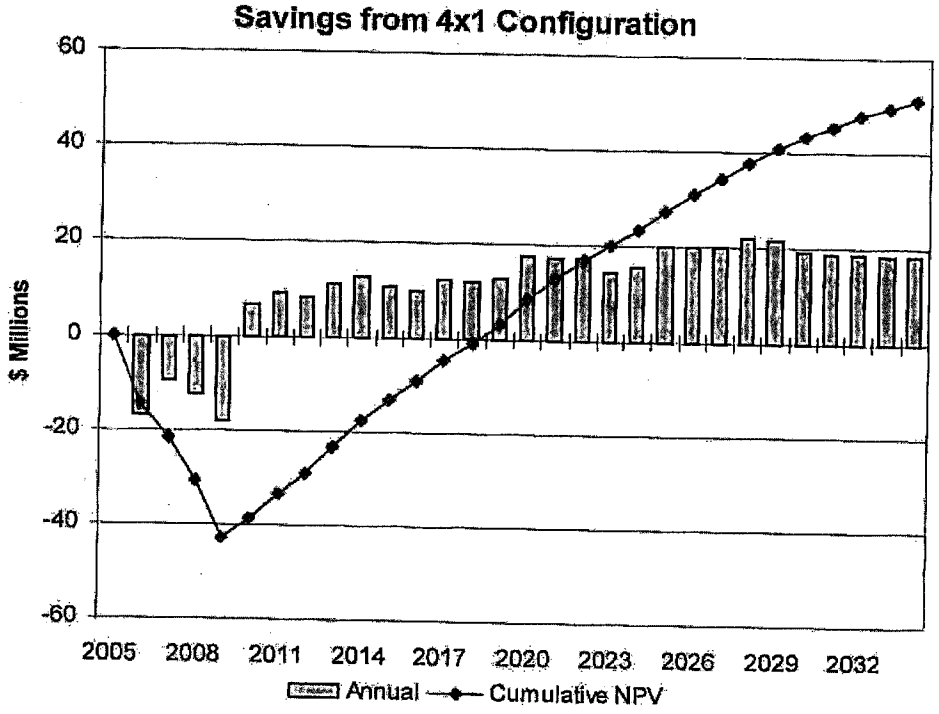
Base Case	New Configuration
Repowering as one 2x2x1 unit and two 1x1x1 units (phased in between 12/2008 and 6/2009)	Repower Bartow as 4x4x1 (phased in between 12/2008 and 6/2009)

Economic Analysis Detail

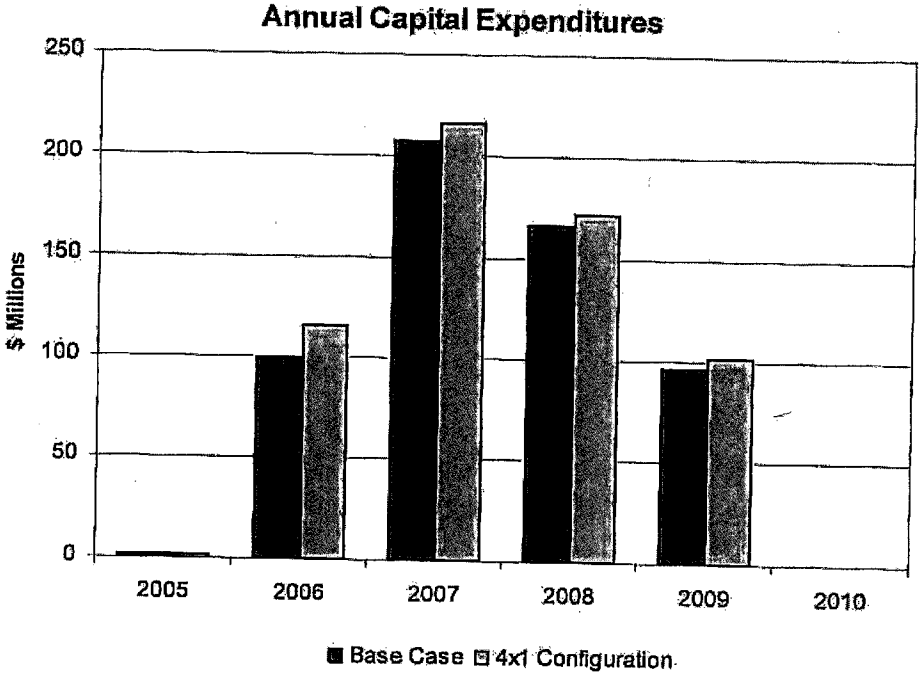
Detailed Discussion of Results
The economic analysis of the Base Case and the New Configuration case captures the costs associated with the changing the configuration of the Bartow repowering project, as shown in the table in the Alternatives Considered section, above. The analysis did not consider costs that were the same in the two scenarios. The costs not considered in this analysis were costs associated with dismantlement of the stacks on the existing units. These costs will be incurred in 2010 after the new generating units are placed in-service. Since these costs are common to both scenarios, they will have no impact on the analysis. The capital and O&M costs of each of the case components (e.g., generation and transmission) shown above were evaluated separately and included in the economic analysis. The analysis also took into consideration the difference in the production costs between the two cases. The analysis was performed through 2034 to capture all the pertinent cash flows. However, the Prosym production cost analysis was only performed through 2025 and production cost differences between the two cases were extrapolated through 2034.

Modeling Tools Used
The Prosym production costing model and detailed revenue requirements/cash flows spreadsheets were used to perform this analysis.

Cash Flow Graph
The chart below shows the difference between the two cases on an annual basis (bars) and cumulative net present value (line).



The chart below shows the difference in annual capital expenditures used in the analysis of the two cases. Note this figure does not include costs associated with stack demolition. Also, payments that are scheduled to be made after the plant is in-service (approximately $20 million) were advanced from 2010 to 2009 for the purposes of this analysis.



The results of the analysis show the 4x4x1 configuration for repowering Bartow to be more cost effective than the Base Case. As shown on the cash flow graph above, the new configuration will increase the net present value of cash flows in excess of $51 million through 2034 compared to the Base Case configuration. These savings are the result of lower production costs (NPV after tax savings of $100 million). The production cost savings come from savings related to a better heat rate of the plant through the use of a new steam turbine and because of the additional operating flexibility of the 4x4x1 design. The 4x4x1 design provides better cycling operation compared to the 2x2x1 and two 1x1x1 design in the Base Case. This allows Bartow to be "turned down" to a lower capacity at night, allowing the system's coal units to operate at a higher capacity state (and higher annual capacity factor). This results in more coal steam generation, lower oil-fired steam generation, and less gas-fired combined cycle generation (there are other changes in system dispatch also).

The $51 million in NPV savings are the savings associated with the new configuration, and are in addition to the updated savings of repowering Bartow. As discussed in the Assumptions section above, the updated value of repowering Bartow prior to analyzing the configuration change was $120 million. With the addition of the configuration change, the net present value of repowering Bartow is now projected to be $171 million (2005 dollars). The table below summarizes the change in value of the Bartow Repowering project.

	Net Present Value	
Original Bartow BAP	$ 158	Million
Pipeline reservation fee	29	Million
Anclote SCR	(58)	Million
Transmission scope	(9)	Million
4x4x1 configuration (including transmission)	51	Million
Revised Bartow	$ 171	Million

Bartow Repowering

Integrated Project Plan & Business Analysis Package

Please Note: This document contains confidential transmission information and is subject to Progress Energy's Standards of Conduct Procedure, #REG-SUBS-00002

Sponsoring Business Unit:	Transmission Ops & Planning (System Planning & Regulatory Performance)
Funding Legal Entity:	PEF
Date Prepared:	03/10/2008

Key Project Contacts:

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Plan Revision Control

The following is required to be updated for significant revisions that impact the project cost 10% and $5M and/or the project schedule by 1 year:

Rev No.	Revised/Authored	Revision Description	Rev Date
0	Elizabeth Murray/George Hixon	Initial Draft	03/10/08

Review & Approval

This section contains formal sign-offs for both review & approval of the IPP. "Reviewing" applies to any party reviewing the IPP for accuracy & clarity, while "Approving" applies to those parties responsible for approving project milestone progression & funding.

Reviewing Party	Reviewing Position	Date Reviewed	Signature	Date
John Elnitsky	VP – Gen. & Trans. Construction	Mar. 2008		
Mark Smothers	GM –PM & Construction/G&TCD			
Tom Cornell	GM – Project Engineering/G&TCD			
Sue Hardison	Dir – Bus. Mgt & Compliance/G&TCD			
Kevin Murray	Dir-Plt Const Proj-G&TCD			
George Hixon	Project Manager/G&TCD			
Departmental Review Outside G&TCD				
Ben Crisp	Dir –System Plan.			
Dale Oliver	VP-Transmission Ops & Planning			
John Goff	Transmission Project Manager			
Eric Grant	Gen Mgr-CT Operations-FL			
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Brenda Brickhouse	Dir-Environ Health & Safety			
Chris Cox	Legal			
Peter Toomey	VP-Finance			
David Sorrick	VP-Power Generation-PEF			
Sasha Weintraub	Executive Director Regulated Fuels			
Javier Portuondo	Dir-Regulatory Planning			
Magnus Ohlsson	Mgr-Strategic Sourcing			

A revised version of this document was sent to the fuels group for approve to ensure compliance with the FERC Standards of Conduct. REG-SUBS-00002.

AGENDA

1.0 Project Overview / Recommendation

2.0 Scope Statement

3.0 Major Deliverables & Milestone Schedule

4.0 Funding Requirements & Update

5.0 Economic Evaluation

6.0 Assumptions & Constraints
- 6.1 Risk Strategy
- 6.2 Contracting & Procurement Strategy
- 6.3 Regulatory Requirements

7.0 External Stakeholders

8.0 Internal Stakeholders Roles & Responsibilities

9.0 Project Assurance Plan

10.0 Communication Plan / Next Steps

APPENDIX:

Definitions & Acronyms

1.0 Project Overview / Recommendation:

1.1. Overview

Repowering the Bartow plant will add approximately 820MW of capacity in December 2009. The additional capacity is needed to support the growing population in our Florida service territory and will allow PEF to satisfy its Reserve Margin and loss of load probability criteria while maintaining an appropriate level of physical reserves for the system.

Repowering the Bartow plant will also reduce system wide NOx and SO2 emissions as part of the Company's plan for compliance with the Clean Air Interstate Rule (CAIR). Moreover, repowering Bartow provides additional system reliability by increasing generation resources in an area that relies heavily on the transmission grid for importing power.

The original configuration of the Bartow Repowering Project called for three, 1x1x1 units. During the study phase, it was determined that a more cost-effective and practical design would be a 4x4x1 configuration. This new configuration consists of site re-powering the Bartow Steam Plant with F-Class combined cycle technology and utilizing natural gas as the primary fuel with distillate fuel oil as a back-up fuel. [Note: The existing steam units will be retired, and environmental permits will expire.]

Transmission upgrades will be required to accommodate the increased generation. Upgrades include the expansion of the existing Bartow 230kV substation, construction of new 230kV underground cable circuits between Bartow and Northeast substations, expansion of the Northeast 230kV substation as well as certain other upgrades to both the 230kV and 115kV systems.

Fuel gas for the combined cycle facility will be via a new, 17 mile undersea pipeline which will be constructed by Gulfstream Natural Gas and which will connect to the existing Gulfstream pipeline at Port Manatee.

Recommendation

The project team recommends that Senior Management authorize additional funding of $18.8 million (See Table 4 for details) and continue funding of the Project, thereby ensuring that the commercial operation date of June 1, 2009 is met. The following documentation provides additional information on the history, status and forward looking aspects of the Bartow Repowering project including an overview of the scope, schedule, cost and risk elements of the project execution plan.

2.0 Scope Statement:

New Generation:

The proposed unit design consists of installing four (4) combustion turbines (CTs), four (4) heat recovery steam generators (HRSGs) and one (1) steam turbine that replace the existing boilers and steam turbines. This 4CT x 4HRSG x 1ST unit design will be used along with auxiliary duct firing for the HRSGs and steam power augmentation for the CTs to provide optimum peaking capacity. By-pass stack dampers on all four CTs will provide added operational flexibility and reliability. This design provides maximum output, operational ease and system dispatch reliability and flexibility.

The plant design should allow a steam turbine trip without the loss of the gas turbines. Condenser by-pass and/or atmospheric vents are included to mitigate this action. An additional feature includes exhaust by-pass stacks on each unit.

The 4x4x1 configuration will have a winter capacity of 1279 MW, increasing system capacity by 827 MW. The additional capacity from the 4x4x1 configuration eliminates two CTs from the resource plan (summer 2010 and summer 2012 additions).

Transmission:

The transmission scope of work associated with the Bartow Repowering falls into two main categories; namely (i) work required to physically connect the new generators and auxiliary transformers to the transmission system and (ii) upgrades to the transmission system to accept the increased generation capacity of the repowered facility.

(i) Connection of new generators and auxiliary transformers to transmission system.

- Bartow – Northeast Underground
    - Bartow substation expansion, equipment upgrades, and new control enclosure
    - Northeast substation expansion and equipment upgrades
    - Bartow – Northeast three new 230kV underground circuits
    - Bartow Generator and Aux Transformer connections

(ii) Upgrades to transmission system to accept increased generation capacity.

- Northeast – 40th Street 230kV Rebuild
    - Northeast substation – rebuild termination
    - 40th Street substation – rebuild termination
    - Northeast – 40th Street –rebuild existing 230kV line
- Northeast – 32nd Street New 115kV Line
    - 32nd Street new breakers and bus
    - Northeast substation new breakers and bus
    - Northeast – 32nd Street new 115kV line
- 51st Street – Install 230/115kV Transformer
    - 51st Street – land for substation expansion
    - 51st Street – install transformer, bus, breakers, and new control enclosure
    - 40th Street – Pasadena –loop the existing 230kV line into 51st Street

Fuel

PEF has entered into an agreement with Gulfstream Natural Gas System for Firm Pipeline Transportation (FT) capacity to access gas supply for the Bartow plant. The total FT capacity contracted for is 155,000 Dths/day for a term of 23 years. This is roughly equivalent to the total gas demand of the re-powered plant at full load for 16 hours. Gulfstream's project will consist of constructing approximately 17 miles of 24" pipeline from their existing pipeline in the Tampa Bay to the Bartow site, additional compression at Gulfstream's existing station in Coden, Alabama, and constructing a new compressor station in Manatee County, FL. The contract provides for 80,000 Dths/d to be available to support testing and startup of the first two CTs and then the full 155,000 Dths/d to be available to commission the additional two CTs and four HRSGs. The in-service schedule for the Gulfstream project is as follows:

- 09/01/08 - Additional pipeline and M&R station complete, providing 80,000 Dths/d of FT
- 01/01/09 - Additional compression complete, providing 155,000 Dths/d of FT

3.0 Remaining Major Deliverables & Milestone Schedule:

Table 1: Major Deliverables and Milestones		
Milestone	**Date**	
	Plan / Forecast	**Actual**
New Generation		
• EPC Contract Executed	Q3 2006	[redacted]
• Combustion Turbines and Generators Delivery	15-Aug-07	
• HRSGs Delivery	30-Oct-07	
• STG Delivery	1-Dec-07	
• Control/Admin Building Complete	1-Jun-08	
• First Fire CTGB	23-Sep-08	
• First Fire CTGC	26-Oct-08	
• First Fire CTGA	28-Nov-08	
• First Fire CTGD	31-Dec-08	
• Mechanical Completion (EPC Contractor)	02-Jan-09	
• STG Initial Roll	24-Mar-09	
• Commercial Operation	1-Jun-09	
Transmission		
• Back feed Auxiliary Transformers	19-Jul-08	
• Complete Generator Connections/Bartow Substation Expansion in Service	1-Sep-08	
• Bartow – Northeast Three new 230kV Underground Circuits in Service	15-Mar-09	
• Northeast Substation Expansion in Service	15-Mar-09	
• Bartow – 40th St. Rebuild 230kV Line In Service	1-Jun-09	
• Bartow - 32nd St. New 115kV Line In Service	1-Jun-09	
• 51st St. new 230/115kV Transformer In Service	1-Jun-09	
Fuels		
Pipeline and Metering/Regulation Station Complete (80,000 Dtherms/Day)	1-Sep-08	
Additional Compression Complete (155,000 Dtherms/Day)	1-Jan-09	

4.0 Funding Requirements & Update:

Total Project Cost Estimate

Table 2- Funding Requirements ($$ in millions)			
Funding Requirements – Project View			
Funding Categories	**Implementation BAP**	**IPP Expected Forecast**	**Difference**
EPC	$243.9	$246.4	$2.5
CTs	$119.7	$120.7	$1
Steam Turbine	$18.0	$19.5	$1.5
HRSG	$64.2	$64.5	$0.3
Other OEM Equipment (SST, Tanks Etc)	$31.5	$31.6	$0.1
Preliminary Engineering (Siting, Permitting etc)	$2.6	$2.6	$-
Owner's Costs	$35.4	$44.8	$9.4
Expected Total Costs	$515.3	$530.1	$14.8
Contingency	10.4	$9.8	($0.6)
Total New Generation	**525.7**	**539.9**	**14.2**
Connection to the Transmission system	$102.0	$111.5	$9.5
Upgrade the Transmission system	$32.0	$28.5	$(3.5)
Contract Change Order	$-	$3.0	$3.0
Total Transmission	**$134.0**	**$143.0**	**$9.0**
Total Project View – Direct Cost	**$659.7**	**$682.9**	**$23.2**

Of the $10.4M of original contingency, the full contingency has been used plus an additional $4.4 (Total $14.8M):

Table 3- Funding	
Original Contingency Analysis	
Funding Categories	**Committed Contingency**
Parking	$1.1
Builder's Risk Premium	$1.7
STG Customs	$0.8
CT Escalation	$1.0
EPC Change Orders	$2.5
OEM Scope Growth	$1.1
Control Room	$0.4
Site Development	$4.0
Start-up	$1.5
Staffing	$0.7
Total Utilized Contingency	**$14.8**

Bartow project contingency was established at the Implementation phase/Construction phase approval in December 2006. The original contingency of $10.4 accounts for approximately 2% of the $525M approved during the implementation. Including the $4.4M, the actual contingency utilized of $14.8 accounts for approximately 2.8%. Experience over the last 24 months has indicated that contingency for new generation projects should be 4-5%.

