

# Need Study for Electrical Power Plant 2007

040206-El



# FPL

## APPENDICES A - D

DOCUMENT NUMBER-DATE

03260 MAR-88

FPSC-COMMISSION CLERK

**Appendix A**  
**FPL's Interconnections with Other Utilities**

<b>List of FPL Major Interconnections (230 KV and 500 KV)</b>		
<b>FPL</b>	<b>FPC <sup>2/</sup></b>	<b>KV</b>
Poinsett	Holopaw	230
Sanford Plant	North Longwood	230
Sanford Plant	Debary	230
Sanford Plant	Altamonte	230
<b>FPL</b>	<b>TECO <sup>2/</sup></b>	<b>KV</b>
Ringling	Big Bend	230
Manatee	Big Bend	230
Manatee	Ruskin	230
<b>FPL</b>	<b>JEA <sup>2/</sup></b>	<b>KV</b>
Duval	Brandy Branch (3 circuits)	230
FPL120G1	Switzerland	230
<b>FPL</b>	<b>OUC <sup>2/</sup></b>	<b>KV</b>
Cape Canaveral	Indian River (2 circuits)	230
<b>FPL</b>	<b>SECI <sup>2/</sup></b>	<b>KV</b>
Calusa	Lee (2 circuits)	230
Rice	Seminole Plant (2 circuits)	230
Putnam <sup>3/</sup>	Seminole Plant	230
Duval	Seminole Plant	230
<b>FPL</b>	<b>FMPA <sup>2/</sup></b>	<b>KV</b>
Orangedale	Sampson	230
Duval	Greencove	230
FPL120G1	Sampson	230
<b>FPL</b>	<b>SOCO <sup>2/</sup></b>	<b>KV</b>
Duval	Hatch	500
Duval	Thalman	500
Yulee	Kingsland	230
<b>Notes:</b>		
1/ FPL is also interconnected with GRU by one 138 KV transmission line.		
2/ FPC: Florida Power Corporation		
TECO: Tampa Electric Company		
JEA: Jacksonville Electric Authority		
OUC: Orlando Utilities Commission		
SECI: Seminole Electric Cooperative, Inc.		
FMPA: Florida Municipal Power Authority		
SOCO: SouthernCompany		
3/ Bus tiebreaker at Seminole Plant normally open, thereby creating Putnam-Titanium 230 KV line.		

**Appendix B  
FPL's Generating Units**

**I. Existing Utilities Capacities**

Plant Name	Unit No.	Location (County/State)	Unit Type	Fuel		Fuel Transportation		Commercial In-Service Month/Year	Expected Retirement Month/Year	Net Capacity 1/	
				Primary	Alternate	Primary	Alternate			Winter MW	Summer MW
Turkey Point	1	Dade	ST	FO6	NG	WA	PL	Apr-67	Unknown	410	407
	2		ST	FO6	NG	WA	PL	Apr-68	Unknown	403	400
	3		NP	UR	No	TK	No	Nov-72	Unknown	717	693
	4		NP	UR	No	TK	No	Jun-73	Unknown	717	693
Cutler	1 to 5	Dade	IC	FO2	No	TK	No	Dec-67	Unknown	12	12
	5		ST	NG	No	PL	No	Nov-54	Unknown	70	68
Lauderdale	6	Broward	ST	NG	No	PL	No	Jul-55	Unknown	142	138
	4		CC	NG	FO2	PL	PL	Oct-57	Unknown	465	430
	5		CC	NG	FO2	PL	PL	Apr-58	Unknown	464	429
Port Everglades	1-12	Broward	GT	NG	FO2	PL	PL	Aug-70	Unknown	509	420
	13-24		GT	NG	FO2	PL	PL	Aug-72	Unknown	509	420
	1		ST	FO6	NG	WA	PL	Jun-60	Unknown	222	221
Riviera	2	Palm Beach	ST	FO6	NG	WA	PL	Apr-61	Unknown	222	221
	3		ST	FO6	NG	WA	PL	Jul-64	Unknown	392	390
	4		ST	FO6	NG	WA	PL	Apr-65	Unknown	403	401
	1-12		GT	NG	FO2	PL	PL	Aug-71	Unknown	509	420
Martin	3	Martin	ST	FO6	NG	WA	PL	Jun-62	Unknown	283	281
	4		ST	FO6	NG	WA	PL	Mar-63	Unknown	286	284
St. Lucie	1	St. Lucie	ST	NG	FO6	PL	PL	Dec-80	Unknown	830	828
	2		ST	NG	FO6	PL	PL	Jun-81	Unknown	829	821
	3		CC	NG	No	PL	No	Feb-94	Unknown	495	471
	4		CC	NG	No	PL	No	Apr-94	Unknown	496	472
	8 A & B		GT	NG	FO2	PL	PL	Jun-01	Unknown	362	314
Cape Canaveral	1	Brevard	NP	UR	No	TK	No	May-76	Unknown	853	839
	2		NP	UR	No	TK	No	Jun-83	Unknown	726	714
Sanford	1	Volusia	ST	FO6	NG	WA	PL	Apr-65	Unknown	410	407
	2		ST	FO6	NG	WA	PL	May-69	Unknown	410	407
Putnam	3	Putnam	ST	FO6	NG	WA	PL	May-59	Unknown	142	138
	4		ST	FO6	NG	WA	PL	Jul-72	Unknown	1,074	940
	5		ST	FO6	No	WA	No	Jul-73	Unknown	1,074	940
	1		CC	NG	FO2	PL	WA	Apr-78	Unknown	286	249
	2		CC	NG	FO2	PL	WA	Aug-77	Unknown	286	249

**Notes:**

1/ These ratings are peak capability

2/ Total capability is 839/853 MW. Capabilities shown represent the company's share of the unit and exclude the Orlando Utilities Commission (OUC) and Florida Municipal Power Agency (FMPA) combined portion of 14.89%

**Appendix B  
FPL's Generating Units**

**I. Existing Utilities Capacities**

Plant Name	Unit No.	Location (County/State)	Unit Type	Fuel		Fuel Transportation		Commercial In-Service Month/Year	Expected Retirement Month/Year	Net Capability 1/	
				Primary	Alternate	Primary	Alternate			Winter MW	Summer MW
Fort Myers	2	Lee	ST	FO6	No	WA	No	Jul-69	Unknown	1,610	1,423
	1-12		GT	FO2	No	WA	No	May-74	Unknown	380	648
	3		CT	NG	FO2	PL	PL	Jun-01	Unknown	769	328
Manatee	1	Manatee	ST	FO6	No	WA	No	Oct-76	Unknown	821	814
	2		ST	FO6	No	WA	No	Dec-77	Unknown	821	814
St.John River 3/	1	Duval	BIT	BIT	No	RR	No	Mar-87	Unknown	130	127
	2		BIT	BIT	No	RR	No	May-88	Unknown	130	127
Scherer 4/	4	Georgia	BIT	BIT	No	RR	No	Jul-89	Unknown	666	658
Total System as of December 31, 2003 =										<b>20,335</b>	<b>19,056</b>

**Notes:**

1/ These ratings are peak capability

2/ Total capability is 839/853 MW. Capabilities shown represent the company's share of the unit and exclude the Orlando Utilities Commission (OUC) and Florida Municipal Power Agency (FMPA) combined portion of 14.89%

3/ The net capability rating represent Florida Power & Light Company's share of St.Johns River Park Unit No. 1 and 2, excluding Jacksonville Electric Authority (JEA) share of 80%; SJRRP receives coal by water (WA) in addition to rail.

4/ These ratings represent Florida Power & Light Company's share of Scherer Unit No. 4, adjusted for transmission losses.

**Appendix B**

**II. Generating Facility Changes/Additions through 2007**

Plant Name	Unit No.	Location (County)	Unit Type	Fuel		Fuel Transportation		Construction Start Date Month/Year	Commercial In-Service Month/Year	Expected Retirement Month/Year	Net Capacity 1/, 2/	
				Primary	Alternate	Primary	Alternate				Winter MW	Summer MW
<b>2004</b>												
Turkey Point	1	Dade County	ST	FO6	NG	WA	PL	Unknown	Jun-04	Unknown	(4)	(4)
Lauderdale	4	Broward County	CC	NG	FO2	PL	PL	Unknown	Jun-04	Unknown	(3)	(3)
Port Everglades	4	City of Hollywood	ST	FO6	NG	WA	PL	Nov-03	Jun-04	Unknown	3	2
Riviera	3	City of Riviera Beach	ST	FO6	NG	WA	PL	Unknown	Jun-04	Unknown	1	1
Martin	1	Martin County	ST	NG	FO6	PL	PL	Unknown	Jun-04	Unknown	---	4
Martin	2	Martin County	ST	NG	FO6	PL	PL	Unknown	Jun-04	Unknown	(17)	(4)
Martin	3	Martin County	CC	NG	No	PL	No	Unknown	Jun-04	Unknown	1	6
Martin	4	Martin County	CC	NG	No	PL	No	Unknown	Jun-04	Unknown	1	6
Martin	8	Martin County	CT	NG	FO2	PL	PL	Unknown	Jun-04	Unknown	1	8
Cape Canaveral	1	Brevard County	ST	FO6	NG	WA	PL	Unknown	Jun-04	Unknown	(4)	(4)
Cape Canaveral	2	Brevard County	ST	FO6	NG	WA	PL	Unknown	Jun-04	Unknown	(4)	(4)
Sanford	4	Volusia County	CC	NG	No	PL	No	Apr-04	Jun-04	Unknown	14	13
Sanford	5	Volusia County	CC	NG	No	PL	No	Nov-03	Jun-04	Unknown	14	13
Manatee	1	Manatee County	ST	FO6	No	WA	No	Unknown	Jun-04	Unknown	(4)	---
Manatee	2	Manatee County	ST	FO6	No	WA	No	Unknown	Jun-04	Unknown	(4)	---
Fort Myers	2	Lee County	CC	NG	No	WA	No	Apr-04	Jun-04	Unknown	15	46
Fort Myers	3	Lee County	CC	NG	No	WA	No	Apr-04	Jun-04	Unknown	(5)	6
Fort Myers CT		Lee County	CT	NG	FO2	PL	PL	Unknown	Jun-04	Unknown	16	(12)
<b>2005</b>												
Pt Everglades	2	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Mar-05	Unknown	---	(1)
Manatee Combined Cycle	3	Manatee County	CC	NG	FO2	PL	PL	Jun-03	Jun-05	Unknown	---	1,107
Martin Combined Cycle	8	Martin County	CC	NG	No	PL	No	Jun-03	Jun-05	Unknown	---	1,107
Martin Combustion Turbine Conv.	8A	Martin County	CT	NG	FO2	PL	PL	Jun-99	Jun-01	12/1/2004	(182)	(161)
Martin Combustion Turbine Conv.	8B	Martin County	CT	NG	FO2	PL	PL	Jun-99	Jun-01	12/1/2004	(182)	(161)
<b>2006</b>												
Pt Everglades	2	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Mar-05	Unknown	(1)	---
Pt Everglades	1	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Sep-05	Unknown	(1)	(1)
Manatee Combined Cycle	3	Manatee County	CC	NG	FO2	PL	PL	Jun-03	Jun-05	Unknown	1,201	---
Martin Combined Cycle	8	Martin County	CC	NG	FO2	PL	PL	Jun-03	Jun-05	Unknown	1,198	---
<b>2007</b>												
Pt Everglades	3	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Mar-07	Unknown	---	(1)
Pt Everglades	4	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Sep-06	Unknown	(1)	(1)
Turkey Point CC	5	Dade County	CC	NG	FO2	PL	PL	Jan-05	Jun-07	Unknown	---	1,144

**Notes:**

1/ The Winter Total MW value consists of all generation additions and changes achieved by January. The Summer Total MW value consists of all generation additions and changes achieved by July. All other MW will be picked up in the following year. This is done for reserve margin calculation.

2/ All MW differences are calculated based on using IRP2003 Submittal (for the year 2003) as the base for all other years. period for repowering efforts.

## Appendix B

### FPL List of Abbreviations Used in FPL Forms

Reference	Abbreviation	Definition
<b>Unit Type:</b>	IC	Internal Combustion
	NP	Nuclear Power
	ST	Steam Unit
	GT	Gas Turbine
	CT	Combustion Turbine
	CC	Combined Cycle
	BIT	Bituminous Coal
<b>Fuel Type:</b>	UR	Uranium
	NG	Natural Gas
	FO6	#4, #5, #6 Oil (Heavy)
	FO2	#1,#2, or Kerosene Oil
	BIT	Bituminous Coal
	No	None
<b>Fuel Transportation:</b>	TK	Truck
	RR	Railroad
	PL	Pipeline
	WA	Water
	No	None

## Appendix C

### Computer Models used in FPL's Resource Planning

#### **TIGER**

TIGER, the "Tie Line Assistance and Generation Reliability" program, is a model originally developed by Florida Power Corporation. The model has been modified by FPL and is used to determine the magnitude and the timing of FPL's resource needs. The system reliability analyses performed by TIGER are based on three planning criteria: minimum Summer reserve margin, minimum Winter reserve margin, and a maximum loss-of-load probability (LOLP) of 0.1 days/year. (In regard to the minimum reserve margins, FPL used as criterion of 15% until the Summer of 2004 when both the Summer and Winter minimum criteria switch from 15% to 20%.)

TIGER is a program capable of modeling two areas. FPL models its service territory (and its connections to other utilities) as a single area. The expected assistance levels from other utility systems are modeled as an additional generator within FPL's service territory.

TIGER performs the calculation of excess firm capacity around the annual system peak (reserve margin). It performs these calculations for the Winter peak (January) and the Summer peak (August). TIGER checks the Winter/Summer reserve margin to determine if additional capacity is needed to meet FPL's reserve margin criteria.