An additional $18.8M of funds are being requested, $9.8 for generation and $9.0 for transmission. This is approximately 5% of the total generation costs and 3% of total project costs. Therefore, the total project is increasing by $23.2M ($4.4M above plus the $18.8M). The detail of the $18.8M is as follows:

Table 4 Funding: Additional Funding ($$s in millions)			
Funding Categories	**Low**	**Expected**	**High**
Intake Structure	$0.5	$1.0	$2.0
CT Performance Bonus	$2.0	$4.0	$6.0
Limit Dual Operations	$-	$-	$7.0
CO Catalyst	$-	$-	$4.4
Start-up (OT) PGN	$-	$0.5	$1.0
Staffing by JV	$-	$-	$6.5
Builder's Risk Deductible	$0.3	$0.5	$0.8
OEM Scope Growth	$0.2	$0.2	$0.2
Gas availability by 9/08	$-	$-	$4.0
EPC Change Orders & Other Misc. Funding	$1.6	$3.6	$5.6
Total Generation	**$4.6**	**$9.8**	**$37.5**
Transmission	$6.6	$9.0	$9.5
Total Additional Funding	**$11.2**	**$18.8**	**$47.0**

Funding Requirements – Financial View ($$s in millions)			
Funding Categories	**Implementation BAP**	**IPP Expected Forecast**	**Difference**
Total Project View – Direct Cost (From Above)	**$659.7**	**$682.9**	**$23.2**
Total Burdens & Allocations	$9.6	$9.6	$-
AFUDC	$96.0	$96.0	$-
Total	**$765.3**	**$788.5**	**$23.2**

Total Project Cost Update

Table 5: Fund Requirement [As Spent Project View $M]				
Scope / Status	**Total Expected Cost**	**PTD – Jan. 2008**	**Percent Expended**	**Percent Complete**
EPC	$246.4	$151.6	62%	35%
CTs	$120.7	$107.9	90%	99%
Steam Turbine	$19.5	$19.3	95%	99%
HRSG	$64.5	$61.1	95%	99%
Other OEM Equipment (SST, Tanks Etc)	$31.6	$26.4	84%	84%
Preliminary Engineering (Siting, Permitting etc)	$2.6	$2.6	100%	100%
Owner's Costs	$44.8	$10.2	23%	23%
Contingency	$9.8	$0.0	0%	0%
Transmission	$143.0	$75.6	53%	53%
Total Project View – Direct Cost	**$682.9**	**$454.7**	**67%**	

OEM percent progress indicates fabrication and receipt of equipment on site only. EPC percent progress includes installation of OEM equipment.

5.0 Economic Evaluation:

PEF Firm Reserve Requirements and Suncoast Benefits

PEF System Planning criteria targets a 20% reserve requirement for both winter and summer peak demand periods. Without new resources in the summer 2009, PEF projected firm reserve requirements would drop below the targeted 20% planning reserve margin criteria. With the addition of the Bartow Repowering Project, PEF will maintain a 20% reserve margin criteria until the summer of 2013, at which time an additional 4x1 Combined Cycle is being planned within the PEF system.

The Bartow Repowering Project also provides the following benefits for the Suncoast Region:

1) 827 MW of additional capacity support for the Suncoast Region
2) Reduced air emissions
3) New generation asset for the Suncoast Region
4) Decrease in oil requirements for the Suncoast Region
5) Increased in natural gas transportation availability in the Suncoast Region
6) Increased power plant operational benefits for the Suncoast Region
    a. Faster start capability
    b. Improved heatrates
7) Less reliance on the Suncoast Transmission Fast Acting Load Shed program
8) Increased transmission operational benefits for the Suncoast Region
    a. Additional Bartow Circuit connections to the Suncoast Grid
    b. 230 kV Upgrades for the Suncoast Region

Alternatives Considered

The original Bartow Repowering project involved adding three gas-turbine generators and Heat Recovery Steam Generators (HRSG) to the site to provide steam to the existing three steam turbines. The existing #6 fuel oil furnaces will be taken out of service and natural gas will be used as the primary fuel. Light fuel oil (#2) will be used as a back up fuel when natural gas is unavailable. System Planning determined during the study phase that the load growth in Florida demanded an increase in generation needs. The feasibility of adding another gas turbine to the Unit #3 steam turbine combined cycle configuration was investigated. System Planning investigated the value based upon the construction and performance values provided by Generation & Transmission Construction. The estimate for constructing the combined cycle using the existing turbines and providing steam with four gas turbines and HRSGs was $498.6 million. The economic analysis of this configuration was found to be more cost-effective than the original configuration.

In the Design phase analysis, the 4x4x1 configuration was shown to be favorable to the other two configurations by $51 million after-tax NPV. In addition, it was shown to be favorable to the initial alternative to Bartow Repowering (a fifth combined cycle at Hines in December 2009 and a 150 MW capacity purchase for the summer of 2009) by $171 million.

Update

The Design phase economic analysis compared Bartow Repowering to a Hines 5 alternative, including a fifth combined cycle (CC) at Hines and a 150 MW capacity purchase for the summer of 2009. This comparison showed an NPV advantage of $171 million for Bartow.

Since the Design phase analysis, the corporate standard assumption for CC costs has increased from $202 million (EPRI TAG) to $312 million (Burns & McDonnell) overnight costs in 2006 dollars. If this new cost assumption had been used for the Hines 5 alternative in the Design phase analysis, it would have increased the NPV by approximately $100 million, more than offsetting the impact of the Bartow project increased NPV cost of $42M. During 2007, there have been no significant events to initiate a 2007 economic update.

At this point, there are no feasible alternatives to the current project that could meet the scheduled in-service date of June 2009. Consequently, a full economic analysis with Prosym and Strategist runs was not performed. However, at a high-level, the major components of the Design phase analysis were reviewed. The review showed at a directional level that, even with the increased project costs, Bartow Repowering is still the most cost-effective alternative.

6.0 Assumptions & Constraints:

- An adequate pool of qualified vendors, personnel, equipment and materials is available to the project
- A stable regulatory environment and associated set of emission requirements
- Adequate contingency to effectively address risk carried by the Company
- Major milestones/schedule listed in Section 3 holds true.

6.1 Risk Strategy:

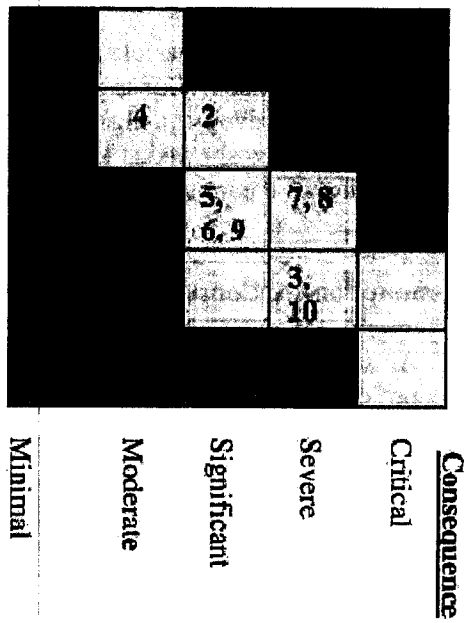
The Project team utilizes a Risk Register, consistent with the Project Risk Planning Guideline CON-PPDX-00008, to track and manage the project risks. This IPP provides and overview of the major Project specific risks currently being tracked by the Project team.

The overall Risk Impact Matrix for the Project is provided below, followed by a detailed Risk Description and associated Response/Plan. The risks are numbered for reference purposes only and are not an indicator of the impact of the associated risk may have on the project although they are listed, in general, in order of importance.

Project Risk ID

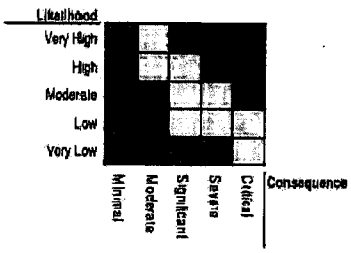
1. Circulating Water Intake Structure
2. Siemens performance bonus
3. Modifications to HRSG
4. Bartow Commissioning CT- Steam Plant Dual Operations
5. Limit Compliance – CO Catalyst Installation
6. Staffing & Recruiting
7. Permit Delays for Northeast Substation
8. Installation of 230/115kv Transformer at 51st St. Substation is Delayed
9. Hurricane
10. Gas line availability
11. Rebuilding existing 230kv line delayed
12. Construction of new NE line Delayed

Likelihood



New Generation Risks

1. Risk:



Circulating Water Intake Structure – Likelihood is Very High, Consequences are Significant: Impact to cost and Schedule

The concept for the intake structure for the repowered facility is to isolate, dewater, create a safe working environment and refurbish six unused existing spare cells north of the existing intake cells. Once refurbished, the new circulating water pumps and piping can be installed. Dewatering and inspection of these cells has had challenges due to the unknown condition of the existing structure. To date a large coffer dam has been installed and several attempts to dewater the cells have resulted in the ingress of seawater due to washout of material adjoining the existing intake structure.

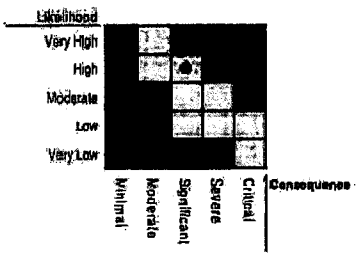
To date, efforts have yet to create a dewatered condition to allow a safe work environment to begin the intake cell refurbishment work. Further inspection by dive teams has provided additional information on the status of the intake structure condition which has been reviewed by a marine engineering firm contracted to the joint venture. The joint venture is now developing a revised comprehensive engineering and execution plan to proceed, with oversight by Progress engineering and Mactec, to assure the protection of the existing intake structure along with the refurbishment effort. The Corps of Engineers has granted Progress the ability to continue work for repairs under our existing permit. No new permits will be needed. Forecast cost increase in excess of the current overall allowance pricing of $14MM has not yet been determined. Following new engineering release this can be estimated and cost updated.

Response / Plan

Engineering work is ongoing to determine the most effective solution to the seawater ingress below the existing intake structure; initial feedback is that a new 1000 cubic yard concrete plug will be needed to be constructed in order to create a "dry hole" and to assure a safe working environment.

The re-engineering will likely take until early to mid March to complete and be approved; at that point actual work can begin again on dewatering and restoration. This sequence will likely put the intake on the critical path and could have negative float for simple cycle firing of the units. Work around for this, should it present itself, is one of possibly three solutions with the likely option being a portable cooling system that will allow commissioning and check out with testing functions up until combined cycle need. This should be adequate to take intake structure off critical path. Minimal permitting would be required.

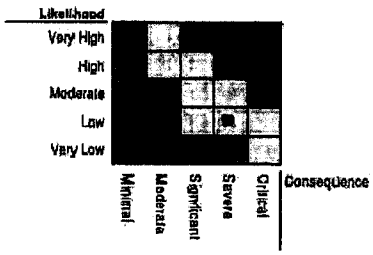
2. Risk



<u>Siemens CTG Contract – Performance Bonus:</u>
Likelihood is High, Consequences are Significant: Impact to cost

The Siemens Master Purchase Agreement provides guarantees for performance of the combustion turbines with respect to electrical output, heat rate, exhaust flow and exhaust temperature. Should any of the CTGs fail to meet the guaranteed performance criteria, liquidated damages would be paid by Siemens. Should performance exceed any of the guaranteed criteria, the contract provides for a bonus to be paid to Siemens. Recent proposals from Siemens for similar CTGs have offered increased performance guarantees which would indicate that these machines are achieving higher performance than first assumed. Based on estimated performance modeling it appears that Siemens could be eligible for performance bonus of between $4MM and $6MM (cap of $1.5MM per unit).

3. Risk:

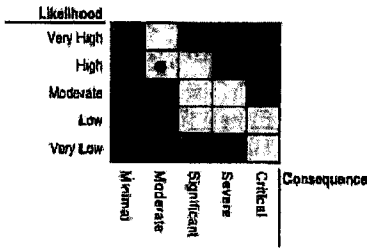


Modifications to HRSGs Due to CTG Exhaust Profile.
Likelihood is Low, Consequences are Severe: Impact to cost.
Siemens has recently updated data associated with the exhaust flow from their CTGs which appears to indicate higher velocities than had previously been stated. Vogt Power, the HRSG manufacturer have studied the data and have recommended some modifications to the transition ducting between the CTG and the HRSG to strengthen the casing to be able to withstand these higher velocities. Also Vogt is concerned that bleed heat to back LP sections could effect performance and warrantee. Vogt has indicated that further data should be obtained from Siemens to fully evaluate the potential impacts to the HRSG but to date Siemens have stated that this data is not available. Potential impact to the project could be damage to the HRSG once the units are in commercial operation due to the aggressive nature of the CTG exhaust profile which could result in outage time on the unit for rework as well as the associated cost of rework. Also performance could be effected that would also require similar modifications not covered by warrantee

Response/Plan

The Project team has pursued this issue with Siemens to secure additional data on the exhaust profile with no success and expect none. In parallel, Progress has asked Vogt Power to recommend field modifications during construction to mitigate potential future effects due to the CTG exhaust that can reasonably be expected from the latest data. This will be implemented. Also negotiations are underway to establish a new warrantee benchmark to provide a level of protection for Progress should damage occur.

4. Risk:



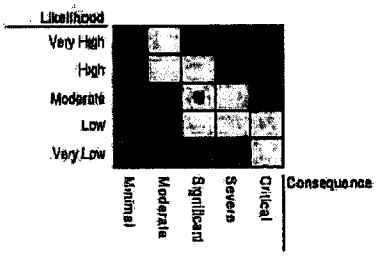
Bartow Commissioning CT – Steam Plant Dual Operation:
Likelihood is High, Consequences are Moderate; Impact to schedule

During commissioning of the new Bartow Units it is anticipated that load demand will likely result in the need to also run the old steam generating units. Dual operation has air and water discharge permit impacts. The Air Construction Permit limits the operation of the new units to 2 designated CTs in simple cycle only for a limited period while existing Units 1,2, and 3 are operating. No combined cycle operation is allowed. Operation during commissioning was not addressed in the permit. Additionally, operation of the CTs in combined cycle mode while the existing units are in operation will result in an increase of the discharge water thermal plume area. The FDEP has requested an evaluation of this potential impact that may or may not be acceptable to the Department. Should FDEP deny our request for short term increased air emissions or increased thermal discharge there would be an impact to the commissioning schedule and cost as the new combined cycle plant would only be permitted to operate when the existing Bartow facility was offline.

Response / Plan: PEF intends to approach the FDEP Air Section mid-March to negotiate the ability to operate all the new CTs in simple and combined cycle modes to allow for commissioning. PEF is providing the FDEP Water Section with a biological opinion as to the impact of the increase in thermal plume. Negotiations to allow for the increased plume during commissioning will commence at that time.

5. Risk:

CO Limit Compliance – CO Catalyst Installation:
Likelihood is Moderate, Consequences are Significant: Impact to Cost



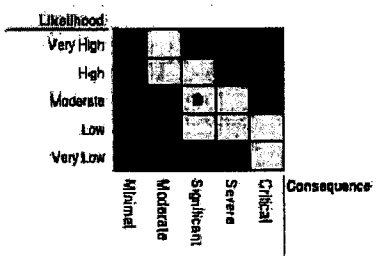
It is not certain that the new units will be able to meet the permitted CO limits. The manufacturer guarantee is higher than the permitted limit. The installation of costly CO oxidation catalyst will be necessary in order for the units to continue to operate in the event that CO limits cannot be met.

Response / Plan

PEF will install CO oxidation catalyst as required. The CTs have been designed with the necessary interfaces to allow for catalyst installation. Cost and lead time for delivery is being confirmed at this time.

6. Risk

Staffing – Attracting and Retaining Skilled Craftspeople
Likelihood is Moderate, Consequences are Significant: Impact to cost and impact to schedule.



The heavy industrial construction market is experiencing an annual reduction in skilled craftspeople of approximately 500,000 craftspeople (or 5% of the available workforce) no longer functioning in the role of a craftsperson due to promotion, retirement, attrition and other reasons. Simultaneously, the heavy industrial construction market is in a boom cycle due to increased infrastructure needs due to a combined aging infrastructure as well as the recent devastation of the gulf coast region caused by natural disasters. The risk is that the failure to attract and retain skilled craftspeople causes a cycle; not staffing in accordance to the plan increases peak manpower requiring more staffing than originally planned. This could potentially delay the completion of the project.
To date, the attraction of craft workers, in terms of numbers, has not been an issue. However, the skill level of the available craftspeople has evolved over time to be problematic.

Response Plan

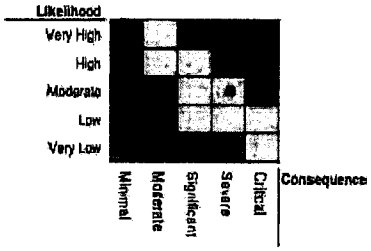
Risk assumed by EPC JV Contractor as part of fixed price structure, subject to force majeure events at the facility that may trigger schedule relief.

The EPC JV Contractor has several parallel programs in place to mitigate this risk.

- Ensure competitive wages and work hours. In February a sizable adjustment was made to most crafts, per-diem increased and a retainage bonus program started.
- HR professional networking, both internal and external is being utilized.
- Employer of Choice programs to attempt to enhance the projects reputation in the industry in place.
- Internal recruiting strategy for other projects now in place.

7. Risk:

Permit Delays for Northeast Substation (Transmission)
Likelihood is Moderate, Consequences are Severe: Impact to Schedule and Cost



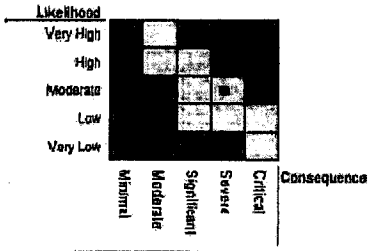
Florida Department of Environmental Protection and the Army Corps of Engineer receipt of permits for expanding Northeast Substation may delay completion of the three new 230kV underground circuits.

Response/ Plan:

a) Work with the FDEP to obtain permit with conditions allowing us to begin work earlier; hire foundation contractor to participate in the permit process and provide expert detailed input to the FDEP Expedite award of the foundation contract so construction can begin upon receipt of permits
b) A shorter construction schedule would be achieved by working multiple crews and/or multiple shifts up to seven days per week.
c) Engineering is investigating alternative configurations for terminating the cables within the existing substation using overhead transitions.
d) Work within the existing substation not requiring a permit will proceed (replacing transformers, replacing breakers, relay modifications, bus modifications).

8. Risk

Installation of the 230/115kV Transformer at 51st Street Substation is Delayed: Likelihood is Moderate, Consequences are Severe: Impact to Schedule and Cost



Installation of a 230/115kV transformer at 51st St. Substation requires additional land adjacent to the existing property. While this land has been acquired, there are challenges to further development:

a. one tenant remains until June 2008, delaying demolition;
b. the subsurface has been contaminated by dry cleaning solvents;

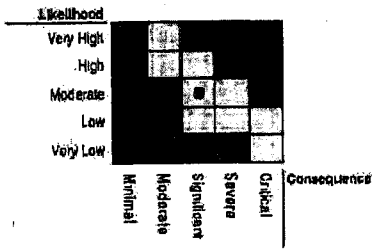
c. Community Relations and Project Management have been working with City Officials to identify and overcome obstacles on this project. Response to date has been positive and there has been a spirit of cooperation. In order to assure success, a team lead by Real Estate is developing and implementing a strategy to overcome any resistance to expanding the substation. Expert outside counsel will participate.
d. partial closing of the alley is required.

If completion is delayed beyond June 2009, there will be some reduction from the plant output depending upon real time load levels and generation dispatch conditions. The amount of reduction will be based on real time conditions of the grid and other generating units.

Response/Plan:

a. The project team is developing a completion schedule that fits within the restraints of the delay in demolition. Installation of a new control enclosure is the most critical activity and this can proceed without demolition.
b. Prior to closing on the properties, when the contamination was discovered and quantified, the expert opinion was that this would not create a problem obtaining construction permits. The source of the contamination is not on the property we have acquired. PEF may be required by the Florida DEP to remediate contamination on the substation site during construction independently of any remedial activities on adjoining property which may be the source of the contamination.
c. Community Relations and Project Management have been working with City Officials to identify and overcome obstacles on this project. Response to date has been positive and there has been a spirit of cooperation. A review of our application is underway and we do not expect this to become a delay.

9. Risk



Hurricane/Other Insurance Claims
Likelihood is Moderate, Consequences are Significant: Impact to cost and impact to schedule

Due to the location of the project on Tampa Bay there is a risk that a major storm could impact the project during construction. Should a major storm hit the project there could be significant damage and subsequent delays.

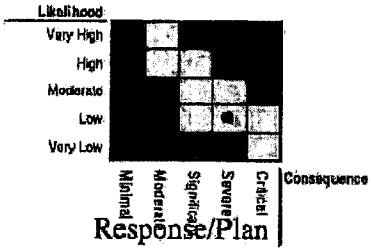
Response/Plan

Builder's Risk insurance is in place for the construction phase of the project to mitigate cost impact. The basic policy limit is $459 million per occurrence, except $459 million in the aggregate for the policy term for

windstorm, flood and earthquake. The deductible is $250k per loss, except $1 million during hot testing, $1 million for damage to existing property and 2.5% of values at risk at the time and place of loss subject to a minimum of $2.5 million for windstorm and flood. Earthquake deductible is $500k. A hurricane response plan has been prepared and contains procedures for storm preparation to ensure that the site is secured in the event of a major storm.

10. Risk:

Gulfstream gas line unavailable to supply gas by September 2008. Likelihood is Low, Consequences are Severe: Impact to cost.



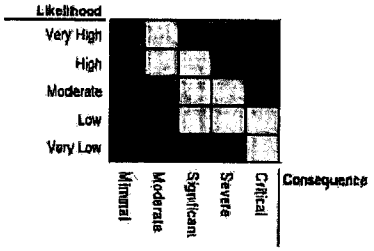
Response/Plan

Gulfstream mobilized mid-February, some five months behind schedule. Current plan from their management is to still meet the September 2008 date for pipeline and metering/regulation station completion. The cause of this delay was primarily permitting problems, shortage of needed equipment, and problems in mobilizing some 17 barges.

Their current schedule utilizes boring around the clock 24 hrs / day up to 7 days a week if needed. Unknown geology anomalies also could impact progress as will weather and hurricanes. Progress will closely monitor progress but due to the highly limited number of companies that do this work and lead times available options are limited.

11. Risk

Rebuilding existing 230kV NF Line is Delayed
Likelihood is Very Low, Consequences are Moderate: Impact to schedule



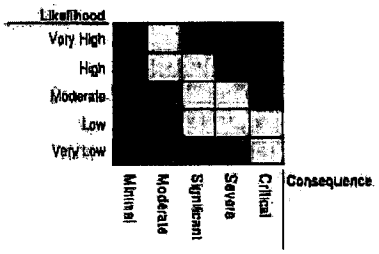
Rebuilding the existing 230kV line from Northeast to 40th Street substation could be delayed due to some unforeseen circumstance. One half of the line is within an existing PEF cross county right of way and the other half is within road right of way in the City of St. Petersburg. No special permits are required and the work is scheduled to be done during the shoulder months so acquiring line outages should not be a problem. Engineering is on schedule and there are no material issues. The probability of a delay is very low and the impact is low to moderate. If completion is delayed beyond June 2009, there will be some reduction from the plant output depending upon real time load levels and generation dispatch conditions. The amount of reduction will be based on real time conditions of the grid and other generating units.

Response/Plan:

a. Construction is scheduled to be done during the shoulder months to minimize the challenges of acquiring line outages.
b. Transmission is working with the ECC to schedule and coordinate all outages required for the Bartow Re-powering scope.
c. New structures will only be required in the cross country portion; all roadside structures will remain, minimizing the impact on distribution and other utilities.

d. Transmission and Community Relations will work closely with the City of St. Petersburg and the local communities to develop maintenance of traffic plan to minimize the impact on the general public and reduce the potential for complaints/work stoppages.

12. **Construction of the new Northeast – 32nd St. 115kV Line is Delayed**
Likelihood is Moderate, Consequences are Severe: Impact to schedule

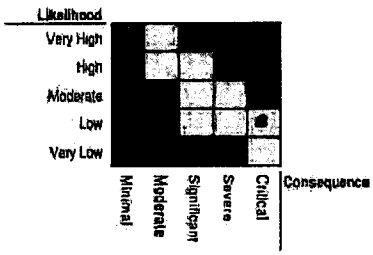


Construction of the new 115kV line from Northeast Substation to 32nd St. Substation could be delayed due to some unforeseen circumstance. This line is being built along the same route as the first half of the 230kV NF Line, as a second circuit on the same structures. The risks and responses are identical and are covered above.

6.1.2 Operational Risks

The following are considered to be Operational risks, which are post-construction risks that are outside of the scope of this project:

Risk **CT Inlet Icing – Compressor damage due to ice ingestion**



Likelihood is Low, Consequences are Critical: Impact to availability of commercial facility.

Siemens advised in Technical Advisory 2005-015 that inlet icing of the compressor bell mouth and the first stage diaphram is possible under certain atmospheric conditions. Bell mouth icing exists at temperatures less than 41°F and first stage diaphram icing exists at temperatures less than 55°F in conjunction with high relative humidity and inlet guide vane positions less than 35°. The ingestion of this ice into the compressor has caused significant damage on operating units as far south as Bowling Green, FL, which is located East South East of Saint Petersburg, FL. Atmospheric conditions have been monitored at the site and icing conditions exist on low temperature mornings and last for periods up to 10 hours. The time frame for icing conditions is coincident with expected startup times for the plant when in cycling service. Work arounds and dispatch exceptions will be required to avoid starting the units during these time frames. The only solution that provides full availability of the CTs is the installation of Inlet Heating. The Inlet Heating system is expected to cost $1.5MM per CT for a total of $6MM for the site. Based on a risk of a 1% on two units ten times a year the B/C Ratio for this install is 2.74 with a break even duration of 4 years. Running as is has a NPV of (-$12.96M) for the 10 year analysis period based on the same assumptions.

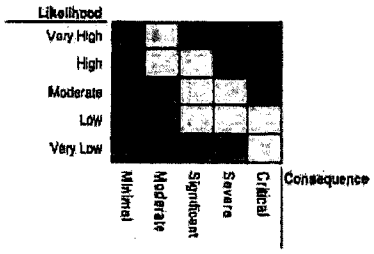
Response Plan

Siemens has proposed four options to mitigate this risk.

- Run the equipment and identify when the potential for icing exists and retune the turbine to avoid the condition.
- Provide an Inlet Icing alarm to alert Operations of the potential.
- Install Inlet Heating to raise the inlet air temperature above the icing potential temperature.
- Use the two year warranty to repair any damage caused by inlet icing.

Risk:

316(b) Phase I Determination:
Likelihood is Very Low, Consequences are Severe; May impact cost.



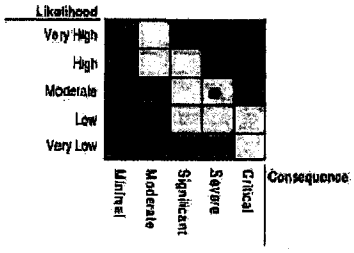
The FDEP has verbally agreed with PEF that the repowering of the Bartow Plant places it in the category of a Phase II facility (existing facility) and as such must comply with the appropriate rules concerning impingement and entrainment impacts caused by intake operations. Currently compliance with this rule allows for the use of Best Professional Judgment (BPJ) by the FDEP. BPJ allows the agency to use mitigation such as restoration (fish hatchery) or other means to mitigate any adverse environmental impacts that are proven to be caused by facility operations. If the FDEP were to change their determination that the facility no longer qualifies as an "existing facility" as could be the case if any one of the existing units remains in operation when the CTs go commercial, or in the event the FDEP has an unexpected change in philosophy, then the facility would be considered a Phase I facility (new facility). This designation requires the facility to limit any impingement and entrainment impacts to the same as would occur if the unit were using closed cycle cooling. A change in determination to a Phase I facility would most likely require the facility to go to closed cycle or air cooling to achieve the performance standard. Note that extended dual operation (see Risk 3) could trigger reclassification to Phase I facility.

Response / Plan:

PEF has discussed this issue with the FDEP numerous times and there is no indication that a change in determination is being considered.

Risk:

Thermal Biological Study:
Likelihood is Moderate, Consequences are Severe: Impact to cost



The current surface water discharge permit (NPDES) for the plant once through cooling requires that a study be conducted to evaluate any biological impact that can be attributed to the once through cooling discharge plume. This study will begin in April of 2008. Results of the study must be supplied to the FDEP in 2009. There is a risk that an adverse environmental impact could be demonstrated and that the FDEP would then require PEF to comply with stringent temperature discharge limitations which would necessitate the addition of supplemental cooling on the discharge from the circulating water system. This should not

impact schedule as it is likely that FDEP would allow some time to comply with any revised discharge thermal limits but would impact overall cost.

Response / Plan: Results of the study are expected in January of 2009. At that time sufficient information will be available to develop an appropriate mitigation plan. If necessary an additional study can be offered to the FDEP to be conducted after the new units are in operation. There is potential that the lower heat rejection profile of the new units can be offered to the FDEP as whole or partial mitigation for any identified impacts.

In addition to the specific operational risks noted above, the Bartow configuration is a first for PEF operations, and as such certain activities will be monitored closely during commissioning and start-up to ensure no additional operational issues occur. Examples of these types of potential issues are:

- Commissioning and proper operation of liquid fuel system
- Commissioning and proper operation of the steam bypass system and demonstration of steam turbine trip at load
- Cold start startup time

6.1.3 Project Risk Cost Assessment

Table 4 provides an overview of the status of various scopes of work and risk elements, as described above, and the associated ranges of uncertainty. For a majority of the scopes of work listed below; (1) engineering and procurement are nearing completion and construction is well underway, and (2) scope is under contract, Lump Sum, with qualified, well performing vendors, thereby increasing the degree of accuracy of the estimated Expected Total Project Cost.

Table 6: Summary Risk Assessment [Project View $M]

Risk	Low	Expected	High
[1] Intake Structure	$0.5	$1.0	$2.0
[2] CT Performance Bonus	$2.0	$4.0	$6.0
[3] HRSG Modifications	$0.2	$0.2	$0.2
[4] Limit Dual Operation	$-	$-	$4.0
[5] CO Limit Compliance	$-	$-	$4.4
[6] Start-up (OT) PGN	$-	$0.5	$1.0
[6] Staffing by JV	$-	$-	$3.5
[7] Permit Delays for Northeast Substation	$-	$-	$2.3
[8] Installation of transformer at 51st delayed	$-	$-	$0.8
[9] Hurricane	$0.3	$0.5	$0.8
[10] Gas available by Sept. 2008	$-	$-	$2.0
[11] Rebuilding existing 230kv line delayed	$-	$-	$1.9
[12] Construction of new NE line Delayed	$-	$-	$0.3
All Other Risks [Cost Uncertainty]	$1.6	$3.6	$5.6
Total Potential Cost Impact	**$4.6**	**$9.8**	**$34.8**

Based on the information provided in Table 6, the Project does not have adequate contingency to cover any of the remaining risk items. As part of the project approval process, we are requesting the expected case to be funded and only in the event that all scopes of work fall in the High cost range will the Project require additional funding to achieve completion.