In addition, TIGER performs the calculation of LOLP by looking at the peak demand for each day of the year, while taking into consideration the unavailability of generators due to maintenance or forced outages. Therefore, 365 daily peaks (366 for leap years) are used to calculate annual LOLP values.

## Appendix C

### Computer Models used in FPL's Resource Planning

#### EGEAS

EGEAS is a production costing, generation expansion program developed under Electric Power Research Institute (EPRI) sponsorship and maintained by Stone & Webster. EGEAS, "Electric Generation Expansion Analysis System", is used in the development of FPL's generation expansion plans and to perform economic analyses of the resource plans.

EGEAS develops the optimum expansion plans in terms of two objective functions: present worth of revenue requirements and levelized average system rates (\$/MWh). The output details the type, size, and installation date of each demand side management and supply side alternative. EGEAS can handle conventional generating alternatives such as fossil-fueled units, combustion turbines, and nuclear units. It can also handle other non-generating alternatives such as demand side management programs.

#### MetrixND

MetrixND is an advanced statistics program for analysis and forecasting of time-series data that is stored in Excel or Access databases. This statistical package is used to develop the regression models to forecast sales, net energy for load and peak demand.

#### Residential Sales Regression Model

Residential energy sales are forecast by multiplying the projected residential use per customer by the projected number of residential customers. A regression model is used to project the electric usage per customer. The regression model

## Appendix C

### Computer Models used in FPL's Resource Planning

utilizes the following explanatory variables: real residential price of electricity, Florida real per capita income, and Cooling and Heating Degree Days.

#### **Commercial Sales Regression Model**

The commercial sales forecast is also developed using a regression model. The regression model utilizes the following explanatory variables: Florida's commercial employment, commercial real price of electricity, Cooling Degree Days, and an auto-regressive term.

#### **Industrial Sales Linear Multiple Regression Model**

Industrial sales were forecasted using a linear multiple regression model. The linear multiple regression model utilizes the following explanatory variables: Florida manufacturing employment, industrial real price of electricity, and a dummy variable for economic recessions.

#### **Net Energy for Load (NEL) Annual and Monthly Econometric Models**

An annual econometric model is developed to produce a Net Energy for Load (NEL) forecast. The explanatory variables used in the model are the following: the real price of electricity, Heating and Cooling Degree Days, Florida non-agricultural employment and an auto-regressive term.

The monthly model is similar except the economic variable utilized is Florida's real per capita income.

## Appendix C

### **Computer Models used in FPL's Resource Planning**

The forecasts from the two models are combined to develop the twenty year monthly Net Energy for Load forecast.

#### **System Summer Peak Econometric Model**

The Summer peak forecast is developed using an econometric regression model. This econometric model utilizes the following explanatory variables: total average customers, the real price of electricity, Florida real total personal income, and the maximum peak day temperature.

#### **System Winter Peak Econometric Model**

The Winter peak forecast is developed using the same econometric regression methodology as is used for Summer peak forecasts. The Winter peak model is a per customer model which contains the following explanatory variables: the minimum temperature on the peak day; a weather term which is a ratio of minimum Winter day temperature and heating saturation; and Heating Degree Hours for the prior day as well as for the morning of the Winter peak day. The model also includes an economic variable, which is Florida real total personal income. In addition, a dummy variable is used to capture the effects of larger homes, which is multiplied by the minimum temperature

#### **The Hourly Load Forecast: System load Forecasting "shaper" Program**

Forecasted values for system hourly load for the period 2003 – 2021 are produced using a System Load Forecasting "shaper" program. This model uses 16 years of historical FPL hourly system load data to develop load shapes for weekdays, weekend days, and holidays. The model allows calibration of hourly values where the peak is maintained or where both the peak and minimum load-to-peak ratio is maintained.

**Florida Power & Light Company's**  
**2003 Request for Proposal**

**August 25, 2003**



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# Florida Power & Light Company's

## 2003 Request for Proposal

### Table of Contents

	<u>Page Number</u>
<b>I. Introduction</b>	
A. Purpose of the Request for Proposal	1
B. Important Notices	1
C. Regulatory Background	1
D. Projected Resource Needs	2
E. Fuel Diversity Preference	2
F. Geographical Preference	3
<b>II. Information for Proposers</b>	
A. FPL's "Next Planned Generating Unit"	7
B. Types of Proposals	8
C. Power Purchase Agreement	9
D. Fuels Plan and Tolling Proposals	9
E. Fuel Switching Credit	10
F. Proposer Obligations	11
G. Schedule	13
H. Security Package Requirements	15
<b>III. How to Submit Your Proposal</b>	
A. FPL's RFP Contact Person	18
B. RFP Evaluation Fee	18
C. Proposal Confidentiality	18
D. Pre- Proposal Workshop	19
E. Minimum Requirements	19
F. Proposer Exceptions	26
G. Questions and Completion of the Proposal	27
H. Submitting the Proposal	27

**IV. How Your Proposal Will Be Evaluated**

A. Initial Screening	28
B. Economic Evaluation of Individual Proposals	28
C. Portfolio Development	28
D. Final Economic Analysis	29
E. Non-Economic Evaluation	29
F. Best and Final Offer Evaluation	30
G. Final Selection	30

**V. FPL's Next Planned Generating Unit and Alternative Unit Data**

A. Required Information	31
B. Tables	31

<b>Appendix A: Draft Purchased Power Agreement</b>	A - 1
<b>Appendix B: Evaluation Methodology</b>	B - 1
<b>Appendix C: Explanation of Equity Adjustment</b>	C - 1
<b>Appendix D: Forms to be Completed for Each Proposal</b>	D - 1
<b>Appendix E: FPL Transmission System Related Costs</b>	E - 1
<b>Appendix F: Turnkey Offerings Considerations</b>	F - 1

Attachment One: FPL's 2003 Ten Year Power Plant Site Plan  
Attachment Two: Standard & Poor's Article on Equity Adjustment

## **I. INTRODUCTION**

### **A. Purpose of the Request for Proposals**

Florida Power & Light Company (FPL) issues this Request for Proposals (RFP) for the purpose of identifying and negotiating contracts for firm capacity and energy beginning in 2007 from supply side resources. FPL has sought to accommodate a wide variety of resource options in this RFP and develop a process that results in a selection that provides FPL customers with the greatest value while meeting specified reliability and performance standards. Low price alone will not necessarily result in a successful proposal.

### **B. Important Notices**

In the interest of protecting FPL customers throughout this process, it is important for FPL to clearly identify some specific actions that may be taken. First, FPL reserves the right to accept other than the lowest-priced proposal, to accept a combination of proposals, or to waive any inconsequential non-compliance in any proposal. FPL also reserves the right to reject any/all proposals, to modify or cancel the RFP, refine its cost estimates for FPL's resource options, and refine its estimated need for resource additions during the RFP process. In the event that modifications of FPL's cost estimates are made, remaining Proposers will be given the opportunity to refine their proposals for those items affected by the modifications.

This RFP is not an offer to enter into a contract. It is a solicitation of exclusive firm offers of fixed duration from Proposers. Nothing in this RFP or any communication associated with this RFP shall be taken as constituting an offer or representation between FPL and any other party. Neither issuance of this RFP, nor the entry of FPL into negotiations with any Proposer, will be deemed to create any commitment or obligation on the part of FPL to enter into a binding agreement with any Proposer. Those who submit proposals do so without recourse against FPL or any of its affiliates for either rejection of their proposal(s) or for failure to execute a purchase agreement for any reason.

### **C. Regulatory Background**

The Florida Administrative Code Rule 25-22.082 requires public utilities to issue an RFP prior to filing a petition for determination

of need in accordance with Section 403.519, Florida Statutes. FPL has identified a need for additional capacity in 2007, and the most cost-effective FPL self-build option to meet that need would require a determination of need. This RFP seeks alternatives that can be compared to FPL's self-build options; options that may or may not require a determination of need. This will allow FPL to identify the generation option that best serves the 2007 needs of FPL's customers.

#### **D. Projected Resource Need**

The planning process requires FPL to maintain available generation resources that will satisfy a reserve margin of twenty percent (20%) above the projected firm summer peak for 2007. FPL seeks proposals that would allow FPL to meet this projected firm capacity need requirement in 2007. Proposals will be required to offer the commitment of firm capacity and energy. FPL defines Firm Capacity and Energy as follows:

*"the electric energy and capacity owned or acquired by the Proposer to be made available to FPL pursuant to the RFP on a first call basis and priority as if FPL owned the generating capacity on its own system. Firm Capacity and Energy shall not include any electric generating capacity that another Party, including the Proposer, has a priority to utilize that is superior to that of FPL."*

The approximate megawatt (MW) value of additional firm capacity needed to achieve FPL's 20 % summer reserve margin target for 2007 is 1,066 MW. This MW value represents an update from the information presented in FPL's 2003 Ten-Year Power Plant Site Plan (Site Plan), a copy of which is attached to this document. This update is based on on-going analyses conducted as part of FPL's resource planning work. This value is potentially subject to further change as this work continues. If such changes occur, FPL may choose to acquire more or less capacity than shown above.

#### **E. Fuel Diversity Preference**

FPL's generation supply currently provides significant benefit to our customers through fuel diversification. By developing a system that utilizes nuclear, coal, fuel oil, natural gas and other fuels, FPL is taking steps to control the impact of market price volatility on the average cost of electricity in our service area. Recent

commodity price increases and volatility in natural gas markets demonstrate that despite the low capital cost and emissions benefits associated with natural gas technologies, FPL must continue to pursue diversification of fuel sources balanced with other considerations. To that end, FPL encourages proposals consisting of generation alternatives utilizing fuel sources that help to control exposure of the FPL system average costs to the volatilities of the fuel commodity markets. FPL anticipates that such diversification may be found in currently operating assets using solid or liquid fuels or units currently under development utilizing traditional technologies (e.g.; pulverized coal or Circulating Fluidized Bed coal) or new sources (e.g.; petroleum coke, Liquefied Natural Gas source natural gas, etc.).

Projects that contribute to FPL's system fuel diversity and lower the system average costs will have an advantage in the economic evaluation. The unique aspects of such proposals will also be considered in the full context of the proposed offering during the non-economic evaluation of environmental and technical or operational factors. Proposals involving solid fuel generation that assist FPL in cost-effectively increasing the fuel diversity of the FPL system are encouraged.

#### **F. Geographic Preference**

One of the key considerations in the 2007 need requirement is the growing disparity between load and generating resources in the Southeast<sup>1</sup> area of Florida. This disparity has been created by strong regional load growth without new generating capacity additions in this region since 1993. The Southeast area is the major load center in the State of Florida with load and generation in this area approximating 12,000 MW at peak and 6,500 MW, respectively. The remaining power requirements in the Southeast area are met by transmission facilities providing import capability for power imports originating to the north and west of this area. The import capability into the Southeast area is finite (in the range of 6,000-7,000 MW comprised of about 5,000-6,000 MW from the north and the remaining 1,000 MW from the west). This import capability is generally lower when generation and/or transmission facilities in and around the Southeast area are unavailable (e.g., due to maintenance or forced outage).

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<sup>1</sup> For the purpose of this RFP, "Southeast area" is defined as the region south and east of and including FPL's Corbett substation. The "Southeast Florida Area" is further defined on the Florida OASIS website located at <http://floasis.siemems-asp.com/OASIS\FPL\INFO.HTM>

In recognition of these unique characteristics of the Southeast area, FPL operates the power system to assist required maintenance of generation and transmission facilities while taking into account the possibility of forced outages. A complete description of all transmission integration requirements is provided in Appendix E, Section 3.

Based on the latest available forecasts, the load growth in the Southeast area will continue to increase the imbalance between generation and load to the point where the power system may not be able to be operated reliably. Avoiding this will require a combination of additional generation in and around the Southeast area, and/or substantial transmission upgrades in the next several years. The generation and/or transmission facilities that are chosen will have a cost impact on how existing Southeast Florida generating units are operated. The planning process must also accommodate significant lead times for siting generation and transmission improvements (See Appendices B and E).