6.2 Contracting & Procurement Strategy:

PEF has assembled a portfolio of lump sum, firm-price contracts with qualified suppliers that are responsible for the execution of various aspects of the Project. Figure 1 provides an overview of the vendors involved in the Project and their associated scope of responsibility.

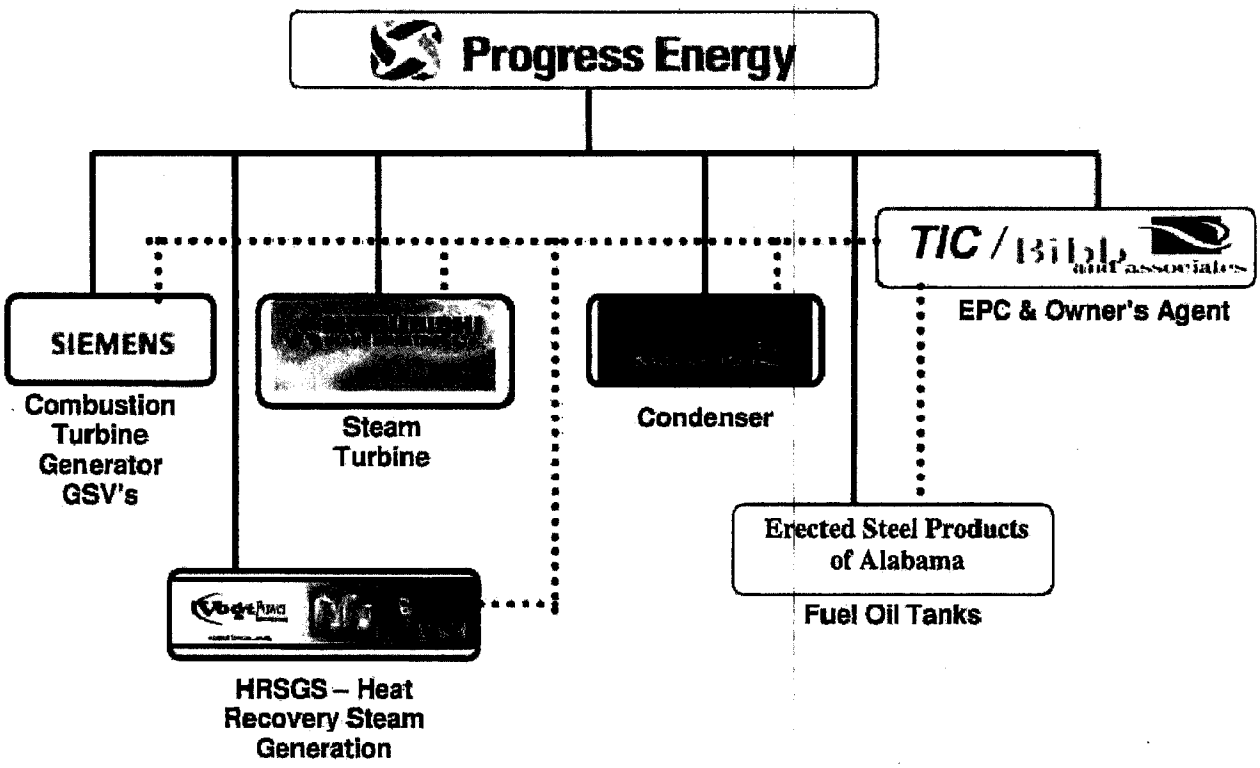


Figure 1: Project Organizational Structure

Concurrent with a lump sum approach, individual contracts with the vendors shown in Figure 1, utilize a payment milestone structure with associated, schedule of liquidated damages for completion of work. In addition, PGN has mitigated cost and performance risk by capturing favorable contract terms and conditions; such as, retention provisions, performance guarantees, and reliability guarantees.

6.3 Regulatory Requirements:

The project constitutes a repowering, as confirmed by the Florida Department of Environmental Protection (FDEP) and the Power Plant Siting Act does not apply.

7.0 External Stakeholders:

We consider the community surrounding the Bartow site to be a key stakeholder and work with internal community relations and plant communications personnel to respond to issues raised by the public regarding this work.

The project community relations plan has been finalized and accepted. Updates of community relations initiatives will continue throughout the project planning and construction phases. The following events are schedule for the near future:

- St. Petersburg City Council Tour – March 4, 2008
- Contact S. Central FL Archeological Society
- Work with corporate communications to prepare article for Venetian Isles HOA newsletter. Article explains repower project and communicates key messages.
- Continuous identification of community stakeholders

Meeting with community organizations began in November 2005 and has continued into 2008. The overall community plan focuses on communicating with various organizations including environmental groups and homeowner associations near Bartow Plant. Public response has been positive toward the project and Progress Energy Florida's proactive communication. The project team works closely with Gulfstream to ensure its participation in meeting opportunities. The partnership has been beneficial and provides customers with a more comprehensive understanding of the entire project.

8.0 Internal Stakeholders Roles & Responsibilities:

8.1 Project Team

Role/Department/Group	Name	Phone No.
Project Manager/G&TCD	George Hixon	**770-6021**
Mgr – Gas Projects/G&TCD	Roy Harris	**770-7521**
Development Lead/G&TCD	John Umstead/Rick Yates	**770-4410/770-4362**
Project Engineer Lead	Akos Arany	**770-4447**
Site Construction Lead	Russ Lattuca	**242-3543**
Construction Manager	Terry Taylor	**242-3528**
Project Controls Lead - G&TCD	Dhiman Bose	**770-7674**
Environmental Lead – G&TCD	Teresa Williams	**770-4111**
Safety Lead – G&TCD	Al Rios	**770-4799**
Document Control Lead – G&TCD	Carol Watkins	**770-4071**
Business Analyst Lead - G&TCD	Elizabeth Murray	**770-4346**
Start-up & Commissioning Lead	Dave Farris	**770-3997**
Plt Mgr CT - Bartow	Tom Callaghan	**242-3547**
Supply Chain Management Lead	Brooks Strickler	**770-6091**
Environmental Services	Patti West	**230-5739**
IT&T	Jeff Hauer	**230-5086**
Community Relations	Melissa Seixas	**220-3297**
Project Assurance	Daniel Grannan	**240-6069**

Legal	Chris Cox	**770-7501**
Fuels	John Trimble	**770-3323**
Transmission Project Mgr	John Goff	**280-2564**
Transmission Business Services	Matt Petrousky	**280-2240**

8.2 Internal Stakeholders

The Project Manager works with the team and with members of G&TCD management to ensure key stakeholders throughout the company remain informed of the status of the project. Key stakeholder groups include:

Stakeholders	Role
PGN Executive and Senior Management, including PEF President	Updates are provided periodically by the G&TCD management team; as well as periodic updates from POG Senior VP at SMC meetings.
POG Senior VP	Vice President of G&TCD provides weekly updates on all projects – including Bartow – to POG Senior VP and staff
PEF Power Operations	The PM ensures up-to-date communications to VP PEF Power Generation and site operations
PEF Finance	G&TCD Business Management provides monthly updates to the PEF Capital Oversight Committee focusing on cost management issues and impact to PEF financials
Capital Planning and Control	G&TCD Business Management works with this section to ensure capital guidelines and approval processes are being followed
Environmental Services	This group is represented on the core PM team and provides critical input to environmental and permitting issues as they arise
Project Assurance	This group provides dedicated resources to ensure ongoing project assurance and guidance on specific issues
Community& Media Relations	Melissa Seixas works with the community surrounding the Bartow site and responds to issues raised by the public.

9.0 Project Assurance Plan:

A designated Project Assurance advisor has been appointed to support and advise the project management team. The advisor will work with the project manager to identify key project decisions and decision milestones for the project and will review appropriate project documentation to provide assurance that adequate documentation is prepared and maintained to demonstrate that those decisions were reasonable, and prudent.

10.0 Communication Plan / Next Steps:

The following milestones are complete:

- Approved Study BAP October 2005
- Approved Design BAP March 2006
- Approved Implementation BAP November 2006
- Approved Design and Implementation PAR September 2007

The following milestone meetings will provide Senior Management with updates on the project and the opportunity to defer, stop, or otherwise change the project direction as needed:

Date	Milestone - Request
March 2008	• Initial IPP approval
	• Update on Plant Construction Progress
	• Update on Transmission Construction Progress
December 2008	• Update on Bartow Plant Construction
	• Update on Transmission Construction
Further updates to be determined as the project develops	

APPENDIX

Definitions & Acronyms:

- AFUDC – Allowance for Funds Used During Construction
- CC – Combined Cycle
- COD – Commercial Operation Date
- CTG – Combustion Turbine Generator
- ECC – Energy Control Center
- EPC – Engineer Procure Construct
- FERC - Federal Energy Regulatory Commission
- FDEP – Florida Department of Environmental Protection
- GFF – Generation & Fuels Forecast
- G&TCD – Generation & Transmission Construction Department
- GSU – Generator Step-up Transformer
- HRSG – Heat Recovery Steam Generator
- kV - Kilovolts
- NERC - North American Electric Reliability Corporation
- NPDES - National Pollutant Discharge Elimination System
- POG – Power Operations Group
- RFP – Request for Proposal
- STG – Steam Turbine Generator
- UAT – Unit Auxiliary Transformer

Review & Approval

This section contains formal sign-offs for both review & approval of the IPP. "Reviewing" applies to any party reviewing the IPP for accuracy & clarity, while "Approving" applies to those parties responsible for approving project milestone progression & funding.

Reviewing Party	Reviewing Position	Rev Reviewed	Signature	Date
John Elnitsky	VP – Gen. & Trans. Construction	Mar. 2008		3/5/08
Mark Smothers	GM –PM & Construction/G&TCD			2/25/08
Tom Cornell	GM – Project Engineering/G&TCD			2/26/08
Sue Hardison	Dir – Bus. Mgt & Compliance/G&TCD			3/5/08
Kevin Murray	Dir-Plt Const Proj-G&TCD			3/4/08
George Hixon	Project Manager/G&TCD		see attached approval	
Departmental Review Outside G&TCD				
Ben Crisp	Dir –System Plan.		approved via email	3/4/08
Dale Oliver	-Transmission Ops & Planning		approved via email	3/7/08
John Goff	Transmission Project Manager		approved via email	3/6/08
Eric Grant	Gen Mgr-CT Operations-FL		approved via email	3/5/08
Alex Glenn	Dep Gen Counsel-PEF		see attached approval	
Paul Crimi	Exec Dir-Pwr Gen Svcs		see attached approval	
Brenda Brickhouse	Dir-Environ Health & Safety		approved via email	3/4/08
Chris Cox	Legal			3/7/08
Peter Toomey	VP-Finance		approved via email	3/4/08
David Sorrick	VP-Power Generation-PEF			
Sasha Weintraub	Executive Director Regulated Fuels			
Javier Portuondo	Dir-Regulatory Planning		See attached approval	
Magnus Ohlsson	Mgr-Strategic Sourcing			3/5/2008

A revised version of this document was sent to the fuels group for approve to ensure compliance with the FERC Standards of Conduct. REG-SUBS-00002.

Approver Name	Approver Position	Approval	Signature	Date
Paula Sims	Sr VP-Power Operations	Initial Publication		4/28/08
Lloyd M Yates	President & CEO-PGN Carolinas			3/10/08
Thomas R Sullivan	VP-Treasurer & CRO			4/15/08
John McArthur	Sr. VP-Corp. Relations & Gen Counsel			3/10/08
Mark F Mulhern	Sr. VP-Finance			4/15/08
Peter M Scott III	President & CEO SvcCo/CFO-PGN			3/10/08
William D Johnson	Chairman, CEO & President			3/10/08
Jim Scarola	Sr. VP – Chief Nuclear Officer	Initial Publication		4/17/08
Jeff Lyash	President & CEO, PGN Florida			4/22/08
Jeff Corbett	Sr. VP Energy Delivery Carolinas			3/21/08
Michael Lewis	Sr. VP Energy Delivery Florida			4/21/08

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Mark Smothers	GM –PM & Construction/G&TCD			
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Kevin Murray	Dir-Plt Const Proj-G&TCD			
George Hixon	Project Manager/G&TCD		George Hixon	3-6-08
Departmental Review Outside G&TCD				
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Sasha Weintraub	Executive Director Regulated Fuels			
Javier Portuondo	Dir-Regulatory Planning			
Magnus Ohlsson	Mgr-Strategic Sourcing			

A revised version of this document was sent to the fuels group for approve to ensure compliance with the FERC Standards of Conduct. REG-SUBS-00002

Review & Approval

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Mark Smothers	GM –PM & Construction/G&TCD			
Tom Cornell	GM – Project Engineering/G&TCD			
Sue Hardison	Dir – Bus. Mgt & Compliance/G&TCD			
Kevin Murray	Dir-Plt Const Proj-G&TCD			
George Hixon	Project Manager/G&TCD			
Departmental Review Outside G&TCD				
Ben Crisp	Dir –System Plan.			
Dale Oliver	VP-Transmission Ops & Planning			
John Goff	Transmission Project Manager			
Eric Grant	Gen Mgr-CT Operations-FL			
Alex Glenn	Dep Gen Counsel-PEF			3/6/08
Paul Crimi	Exec Dir-Pwr Gen Svcs			
Brenda Brickhouse	Dir-Environ Health & Safety			
Chris Cox	Legal			
Peter Toomey	VP-Finance			
David Sorrick	VP-Power Generation-PEF			
Sasha Weintraub	Executive Director Regulated Fuels			
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Murray, Elizabeth

From: Brickhouse, Brenda
Sent: Tuesday, March 04, 2008 3:46 PM
To: Murray, Elizabeth
Subject: RE: Final Bartow IPP - Please sign-off

I approve the Bartow IPP! Thanks, B

-----Original Message-----
From: Murray, Elizabeth
Sent: Tuesday, March 04, 2008 12:19 PM
To: Elnitsky, John; Smothers, Mark; Cornell, Tom; Hardison, Sue; Murray, Kevin; Hixon, George; Crisp, John Benjamin (Ben); Oliver, Dale; Goff, John; Grant, Eric; Glenn, Alex; Crimi, Paul V; Brickhouse, Brenda; Cox, Chris; Toomey, Peter; Sorrick, David; Portuondo, Javier J; Ohlsson, Magnus; MacGregor, Andrew; Grannan, Daniel P.; Bose, Dhiman
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Again, thank you to everyone who provided input for this document!

<< File: Bartow IPP Final030408.pdf >> << File: Sign-off Sheet.pdf >>

Elizabeth A. Murray
Financial & Business Services
Plant Construction Department
Progress Energy
Direct: (919) 546-4346

Murray, Elizabeth

From: Crisp, John Benjamin (Ben)
Sent: Tuesday, March 04, 2008 12:34 PM
To: Murray, Elizabeth
Subject: RE: Final Bartow IPP - Please sign-off

I approve the Bartow IPP.

Ben Crisp
Director, System Planning and Regulatory Performance
Progress Energy Florida
O - (727) 344-4190
C - (727) 366-6991
ben.crisp@pgnmail.com

-----Original Message-----
From: Murray, Elizabeth
Sent: Tuesday, March 04, 2008 12:19 PM
To: Elnitsky, John; Smothers, Mark; Cornell, Tom; Hardison, Sue; Murray, Kevin; Hixon, George; Crisp, John Benjamin (Ben); Oliver, Dale; Goff, John; Grant, Eric; Glenn, Alex; Crimi, Paul V; Brickhouse, Brenda; Cox, Chris; Toomey, Peter; Sorrick, David; Portuondo, Javier J; Ohlsson, Magnus; MacGregor, Andrew; Grannan, Daniel P.; Bose, Dhiman
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Elizabeth A. Murray
Financial & Business Services
Plant Construction Department
Progress Energy
Direct: (919) 546-4346

Murray, Elizabeth

From: Grant, Eric
Sent: Wednesday, March 05, 2008 8:30 AM
To: Murray, Elizabeth
Subject: RE: Final Bartow IPP - Please sign-off

"I approve the Bartow IPP" Thanks.

Eric S. Grant, P.E.