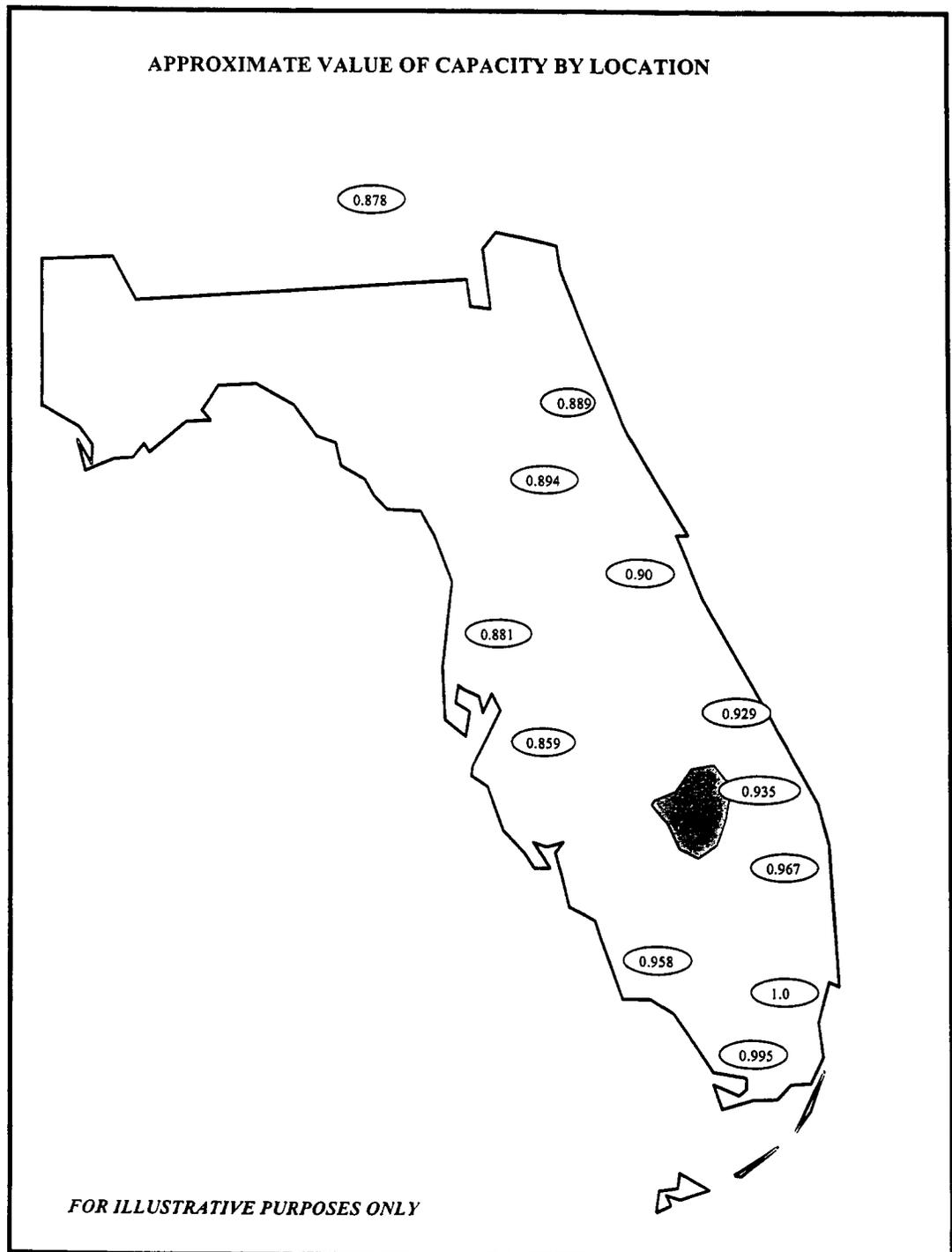
In order to enable reliable operation of the power system in 2007 and beyond, FPL applies a planning standard that ensures the FPL transmission system has sufficient capability to serve FPL customers and meets FPL transmission service obligations consistent with North American Electric Reliability Council (NERC), Florida Reliability Coordination Council (FRCC) and FPL standards.

FPL will also assess the impact that the location of a proposed generation resource has on system transmission losses. Figure I.1 provides an illustrative depiction of how capacity in various geographical locations on the FPL system will have different capacity loss factors. The methodology to assess the impact of losses that will be used in the evaluation of proposals is described in Appendix E.

The values shown in Figure I.1 represent FPL's best available projection of capacity loss factors for various locations in the state of Florida. This projection is provided for illustrative purposes only and should be used solely to indicate the relative desirability and advantages, from a transmission loss perspective, of siting new generation capacity in Southeast Florida. For example, a 100 MW plant located just East of Lake Okeechobee would effectively deliver 93.5 MW to the FPL system during peak conditions, while a similar 100 MW plant located North of Tampa Bay would effectively deliver 88.1 MW. Loss calculations will be performed

for the most competitive portfolios analyzed and those calculations rather than the values shown in Figure I.1 will be used in FPL's economic analyses as discussed in Appendix E.

Figure I.1 Illustrative map of Florida with representative loss factors.



An additional factor involves the option of adding future solid fuel alternatives, and the impact planning choices made today could have on this future desired alternative. Specifically, the most likely site for a future solid fuel facility in Florida would be outside the Southeast area. If generation is not sited in Southeast Florida for the 2007 need, generation that is added in 2007 will consume available transmission capacity into the Southeast region, and future solid fuel generation would have to carry a larger burden of transmission costs to deliver generation into the Southeast region.

FPL has a strong preference for adding new generation capacity in the Southeast area in 2007 based on 1) recognizing the current load-generation imbalance and the associated system losses, 2) understanding the system requirements needed to achieve reliability standards and minimize operating costs, and 3) desiring to maintain future fuel diversity options as viable.

## II. INFORMATION FOR PROPOSERS

### A. FPL's "Next Planned Generating Unit"

Rule 25-22.082, Florida Administrative Code, requires that specific information about FPL's "next planned generating unit" be included in an RFP seeking firm capacity. That specific information is presented in Section V.

In its 2003 Ten Year Site Plan, FPL indicated siting of a new combined cycle (CC) unit at an un-named site would satisfy the 2007 need requirement. This proposed CC unit was based on four combustion turbines (CT's) in combined cycle with four heat recovery system generators and a single steam turbine generator. The new CC unit would add approximately 1,100 MW (summer). Additionally, the new CC unit would have dual fuel capability (distillate) with on-site storage capacity to enable a minimum of 72 hours of full capability operation.

FPL has selected its existing Turkey Point plant site as the site for this new CC unit. Therefore, FPL presents the Turkey Point Combined Cycle plant as the "next planned generating unit" in accordance with the requirements of Rule 25-22.082, Florida Administrative Code. The eligible proposals submitted in response to this RFP will be evaluated against this next planned generating unit.

FPL also plans to evaluate the RFP proposals against and potentially in conjunction with a second FPL self-build option. The additional FPL self-build option is a combination of four simple-cycle combustion turbines (CT's) located at FPL's Turkey Point plant site. This option would not require a need determination or this RFP.

FPL's purpose in identifying and making this second self-build option available for analysis, in addition to its next planned generating unit, is to protect FPL customers by maintaining flexibility in the evaluation process. Inclusion of the option offers another means of creating candidate portfolios to satisfy the 2007 need and include generation sited in the Southeast area. Inclusion also helps to address developments which may occur during the pendency of the RFP. For example, FPL's forecasted need might change during the pendency of the RFP, requiring more or less generation to meet customer needs. In such a circumstance FPL will have the option of being able to analyze all of the generating alternatives that may potentially best serve its customers. The inclusion of this option also provides a portfolio pairing

opportunity for proposals that only partially meet the 2007 need requirement. The evaluation process maintains the ability to identify one or more proposals that are more cost-effective than FPL's next planned generating unit, including portfolios that meet the need requirement when combined with the FPL CT option.

To protect Proposers from potential surprise and to allow them to compete with all FPL self-build options that will be analyzed, FPL has provided the same detailed technical and cost information for the additional FPL self-build option as is provided for FPL's "next planned generating unit" in Section V.

## **B. Types of Proposals**

This RFP is designed to accommodate a wide range of proposals for supply-side generation alternatives from various fuels, technologies, locations and under differing commercial frameworks. For example, FPL may receive proposals for power sales under a Purchase Power Agreement from existing facilities (currently in operation) and newly constructed facilities (greenfield, brownfield, or turnkey offerings). FPL may also receive proposals for the sale of existing or newly constructed facilities, and the structure of these sales could take several forms. Every attempt has been made to accommodate creative variations that may be proposed. Nonetheless, it is conceivable that a Proposer may offer a unique attribute that has not been explicitly considered. In that instance, FPL will work with the Proposer to understand, and if possible, accommodate the unique features of a particular offering.

Proposals offering the sale of an existing power plant or a new construction turnkey offering must include a proposed date of conveyance that would occur between January 1, 2007 and June 1, 2007. FPL will also entertain an alternative that would offer the sale (or option to buy) at a later date, following some period of firm capacity sale (via a Purchased Power Agreement) to FPL from this unit. The purchase price will be set by a pre-determined price submitted in the proposal on Pricing Information Form # 6, Appendix D.

Customary and prudent due diligence will apply to the consideration of acquiring existing assets or turnkey projects. The analysis will commence with a review of the required submittals (See Appendix F for additional requirements specific to turnkey offerings). Asset price and forecasted costs will also be compared to industry benchmarks (such as industry references like RDI/UDI,

or NERC GADS reporting data). Should the proposal become a Finalist, further due diligence will be conducted concurrent to negotiations and will include, but not be limited to, the following areas:

Technical Design	Performance Guarantees
Maintenance	Operations
Material History	Supply Chain/IT
Environmental	Human Resources
Fuels Plan	Transmission Plan
Accounting/Tax	Management
Risk/Mitigation	Project Schedule

**C. Power Purchase Agreement**

For each selected power purchase proposal, FPL expects to enter into a pay-for-performance type power purchase contract. A draft Power Purchase Agreement (PPA) has been included in Appendix A to allow Proposers to understand the general commercial framework that will describe the ongoing relationship of a successful proposal. The PPA draft provided in Appendix A is written from the perspective of a new Combined Cycle generating facility falling under the Florida Electrical Power Plant Siting Act subject to a Determination of Need order from the FPSC. While preserving a balance of risk and benefits, milestones and other relevant terms and conditions will be modified to reflect the characteristics of Facilities that are not subject to the Siting Act.

Proposers should consider the draft PPA contains the key elements FPL considers are necessary. Any proposed revision to the draft PPA must be set forth in the proposal as discussed in Section III.F. Concerns regarding the draft PPA language will be addressed through a negotiation process with Finalists.

**D. Fuels Plan and Natural Gas Tolling Proposals**

FPL will evaluate the economics of each proposal based on the current "most likely" FPL Fossil Fuel Price and Natural Gas Availability Forecast to be issued in September 2003. This will be provided to participants when available in mid-September. The following items are contained in the FPL fuels forecast:

- Delivered natural gas prices into the FGT and Gulfstream pipeline systems.
- FGT and Gulfstream firm and non-firm transportation costs.

- Residual and distillate fuel oil commodity prices and transportation costs for various sulfur grades and delivery points in Florida.
- Delivered coal and petroleum coke prices.

Proposals should therefore designate the fuel type and, for natural gas, the fuel source (FGT or Gulfstream) and delivery point to be used, including evidence of feasibility (letter of intent or other indicative planning documents) to deliver the required volume, at the required pressure, to operate the proposed unit(s) at capacity. For coal and petroleum coke, please indicate the mode(s) of transportation FPL should assume in the evaluation. Proposals that require pricing for commodity or transportation of fuels other than that outlined in the FPL Fossil Fuel Price and Natural Gas Availability Forecast must provide such commodity and transportation pricing forecasts. In order for a Proposer's forecast to be used in the economic evaluation the Proposer must guarantee such pricing with the guarantee supported by a creditworthy entity to the satisfaction of FPL. Alternatively, or in the absence of such a guarantee and appropriate credit support, the proposal will be evaluated using the most appropriate commodity and transportation costs as determined by FPL.

Natural gas proposals (including those based on natural gas tolling arrangements) must be sure the price includes all capital costs to construct, and all O&M costs to maintain, any pipeline laterals(s) necessary to deliver the full fuel requirements, at the required pressure, from the Proposer-designated Fuel Delivery Point on the natural gas pipeline to the generating unit. In addition, proposals shall include all capital costs associated with any interstate mainline improvements required to deliver the full fuel requirements, at the required pressure, to the Proposer-designated Fuel Delivery Point. FPL will develop and include in the evaluation, for all projects requesting tolling, the estimated expense for fuel transportation to the Fuel Delivery Point on the natural gas pipeline.

#### **E. Fuel Switching Credit**

FPL recognizes that certain assets may provide short-term fuel cost volatility management benefits by their inherent capability to operate on both natural gas and residual fuel oil. These assets provide an opportunity whose value is dependent upon a number of external factors that have historically demonstrated their own degree of uncertainty. These factors include individual commodity prices, commodity price correlation, transportation costs, unit

performance, maintenance costs, emissions and others. FPL seeks to recognize the potential value this fuel switching capability may offer to FPL customers in the evaluation process.

In order to recognize the potential value offered by an asset's fuel switching capability, the economic evaluation will include a Fuel Switching Credit (FSC) for any asset that offers the capability of switching between natural gas and residual fuel oil; and that opportunity is to the benefit of FPL customers. Assets eligible for the FSC would be sales of existing assets, turnkey offerings, and tolling arrangements. The FSC will be determined by using a standard option model with up-to-date assumptions for the normal strike price, underlying value, interest rates, time to expiration and term consistent with each proposal. Additionally, the model will incorporate the forecast volatility, correlations of the two fuels and the heat rate of the plant. Using current forecasts and an 11,000 Btu/kWh (HHV) heat rate, the FSC was estimated to be approximately \$0.208/kW-mo. This value will be developed for each eligible proposal based on the current and applicable information. The value will then be deducted from unit's bid capacity price for the purpose of the economic evaluation for the term of the proposal.

## **F. Proposer Obligations**

### **1) Regulatory Compliance**

The Proposer is responsible for acquiring and maintaining compliance with all licenses, permits, and other regulatory approvals (including environmental) that will be required by current or future federal, state, or other local government laws, regulations, or ordinances to successfully implement the proposal. (For a selected proposal that requires new power plant construction falling under the Florida Electrical Power Plant Siting Act ("Siting Act"), FPL will be a co-applicant in a Determination of Need filing.) FPL will cooperate with any selected Proposer(s) to provide information or such other assistance as may reasonably be necessary for the Proposer(s) to satisfy licensing and regulatory requirements. The selected Proposer(s) shall fully support all of FPL's regulatory requirements associated with this potential capacity and energy arrangement.

A proposal that requires new power plant construction falling under the Siting Act will have to demonstrate a permitting and construction schedule that allows the new plant to be in commercial operation on or before FPL's needed in-service date of

June 1, 2007. Please see Appendix D for a discussion of Form # 7 that requests, in part, this permitting and construction schedule information.

## **2) Development Activities**

The Proposer is completely responsible for the location, acquisition, and development of the plant site and other land or infrastructure that is needed for new generating units.