GM - CT Generation - Florida
Progress Energy Florida, Inc.
299 First Avenue, North
Mail Code/Suite: PEF-134
Saint Petersburg, FL 33701

Phone: 727-820-5853
Cell: 727-580-1826
Fax: 727 820 4611
E-mail: eric.grant@pgnmail.com

-----Original Message-----
From: Murray, Elizabeth
Sent: Tuesday, March 04, 2008 12:19 PM
To: Elnitsky, John; Smothers, Mark; Cornell, Tom; Hardison, Sue; Murray, Kevin; Hixon, George; Crisp, John Benjamin (Ben); Oliver, Dale; Goff, John; Grant, Eric; Glenn, Alex; Crimi, Paul V; Brickhouse, Brenda; Cox, Chris; Toomey, Peter; Sorrick, David; Portuondo, Javier J; Ohlsson, Magnus; MacGregor, Andrew; Grannan, Daniel P.; Bose, Dhiman
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Elizabeth A. Murray
Financial & Business Services
Plant Construction Department
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George Hixon	Project Manager/G&TCD			
Departmental Review Outside G&TCD				
Ben Crisp	Dir –System Plan.			
Dale Oliver	VP-Transmission Ops & Planning			
John Goff	Transmission Project Manager			
Eric Grant	Gen Mgr-CT Operations-FL			
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Brenda Brickhouse	Dir-Environ Health & Safety			
Chris Cox	Legal			
Peter Toomey	VP-Finance			
David Sorrick	VP-Power Generation-PEF			
Sasha Weintraub	Executive Director Regulated Fuels			
Javier Portuondo	Dir-Regulatory Planning			3/5/08
Magnus Ohlsson	Mgr-Strategic Sourcing			

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Murray, Elizabeth

From: Toomey, Peter
Sent: Tuesday, March 04, 2008 5:41 PM
To: Murray, Elizabeth
Subject: RE: Final Bartow IPP - Please sign-off

Importance: High

I approve the Bartow IPP

Peter Toomey
PEF VP Finance

-----Original Message-----
From: Murray, Elizabeth
Sent: Tuesday, March 04, 2008 12:19 PM
To: Elnitsky, John; Smothers, Mark; Cornell, Tom; Hardison, Sue; Murray, Kevin; Hixon, George; Crisp, John Benjamin (Ben); Oliver, Dale; Goff, John; Grant, Eric; Glenn, Alex; Crimi, Paul V; Brickhouse, Brenda; Cox, Chris; Toomey, Peter; Sorrick, David; Portuondo, Javier J; Ohlsson, Magnus; MacGregor, Andrew; Grannan, Daniel P.; Bose, Dhiman
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Elizabeth A. Murray
Financial & Business Services
Plant Construction Department
Progress Energy
Direct: (919) 546-4346

Murray, Elizabeth

From: Goff, John
Sent: Thursday, March 06, 2008 9:47 AM
To: Murray, Elizabeth
Subject: RE: Final Bartow IPP - Please sign-off

Elizabeth,
I approve the IPP.
John Goff

-----Original Message-----
From: Murray, Elizabeth
Sent: Tuesday, March 04, 2008 12:19 PM
To: Elnitsky, John; Smothers, Mark; Cornell, Tom; Hardison, Sue; Murray, Kevin; Hixon, George; Crisp, John Benjamin (Ben); Oliver, Dale; Goff, John; Grant, Eric; Glenn, Alex; Crimi, Paul V; Brickhouse, Brenda; Cox, Chris; Toomey, Peter; Sorrick, David; Portuondo, Javier J; Ohlsson, Magnus; MacGregor, Andrew; Grannan, Daniel P.; Bose, Dhiman
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Elizabeth A. Murray
Financial & Business Services
Plant Construction Department
Progress Energy
Direct: (919) 546-4346

Murray, Elizabeth

From: Oliver, Dale
Sent: Friday, March 07, 2008 9:29 AM
To: Murray, Elizabeth
Subject: RE: Final Bartow IPP - Please sign-off

I approve the Bartow IPP.

Thanks...

Dale Oliver, P.E.
Vice President
Transmission Operations and Planning
Progress Energy Florida, Inc.
(v-net) 230-5806
(o) 727-820-5806
(c) 727-204-1776
(f) 727-820-5940
dale.oliver@pgnmail.com

-----Original Message-----
From: Murray, Elizabeth
Sent: Thursday, March 06, 2008 12:49 PM
To: Oliver, Dale; Glenn, Alex; Sorrick, David; Cox, Chris
Subject: FW: Final Bartow IPP - Please sign-off

Friendly reminder, please approve the IPP by tomorrow @ 12:00.

Thanks,
Elizabeth

-----Original Message-----
From: Murray, Elizabeth
Sent: Tuesday, March 04, 2008 12:19 PM
To: Elnitsky, John; Smothers, Mark; Cornell, Tom; Hardison, Sue; Murray, Kevin; Hixon, George; Crisp, John Benjamin (Ben); Oliver, Dale; Goff, John; Grant, Eric; Glenn, Alex; Crimi, Paul V; Brickhouse, Brenda; Cox, Chris; Toomey, Peter; Sorrick, David; Portuondo, Javier J; Ohlsson, Magnus; MacGregor, Andrew; Grannan, Daniel P.; Bose, Dhiman
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<< File: Bartow IPP Final030408.pdf >> << File: Sign-off Sheet.pdf >>

Hardison, Sue

From: Hardison, Sue
Sent: Sunday, February 24, 2008 5:39 PM
To: Sorrick, David
Cc: Wilterdink, Dale; Murray, Kevin; Elnitsky, John
Subject: CR North CAIR ESP -FINAL IPP_022108.doc

Importance: High

David -- I made the changes per our discussion & have sent them in the above file with edit marks. Please take a look at pgs 5-6, 10-11, 12, and 17-18 to ensure you concur; if so, I can get your signature this week while I'm in Fla -- thanks!

Verbal approval
Monday, 2125108
6:14

Approving Party	Approving Position	Rev Approved	Signature	Date
Jeff Lyash	President & CEO-PGN Florida	Initial Publication		3/11/08
Michael A Lewis	Sr. VP-Energy Delivery-FL	↓	Michael B. Lewis	3/18/08

Hamm, Shawnita

From: Murray, Elizabeth
Sent: Friday, May 09, 2008 11:30 AM
To: Hamm, Shawnita
Subject: FW: Bartow IPP Sign-off

Please include as part of the final Bartow IPP.

From: Weintraub, Sasha
Sent: Friday, May 09, 2008 11:16 AM
To: Murray, Elizabeth
Cc: McCallister, Joseph; Trimble, John
Subject: RE: Bartow IPP Sign-off

I approve. Thanks.

Sasha

From: Murray, Elizabeth
Sent: Wednesday, May 07, 2008 4:22 PM
To: Weintraub, Sasha
Cc: McCallister, Joseph; Trimble, John
Subject: Bartow IPP Sign-off

Sasha,

I was filing the final Bartow IPP and realized that I did not receive a sign-off from fuels. Attached is the final Bartow IPP that was presented to SMC in March. This IPP excludes transmission.

Please take a look and provide an email stating you approve the Bartow IPP.

Feel free to give me a call if you have any questions.

Thanks for your help with this.

Elizabeth A. Murray
Financial & Business Services
Generation & Transmission Construction Department
Progress Energy
Direct: (919) 546-4346

Bartow Repowering

Integrated Project Plan

****Please Note: This document contains confidential transmission information and is subject to Progress Energy's Standards of Conduct Procedure, #REG-SUBS-00002. Please do not distribute to Fuels & Power Optimization or Efficiency and Innovative Technology groups****

Sponsoring Business Unit:	Transmission Ops & Planning (System Planning & Regulatory Performance)
Funding Legal Entity:	PEF
Date Prepared:	12/1/2008

Key Project Contacts:

Role/Department	Name	Phone No.
Project Manager/G&TCD	George Hixon	**770-6021**
GM – Florida Projects/G&TCD	Kevin Murray	**230-4383**
GM – Construction/G&TCD	Mark Smothers	**770-7520**
Director – Business Mgt & Compliance/G&TCD	Sue Hardison	**770-3062**
VP Generation & Transmission Construction	John Elnitsky	**230-4481**
Project Sponsor Dir-System Planning & Regulatory Performance	Ben Crisp	**220-4565**
Project Manager Transmission	John Goff	**280-2526**
GM – Trans Const & Engring	Bobby Burgess	**280-2217**
VP-Transmission Ops & Planning	Dale Oliver	**230-5806**

Plan Revision Control

[illegible]	[illegible]	[illegible]	[illegible]
0	Elizabeth Murray/George Hixon	Initial Draft	03/10/08
1	Joel Rutledge/George Hixon	December 2008 SMC Update	12/1/2008

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Mark Smothers	GM – Construction/G&TCD		Email	
Sue Hardison	Dir – Bus. Mgt & Compliance/G&TCD			
Kevin Murray	GM – Florida Projects/G&TCD ✓			
Randy Paulson	Dir – Project Develop & Engring			
George Hixon	Project Manager/G&TCD ✓			
Magnus Ohlsson	Mgr-Strategic Sourcing ✓			
Chris Cox	Legal			
	Departmental Review Outside G&TCD			
Ben Crisp	Dir –System Plan. ✓			
Dale Oliver	VP-Transmission Ops & Planning ✓			
John Goff	Transmission Project Manager			
Eric Grant	Gen Mgr-CT Operations-FL ✓			
Alex Glenn	Dep Gen Counsel-PEF Today ✓			
Paul Crimi	Exec Dir-Pwr Gen Svcs ✓			
Brenda Brickhouse	Dir-Environ Health & Safety ✓			
Peter Toomey	VP-Finance ✓			
David Sorrick	VP-Power Generation-PEF Spoke w/ Linda			
Sasha Weintraub	VP-Fuels & Pwr Optimization ✓			
Javier Portuondo	Dir-Regulatory Planning ✓ Sending NOTES			

Approving Party	Approving Position	Rev	Signature	Date
Paula Sims	Sr VP-Power Operations			
Thomas R Sullivan	VP-Treasurer & CRO			
Michael Lewis	Sr VP-Energy Delivery-FL			
Jeff Lyash	President & CEO-PGN Florida			
John McArthur	Sr VP-Corp. Relations & Gen Cnsl			
Peter Toomey	VP-Finance			
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William D Johnson	Chairman, CEO & President			

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Brenda Brickhouse	Dir-Environ Health & Safety			
Peter Toomey	VP-Finance			
David Sorrick	VP-Power Generation-PEF			
Sasha Weintraub	VP-Fuels & Pwr Optimization		Sp on behalf	
Javier Portuondo	Dir-Regulatory Planning			
Paula Sims	Sr VP-Power Operations			
Thomas R Sullivan	VP-Treasurer & CRO			
Michael Lewis	Sr VP-Energy Delivery-FL			
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Kevin Murray	GM - Florida Projects/G&TCD			11/11/08
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Alex Glenn	Dep Gen Counsel-PEF			
Paul Crimi	Exec Dir-Pwr Gen Svcs			
Brenda Brickhouse	Dir-Environ Health & Safety			
Peter Toomey	VP-Finance		Peter E. Toomey	11/11/08
David Sorrick	VP-Power Generation-PEF			
Sasha Weintraub	VP-Fuels & Pwr Optimization			
Javier Portuondo	Dir-Regulatory Planning			
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John McArthur	Sr VP-Corp. Relations & Gen Csl			
Peter Toomey	VP-Finance		Peter E. Toomey	11/11/08
Mark I Mulhern	President & CEO SvcCo/CFO-PGN			
William D Johnson	Chairman, CEO & President			

Paula Sims	Sr VP-Power Operations			12/1/08
James Scarola	Sr VP – Chief Nuclear Officer		Not applicable (1)	
Michael Lewis	Sr VP-Energy Delivery-FL			
Jeff Lyash	President & CEO-PGN Florida			12/1/08
John McArthur	Sr VP-Corp. Relations & Gen Cnsl			12/1/08
Mark F Mulhern	President & CEO SvcCo/CFO-PGN			12/1/08
William D Johnson	Chairman, CEO & President			12/1/08

Approving Party	Approver's Position	Rev #	Signature	Date
Paula Sims	Sr VP-Power Operations			12/1/08
James Scarola	Sr VP - Chief Nuclear Officer		(1)	
Michael Lewis	Sr VP-Energy Delivery-FL			12/4/08
Jeff Lyash	President & CEO-PGN Florida			12/1/08
John McArthur	Sr VP-Corp Relations & Gen Cnsl			12/1/08
Mark F Mulhern	President & CEO SveCo-CFO-PGN			
William D Johnson	Chairman, CEO & President			12/1/08

AGENDA

1.0 Project Overview / Recommendation

2.0 Scope Statement

3.0 Major Deliverables & Milestone Schedule

4.0 Funding Requirements & Update

5.0 Economic Evaluation
- 5.1 Operational Life Cycle Costs

6.0 Assumptions & Constraints
- 6.1 Risk Strategy
- 6.2 Contracting & Procurement Strategy
- 6.3 Regulatory Requirements

7.0 External Stakeholders

8.0 Internal Stakeholders Roles & Responsibilities

9.0 Project Assurance Plan

10.0 Communication Plan / Next Steps

11.0 Appendix

1.0 Project Overview / Recommendation:

1.1. Overview

The Bartow repowering project consists of installing a combined cycle plant with a winter rating of approximately 1,279 MW and an estimated in-service date of June 1, 2009.

The plant's design consists of four (4) Siemens' F-Class combustion turbines (CTGs), four (4) heat recovery steam generators (HRSGs) and one (1) steam turbine generator (STG). Natural gas is the primary fuel source with distillate fuel oil as a back-up fuel.

Transmission upgrades will be required to accommodate the increased generation. Upgrades include the expansion of the existing Bartow 230kV and Northeast 230kV substations, construction of new 230kV underground cable circuits between Bartow and Northeast substations, and certain other upgrades to both the 230kV and 115kV systems.

Fuel gas for the combined cycle facility will be via a new 17 mile undersea pipeline constructed by Gulfstream Natural Gas and connect to the existing Gulfstream pipeline at Port Manatee.

This additional generation capacity is needed to support our Florida service territory and will:

- Allow PEF to satisfy its Reserve Margin and loss of load probability criteria, while maintaining an appropriate level of physical reserves for the system;
- Reduce system-wide NOx and SO2 emissions as part of the Company's plan for environmental compliance.
- Provide additional system reliability by increasing generation resources in an area that relies heavily on the transmission grid for importing power.

Subsequent to the completion of the project, PEF anticipates that the existing steam units will be retired and the related environmental permits will expire.

The current estimated project cost is $795.4M which is comprised of $143M for Transmission, $558.5M for New Generation, and $93.9M for AFUDC. The current estimate represents an increase in project costs of $6.9M from the IPP approved in April 2008. The increase is primarily due to scope changes related to 12,000 hour basket upgrades and inlet icing mitigation for new generation construction.

1.2 Recommendation

The project team recommends that Senior Management approve a project cost increase of $6.9M:

- $6.8M of additional costs for scope increases
- $3.2M of anticipated close-out costs

These total costs of $10.0M are offset by $3.1M in reductions in AFUDC and indirect costs for a net project increase of $6.9M.

The purpose of this document is to apply the project governance discipline as outlined in the IPP procedures to this project. The following documentation provides additional information on the

history, status and forward looking aspects of the Bartow Repowering project including an overview of the scope, schedule, cost and risk elements of the project execution plan.

2.0 Scope Statement:

New Generation:

The proposed unit design consists of installing four (4) combustion turbines (CTGs), four (4) heat recovery steam generators (HRSGs) and one (1) steam turbine generator (STG). The 4x4x1 configuration will have a winter capacity of 1,279 MW, increasing system capacity by 827 MW over the existing steam units output.

The 4CTG x 4HRSG x 1STG unit design will be used along with auxiliary duct firing for the HRSGs and steam power augmentation for the CTs to provide optimum peaking capacity. By-pass stack dampers on all four CTs will provide the option to run in simple cycle as well as combined cycle mode. This design provides maximum output, operational ease, and system dispatch reliability and flexibility.

The plant design should allow a steam turbine trip without the loss of the gas turbines. Condenser by-pass and/or atmospheric vents are included to mitigate this action. An additional feature includes exhaust by-pass stacks on each unit.

The project also includes construction of a new control administration building, modification of the existing intake structures, and $3M for the demolition of the three smoke stacks related to the retirement of the oil fired steam plant.

Additional Major Scope Items

12,000 Hour Basket Hardware
The Plant Operations Group executed a long-term service agreement with Siemens to provide ongoing maintenance of the CTGs. As part of that agreement, Siemens will modify the 4 CTGs with upgraded baskets that extend the maintenance duration from 8,000 hours to 12,000 hours. The benefits to Progress Energy include extended maintenance duration and a reduction in the number of combustion turbine inspections. The $5.2M portion of the long-term service agreement attributable to parts will properly be accounted for as capital. Additional scope and related costs were approved by the PEF Finance Committee.