The Proposer is also completely responsible for securing, locating, or guaranteeing any emissions allowances, credits, or offsets which may be required by the Title IV Clean Air Act Amendments or other federal, state, or local requirements to allow the construction and/or operation of the proposed facility. Proposers whose proposals offer the sale of an existing power plant(s) must secure the emission allowances, credits, or approvals necessary to operate the facility until ownership of the facility and the emission allowances, credits, or approvals are transferred to FPL.

## **3) Project Execution**

The Proposer also will be completely responsible for ensuring that the implementation of any and all parts of the proposal is carried out in full compliance with any changes, modifications, or additions to laws, regulations, ordinances, licenses, permits, and other regulatory approvals (including environmental) that affect the proposal. FPL shall not bear any price or cost risk associated with any such changes, modifications, or additions, except in the case of proposals offering the sale of an existing power plant(s) to the extent the contract for conveyance expressly places such risk(s) on FPL upon transfer of ownership of the facility.

## **4) Project Funding and Costs**

All Proposers are completely responsible for all financing activities related to the project and for engineering, design, procurement and construction of all aspects of the facility. These include, but are not limited to, the power block, environmental control systems, fuel delivery systems, and electrical interconnections, etc. The Proposer is also completely responsible for sourcing and contracting for a reliable fuel supply (unless the proposal is a tolling proposal) and any other activity required for the reliable delivery of firm capacity and energy to FPL at the identified delivery or interconnection point. All costs associated with the design, construction, operation, and maintenance of the

transmission interconnection facilities (including but not limited to generator step-up transformers and high-voltage breakers) associated with the delivery of firm capacity and energy to FPL will be the responsibility of the Proposer.

#### **5) Interconnection and Transmission Service**

The Proposer must secure with the appropriate transmission provider(s) all needed transmission facilities and arrangements required to deliver the firm capacity and energy to the FPL transmission system on a firm long-term basis for the entire term of the proposal. FPL prefers proposals for facilities that are directly connected to FPL's transmission system, although any proposal with firm transmission will be considered.

#### **6) Cooperation**

Any selected Proposer(s) agrees by the act of submitting a proposal in response to this RFP to file, as needed, an application under the Siting Act and to fully support, as requested by FPL, any FPL regulatory proceeding(s) related to firm capacity purchases and/or sale of an existing power plant(s) emanating from this solicitation. Proposers shall be responsible for all of Proposer's costs to participate in the necessary regulatory proceedings.

#### **G. Schedule**

FPL envisions that the schedule for the RFP process will be as described in Table II.1. FPL reserves the right to change the schedule at its sole discretion. If a schedule change occurs before the Proposal Due Date, parties that have received the RFP will be notified of the change electronically or in writing.

**Table II.1 Schedule of Milestones for 2003 RFP Process**

<b>Milestone</b>	<b>Date</b>	<b>Comments</b>
• RFP Pre-Release Meeting	Aug 21, 2003	Discuss RFP Requirements in person and by teleconference.
• Release RFP Document	Aug 25, 2003	The RFP document will be issued to parties requesting a copy.
• Pre-Proposal Workshop	Sept 2, 2003	A workshop will be held in Miami to discuss the RFP and answer questions from potential Proposers.
• Cutoff Date for RFP Questions	Sept 23, 2003	-----
• Proposals Due	Oct 24, 2003	Proposals, together with the applicable RFP fee, must be received by the RFP Contact Person by 4:00 p.m. EDT on this date.
• Short List Announcement	Jan 15, 2004	Proposals that make the Short List will be considered Finalists.
• Permitting Activity Commences	Jan 15, 2004	FPL recommends Finalists commence permitting process
• Best and Final Offers Due	Jan 26, 2004	Best and Final Offers(BAFO) due from all Finalists.
• Initial Negotiations	Jan 26, 2004 to Feb 16, 2004	Best and Final Offers (BAFO) reviewed and Initial Negotiations proceed as needed.
• Selection Announced	Feb 16, 2004	Negotiations continue with selected Finalists as needed unless Self-Build option is indicated by evaluation.
• Deadline for Completion of Contract Negotiations (if required)	May 13, 2004	Contract negotiations completed.
• Latest Date to file for Need Determination.	Jun 23, 2004	Need Determination filing with the FPSC for selected option(s), if necessary.

Note: The above dates are goals, however all dates are subject to change to accommodate unforeseen delays or required procedural actions.

## H. Security Package Requirements

FPL has developed security requirements that will provide protection in the event a Proposer fails to deliver the contracted firm capacity and energy as required. The Completion Security addresses the risk associated with a new construction project's ability to deliver capacity on the scheduled Capacity Delivery Date. The Performance Security addresses performance risk from the commencement of contracted deliveries through the duration of the contract. Section 3.2 of Appendix A provides specific details related to drawdown of the security amounts.

### 1) Completion Security for Proposals Supported by New Construction

- a) Proposer must provide Completion Security in an amount equal to \$188,000 per MW of capacity bid.
- b) Completion Security must be posted upon execution of the Purchase Power Agreement and remain in place up to and including the Capacity Delivery Date.
- c) During the facility construction period, the selected supplier must provide evidence they meet the Project Milestones Schedule specified in Section III. E 13. Failure to meet these milestones could result in termination of the Purchase Power Agreement and payment of liquidated damages.

### 2) Performance Security for Proposals Supported by New Construction

- a) Proposer must provide Performance Security in an amount equal to \$95,000 per MW of capacity bid.
- b) Performance Security must be posted upon commencement of commercial operations for a proposal supported by new construction. Performance Security must be provided through the duration of the contract.

### 3) Performance Security for Proposals from Existing Facilities

- a) Proposer must provide Performance Security in an amount equal to \$95,000 per MW of capacity bid.
- b) Performance Security must be posted upon execution of the Purchase Power Agreement and remain in place through the duration of the contract.

**4) Form of Security**

A minimum of 10% of the Completion Security and Performance Security must be provided in the form of cash in U.S. Dollars, U. S. Government Bonds deposited with an Issuer acceptable to FPL, or an irrevocable standby Letter of Credit (LOC) drawn on an Issuer acceptable to FPL. Remaining security requirements may be provided with a combination of cash, Letter Of Credit (LOC) or a company guarantee based on the Proposer's credit quality and tangible net worth.

A Supplier Credit Limit will be calculated for each Supplier or Guarantor of Supplier based on the Company's unsecured debt rating and tangible net worth as follows:

<b>Unsecured Debt Rating</b>	<b>% of Tangible Net Worth</b>
AAA+/Aaa1 to AA-/Aa3	15%
A+/A1 to A-/A3	10%
BBB+/Baa1 to BBB/Baa2	5%
BBB-/Baa3 and below or unrated	0%

Completion Security and Performance Security in an amount up to the Supplier Credit Limit shall be in the form of a company guarantee, an affiliate or parent company guarantee if relying on affiliate or parent company credit, cash in U.S. Dollars, U. S. Government Bonds deposited with an Issuer acceptable to FPL, or an irrevocable standby LOC drawn on an Issuer acceptable to FPL.

Completion Security and Performance Security in excess of the Supplier Credit Limit shall be in the form of cash in U.S. Dollars or U.S. Government Bonds deposited with an Issuer acceptable to FPL or an irrevocable standby LOC drawn on an Issuer acceptable to FPL.

The Supplier Credit Limit shall be recalculated and the form of Completion and Performance Security adjusted quarterly based on the Proposer's most recent financial statements and within 5 business days of Proposer or seller becoming aware of any change in the Proposer's unsecured debt ratings.

**5) Definitions**

Supplier Credit Limit – The maximum credit exposure FPL will accept from a Proposer in the form of a guarantee from an investment grade entity. Security requirements in excess of the Supplier Credit Limit must be in the form of Cash or a LOC.

Tangible Net Worth = Net worth per most recent audited financial statements of entity providing credit support less goodwill and intangible assets.

### III. HOW TO SUBMIT YOUR PROPOSAL

#### A. FPL's RFP Contact Person

All proposals submitted for this RFP, and all inquiries or communications regarding the RFP, are to be directed to:

Steve Scroggs  
RFP Contact Person  
Florida Power & Light Company  
Resource Assessment & Planning Department  
9250 West Flagler Street  
Miami, Florida 33174  
e-mail: [steven\\_scroggs@fpl.com](mailto:steven_scroggs@fpl.com)  
Telephone: (305) 552-4199  
Fax: (305) 552-2716

#### B. RFP Evaluation Fee

The RFP Evaluation Fee is a cost-based value reflecting the costs incurred for each proposal evaluated during previous RFP's. In order for a proposal to be evaluated, a non-refundable check of \$10,000 made out to "Florida Power & Light Company" must be submitted to the FPL RFP Contact Person at the same time and date (no later than 4:00 p.m. EDT on October 24, 2003) as the proposal. The RFP Evaluation Fee is based on the cost anticipated to evaluate the proposals submitted in response to this RFP and is consistent with past experience. If more than one proposal is submitted by a specific Proposer, then a separate, non-refundable \$10,000 fee must accompany each proposal. Proposals deemed ineligible or otherwise non-responsive after an initial review will not be evaluated further and 75% of the fee will be refunded.

One proposal consists of one total capacity level, one length of service (e.g., 10 years), one price and one location. Proposals with variations of price, total capacity level, term-of-service, location, etc. require a specific analytical effort, and therefore will constitute separate proposals. As such each must be accompanied by a separate, non-refundable \$10,000 fee.

#### C. Proposal Confidentiality

FPL will take reasonable precautions and use reasonable efforts to protect proprietary and confidential information contained in a proposal, provided that such information is clearly identified by the

Proposer as Proprietary and Confidential on the page(s) on which the information appears.

To clearly identify confidential information, the Proposer must (1) stamp each such page with "Confidential Information" and (2) highlight/shade the confidential information on the pages stamped "Confidential Information". (A blanket statement that an entire page or proposal is proprietary and confidential will not be considered clear identification.)

FPL will attempt to maintain the confidentiality of the clearly identified proprietary and confidential information in the proposals. **NOTICE: All proposal information will be disclosed to the Florida Public Service Commission and FPL may deem it necessary to disclose, pursuant to order or confidential agreement, all or part of the information to third parties, including other Proposers, in regulatory and/or legal proceedings.**

**D. Pre-Proposal Workshop**

FPL will hold a Pre-Proposal Workshop in Miami on September 2, 2003, beginning at 9:00 a.m. EDT at the Hilton – Miami Airport (5101 Blue Lagoon Drive, Miami, FL). The workshop will conclude by 3 p.m. EDT. The purpose of the Pre-Proposal Workshop is to assist Proposers in understanding the submittal requirements.

**E. Minimum Requirements**

All proposals must satisfy all of the Minimum Requirements listed below, except where specifically noted. Failure of a proposal to satisfy the Minimum Requirements will be grounds for determining a proposal ineligible. However, FPL reserves the right to waive inconsequential non-compliance with these Minimum Requirements. Proposals determined to be ineligible will be returned to the Proposer along with a refund of 75% of the RFP Fee.

**1) Proposal Submission Requirements**

All proposals must be received by the FPL RFP Contact Person by 4:00 p.m. EDT on October 24, 2003 (the Proposal Due Date and Time). Proposers must submit five (5) bound hard copies, plus an electronic copy of the completed forms on a CD (supplied with the

RFP), by the Proposal Due Date and Time. The RFP Evaluation Fee must be received by this Proposal Due Date and Time.

All required forms and the information requested on these forms must be submitted. FPL may, but is under no obligation to, contact a Proposer to request that omitted or incomplete information is provided. Any attempt by a Proposer to disclaim generally the terms and conditions of this RFP and/or PPA without stating specific exceptions and alternative language will be grounds for determining a proposal to be incomplete, and therefore ineligible.

Proposer must comply with the Publication Notice requirement of Rule 25-22.082, Florida Administrative Code which requires a notice to be published in a newspaper of general circulation in each county in which the participant proposes to build an electrical power plant. The notice shall be at least one-quarter of a page and shall be published no later than 10 days after the Proposal Due Date. The notice shall state that the participant has submitted a proposal to build an electrical power plant, and shall include the name and address of the participant submitting the proposal, the name and address of the public utility that solicited the proposals, and a general description of the proposed power plant and its location. A copy of the notice must be submitted to FPL within 10 days of publication.

## **2) Term of the Proposal(s)**

The firm capacity and energy offered by the proposal must commence no later than June 1, 2007. The acceptable term lengths for proposals are established recognizing factors that are specific to the source of the proposals.

- a) The minimum term length for proposals offering system sales or proposals supported by new or existing assets that do not require a need determination is one (1) year.
- b) The minimum term length for proposals offering PPA sales from a new asset requiring a need determination is ten (10) years.
- c) The minimum term length for proposals requiring a natural gas Tolling Agreement is fifteen (15) years.
- d) The maximum term length of any proposal type is twenty-five (25) years.

## **3) Firm Nature of Proposal**

- a) Proposals must offer year-round firm capacity.

- b) The firm capacity and energy must be fully dispatchable under the operational control of FPL, subject only to the operating capabilities of the facility for proposals other than system sales.
- c) Proposals supported by identifiable units (other than system sales) must commit all of the facility output, including any ancillary service products.
- d) The firm capacity and energy delivery must commence by June 1, 2007 and remain as firm capacity and energy throughout the term of the proposal offer.

**4) Resource Block Size (MW)**

The minimum resource block size that FPL will consider in a proposal is 50 MW. Exceptions to this minimum requirement will be made for proposals based on Qualifying Facilities. The maximum block size that will be considered from a single proposal will be 1,225 MW (Summer), to maintain the solicitation consistent with the 2007 need.