Inlet Icing
Siemens advised the project team that inlet icing of the compressor bell mouth and the first stage diaphram is possible under certain atmospheric conditions. The ingestion of ice into the compressor would cause significant damage to the operating units. The project and operations teams evaluated options to mitigate the risk and decided to install inlet heating equipment. Labor to install inlet heating in all units will be provided by Progress Energy at an expected cost of $1.2M and parts will be paid for by Progress Energy at an expected cost of $400k. The amount paid for parts will reduce the cap on Siemens' CTG performance bonus by a like amount.

Transmission:

The transmission scope of work associated with the Bartow Repowering falls into two main categories; namely (i) work required to physically connect the new generators and auxiliary transformers to the transmission system and (ii) upgrades to the transmission system to accept the increased generation capacity of the repowered facility.

The project team has identified a modification requirement to the 115kV & 230kV Switchyard which will be managed outside the scope of the repowering project. Otherwise, the transmission scope of work remains unchanged since the last IPP.

(i) Connection of new generators and auxiliary transformers to transmission system.

- Bartow – Northeast Underground
  - Bartow substation expansion, equipment upgrades, and new control enclosure
  - Northeast substation expansion and equipment upgrades
  - Bartow – Northeast three new 230kV underground circuits
  - Bartow Generator and Aux Transformer connections

(ii) Upgrades to transmission system to accept increased generation capacity.

- Northeast – 40th Street 230kV Rebuild
  - Northeast substation – rebuild termination
  - 40th Street substation – rebuild termination
  - Northeast – 40th Street –rebuild existing 230kV line
- Northeast – 32nd Street New 115kV Line
  - 32nd Street new breakers and bus
  - Northeast substation new breakers and bus
  - Northeast – 32nd Street new 115kV line
- 51st Street – Install 230/115kV Transformer
  - 51st Street – land for substation expansion
  - 51st Street – install transformer, bus, breakers, and new control enclosure
  - 40th Street – Pasadena –loop the existing 230kV line into 51st Street
- Central Plaza – replace 115kv breaker

Fuel

PEF has entered into an agreement with Gulfstream Natural Gas System for Firm Pipeline Transportation (FT) capacity to access gas supply for the Bartow plant. The total FT capacity contracted for is 155,000 Dths/day for a term of 23 years. The daily capacity is roughly equivalent to the total gas demand of the re-powered plant at full load for 16 hours. Gulfstream's project consisted of constructing approximately 17 miles of 20" pipeline from their existing pipeline in the Tampa Bay to the Bartow site, additional compression at Gulfstream's station in Coden, Alabama, and constructing a new compressor station in Manatee County, FL. The contract provides for 80,000 Dths/d to be available to support testing and startup of the first two CTs and then the full 155,000 Dths/d to be available to commission the additional two CTs and four HRSGs. The scope of work remains unchanged since the last IPP.

3.0 Major Deliverables & Milestone Schedule:

Milestone		Date	
	Initial IPP	Forecast	Actual
New Generation			
• EPC Contract Executed	Q3 2006	Q3 2006	14-Aug-06
• Combustion Turbines and Generators Delivery	15-Aug-07	15-Aug-07	29-Jul-07
• HRSGs Delivery	30-Oct-07	30-Oct-07	14-Oct-07
• STG Delivery	1-Dec-07	1-Dec-07	20-Nov-07
• Control/Admin Building Complete	1-Jun-08	1-Jun-08	1-Jun-08
• First Fire CTGB	23-Sep-08	5-Nov-08	5-Nov-08
• First Fire CTGC	26-Oct-08	19-Nov-08	19-Nov-08
• First Fire CTGA	28-Nov-08	15-Dec-08	
• First Fire CTGD	31-Dec-08	15-Jan-09	
• Mechanical Completion (EPC Contractor)	02-Jan-09	5-Jan-09 (1)	
• STG Initial Roll	24-Mar-09	24-Mar-09	
• Commercial Operation	1-Jun-09	1-Jun-09	
Transmission			
• Back feed Auxiliary Transformers	19-Jul-08	19-Jul-08	12-July-08
• Complete Generator Connections/Bartow Substation Expansion in Service	1-Sep-08	1-Sep-08	29-Aug-08
• Bartow – Northeast Three new 230kV Underground Circuits in Service	15-Mar-09	15-Mar-09	
• Northeast Substation Expansion in Service	15-Mar-09	15-Mar-09	
• Northeast 40th St. Rebuild 230kV Line In Service	1-Jun-09	15-Mar-09	
• Northeast 32nd St. New 115kV Line In Service	1-Jun-09	15-Mar-09	
• 51st St. new 230/115kV Transformer In Service	1-Jun-09	22-Mar-09	
Fuels			
Pipeline and Metering/Regulation Station Complete (80,000 Dtherms/Day)	1-Sept-08	25-Oct-08	25-Oct-08
Additional Compression Complete (155,000 Dtherms/Day)	1-Jan-09	1-Jan-09	

(1) Final punchlist items and warranty work will extend beyond this date

Other New Gen Status

The project is on schedule for commercial operation by June 1, 2009. Site construction actual 89.5% complete versus 93.5% planned. The ongoing mitigation plan will proceed with the intent of closing the gap between complete and planned. We anticipate the conclusion of site construction 15-Feb-09. Other key activities:

1. Placed CTG C on turning gear.
2. The 12,000 hour upgrades have been installed on units A and B.
3. Hydro testing complete on all boilers, A, B, C, and D.
4. Mechanical completion of CTG B and CTG C.
5. The construction of the Steam Turbine is proceeding as planned with the Oil flush scheduled for December.

Other Transmission Status

Transmission projects are on schedule to support commercial operation date of June 1, 2009 and on target to meet the $143M budget. Progress is 78% complete versus 77% planned. Other key activities:

1. Auxiliary transformers back feed complete.
2. Bartow substation is in service.
3. Generator step-up transformers have been energized.

Other Fuel Status

The projected in service date for the gas pipeline was pushed back to October 25, 2008 which is 55 days later than the original targeted in service date of September 1. Project delays have been attributed to three (3) storms which required demobilization from pipeline construction activities in Tampa Bay, a delayed start of construction originally intended to commence in January of 2008 which commenced in March of 2008, and the discovery of undersea rock which required longer drill time.

4.0 Funding Requirements & Update:

Total Project Cost Estimate

Table 2: Project Cost Requirements ($$ in millions)				
Funding Categories	**PTD Expenditure - as of Oct 08**	**Estimated to Complete**	**Estimate at Completion**	**Percent Expended**
EPC	$232.8	$21.0	$253.8	92%
CTs	122.4	9.5	131.9	93%
Steam Turbine	19.3	0.4	19.7	98%
HRSG	62.3	2.2	64.5	97%
Other OEM Equipment	27.1	5.0	32.2	84%
Preliminary Engineering	2.6	0.0	2.6	100%
Stack Demolition	0.0	3.0	3.0	0%
Owner's Costs	26.7	15.6	42.3	63%
Total New Gen Direct Costs	**493.2**	**56.7**	**549.9**	**90%**
Total Burdens and Allocations	5.3	3.3	8.6	62%
Total New Generation	**498.5**	**60.1**	**558.5**	**89%**
Connection to the Trans system	111.9	2.6	114.5	98%
Upgrade the Transmission system	12.8	15.7	28.5	45%
Total Transmission	**124.7**	**18.3**	**143.0**	**87%**
AFUDC	**58.5**	**35.4**	**93.9**	**62%**
Total Funding	**$623.1**	**$78.4**	**$795.4**	**78%**
	LESS: Prior IPP Funding		**($788.5)**	
	Total Change in Project Cost		**$6.9**	

Note: See Section 6.1.3 – Table 5 for risk analysis and expected costs generating additional funding requirements.

5.0 Economic Evaluation:

PEF Firm Reserve Requirements and Suncoast Benefits

PEF System Planning criteria targets a 20% reserve requirement for both winter and summer peak demand periods. Without new resources in the summer 2009, PEF projected firm reserve requirements would drop below the targeted 20% planning reserve margin criteria.

The Bartow Repowering Project also provides the following benefits for the Suncoast Region:

1) Increased capacity of 827 MW
2) Decreased air emissions
3) Decreased oil requirements
4) Increased natural gas transportation availability
5) Increased power plant operational benefits
    a. Faster start capability
    b. Improved heat rates
6) Decreased reliance on the Suncoast Transmission Fast Acting Load Shed program
7) Increased transmission operational benefits
    a. Additional Bartow Circuit connections to the Suncoast Grid
    b. 230 kV Upgrades
    c. Additional 115kV capacity

Alternatives Considered

The original Bartow Repowering project involved adding three gas-turbine generators and Heat Recovery Steam Generators (HRSG) to the site to provide steam to the existing three steam turbines. The existing #6 fuel oil furnaces will be taken out of service and natural gas will be used as the primary fuel. Light fuel oil (#2) will be used as a back-up fuel when natural gas is unavailable. The feasibility of adding another gas turbine to the Unit #3 steam turbine combined cycle configuration was also investigated. System Planning determined during the study phase that the load growth in Florida demanded an increase in generation needs.
Based on the increased demand forecast, System Planning investigated the value of a 4x4x1 configuration using the construction and performance values provided by Generation & Transmission Construction. The estimate for constructing the combined cycle using the existing turbines and providing steam with four gas turbines and HRSGs was $498.6M. The economic analysis of this configuration was found to be more cost-effective than the original configuration.

In the Design phase analysis, the 4x4x1 configuration was shown to be favorable to the other two configurations by $51M after-tax NPV. In addition, it was shown to be favorable to the initial alternative to Bartow Repowering (a fifth combined cycle at Hines in December 2009 and a 150 MW capacity purchase for the summer of 2009) by $171M.

Economic Analysis Detail

The Design phase economic analysis compared Bartow Repowering to a Hines 5 alternative, including a fifth combined cycle (CC) at Hines and a 150 MW capacity purchase for the summer of 2009. This comparison showed an NPV advantage of $171M for Bartow.

Since the Design phase analysis, the corporate standard assumption for combined cycle costs has increased from $202M (EPRI TAG) to $622M (Burns & McDonnell) overnight costs in 2008 dollars. The Design phase analysis was revised in 2005 using a current generic cost assumption of $312M (Burns & McDonnell). If the 2005 cost assumption had been used for the Hines 5 alternative in the Design phase analysis, it would have increased the NPV by approximately $100M, more than offsetting the impact of the Bartow project increased NPV cost of $42M. Since 2005, there have been no significant events to initiate an economic update.

Update

At this point, there are no feasible alternatives to the current project that could meet the scheduled in-service date of June 2009. Consequently, a full economic analysis with Prosym and Strategist runs was not performed. However, at a high-level, the major components of the Design phase analysis were reviewed. The review showed at a directional level that, even with the increased project costs, Bartow Repowering is still the most cost-effective alternative.

Bartow repowering continues to be the most economical option and there have been no significant events to initiate an economic update since 2005.

5.1 Operational Life Cycle Costs:

Table 4 - New Gen Operating Life Cycle Costs ($$ in millions)

	2009[1]	2010	Total
Operations	5.01	7.17	12.19
O&M Projects	0.35	4.20	4.55
Capital Projects	0.79	1.52	2.31
[1] Partial Year	6.15	12.89	19.05

Operation Costs

- Headcount of 32 for 2009 and headcount of 34 for 2010 forward.

O&M Projects

- Balance of Plant (BOP) Fall and Spring of 2009 and 2010 with total spend of $1.35M.
- Combustion Inspection (CI) Spring and Fall 2010 totaling $3.2M.

Capital Projects

- Projects including CC Simulator, Water Reclamation, and Cyber security totaling $1.2M.
- Combustion Inspection (CI) Spring and Fall 2010 totaling $1.1M.

6.0 Assumptions & Constraints:

- An adequate pool of qualified vendors, personnel, equipment and materials is available to the project
- A stable regulatory environment and associated set of emission requirements
- Adequate contingency to effectively address risk carried by the Company
- Major milestones/schedule listed in Section 3 holds true.

6.1 Risk Strategy:

The Project team utilizes a Risk Register, consistent with the Project Risk Planning Guideline CTCX-PPDX-00008, to track and manage the project risks. This IPP provides an overview of the major Project specific risks currently being tracked by the Project team.

The overall Risk Impact Matrix for the Project is provided below, followed by a detailed Risk Description and associated Response/Plan.

The risks have been divided into three categories, Construction, Operational, and Mitigated. Mitigated risks are no longer significant and/or have been resolved.

Enterprise Risks

Construction Risks

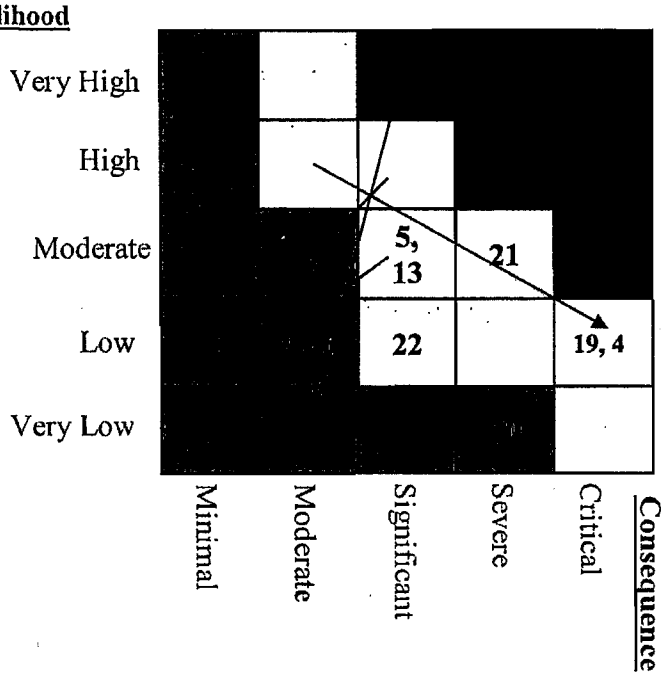
1. Circulating Water Intake Structure
2. Siemens Performance Bonus
4. Bartow Commissioning CT- Steam Plant Dual Operations
5. Carbon Monoxide (CO) Limit Compliance – CO Catalyst Installation
9. Hurricane/Other Insurance Claims
13. *Commissioning – Cost/Schedule
16. *Cost of Fuel During Startup
18. *CTG Equipment Addition for Inlet Icing

Operational Life Cycle Risks

19. Inlet Icing
20. 316(b) Phase I Determinations
21. Thermal Biological Study
22. Loss of Auxiliary Power Feed

Mitigated Risks (See Appendix for Mitigation Details)

3. Modifications to HRSG
6. Staffing & Recruiting
7. Permit Delays for Northeast Substation
8. Installation of 230/115kv Transformer at 51st St. Substation is Delayed
10. Gas line availability
11. Rebuilding existing 230kv line delayed
12. Construction of new NE line Delayed
14. *Bartow to NE Underground Cable Rework
15. *Increased Scope for Boiler Clean
17. *Increased Scope for Equipment Allowance

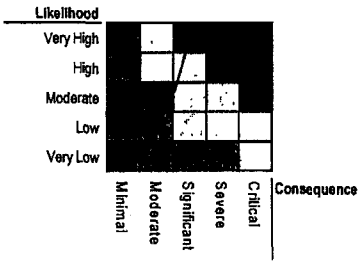


* - New Risks Identified Since Last IPP

6.1.1 Construction Risks

1. Risk:

Circulating Water Intake Structure – Likelihood is Very Low, Consequences are Moderate: Impact to cost and schedule



The process is in final construction with a limited amount of vulnerability if a major failure would result in disruption of the intake capacity.

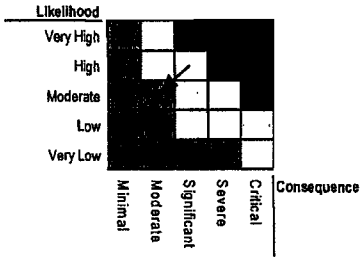
The concept for the intake structure for the repowered facility is to isolate, dewater, create a safe working environment and refurbish six unused existing spare cells north of the existing intake cells. Once refurbished, the new circulating water pumps and piping can be installed.

Response / Plan

The portable cooling tower is installed to support the first fire of the CTG's allowing additional time to complete the intake structure before performance testing. Construction is nearing completion and this risk has been almost completely mitigated.