**5) Financial Viability and Security Requirements**

- a) For proposals supported by newly built generation (greenfield, brownfield, turnkey) Proposer or guarantor of Proposer must possess a senior unsecured debt rating of no less than "BBB" from Standard & Poor's or "Baa2" from Moody's Investors Service with a "stable" outlook. In submitting a proposal, a Proposer agrees to provide Completion Security and Performance Security described in section II.H.
- b) For proposals supported by existing facilities, Proposer must agree to provide the Performance Security described in section II.H.
- c) Proposer must certify that there are no pending legal or civil actions that would affect the ability of the Proposer and/or its guarantor to maintain the above criteria.

**6) Proposal Price Requirements**

A proposal's prices must include any and all costs that FPL will be expected to pay to the Proposer for delivered capacity and energy. This includes without limitation:

- a) The costs of all equipment, development, design, construction, commissioning and all costs of meeting and

maintaining compliance with current environmental regulations.

- b) If the fuel is natural gas the proposal price must include any required capital and O&M costs from the Fuel Delivery Point to the facility burner tip. This requirement applies to PPA, Asset Sales or Tolling Agreements. If a proposal offers to provide its own fuel supply, it must also include all costs for gas transportation and commodity costs as well as the assumed pipeline system (FGT, Gulfstream, etc.) designated to deliver the gas to the plant site. The proposal must also guarantee these costs and demonstrate credit support for the guarantee that is satisfactory to FPL.
- c) FPL will not accept any proposals that require FPL to secure transmission rights, as this is a responsibility of the Proposer. Proposed prices must include all costs of delivering capacity and energy to the FPL system Receipt Point (Transmission integration costs, plus the costs of energy and capacity losses within FPL's system will be developed by FPL during the economic analysis of specific proposals and should not be included in the initial proposal price.) Proposers should note that prior to operation under an RTO or ISO open access tariff, the FPL Receipt Point is defined as the location where the facility (or a third party transmission system, if the facility is not in FPL territory) connects with the FPL system. Following the implementation of an RTO or ISO, the Receipt Point is defined as the load bus or group of buses that represents FPL's electrical load center (i.e., North Broward County or South Palm Beach County service area), to be specifically designated solely by FPL at the time of the implementation of an RTO or ISO

The proposed prices must be presented in the format specified in Appendix D, Section F. and/or Appendix D, Section G. Prices for firm capacity and energy purchases, or for projects that initially offer purchases prior to sale of a new or an existing power plant to FPL, must be provided on Pricing Information Form # 5. Prices for the sale of a new or an existing power plant must also be provided on Pricing Information Form # 6.

#### **7) Permit and Authorization Feasibility**

The Proposer must demonstrate that there are no significant barriers to obtaining the necessary regulatory and governmental permits and authorizations to execute or implement the proposed project on a schedule that meets the June 1, 2007 date. All

proposals will be subject to the approval of the appropriate Regulatory Authorities.

The Proposer is responsible for acquiring and maintaining compliance with all licenses, permits, and other regulatory approvals (including environmental) that will be required by current or future federal, state, or other local government laws, regulations, or ordinances to successfully implement the proposal.

#### **8) Binding Nature of Proposal**

Proposal(s) must remain valid and binding offers for 120 days from the submittal date and cannot be modified, except to be withdrawn in full or modified in response to a modification of FPL information describing the FPL self-build generating unit. Clarifications requested by FPL are not considered modifications. **Indicative bids or bids not certified by an Officer of the proposing entity are not eligible.**

Once selected for the Short List, the Proposer will be asked to provide a Best and Final Offer (BAFO). Such offer must be valid and binding for 180 days from the date of Short List publication.

#### **9) Identifiable Capacity Source**

The proposal's firm capacity and energy must be from a specific power plant(s) that is clearly identified in the proposal or from a system sale. If the firm capacity and energy are from a system sale, a clear explanation of how the MW are to be obtained and delivered respecting Florida Public Service Commission (FPSC) reserve margin requirements (or the requirements of other state agencies as appropriate) must be given in the proposal on Form # 4.

#### **10) Minimum Experience of Proposer**

Proposals supported by new construction must have successfully executed the development, permitting, design, procurement, construction, and commissioning of a project similar to that proposed. The operating entity must have over five years of demonstrated experience in the successful and reliable operation of facilities employing the technology similar to that proposed. The success and reliability of operations may be demonstrated through operational records and/or NERC GADS reporting data as requested in Appendix D, Form # 4.

**11) Dual Fuel Capability**

All newly built gas-fired generation proposals must include the capability to operate on distillate fuel oil as a secondary fuel to satisfy reliability and continuity concerns. Specifically, the proposed price for newly built gas-fired generation unit(s) shall reflect the necessary equipment to enable a minimum of seventy-two (72) hours of continuous firing of the unit(s) on the secondary fuel at full capacity supplied from on-site storage. The unit(s) must be able to start up on the secondary fuel. Additionally, the unit(s) must be able to make the transition from the primary to the secondary fuel without disconnecting electrically from the grid.

Due to the sequence of the permitting process, FPL recognizes that Proposers are unable to ascertain the success of permitting the facility for full use of this capability. However, Proposers will be required to make commercially reasonable efforts to seek permits and authorizations necessary to support up to 500 hours of operation per year on the secondary fuel.

Distributed Generation sources will be excused from this requirement.

**12) Site Development**

For newly built generation, the Proposer shall be responsible for the location, development and permitting of the proposed facility site.

**13) Project Milestone Schedule**

All Proposers must agree to meet the following Critical Milestone dates. FPL retains the right to terminate negotiations if a Finalist would fail to meet the Filing dates scheduled for April 1, 2004. The remaining milestones would be a part of any contract entered into by FPL as a result of this RFP.

Site Certification Application Filed	April 1, 2004
Air Permit Application Filed	April 1, 2004
Interconnection Application Filed	April 1, 2004
Irrevocable Orders Placed for major equipment	February 1, 2005
Firm Fuel Transportation Agreement(s) Executed	June 1, 2005
Contractor Mobilized, Financing Closed	October 1, 2005

#### **14) Minimum Operating Characteristics**

The following operational characteristics must be accommodated by any proposal.

- a) The facility must be able to achieve and sustain generation at the proposed capacity and heat rate while maintaining compliance with all permits and authorizations.
- b) Natural gas-fired facilities shall be designed to fulfill all operational requirements satisfying all permits and authorizations using pipeline quality gas.

#### **15) Regulatory Modifications**

Should FPL, at any time during the term of a contract entered into based on this RFP, fail to obtain or is denied the authorization of the FPSC, or the authorization of any other legislative, administrative, judicial or regulatory body which now has, or in the future may have, jurisdiction over FPL's rates and charges, to recover from its customers all of the payments required to be made to the seller under the terms of such a contract or any subsequent amendment hereto, FPL may, at its sole option, adjust the payments made under such contract to the amount(s) which FPL is authorized to recover from its customers. In the event that FPL so adjusts the payments to which the seller is entitled under such a contract, then, the seller may, at its sole option, terminate such a contract upon ninety (90) days notice to FPL. If such determination of disallowance is ultimately reversed and such payments previously disallowed are found to be recoverable, FPL shall pay all withheld payments. The seller acknowledges that any amounts initially received by FPL from its customers, but for which recovery is subsequently disallowed and charged back to FPL, may be offset or credited, against subsequent payments to be made by FPL to the seller under such a contract.

If, at any time, FPL receives notice that the FPSC or any other legislative, administrative, judicial or regulatory body seeks or will seek to prevent full recovery by FPL from its customers of all payments required to be made under the terms of such a contract or any subsequent amendments to such a contract, then FPL shall, within thirty (30) days of such action, give notice thereof to the seller. FPL shall use reasonable efforts to defend and uphold the validity of such a contract and its right to recover from its customers all payments required to be made by FPL hereunder, and will cooperate in any effort by the seller to intervene in any proceeding challenging, or to otherwise defend, the validity of

such a contract and the right of FPL to recover from its customers all payments to be made by it hereunder.

#### **16) Regulatory Approvals**

The obligations of Proposer to generate, deliver and sell, and of FPL to accept delivery of and purchase, Capacity and Energy in any contract that results from this RFP shall be subject to the satisfaction of the conditions precedent that: (i) the FPSC shall have issued a final Determination of Need and a final order approving such contract, which order includes a finding that FPL is entitled to recover from its customers all payments for Capacity and Energy, which orders are no longer subject to appeal, (ii) the FERC shall have issued a final order authorizing Proposer to make the sales of electrical energy and capacity contemplated by such contract, which order is no longer subject to appeal, and (iii) each other Governmental Authority having jurisdiction over such contract shall have issued a final order approving such contract or otherwise authorizing sales of electrical Capacity and Energy under such contract, as applicable, which orders are no longer subject to appeal

#### **F. Proposer Exceptions**

FPL will consider proposals that contain exceptions to the general terms and conditions of the RFP and/or the PPA. No exceptions to the Minimum Requirements, Section III. E. will be accepted. If a Proposer identifies exceptions, the exceptions must be explained in writing as part of the proposal using Form # 10 (Appendix D). For each exception, the Proposer must fully explain in writing the condition, requirement, or facet of the RFP or the PPA to which the Proposer takes exception and provide the replacement language proposed. Additionally, Proposers that would employ a natural gas tolling agreement are invited to propose language communicating the elements of such an arrangement.

Inclusion of this information with a proposal will facilitate negotiations by allowing FPL to evaluate the specific core issues of the exceptions, rather than addressing generic or conceptual comments. FPL reserves the right to request from a Proposer whether or to what extent FPL's contemplated rejection of a particular exception would affect the pricing.

Failure to state exceptions and pose alternative language shall constitute acceptance of the terms and conditions set forth in the RFP and/or the PPA.

**G. Questions and Completion of the Proposal**

Proposers are to follow all instructions contained in this RFP and provide all information requested in the RFP and on the forms presented and discussed in Appendix D of this document. Proposers also are expected to provide supporting documentation, and answer any follow-up questions from FPL, as requested. Proposers are encouraged to contact FPL with questions prior to the cut-off date for questions and answers (See Section II. G for dates) to ensure complete and accurate proposals. FPL will host a Question and Answer Bulletin Board on the FPL.com website at [www.FPL.com/2003rfp](http://www.FPL.com/2003rfp). All questions and answers from the Pre-Proposal Workshop, and any subsequent questions posed to FPL and answers to these questions, will be posted for the benefit of all Proposers. FPL has no obligation to pursue incomplete or unclear proposals.

**H. Submitting the Proposal**

All proposals must be received by the RFP Contact Person no later than 4:00 p.m. EDT on October 24, 2003. Proposers must submit five (5) bound hard copies, plus an electronic copy of the completed forms on a CD and the RFP Evaluation Fee by this date and time.

#### **IV. OVERVIEW OF PROPOSAL EVALUATION PROCESS**

The objective of the RFP is to solicit proposals that allow FPL to assess the best generating alternatives that cost-effectively meet the 2007 need requirement. It is anticipated that FPL will receive a variety of proposals that may vary in length of term, capacity, source, price, fuel and other pertinent characteristics. In addition to the variations that may be presented within individual proposals, there may be a need to combine multiple proposals or proposals and FPL's identified self-build options to develop portfolios that meet the 2007 need requirement. Therefore, it is incumbent upon FPL to employ an evaluation methodology that will anticipate responses that offer a wide range of individual characteristics and can evaluate the benefits offered by combining various proposals into unique portfolios of generating alternatives. Therefore, eligible proposals that pass initial screening and individual economic ranking, but do not individually meet the 2007 need requirement, will be evaluated in portfolios that match them with other resources to meet the 2007 need requirement. Ultimately, FPL will identify the best proposal or portfolio that cost-effectively meets the need requirement beginning in 2007. FPL's evaluation methodology, including a detailed description of the criteria to be used to evaluate price and non-price attributes, is discussed in detail in Appendices B, C and E. A summary description of the evaluation process is provided below.

##### **A. Initial Screening**

Proposals will be reviewed for compliance with the Minimum Requirements set forth in this RFP. Those proposals determined to be eligible will advance in the evaluation. Proposals determined to be ineligible will be returned to the Proposer along with a refund of 75% of the RFP Evaluation Fee.

##### **B. Economic Evaluation of Individual Proposals**

Proposals determined to be eligible will first be individually ranked by their individual economic impact on the FPL system. If there are a large number of eligible proposals and a significant difference in economic impact on the FPL system is noted, this analysis will be used to eliminate a portion of the lowest ranked proposals from further evaluation.

##### **C. Portfolio Development**

It is anticipated that some of the proposals may need to be combined with other proposals or FPL self-build alternatives to

develop portfolios that fully meet the 2007 need requirement. FPL will, therefore conduct a portfolio analysis.

The portfolios will be developed using the EGEAS generation planning software to identify the lowest cost portfolios that are able to meet the 2007 need requirement. Portfolios may consist of a single generation alternative or a combination of proposals (or proposals and FPL self-build alternatives) that satisfy the 2007 need requirement.

#### **D. Final Economic Evaluation**

The portfolios will be combined with the existing FPL system to represent a potential future FPL system. The net present value of revenue requirements for the FPL system will be the key cost metric used in the evaluation. The EGEAS generation planning program will calculate this value over the 2003 - 2031 time period for each potential future FPL system. This base value produced using EGEAS will include an estimate of the transmission and fuel system interconnection costs, including third party transmission costs (as applicable).

Additionally, the potential future FPL system created by the inclusion of the proposed portfolio will be evaluated for the economic impact created by each portfolio. These impacts include transmission integration costs, the costs of system energy and capacity losses, and the cost impact each portfolio has on the efficiency of Southeastern regional dispatch. Additional costs related to fuel infrastructure enhancements will also be addressed.

An equity adjustment will be applied for purchase power obligations of more than three years. In conducting such an evaluation relative to the impact of purchased power and the computation of an equity adjustment, FPL will also consider the presence or absence of mitigating factors. Finally, a Fuel Switching Credit (discussed in Section II. E) will be applied to eligible proposals.