2. Risk

Siemens CTG Contract – Performance Bonus:
Likelihood is Moderate, Consequences are Moderate: Impact to cost



If the performance of the CTGs exceeds the contractually guaranteed criteria, the contract provides for a bonus to be paid to Siemens. The Siemens Master Purchase Agreement provides guarantees for performance of the combustion turbines with respect to electrical output, heat rate, exhaust flow and exhaust temperature. Should any of the CTGs fail to meet the guaranteed performance criteria, liquidated damages would be paid by Siemens.

Recent proposals from Siemens for similar CTGs have offered increased performance guarantees which would indicate that these machines are achieving higher performance than first assumed.

Based on estimated performance modeling it appears that Siemens could be eligible for performance bonus of between $4M and $5.6M (cap of $1.4M per unit). The project has received authorization for $4M through the previous IPP process. The remaining risk is limited to the additional unfunded $1.6M. The $400k cost of inlet icing repair parts (see risk 19) will offset the maximum performance bonus payment which was originally $6M and is now $5.6M.

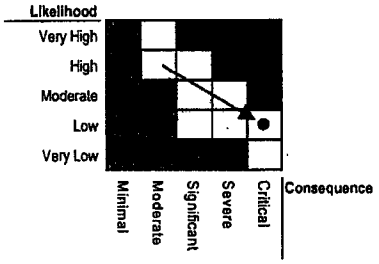
Response / Plan:

The bonus is a contractual obligation to be paid if the performance criteria are achieved.

4. Risk:

Bartow Commissioning CT – Steam Plant Dual Operation:

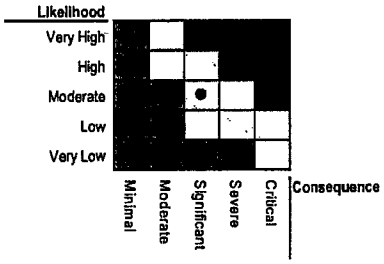
Likelihood is Low, Consequences are Critical; Impact to cost and schedule



New combined cycle plant requires testing prior to commercial operation while the existing steam plant remains available for dispatch. Dual operations could cause thermal discharge temperatures that would damage or kill large areas of seagrass in the bay. Mitigation costs to restore seagrass are unacceptably high. The FDEP has requested an evaluation of this potential impact. If FDEP denies our request for short-term increased air emissions or increased thermal discharge, then the combined cycle would only be permitted to operate when the existing Bartow units were offline. Accordingly, there would likely be an impact to the commissioning schedule and cost.

Response / Plan: We received the FDEP permit revision allowing dual operation between the combined units and existing steam plant units 1 and/or 3. The project team is in the process of working with the ECC and Environmental Services staff to determine the mode of operation or need to operate at any level of the Bartow existing steam plant. This involves several issues of transmission reliability and potentially very significant impacts to Progress Energy if environmental damage was done to local sea grass requiring mitigation. Preliminary indications are that the steam units will not be run in conjunction with project testing.

5. Risk: **<u>Carbon Monoxide (CO) Limit Compliance – CO Catalyst Installation</u>: Likelihood is Moderate, Consequences are Significant: Impact to Cost**

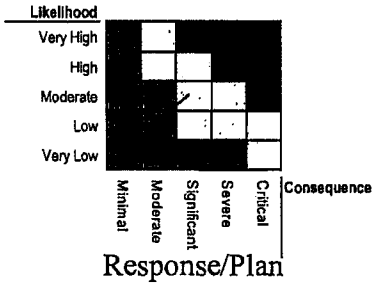


The plant may not meet the permitted CO limits when it comes online. The installation CO oxidation catalyst will be necessary to continue to operate in the event that CO limits cannot be met.

Response / Plan PEF will install CO oxidation catalyst if required. The permit allows time to remediate. The HRSGs have been designed with the necessary interfaces to allow for catalyst installation.

9. Risk **<u>Hurricane/Other Insurance Claims</u>**

Likelihood is Low, Consequences are Moderate: Impact to cost and schedule



There is a risk that a major storm or other event could impact the project during construction. There could be significant damage and subsequent delays related to such an event.

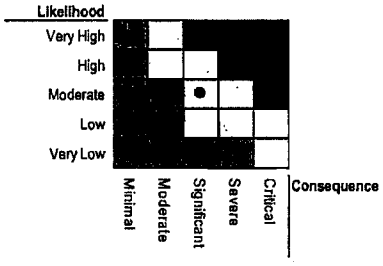
Response/Plan

Builder's risk insurance is in place for the construction phase of the project to mitigate cost impact. The basic policy limit is $459M per occurrence, except $459M in the aggregate for the policy term for windstorm, flood and earthquake. The deductible is $250k per loss, except $1M during hot testing, $1M for damage to existing property and 2.5% of values at risk at the time and place of loss subject to a minimum of $2.5M for windstorm and flood. Earthquake deductible is $500k. A hurricane response plan has been prepared and contains procedures for storm preparation to ensure that the site is secured in the event of a major storm. The 2008 hurricane season is nearing its end and there is minimal risk for a significant event. The plant will be operational before next hurricane season.

13. Risk

Commissioning – Cost/Schedule

Likelihood is Moderate, Consequences are Significant: Impact to cost and schedule



Delays related to gas delivery and contractor productivity have increased the total commissioning risk by exhausting the majority of the float from the schedule. Additional personnel and/or funds may be required to mitigate the risks.

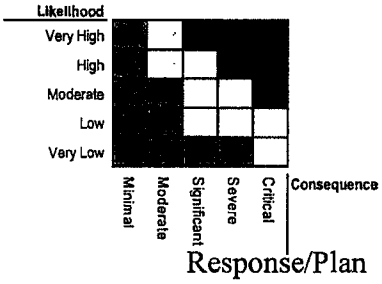
Response/Plan

We continue to closely manage and monitor the timeline and cost. Four additional staff and needed equipment/supplies have been added to the commissioning team to help manage this risk.

16. Risk

Cost of Fuel During Start-up

Likelihood is Low, Consequences are Moderate: Impact to cost



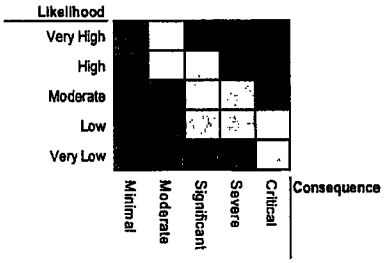
Due to limited flexibility in the schedule, we may incur fuel related charges because of low demand for electricity when testing the units.

Response/Plan

The project team has worked with the fuels group to compare expected usage with anticipated demand, which heavily relied upon historical data,

to confirm the appropriateness of the $6.5M in funds currently available to the project for fuel.

18. Risk



CTG Equipment Addition for Inlet Icing
Likelihood is Low, Consequences are Minimal: Impact to cost

The project requires installing inlet heating equipment to mitigate the risk of ice damage to the CTG. This is an additional scope item with funding approved by the PEF Finance Committee.

Siemens advised in Technical Advisory 2005-015 that inlet icing of the compressor bell mouth and the first stage diaphram is possible under certain atmospheric conditions.

Labor to install in all units will be provided by Progress Energy and scheduled depending on engineering and parts availability. Siemens will deduct the payment for the parts from their performance bonus.

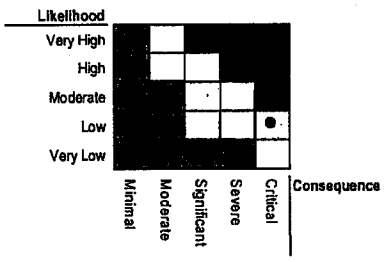
Response/Plan

Siemens has provided an Inlet Icing alarm to alert operations when conditions are right for icing to occur as an interim solution. PEF and Siemens will install an Inlet Heating System to raise the inlet air temperature above the icing potential temperature. Refer to Operational Life Cycle Risk #19 for additional details.

6.1.2 Operational Life Cycle Risks

The following are considered to be Operational Life cycle Risks, which are post-construction risks that are outside of the scope of this project:

19. Risk



CT Inlet Icing – Compressor damage due to ice ingestion

Likelihood is Low, Consequences are Critical: Impact to availability of commercial facility.

Siemens advised in Technical Advisory 2005-015 that inlet icing of the compressor bell mouth and the first stage diaphram is possible under certain atmospheric conditions. Bell mouth icing exists at temperatures less than 41°F and first stage diaphram icing exists at temperatures less than 55°F in conjunction with high relative humidity and inlet guide vane positions less than 35°. The ingestion of this ice into the compressor has caused significant damage on operating units as far south as Bowling Green, FL. Atmospheric conditions have been monitored at the site and icing conditions exist on low temperature mornings and last for periods up to 10 hours. The time frame for icing conditions is coincident with expected startup times for the plant when in cycling service. Work arounds and dispatch exceptions will be required to avoid starting the units

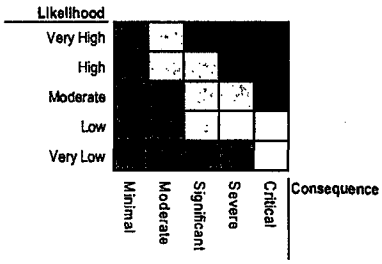
during these time frames. The only solution that provides full availability of the CTs is the installation of Inlet Heating.

Response Plan

Siemens has provided an Inlet Icing alarm to alert operations when conditions are right for icing to occur. The alarm is an interim measure while waiting for the installation of Inlet Heating to raise the inlet air temperature above the icing potential temperature (Refer to Risk #18).

20. Risk

316(b) Phase I Determination:
Likelihood is Very Low, Consequences are Severe; May impact cost.



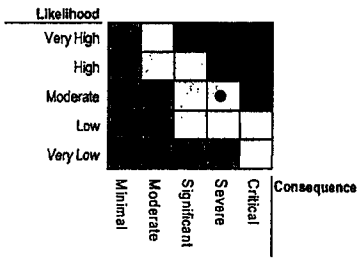
The FDEP has verbally agreed with PEF that the repowering of the Bartow Plant places it in the category of a Phase II facility (existing facility) and as such must comply with the appropriate rules concerning impingement and entrainment impacts caused by intake operations. Currently compliance with this rule allows for the use of Best Professional Judgment (BPJ) by the FDEP. BPJ allows the agency to use mitigation such as restoration (fish hatchery) or other means to mitigate any adverse environmental impacts that are proven to be caused by facility operations. If the FDEP were to change their determination that the facility no longer qualifies as an "existing facility" as could be the case if any one of the existing units remains in operation when the CTs go commercial, or in the event the FDEP has an unexpected change in philosophy, then the facility would be considered a Phase I facility (new facility). This designation requires the facility to limit any impingement and entrainment impacts to the same as would occur if the unit were using closed cycle cooling. A change in determination to a Phase 1 facility would most likely require the facility to go to closed cycle or air cooling to achieve the performance standard. Note that extended dual operation (see Risk 3) could trigger reclassification to Phase I facility.

Response / Plan:

PEF has discussed this issue with the FDEP numerous times and there is no indication that a change in determination is being considered. This determination would change if the existing units were to remain in operation after the agreed upon retirement date.

21. Risk

Thermal Biological Study:
Likelihood is Moderate, Consequences are Severe: Impact to cost



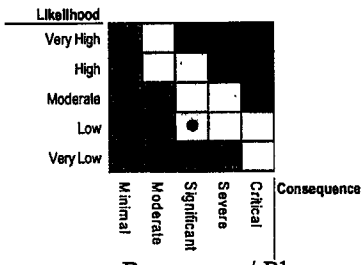
The current surface water discharge permit (NPDES) for the plant once through cooling requires that a study be conducted to evaluate any biological impact that can be attributed to the once through cooling discharge plume. This study is in progress. Results of the study must be supplied to the FDEP in 2009. There is a risk that an adverse environmental impact could be demonstrated and that the FDEP would

then require PEF to comply with stringent temperature discharge limitations which would necessitate the addition of supplemental cooling on the discharge from the circulating water system. This should not impact schedule as it is likely that FDEP would allow some time to comply with any revised discharge thermal limits but would impact overall cost.

Response / Plan: Results of the study are expected in January of 2009. At that time sufficient information will be available to develop an appropriate mitigation plan. If necessary an additional study can be offered to the FDEP to be conducted after the new units are in operation. There is potential that the lower heat rejection profile of the new units can be offered to the FDEP as whole or partial mitigation for any identified impacts.

22. Risk

Loss of Auxiliary Power:
Likelihood is Low, Consequences are Significant: Impact to cost



If the duration of an auxiliary power loss exceeds current back-up source capability, then it could lead to equipment damage.

Response / Plan: This is an emergent risk identified during CTG B first fire. We are beginning the evaluation process of alternative sources of auxiliary power, such as an onsite generator, additional auxiliary, and/or adding additional battery capacity.

6.1.3 Project Risk Cost Assessment

Based on the information provided in Table 3, the Project does not have adequate contingency to cover the remaining risk items. As part of the project approval process, we are requesting the expected case to be funded (See Table 3).

In the event that scope of work falls into the High cost range, the Project may require additional funding to achieve completion. Based on current information and the mature stage of this project, we feel the estimate to completion is reliable.

Table 5 Summary Cost - Risk Assessment [Project View $M]

Risk	Low	Expected	High
[13] Commissioning	-	-	0.9
[16] Cost of Fuel During Startup	(2.5)	-	1.5
[18] Inlet Icing (Labor to install) (2)	-	1.6	2.1
12,000 Hour Basket Upgrades (2)	5.2	5.2	5.2
Project Close-Out	-	3.2	7.5
Total Project Cost Requested	**2.7**	**10.0**	**17.2**
Contingency Balance Oct 2008	0.0	0.0	0.0
Increase in Direct Project Costs	**2.7**	**10.0**	**17.2**
Less: Reductions in AFUDC & Indirects	(3.1)	(3.1)	(3.1)
Total Project Cost Impact	**(0.4)**	**6.9**	**14.1**

(1) $6.8M of additional costs is for scope increases.

6.2 Contracting & Procurement Strategy:

PEF has assembled a portfolio of lump sum, firm-price contracts with qualified suppliers that are responsible for the execution of various aspects of the Project. Figure 1 provides an overview of the vendors involved in the Project and their associated scope of responsibility.

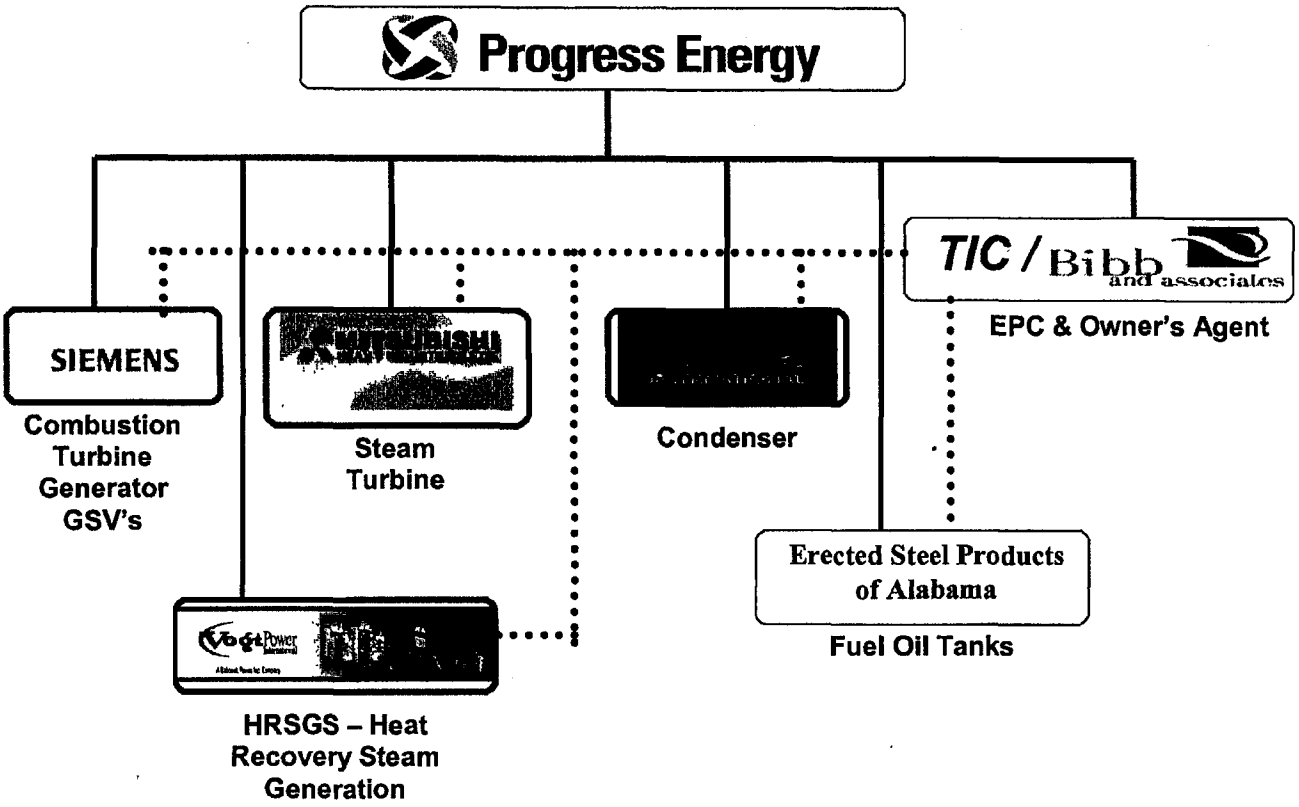


Figure 1: Project Organizational Structure

Concurrent with a lump sum approach, individual contracts with the vendors shown in Figure 1, utilize a payment milestone structure with associated schedules of liquidated damages for completion of work. In addition, PGN has attempted to mitigate cost and performance risk by capturing favorable contract terms and conditions such as retention provisions, performance guarantees, and reliability guarantees.