#### **E. Non-Economic Evaluation**

In addition to the economic evaluation, portfolios will be evaluated for non-economic factors. In the non-economic evaluation of portfolios, the individual proposals will be evaluated as to the environmental, technical/operational, and project execution non-economic factors enumerated in more detail in Appendix B. The objective of the evaluation is to develop an understanding of the

approach proposed and identify areas that may warrant further review. Proposals that exhibit strong potential in the economic evaluation will be considered for a Panel Review. The Panel Review would be an interview-style exchange between the Proposer(s) and FPL panelists representing the non-economic evaluation areas. This will allow for a more complete exchange of ideas in these important areas.

The result of the non-economic evaluation will be a summary report on the risk areas that may be used in conjunction with the results of the economic evaluation to select Finalists. A complete description of the non-economic criteria is provided in Appendix B.

**F. Best and Final Offer Evaluation**

FPL will apply the process above to develop a Short List of proposals that will be Finalists. FPL will request from the Finalists a Best and Final Offer. FPL will evaluate these Best and Final Offers to develop the final economic and non-economic evaluations.

**G. Final Selection**

The economic and non-economic factors will be presented to an FPL Management Review Team. The Management Review Team will then make a selection based on prudent business practices.

**V. FPL's Next Planned Generating Unit and Alternative Unit Data****A. Required Information**

FPL is providing a technical description of not only its next planned generating unit, but also of a second FPL self-build option which will be evaluated. The technical description for each unit complies with the requirements of Rule 25-22.082 (5) (a).

**B. Tables**

The technical information required by Rule 25-22.082 (5) (a) is presented in Tables V-1, V-2, and V-3 for the Turkey Point CC unit that is FPL's most economic construction option for meeting all of the presently forecast 2007 capacity need. This CC unit is FPL's "Next Planned Generating Unit".

The technical information outlined in Rule 25-22.082 (5) (a) is also presented for the four CT option at Turkey Point in Tables V-4, V-5, and V-6.

**Table V- 1**

**Next Planned Generating Unit Data – Turkey Point CC Unit**

The following data represent FPL's current estimates for this capacity addition. These planning estimates are subject to further refinement in regard to site specific costs, detailed engineering, or vendor quotes. FPL reserves the right to modify the construction costs and/or performance parameters for this unit. If FPL exercises this option, it will do so concurrent to publication of the Short List. FPL would then inform the remaining participants of its intent and permit the remaining participants to revise their proposals.

1. A four-on-one combined cycle generating unit to be located at FPL's Turkey Point plant site.
2. Planned size 1,144 MW (summer rating).
3. Commercial operation for the facility is proposed to be on or before June 1, 2007.
4. The primary fuel is natural gas. Low sulfur light oil will be the secondary fuel type.
5. The estimated total direct cost (without AFUDC) is \$528.5 million (in 2007 \$). This value includes the cost of generation, gas expansion and handling, transmission interconnection and integration (without AFUDC).
6. The estimated annual levelized capital (generation, gas expansion and handling, transmission interconnection and integration) revenue requirement with AFUDC is \$77.9 million over 25 years.
7. The estimated annual value of deferral with AFUDC of this unit is \$58.85 /kw-yr in 2007 (excludes Variable O&M, fixed O&M and capital replacement).
8. The estimated fixed O&M, capital replacement, and variable O&M annual expenditures are presented in Table V-2.
9. The estimated fuel cost in 2007 is currently estimated at \$ 4.76 /mmBtu (2007 \$), and fixed transportation cost is currently estimated at \$ 0.55 /mmBtu. (See Note 1).
10. The following are the estimates for:
 

Planned Outage Factor	See Table V-3 and Note 2
Forced Outage Rate	See Table V-3 and Note 2
Heat Rate at maximum capacity	6835 Btu/kWh @75F (HHV) 100% (Base Operational Mode)
Minimum load	300 MW
Ramp Rate	30 MW/min
11. The estimated transmission interconnection and integration costs associated with this unit are \$ 26.4 million (without AFUDC in 2007 \$). The gas expansion and handling cost is \$ 29.9 million (in 2007 \$).
12. Air, water discharge and other permits will be required for this unit. It is the Company's plan to comply with all air and water quality standards of the Local, State and Federal governments.
13. The major financial assumptions in the development of these numbers were:
 

Construction escalation	1.7 %
General escalation	See Table V-2 and Note 3
Fuel escalation	Varies by year. See Note 1
Capital Structure	45 % debt @ 6.4 % 55 % equity @ 11.0 %

**Table V - 2**  
**Next Planned Generating Unit Data - Turkey Point CC Unit**

Year	Projected Fixed O&M Expenditures (\$/kw-Yr.) *	Projected Variable O&M Expenditures (\$/mwh) *,**	Projected Capital Replacement Expenditures (\$/kw-Yr.) *
2007	3.57	0.13	6.49
2008	3.72	0.13	6.57
2009	3.89	0.13	6.65
2010	4.06	0.13	6.73
2011	4.24	0.14	6.82
2012	4.44	0.14	6.91
2013	4.64	0.14	7.01
2014	4.86	0.14	7.10
2015	5.07	0.14	7.18
2016	5.30	0.15	7.26
2017	5.52	0.15	7.36
2018	5.77	0.15	7.49
2019	6.03	0.15	7.63
2020	6.31	0.16	7.77
2021	6.59	0.16	7.91
2022	6.87	0.16	8.06
2023	7.17	0.16	8.22
2024	7.49	0.17	8.37
2025	7.83	0.17	8.54
2026	8.18	0.17	8.72
2027	8.56	0.18	8.91
2028	8.95	0.18	9.10
2029	9.35	0.19	9.29
2030	9.78	0.19	9.49
2031	10.22	0.19	9.70
2032	10.69	0.20	9.90

\* Based on Summer (95 degrees) Capacity Rating including Base, Duct Firing and Peak Firing.

\*,\*\* Based on an assumed Annual Capacity Factor of 85% each year and cost excludes fuel.

**Table V-3**  
**Next Planned Generating Unit Data - Turkey Point CC Unit**  
 (See Note 2)

Year	Base & Duct Firing <u>Operational Mode</u>		Peak Firing <u>Operational Mode</u>	
	Projected Annual Planned Outage Hours	Projected Annual Forced Outage Hours	Projected Annual Planned Outage Hours	Projected Annual Forced Outage Hours
2007	148	88	8672	0
2008	148	88	8672	0
2009	148	88	8672	0
2010	148	88	8672	0
2011	148	88	8672	0
2012	148	88	8672	0
2013	148	88	8672	0
2014	148	88	8672	0
2015	148	88	8672	0
2016	148	88	8672	0
2017	148	88	8672	0
2018	148	88	8672	0
2019	148	88	8672	0
2020	148	88	8672	0
2021	148	88	8672	0
2022	148	88	8672	0
2023	148	88	8672	0
2024	148	88	8672	0
2025	148	88	8672	0
2026	148	88	8672	0
2027	148	88	8672	0
2028	148	88	8672	0
2029	148	88	8672	0
2030	148	88	8672	0
2031	148	88	8672	0
2032	148	88	8672	0

**Notes for:  
Next Planned Generating Unit Data – Turkey Point CC Unit**

1. The fuel cost values provided in Table V-1 represent FPL's now current fuel cost forecast. For the economic evaluation of capacity options, both for proposals received in response to this RFP and FPL's self-build options, FPL will use the September 2003 Fuel Forecast in the economic evaluation of all alternatives.
  
2. The projected outage hour estimates for FPL's self-build options represent arithmetic averages of expected outage hours over the 2003-2031 period and do not represent "new & clean" unit values. A capacity factor of 85% for all years for the unit as a whole was used in making these projections. Maintenance outage hours were not included in these projections. The Planned Outage Hours value of 8,672 hours/year for the Peak Firing operational mode represents a projected operational limitation that this operational mode will be operated no more than 1% of the hours in a year.

Using these outage hour values, FPL projects the following values:

	Base & Duct Firing Operational Mode	Peak Firing Operational Mode
POF	2%	99%
FOR	1%	0%
Availability	97%	1%

3. FPL used a variety of escalation indices to develop the values in Table V-2. Since FPL is requiring annual guaranteed cost values for all PPA proposals (and is not allowing submission of starting year costs followed by a formula stating how to escalate these costs), FPL is providing its annual projected costs for O&M and capital replacement costs.

Table V- 4

**Next Alternative Generating Unit Data – Turkey Point CT Option**

The following data represent FPL's current estimates for this capacity addition. These planning estimates are subject to further refinement in regard to site specific costs, detailed engineering, or vendor quotes. FPL reserves the right to modify the construction costs and/or performance parameters for this unit. If FPL exercises this option, it will do so concurrent to publication of the Short List. FPL would then inform the remaining participants of its intent and permit the remaining participants to revise their proposals.

1. Four combustion turbine generating units to be located at FPL's Turkey Point plant site.
2. Planned size 648 MW (summer rating).
3. Commercial operation for the facility is proposed to be on or before June 1, 2007.
4. The primary fuel is natural gas. Low sulfur light oil will be the secondary fuel type.
5. The estimated total direct cost (without AFUDC) is \$ 282.0 million (in 2007 \$). This value includes the cost (without AFUDC) of generation, gas expansion and handling, and transmission interconnection.
6. The estimated annual levelized (capital (generation, gas expansion and handling, and transmission interconnection) revenue requirement with AFUDC is \$ 40.6 million over 25 years.
7. The estimated annual value of deferral with AFUDC of this unit is \$ 30.65 /kw-yr in 2007 (excludes Variable O&M, Fixed O&M and capital replacement).
8. The estimated fixed O&M, capital replacement, and variable O&M annual expenditures are presented in Table V-5.
9. The estimated fuel cost in 2007 is currently estimated at \$ 5.52 /mmBtu, and no fixed transportation cost is currently estimated for this option. (See Note 1.)
10. The following are the estimates for:
 

Planned Outage Factor	See Table V-6 and Note 2
Forced Outage Rate	See Table V-6 and Note 2
Heat Rate at maximum capacity	10400 Btu/kWh @75F (HHV) 100% (Base Operational Mode)
Minimum load	90 MW
Ramp Rate	12 MW/min
11. The estimated transmission interconnection associated with this unit is \$ 21.7 million (without AFUDC in 2007 \$). Transmission integration costs are not known at this time since they are dependent on the portfolio created with this option. The gas expansion and handling cost is \$ 29.9 million (in 2007 \$).
12. Air, water discharge and other permits will be required for this unit. It is the Company's plan to comply with all air and water quality standards of the Local, State and Federal governments.
13. The major financial assumptions in the development of these numbers were:
 

Construction escalation	1.7 %
General escalation	See Table V-5 and Note 3.
Fuel escalation	Varies by year. See Note 1
Capital Structure	45 % debt @ 6.4 % 55 % equity @ 11.0 %

**Table V - 5**  
**Alternative Generating Unit Data - Turkey Point CT Option**

Year	Projected Fixed O&M Expenditures (\$/kw-Yr.) *	Projected Variable O&M Expenditures (\$/mwh) *,**	Projected Capital Replacement Expenditures (\$/kw-Yr.) *
2007	2.47	0.09	7.85
2008	2.58	0.09	7.94
2009	2.69	0.09	8.04
2010	2.81	0.09	8.15
2011	2.94	0.09	8.25
2012	3.07	0.10	8.36
2013	3.21	0.10	8.47
2014	3.36	0.10	8.59
2015	3.51	0.10	8.68
2016	3.66	0.10	8.78
2017	3.82	0.10	8.90
2018	3.99	0.10	9.06
2019	4.17	0.11	9.22
2020	4.36	0.11	9.40
2021	4.56	0.11	9.57
2022	4.76	0.11	9.75
2023	4.96	0.11	9.94
2024	5.18	0.12	10.13
2025	5.42	0.12	10.33
2026	5.66	0.12	10.55
2027	5.92	0.12	10.78
2028	6.19	0.13	11.01
2029	6.47	0.13	11.24
2030	6.77	0.13	11.48
2031	7.07	0.13	11.73
2032	7.40	0.14	11.98

\* Based on Summer (95 degrees) Capacity Rating including Base and Peak Firing.

\*,\*\* Based on an assumed Annual Capacity Factor of 85% each year and cost excludes fuel.

**Table V-6**  
**Alternative Generating Unit Data - Turkey Point CT Option**  
 (See Note 2)

Year	Base <u>Operational Mode</u>		Peak Firing <u>Operational Mode</u>	
	Projected Annual Planned Outage Hours	Projected Annual Forced Outage Hours	Projected Annual Planned Outage Hours	Projected Annual Forced Outage Hours
2007	144	88	8672	0
2008	144	88	8672	0
2009	144	88	8672	0
2010	144	88	8672	0
2011	144	88	8672	0
2012	144	88	8672	0
2013	144	88	8672	0
2014	144	88	8672	0
2015	144	88	8672	0
2016	144	88	8672	0
2017	144	88	8672	0
2018	144	88	8672	0
2019	144	88	8672	0
2020	144	88	8672	0
2021	144	88	8672	0
2022	144	88	8672	0
2023	144	88	8672	0
2024	144	88	8672	0
2025	144	88	8672	0
2026	144	88	8672	0
2027	144	88	8672	0
2028	144	88	8672	0
2029	144	88	8672	0
2030	144	88	8672	0
2031	144	88	8672	0
2032	144	88	8672	0

**Notes for:  
Alternative Generating Unit Data – Turkey Point CT Option**

1. The fuel cost values provided in Table V-4 represent FPL's current fuel cost forecast. For the economic evaluation of capacity options, both for proposals received in response to this RFP and FPL's self-build options, FPL will use the September 2003 Fuel Forecast in the economic evaluation of all alternatives.
  
2. The projected outage hour estimates for FPL's self-build options represent arithmetic averages of expected outage hours over the 2003-2031 period and do not represent "new & clean" unit values. A capacity factor of 15% for all years for the unit as a whole was used in making these projections. Maintenance outage hours were not included in these projections. The Planned Outage Hours value of 8,672 hours/year for the Peak Firing operational mode represents a projected operational limitation that this operational mode will be operated no more than 1% of the hours in a year.

Using these outage hour values, FPL projects the following values:

	Base Operational Mode	Peak Firing Operational Mode
POF	2%	99%
FOR	1%	0%
Availability	98%	1%

3. FPL used a variety of escalation indices to develop the values in Table V-2. Since FPL is requiring annual guaranteed cost values for all PPA proposals (and is not allowing submission of starting year costs followed by a formula stating how to escalate these costs), FPL is providing its annual projected costs for O&M and capital replacement costs.

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**APPENDIX A**

**Draft Purchase Power Agreement**

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**CONTRACT FOR THE PURCHASE OF  
FIRM CAPACITY AND ENERGY**

between

---

and

**FLORIDA POWER & LIGHT COMPANY**

dated as of

\_\_\_\_\_, 2004

## TABLE OF CONTENTS

	<u>Page</u>
<u>1.0</u> <u>DEFINITIONS; RULES OF CONSTRUCTION</u> .....	1
<u>2.0</u> <u>CONDITIONS PRECEDENT; CONTRACT TERM</u> .....	16
<u>3.0</u> <u>CONTRACT MILESTONES</u> .....	17
<u>4.0</u> <u>COMPLETION SECURITY; PERFORMANCE SECURITY</u> .....	19
<u>5.0</u> <u>STEP-IN RIGHTS; FPL'S LIEN</u> .....	22
<u>6.0</u> <u>SALE OF ENERGY AND CAPACITY</u> .....	25
<u>7.0</u> <u>PAYMENT BY FPL</u> .....	27
<u>8.0</u> <u>BILLING AND PAYMENT</u> .....	28
<u>9.0</u> <u>TESTING AND CAPACITY RATING</u> .....	30
<u>10.0</u> <u>INTERCONNECTION AND DELIVERY OF ENERGY, COMMITTED CAPACITY, AND ANCILLARY SERVICES; METERING</u> .....	34
<u>11.0</u> <u>OPERATING REPRESENTATIVES</u> .....	39
<u>12.0</u> <u>PRE-OPERATION PERIOD</u> .....	40
<u>13.0</u> <u>DISPATCH, CONTROL, OPERATION AND MAINTENANCE OF THE FACILITY</u> .....	43
<u>14.0</u> <u>DATA ACQUISITION</u> .....	52
<u>15.0</u> <u>RECORDS AND AUDITS</u> .....	53
<u>16.0</u> <u>INSURANCE</u> .....	54
<u>17.0</u> <u>COMPLIANCE WITH LAWS, RULES AND REGULATIONS</u> .....	56
<u>18.0</u> <u>FORCE MAJEURE</u> .....	60
<u>19.0</u> <u>DEFAULT AND TERMINATION</u> .....	62
<u>20.0</u> <u>INDEMNIFICATION</u> .....	69
<u>21.0</u> <u>LIMITATIONS OF LIABILITY</u> .....	70
<u>22.0</u> <u>NOTICES</u> .....	71
<u>23.0</u> <u>REPRESENTATIONS AND WARRANTIES</u> .....	71
<u>24.0</u> <u>MISCELLANEOUS</u> .....	74

<u>APPENDICES</u>	<u>TITLE</u>
APPENDIX A	MONTHLY CAPACITY AND ENERGY PAYMENT CALCULATION.....A1
APPENDIX B	DEFERRED GOVERNMENTAL APPROVALS .....B1
APPENDIX C	FORM OF PARENT GUARANTY .....C1
APPENDIX D	FACILITY ACTUAL NET GENERATION AND PERFORMANCE DATA.....D1
APPENDIX E	START-UP COSTS.....E1
APPENDIX F	FACILITY OPERATING CAPABILITIES.....F1
APPENDIX G	PLANNED OUTAGE HOURS.....G1
APPENDIX H	RECEIPT POINT.....H1
APPENDIX I	CAPACITY DEMONSTRATION TESTING GUIDELINES.....I1
APPENDIX J	TELEMETERING SPECIFICATIONS .....J1
APPENDIX K	DESCRIPTION OF FACILITY SITE .....K1
APPENDIX L	REFERENCE CONDITIONS .....L1
APPENDIX M	MILESTONES.....M1
APPENDIX N	FORM OF MORTGAGE AND SECURITY AGREEMENT.....N1
APPENDIX O	FORM OF ASSIGNMENT OF FIRM TSA.....O1
APPENDIX P	CPM SCHEDULE .....P1

THIS CONTRACT is made and entered as of the \_\_\_th day of \_\_\_\_\_, 2004, by and between \_\_\_\_\_ ("Seller"), a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, having its principal place of business in \_\_\_\_\_, \_\_\_\_\_, and FLORIDA POWER & LIGHT COMPANY ("FPL"), a corporation organized and existing under the laws of the State of Florida, having its principal place of business in Juno Beach, Florida. Seller and FPL shall collectively herein be called the "Parties" and each may be individually identified herein from time to time as a "Party".

WITNESSETH:

WHEREAS, Seller will construct and be the owner and operator of an independent power production facility; and

WHEREAS, Seller desires to sell, and FPL desires to purchase, electricity to be generated by such facility;

NOW, THEREFORE, for mutual consideration, the Parties agree as follows:

## 1.0 DEFINITIONS; RULES OF CONSTRUCTION

1.1 **Definitions.** When used herein with initial or complete capitalization, whether in the singular or in the plural, the following terms shall have the following defined meanings; however, such defined terms shall not apply except as otherwise specified therein to Appendix D.

**"Ancillary Services"** – all commercial products produced by or related to the Facility, including spinning reserves, operating reserves, black start capability, balancing energy, regulation service, emissions credits (including NO<sub>x</sub>, SO<sub>2</sub>, and CO<sub>2</sub> credits), renewable energy credits, any other environmental or regulatory credits or allowance resulting from operation of the Facility or any similar benefit FPL otherwise would have realized from or related to the Facility if FPL rather than Seller had constructed, owned or operated the Facility.

**"Annual Capacity Factor" or "ACF"** – the arithmetic average of the last twelve Monthly Capacity Factors, expressed as a percentage. Until the first twelve Months of the Contract Term have been completed, the arithmetic average of the Monthly Capacity Factors to date shall be used as the Annual Capacity Factor.

**"Annual Peak Capacity Factor" or "APCF"** – the sum of the last twelve Monthly Weighted Peak Capacity Factors, expressed as a percentage. Until the first twelve Peak Months of the Contract Term have been completed, the sum of the Monthly Weighted Peak

Capacity Factors to date shall be used as the Annual Peak Capacity Factor.

**"Applicable Laws"** – any and all federal, state, regional or local statutes, laws, municipal charter provisions, regulations, ordinances, rules, mandates, judgments, orders, decrees, Governmental Approvals, codes, licenses or permit requirements or other governmental requirements or restrictions, or any interpretation or administration of any of the foregoing by any governmental authority, that apply to the facilities, services or obligations of either Party under this Contract, whether now or hereafter in effect.

**"Assignment of Firm TSA"** – *[the Assignment of Firm TSA, to be entered into by and between Seller [, Seller's third-party transmission provider.] and FPL.]*

**"Associated Facility"** – as defined in Section 403.503 (12), Florida Statutes.

**"Automatic Generation Control" or "AGC"** – procedures and equipment which automatically adjust a control area's generation to maintain its net interchange schedule plus frequency bias.

**"Available Capacity" or "AC"** – Declared Capacity less all Unscheduled Outages and Scheduled Reductions, expressed in the nearest whole megawatt ("MW") quantities, which shall be reported by Seller pursuant to Section 13.9. Available Capacity shall never be greater than Declared Capacity.

**"Base Operation Mode"** – the mode of operation which, under normal circumstances, achieves generation levels in a range from Minimum Load to maximum hourly generation which can be obtained from the Facility while under FPL control. Base Operation Mode generation levels can be maintained for sustained periods without operating difficulties taking into account reference conditions (i.e., summer conditions). The maximum hourly generation for the Base Operation Mode is the high load limit set into the AGC by Seller under normal conditions.

**"Capacity"** – net electrical power, in MW, generated by the Facility and delivered to or available for FPL's system at the Receipt Point.

**"Capacity Billing Factor" or "CBF"** – the product of the Annual Capacity Factor and 0.4 plus the product of the Annual Peak Capacity Factor and 0.6 (i.e.,  $CBF = (0.4 * ACF) + (0.6 * APCF)$ ). For purposes of determining the Capacity Billing Factor, neither the Annual Capacity Factor nor the Annual Peak Capacity Factor shall be greater than one hundred percent (100%).

**"Capacity Delivery Date"** – the date on which the Facility begins delivering Available Capacity hereunder, which shall be the later of (a) the Scheduled Capacity Delivery Date, (b) the calendar day immediately following the date of successful completion of the Initial Test in accordance with Section 9.0 as demonstrated by written test results and reports certified by a responsible officer of Seller and confirmed by FPL, or (c) the date on which the other conditions set forth in Section 9.1 shall have been satisfied.

**"Capacity Test"** – the Initial Test and each other test as described in Section 9.0 that is performed by Seller to determine the Continuous Capability and the incremental Capacity associated with each applicable mode of operation above the Base Operation Mode included in Appendix A of this Agreement. *[Insert other modes of operation from Proposer's Form 4.]*

**"Commencement Date"** – the date on which both Parties shall have executed and delivered this Contract.

**"Commit" or "Commitment"** – to initiate (or the initiation of) the start-up sequence of the Facility at FPL's request.

**"Committed Capacity" or "CC"** – the firm Capacity of the Facility associated with the Base Operation Mode at Reference Conditions using the correction curves provided in the Test Protocol, equal to \_\_\_ kW. *[Insert Guaranteed Firm Capacity associated with Base Operation at Reference Conditions from Proposer's Form 4 submission.]*

**"Completion Security"** – the security provided by or on behalf of Seller for the benefit of FPL pursuant to Section 4.1.

**"Completion Security Amount"** – the aggregate amount of Completion Security, equal to [           Dollars (\$          )] *[Insert amount equal to the product of the Committed Capacity (in kW) multiplied by One Hundred Eighty-Eight Dollars (\$188.00) per kW].*

**"Completion Security Liquid Amount"** – the amount of Completion Security required to be satisfied through Liquid Security, equal to the greater of (a) the difference equal to (i) the Completion Security Amount, *minus* (ii) the sum of (A) Seller's Credit Limit, *plus* (B) the Credit Limit of the Creditworthy Guarantor providing the Parent Guaranty, if any, or (b) ten percent (10%) of the Completion Security Amount.

**"Continuous Capability"** – the highest sustained Capacity associated with the Base Operation Mode at which the Facility can

operate consistent with Environmental Requirements without exceeding the design operating conditions, temperatures, pressures, etc. defined by the applicable manufacturer(s), as determined by a Capacity Test pursuant to Section 9.0.

**"Contract"** – this Contract for the Purchase of Firm Capacity and Energy, which is comprised of Sections 1.0 through 24.0 and Appendices A through P.

**"Contract Term"** – has the meaning given thereto in Section 2.4.

**"Contract Year"** – the twelve Monthly Billing Periods preceding each anniversary of the first day of the first full Monthly Billing Period following the Capacity Delivery Date.

**"CPM Schedule"** – the detailed, integrated schedule for the development, permitting, design, engineering, procurement, construction, testing and completion of the Facility, using the "critical path management" method, attached hereto as Appendix P, as revised from time to time as provided herein.

**"Credit Limit"** – the amount, in United States Dollars, equal to the percentage of an entity's Tangible Net Worth corresponding to its Investment Grade Credit Rating from time to time, as set forth below:

Credit Rating (S&P/Moody's)	Percent (%) of Tangible Net Worth
AAA+/Aaa1 to AA- /Aa3	15%
A+/A1 to A-/A3	10%
BBB+/Baa1 to BBB/Baa2	5%
BBB-/Baa3 and below or unrated	0%

**"Creditworthy Guarantor"** – an affiliate of Seller having an Investment Grade Credit Rating.

**"Declared Capacity"** or **"DC"** – the Capacity declared by Seller pursuant to Section 9.0, as modified from time to time pursuant to the terms hereof.

**"Decommit" or "Decommitment"** – to initiate (or the initiation of) the shutdown sequence of the Facility at FPL's request.

**"Deferred Governmental Approvals"** – those Governmental Approvals, including Environmental Licenses, which are required under Applicable Law for Seller to own, operate, or maintain the Facility, but which cannot be obtained under Applicable Law prior to the Capacity Delivery Date, all of which Governmental Approvals are listed on Appendix B.

**"Determination of Need"** – a determination made by the FPSC under Section 403.519, Florida Statutes, that there is a need for the Facility.

**"Dispatch and Control Rights"** – the absolute and sole right of FPL in any manner, for any reason it deems appropriate, or for no reason at all, in FPL's unfettered discretion, solely in FPL's own interest, without regard to Seller's interest, and without any liability or obligation in connection therewith, (a) to Commit and Decommit the Facility and (b) through supervisory equipment (e.g., AGC) or otherwise, to control the Capacity and Energy output of the Facility pursuant to this Contract, subject only to the Facility Operating Capabilities. These rights also extend to control of the reactive power output of the Facility, voltage, frequency and other characteristics of such Energy output, including all Ancillary Services. FPL's exercise of its Dispatch and Control Rights as defined herein shall not give rise to any liability on the part of FPL, including any claim for breach of contract and/or for breach of any covenant of good faith and fair dealing.