6.3 Regulatory Requirements:

The project constitutes a repowering, as confirmed by the Florida Department of Environmental Protection (FDEP) and the Power Plant Siting Act does not apply. The Bartow Repower will be included in the next rate case.

7.0 External Stakeholders:

We consider the community surrounding the Bartow site to be a key stakeholder and work with internal community relations and plant communications personnel to respond to issues raised by the public regarding this work.

The project community relations plan has been finalized and accepted. Updates of community relations initiatives will continue throughout the project planning and construction phases. The following outreach activities have occurred over the life of the project:

- Open house to introduce the project to the community (Oct 2006)
- Project overview meetings with various stakeholders including elected officials, environmental groups, and homeowner association meetings

- *St. Petersburg Times* and Audubon Society Tour (Oct 2007 resulted in favorable article)
- St. Petersburg City Council Tour – March 4, 2008
- Contact S. Central FL Archeological Society
- Work with corporate communications to prepare article for Venetian Isles HOA newsletter. Article explains repower project and communicates key messages.
- Continuous identification of community stakeholders
- Project update communication to 3,200 customers in immediate vicinity of the plant (Sep 2008)

Meeting with community organizations began in November 2005 and has continued into 2008. The overall community plan focuses on communicating with various organizations including environmental groups and homeowner associations near Bartow Plant. Public response has been positive toward the project and Progress Energy Florida's proactive communication. The project team works closely with Gulfstream to ensure its participation in meeting opportunities. The partnership has been beneficial and provides customers with a more comprehensive understanding of the entire project.

8.0 Internal Stakeholders Roles & Responsibilities:

8.1 Project Team

Role, Department / Group	Name	Phone No.
Project Manager/G&TCD	George Hixon	770-6021
Transmission Project Mgr	John Goff	280-2564
Construction Manager	Terry Taylor	242-3528
Development Lead/G&TCD	John Umstead/Rick Yates	770-4410/770-4362
Project Engineer Lead	Karl Humberson	770-5476
Project Controls Lead - G&TCD	Scott Fandrich	770-7674
Environmental Lead – G&TCD	Teresa Williams	770-4111
Safety Lead – G&TCD	Al Rios	770-4799
Document Control Lead – G&TCD	Carol Watkins	770-4071
Business Analyst Lead - G&TCD	Joel Rutledge	770-3182
Start-up & Commissioning Lead	Dave Farris	770-3997
Plant Manager	Tom Callaghan	242-3547
Environmental Services	Patti West	230-5739
IT&T	Jeff Hauer	230-5086
Community Relations	Melissa Seixas	220-3297
Project Assurance	Daniel Grannan	240-6069
Legal	Chris Cox	770-7501
Fuels	John Trimble	770-3323
Transmission Business Services	Matt Petrousky	280-2240

8.2 Internal Stakeholders

The Project Manager works with the team and with members of G&TCD management to ensure key stakeholders throughout the company remain informed of the status of the project. Key stakeholder groups include:

Stakeholder	Role
PGN Executive and Senior Management, including PEF President	Updates are provided periodically by the G&TCD management team; as well as periodic updates from POG Senior VP at SMC meetings.
POG Senior VP	Vice President of G&TCD provides weekly updates on all projects – including Bartow – to POG Senior VP and staff
VP of Transmission	Transmission Project Manager provides formal monthly updates and interim discussions of issues or events
PEF Power Operations	The Plant Manager ensures up-to-date communications to VP PEF Power Generation and site operations
PEF Finance	G&TCD Business Management provides monthly updates to the PEF Capital Oversight Committee focusing on cost management issues and impact to PEF financials
Capital Planning and Control	G&TCD Business Management works with this section to ensure capital guidelines and approval processes are being followed
Environmental Services	This group is represented on the core PM team and provides critical input to environmental and permitting issues as they arise
Project Assurance	This group provides dedicated resources to ensure ongoing project assurance and guidance on specific issues
Community& Media Relations	Melissa Seixas works with the community surrounding the Bartow site and responds to issues raised by the public.

9.0 Project Assurance Plan:

A designated Project Assurance advisor has been appointed to support and advise the project management team. The advisor will work with the project manager to identify key project decisions and milestones for the project. The key project decisions and milestones will be identified in a Project Assurance Plan that establishes the way in which key project stakeholders will work together to ensure that material decisions for the Bartow project are prudent, appropriately documented and support the regulatory process for cost recovery.

Some Key Project Change Notice (PCN) Packages that have been assembled to date include:

- The Steam Turbine Enclosure
- The Fire Service Water System
- Costs to delay the start of Construction
- Pilings cost adjustment due to added length of pilings
- Additional Startup resources
- Stack Bypass Valves

10.0 Communication Plan / Next Steps:

The following milestone meetings will provide Senior Management with updates on the project and the opportunity to defer, stop, or otherwise change the project direction as needed:

Date	Milestone - Request
Early 2010	Post Project Benefit Assessment
Further updates to be determined as the project develops	

11.0 Appendix

Risk Mitigation

3. ***Modifications to HRSG**
   Installation of the modifications is complete and funded through the last IPP.

6. ***Staffing & Recruiting**
   The EPC vendor combined a competitive wage structure and end-of-project bonuses to make the jobs more attractive. These actions mitigated the risk by attracting and retaining the skilled labor needed to complete the project.

7. ***Permit Delays for Northeast Substation**
   PEF Transmission worked with the FDEP and Corps of Engineers to expedite the permit processes and allow construction to proceed on target.

8. ***Installation of 230/115kv Transformer at 51st St. Substation is Delayed**
   PEF Transmission worked with the City and community leaders to overcome obstacles to the project so no delays in permits or approvals were encountered.

10. ***Gas line availability**
    Natural gas has been received at the site. G&TC condensed and otherwise modified the start-up schedule to account for the later receipt of gas without impacting the overall commissioning date.

11. ***Rebuilding existing 230kv line delayed**
    PEF Transmission and the ECC jointly developed outage schedules to support the construction schedule; PEF Transmission continues to work with the City and community leaders to minimize impacts along the right of way.

12. ***Construction of new NE line Delayed**
    PEF Transmission and the ECC jointly developed outage schedules to support the construction schedule; PEF Transmission continues to work with the City and community leaders to minimize impacts along the right of way.

14. **Bartow to NE Underground Cable Rework**
    PEF transmission worked with the cable supplier to expedited manufacturing and delivery of the replacement cables to coincide with completion of the cable installation into Northeast substation.

15. **Increased Scope for Boiler Clean**
    Project team clarified results of the study and clarified cost and benefits to management. Management agreed with the project team that the additional scope was not prudent.

17. **Increased Scope for Equipment Allowance**
    The project team managed this exposure through existing, previously unallocated contingency.

New Generation Contingency Analysis

New Generation Contingency Analysis	Original	April IPP	Current IPP	Total
EPC				
Change Orders and Scope Adds	3.6	0.3	-	3.9
Intake Structure	-	2.6	-	2.6
HRSG Modification	-	0.2	-	0.2
Project Close-out	-	-	3.2	3.2
Total EPC				**9.9**
CTG				
Price Escalation	1.0	-	-	1.0
Performance Bonus	-	4.0	-	4.0
12,000 Hour Basket Upgrades	-	-	5.2	5.2
Inlet Icing (Labor to install)	-	-	1.6	1.6
Total CTG				**11.8**
Owner's Cost				
Site Development	4.4	-	-	4.4
Start-up	1.5	1.2	-	2.7
Site Security	-	1.0	-	1.0
Staffing	0.7	0.3	-	1.0
Parking	1.1	-	-	1.1
Total Owner's Cost				**10.2**
Other				
Builder's Risk Insurance Premium	1.7	-	-	1.7
Limit Dual Operation	-	-	-	0.3
Hurricane/Other Insurance Claims	-	0.3	-	0.3
STG Customs	0.8	-	-	0.8
Total Other				**3.1**
Total New Generation	**14.8**	**9.8**	**10.0**	**34.9**

Original Cost Compared to Current Request

Table 6: Expected IPP Comparison to Original BAP (millions)				
Cost Categories	**Implementation BAP**	**IPP Expected Forecast**	**Difference**	**Percent Change**
EPC	$243.90	$253.80	$9.90	4.1%
CTs	$119.70	$131.90	$12.20	10.2%
Steam Turbine	$18.00	$19.70	$1.70	9.4%
HRSG	$64.20	$64.50	$0.30	0.5%
Other OEM Equipment (SST, Tanks Etc)	$31.50	$32.15	$0.65	2.1%
Preliminary Engineering (Siting, Permitting etc)	$2.60	$2.60	$0.00	0.0%
Owner's Costs	$35.40	$42.25	$6.85	19.4%
Contingency	$10.40	$0.00	($10.40)	-100.0%
Total New Gen Direct Costs	**$525.70**	**$546.90**	**$21.20**	**4.0%**
Total Burdens and Allocations	$9.60	$7.80	($1.80)	-18.8%
Total New Generation	**$535.30**	**$554.70**	**$19.40**	**3.6%**
Connection to the Transmission system	$102.00	$114.50	$12.50	12.3%
Upgrade the Transmission system	$32.00	$28.50	($3.50)	-10.9%
Total Transmission	**$134.00**	**$143.00**	**$9.00**	**6.7%**
AFUDC	**$96.00**	**$93.90**	($2.10)	-2.2%
Total Cost	**$765.30**	**$791.60**	**$26.30**	**3.4%**

Definitions & Acronyms:

- ACSR - Aluminum Cable Steel Reinforced
- AFUDC – Allowance for Funds Used During Construction
- BOP – Balance of Plant
- CBs – Circuit Breaker
- CC – Combined Cycle
- CI - Combustion Inspection
- CO – Carbon Monoxide
- COD – Commercial Operation Date
- CTG – Combustion Turbine Generator
- E&P – Engineer & Procure

- ECC – Energy Control Center
- EPC – Engineer Procure Construct
- FDEP – Florida Department of Environmental Protection
- FERC - Federal Energy Regulatory Commission
- G&TCD – Generation & Transmission Construction Department
- GFF – Generation & Fuels Forecast
- GSU – Generator Step-up Transformer
- HRSG – Heat Recovery Steam Generator
- IPO - Independent Pole Operation
- kV - Kilovolts
- LTSA – Long Term Service Agreement
- MCM - Multichip module
- NCDWQ - North Carolina Division of Water Quality
- NCUC - North Carolina Utilities Commission
- NERC - North American Electric Reliability Corporation
- NPDES - National Pollutant Discharge Elimination System
- OEM – Original Equipment Manufacturer
- PLC – Part's Life Credit
- POG – Power Operations Group
- QA/QC – Quality Assurance/Quality Control
- RFP – Request for Proposal
- RMC – Risk Management Committee
- STG – Steam Turbine Generator
- T&M – Time & Material
- TRT – Treasury Risk Transaction Committee
- UAT – Unit Auxiliary Transformer
- VAr - Volt-amperes reactive

Rutledge, Joel

From: Oliver, Dale
Sent: Wednesday, November 12, 2008 8:42 PM
To: Rutledge, Joel
Subject: Yes, I have reviewed the Bartow IPP and find it to be accurate and clear: Bartow IPP Review Sign-off

Rutledge, Joel

From: Grant, Eric
Sent: Saturday, November 15, 2008 6:22 PM
To: Rutledge, Joel
Subject: Yes, I have reviewed the Bartow IPP and find it to be accurate and clear: Bartow IPP Review Sign-off

Rutledge, Joel

From: Harris, Glenn
Sent: Monday, November 17, 2008 6:46 AM
To: Rutledge, Joel
Subject: Yes, I have reviewed the Bartow IPP and find it to be accurate and clear: Bartow IPP Review Sign-off

Rutledge, Joel

From: Portuondo, Javier J
Sent: Monday, November 17, 2008 9:25 AM
To: Rutledge, Joel
Subject: Yes, I have reviewed the Bartow IPP and find it to be accurate and clear: Bartow IPP Review Sign-off

Rutledge, Joel

From: Crisp, John Benjamin (Ben)
Sent: Monday, November 17, 2008 10:22 AM
To: Rutledge, Joel
Subject: Yes, I have reviewed the Bartow IPP and find it to be accurate and clear: Bartow IPP Review Sign-off

Rutledge, Joel

From: Ohlsson, Magnus
Sent: Monday, November 17, 2008 4:55 PM
To: Rutledge, Joel
Subject: Yes, I have reviewed the Bartow IPP and find it to be accurate and clear: Bartow IPP Review

Rutledge, Joel

From: Glenn, Alex
Sent: Tuesday, November 18, 2008 10:54 AM
To: Rutledge, Joel
Subject: RE: Bartow Integrated Project Plan (IPP) Review by Key Stakeholders

Joel:

The IPP looks fine.

Alex

From: Rutledge, Joel
Sent: Tuesday, November 11, 2008 9:54 AM
To: Glenn, Alex
Subject: FW: Bartow Integrated Project Plan (IPP) Review by Key Stakeholders
Importance: High

Alex,

Are you able to send a representative? If not, would you be able to review and provide your feedback to me? I will be in the downtown St Pete offices around lunch time today, if you would like to discuss.

I am especially interested in your opinion on the first paragraph of section 5.0 regarding the 20% reserve requirement with regards to accuracy and appropriateness.

Either way, I am going to need your agreement with the document. Thanks,

Joel

-----Original Appointment-----
From: Glenn, Alex
Sent: Tuesday, November 11, 2008 8:42 AM
To: Rutledge, Joel
Subject: Declined: Bartow Integrated Project Plan (IPP) Review by Key Stakeholders
When: Tuesday, November 11, 2008 4:00 PM-5:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: CR PEF 13A2-1, Cap. 14; MMCCG-34 General (Cap. 10) VNet:770-6964

I will be on a plane at 4pm.

Rutledge, Joel

From: Cox, Chris
Sent: Friday, November 21, 2008 10:01 AM
To: Rutledge, Joel
Subject: Yes, I have reviewed the Bartow IPP and find it to be accurate and clear: Bartow IPP Review

Rutledge, Joel

From: Sorrick, David
Sent: Monday, December 01, 2008 2:08 PM
To: Rutledge, Joel
Subject: RE: Bartow IPP Review Sign-off

In that case, I approve the current IPP.

Thanks.

David

From: Rutledge, Joel
Sent: Monday, December 01, 2008 2:06 PM
To: Sorrick, David
Subject: RE: Bartow IPP Review Sign-off

David,

You can print the sign-off page (page 3), sign it, and send it up to me via inter-office mail. My address is PEB 8. The e-mail response would also suffice.

Thanks,

Joel

From: Sorrick, David
Sent: Monday, December 01, 2008 1:50 PM
To: Rutledge, Joel
Subject: RE: Bartow IPP Review Sign-off

Joel,

How do I physically sign this?

David

From: Rutledge, Joel
Sent: Wednesday, November 12, 2008 11:19 AM
To: Crisp, John Benjamin (Ben); Oliver, Dale; Goff, John; Grant, Eric; Glenn, Alex; Sorrick, David; Portuondo, Javier J; Harris, Glenn
Subject: Bartow IPP Review Sign-off
Importance: High

Thank you for participating in the IPP process for Bartow. Attached is the most recent version of the document with only minor changes from the previous version you received.

Please reply via e-mail using the voting buttons above to indicate you have reviewed the Bartow IPP for accuracy and clarity. If you have concerns about the document, please give me a call to discuss.

I require a response by the end of the week to keep our time table for presentation to senior management. Thanks,