**"Energy"** – electrical energy in MWh generated by the Facility and delivered to FPL at the Receipt Point.

**"Environmental License/Licensing"** – any and all Governmental Approvals applicable to the Facility, the Facility Site, or Associated Facility relating to environmental protection, natural resource protection, land use or zoning.

**"Environmental Requirements"** – any and all requirements applicable to the Facility, the Facility Site, or Associated Facility under any Environmental License or any Applicable Laws relating to environmental protection, natural resource protection, land use or zoning.

**"Event of Default"** – for Seller, any of those occurrences specified in Section 19.1 and, for FPL, any of those occurrences specified in Section 19.2.

**"Facility"** – *[Insert description of Proposer's facility.]*

**"Facility Operating Capabilities"** – certain operating capabilities of the Facility which shall be available to FPL pursuant to this Contract as set forth in Appendix F. *[To include, among other things, types of information in Proposer's submission, Form 4.]*

**"Facility Site"** – the real property described in Appendix K.

**"FERC"** – the Federal Energy Regulatory Commission and any successor thereto.

**"Final Capacity Delivery Date"** – December 1, 2007.

**"Firm TSA"** – the agreement between Seller and Seller's third-party transmission provider entered into pursuant to Section 10.3.1 for firm point-to-point transmission service on a third party system to deliver all Capacity and Energy required to be provided by Seller hereunder to the Receipt Point by Seller pursuant to this Contract.

**"Force Majeure"** – an event or circumstance that is not reasonably foreseeable, is beyond the reasonable control of and is not caused by the negligence or lack of due diligence of the affected Party or its contractors or suppliers. Such events or circumstances may include, but are not limited to, actions or inactions of civil or military authority (including Governmental Authority); acts of God; war, riot or insurrection; blockades; embargoes; sabotage; epidemics; explosions and fires not originating in the Facility or caused by its operation; hurricanes; floods; general strikes, lockouts or other labor disputes or difficulties affecting the electric power industry or the State of Florida generally (and excluding, for avoidance of doubt, strikes, lockouts or other labor disputes or difficulties located solely at the Facility or Facility Site or solely with respect to Seller or its affiliates or Seller's vendors, suppliers or contractors). Normal climactic conditions (including normal inclement weather) affecting construction, testing, start-up, operation or maintenance of the Facility or related facilities, equipment breakdown (or inability to use equipment) caused by its design, engineering, construction, operation, or maintenance, or otherwise caused by an event originating at the Facility, or inability of Seller or the Facility to meet the requirements of Applicable Law, to obtain required environmental allowances, offsets or credits, or to obtain, maintain, or comply with all Governmental Approvals required under Applicable Law, including Environmental Requirements and Environmental Licenses (whether such Applicable Law is in effect on the Commencement Date or is subsequently amended, modified, enacted, or promulgated) shall not be considered Force Majeure.

Interruption in supply or transportation of fuel to the Facility shall not be considered Force Majeure except to the extent caused by an event that otherwise would constitute Force Majeure hereunder.

**"Force Majeure Aggregate Allowance"** – has the meaning given thereto in Section 19.3.

**"FPL Control"** – FPL's Dispatch and Control Rights with respect to Committing and Decommitting the Facility and controlling the Capacity and Energy output of the Facility.

**"FPL Entities"** – FPL, its parent, present and future subsidiaries and affiliated entities and any other entity which directly or indirectly controls, is controlled by or under common control with any of the foregoing, and each of their respective officers, directors, employees, and agents.

**"FPL's Avoided Cost"** – the "Standard Rate for Purchase of As-Available Energy from Qualifying Cogeneration and Small Power Production Facilities," as described in Appendix A of FPL's COG-1 Tariff and as calculated each hour for the Power Production Pricing Area corresponding to the Receipt Point.

**"FPL's Cost of Cover"** – has the meaning given thereto in Section 19.6.

**"FPL's Lien"** – has the meaning given thereto in Section 5.2.

**"FPSC"** – the Florida Public Service Commission and any successor thereto.

**"FRCC"** – the Florida Reliability Coordinating Council and any successor thereto.

**"Fuel"** – Primary Fuel or Secondary Fuel, as applicable.

**"Fuel Contracts"** – has the meaning given thereto in Section 13.5.

**"GAAP"** – generally accepted accounting principles in the United States.

**"Good Engineering and Operating Practices"** – generally accepted and sound electric utility generation industry practices, methods and acts applicable to similarly situated regulated electric utility generation facilities in the United States which at a particular time, in the exercise of reasonable judgment in light of the facts known or that reasonably should be known at the time a decision is made, would be expected to accomplish the desired result in a

manner consistent with Applicable Laws, reliability, safety, environmental protection, economy and expedition. With respect to the Facility, Good Engineering and Operating Practices include, but are not limited to, taking reasonable steps to ensure that:

- (a) Adequate materials, equipment redundancy, spare parts, resources and supplies, including Fuel in sufficient reliable volumes and quality, are available to meet the Facility's needs under normal conditions and reasonably anticipated abnormal conditions;
- (b) Sufficient qualified operating, maintenance and supervisory personnel are available and adequately experienced and trained to operate, maintain and supervise the Facility properly, efficiently and within manufacturer's guidelines and specifications and are capable of responding to emergency conditions;
- (c) Preventive, routine and non-routine maintenance and repairs are performed on a basis that ensures reliable long-term and safe operation, and are performed by knowledgeable, trained and experienced personnel utilizing proper equipment, tools and procedures;
- (d) Appropriate monitoring and testing are done periodically to ensure that equipment and systems are functioning as designed and to provide assurance that equipment and systems will function properly under normal conditions and emergency conditions; and
- (e) Equipment and systems are operated in a safe manner and in a manner safe to workers, the general public and the environment and with regard to design and operating limitations such as steam pressure, temperature and moisture content, chemical content and quality of make-up water, operating voltage range, current, frequency, rotational speed, polarity, synchronization, control system limits, etc.

**"Governmental Approval"** – any and all licenses, permits, franchises, agreements, approvals, authorizations, consents, waivers, rights, exemptions, releases, variances, exceptions, or order of or

issued by, or filings with, or notice to, any Governmental Authority under Applicable Laws.

**"Governmental Authority"** – any national, state, regional or local government (whether domestic or foreign), any political subdivision thereof or any other governmental, quasi-governmental, judicial, executive, legislative, administrative, public or statutory instrumentality, authority, body, agency, department, bureau or entity or any arbitrator with authority to bind a party at law.

**"Hourly Capacity Factor" or "HCF"** – (a) during any hour that the Facility is not undergoing a Scheduled Reduction, a figure (expressed as a percentage) calculated by (i) dividing the Available Capacity in such hour by the Committed Capacity, and (ii) multiplying by 100 (provided that for purposes of this definition the Available Capacity of the Facility shall be subject to reduction pursuant to Section 13.11); or (b) during any hour during which the Facility is undergoing a Scheduled Reduction, the Hourly Capacity Factor shall be equal to the ACF of the preceding Monthly Billing Period.

**"Hourly Peak Capacity Factor" or "HPCF"** – (a) in any Peak Hour that the Facility is not undergoing a Scheduled Reduction, a figure (expressed as a percentage) calculated by (i) dividing the Available Capacity in such hour by the Committed Capacity, and (ii) multiplying by 100 (provided that for purposes of this definition the Available Capacity of the Facility shall be subject to reduction pursuant to Section 13.11); or (b) during any Peak Hour during which the Facility is undergoing a Scheduled Reduction, the Hourly Peak Capacity Factor shall be equal to the APCF of the preceding Monthly Billing Period.

**"Initial Synchronization Date"** – the first date upon which (a) Energy is generated by the Facility, and (b) such Energy is delivered to FPL and metered by the FPL-owned or FPL-approved metering equipment, all pursuant to Section 12.6.

**"Initial Test"** – the first Capacity Test of the Facility completed successfully as described in Section 9.0.

**"Interconnection Agreement"** – the contract between FPL and Seller which principally delineates and governs (a) the interconnection of FPL's electrical system and the Facility, (b) Seller's responsibility for the costs of installing, operating, maintaining, repairing, upgrading and removing the interconnection facilities and related equipment necessary to safely and effectively connect the Facility to FPL's electrical system, and (c) the Parties'

respective ownership rights and other obligations with respect to the interconnection.

**"Intercreditor Agreement"** – the Intercreditor Agreement to be entered into by FPL and the Lenders, in form and substance satisfactory to FPL, with respect to FPL's Lien and any lien of the Lenders on the Facility or Facility Site.

**"Investment Grade Credit Rating"** – with respect to (a) a corporation, limited liability company, partnership, or other entity other than a financial institution, a long-term unsecured, general obligation bond rating of BBB from Standard & Poor's Corporation ("S&P") or above or Baa2 from Moody's Investors Services ("Moody's") or above, in each case with a "stable" outlook, or (b) a financial institution, a rating on the senior long-term debt of such financial institution of BBB from S&P's or above or Baa2 from Moody's Investors Services ("Moody's") or above, in each case with a "stable" outlook.

**"Lenders"** – any entity or group of entities (including, upon prior notice to FPL, any and all successors pursuant to refinancing but excluding Seller or any affiliate thereof) providing all or substantially all of the debt financing, in any form (including lease financing), for the development, construction or improvement of the Facility.

**"Level 1 Available Capacity" or "LIAC"** – Level 1 Declared Capacity less all Level 1 Unscheduled Outages and Scheduled Reductions, expressed in the nearest whole MW quantities, which shall be reported by Seller pursuant to Section 13.9. Level 1 Available Committed Capacity shall never be greater than Level 1 Declared Capacity.

**"Level 1 Committed Capacity"** – the incremental maximum Capacity for Level 1 Mode of Operation equal to \_\_\_\_\_kW at Reference Conditions using applicable manufacturers' correction curves. *[Insert incremental capacity, at Reference Conditions, for Level 1 Mode of Operations, from Proposer's submittal Form 4.]*

**"Level 1 Declared Capacity"** – the incremental Capacity associated with Level 1 Mode of Operation declared by Seller pursuant to Section 9.0, as modified from time to time pursuant to the terms hereof.

**"Level 1 Mode of Operation"** – *[Insert description, from Proposer's submission, Form 4, of Level 1 Mode of Operation, which must be capable of being placed under FPL's Automatic*

*Generation Control and must not have additional operating limitations.]*

**"Level 1 Unscheduled Outage"** – a whole or partial interruption or reduction of the Facility's Capacity to a level below the Level 1 Committed Capacity, whether the Facility is on-line or off-line, expressed in the nearest whole MW, that does not qualify as a Scheduled Reduction.

**"Liquid Security"** – security in the form of one or more of the following: (a) direct obligations of (other than obligations issued or held in book entry form on the books of) the Department of the Treasury of the United State of America deposited with a depository bank acceptable to FPL, (b) a cash deposit in United States dollars, or (c) an unconditional, irrevocable, stand-by letter of credit issued by an issuer acceptable to FPL capable of issuing letters of credit and having an Investment Grade Credit Rating, in form and substance acceptable to FPL (including, in the case of a letter of credit, provisions (i) for partial draws, and (ii) permitting FPL to draw upon such letter of credit in full, if such letter of credit is not renewed or replaced at least ten (10) business days prior to its expiry date (or as otherwise required by Section 4.0), without further notice to or action by any party).

**"Maintenance Outage"** – has the meaning given thereto in Section 13.12.

**"Major Equipment"** – the *[combustion turbine generator set, heat recovery steam generator, and steam turbine]. [Insert additional major equipment from Proposer's submission, Form 7.]*

**"Major Milestone"** – a Milestone specified as a Major Milestone in Part A of Appendix M.

**"Market Rules"** – has the meaning given thereto in Section 13.20.

**"Maximum Sustained Rate"** – the maximum safe and continuous load-following capability of the Facility, expressed in MW per minute, to which the Facility can be raised or lowered to meet FPL's dispatch instructions.

**"Milestone"** – has the meaning given thereto in Section 3.1.

**"Milestone Date"** – has the meaning given thereto in Section 3.1.

**"Minimum Capacity"** – a Capacity equal to [           MW] which is equal to ninety-five percent (95%) of the Committed Capacity.

**"Minimum Load"** – the minimum MW level below which FPL shall not exercise FPL Control without Decommittting the Facility, which minimum shall be equal to \_\_\_\_ MW net of internal electrical requirements of the Facility. *[Insert number of MW from Proposer's submission.]*

**"Month"** – a calendar month.

**"Monthly Billing Period"** – the period beginning on the first calendar day of each calendar month, except that the initial Monthly Billing Period shall consist of the period beginning 12:01 a.m. on the Initial Synchronization Date and ending with the last calendar day of such month.

**"Monthly Billing Statement"** – a monthly summary prepared by FPL in accordance with Section 8.1.

**"Monthly Capacity Factor"** or **"MCF"** – in any Month, the arithmetic average of the Hourly Capacity Factors for the Monthly Billing Period, expressed as a percentage.

**"Monthly Capacity Payment"** or **"MCP"** – monthly payments for Committed Capacity calculated in accordance with Appendix A.

**"Monthly Energy Payment"** or **"MEP"**– monthly payments for Energy calculated in accordance with Appendix A.

**"Monthly Peak Capacity Factor"** or **"MPCF"**– in any Month, the arithmetic average of the Hourly Peak Capacity Factors for the Monthly Billing Period, expressed as a percentage.

**"Monthly Weighted Peak Capacity Factor"** or **"MWPCF"**– the product of the Monthly Peak Capacity Factor and a monthly weight factor, where the monthly weight factor is equal to 0.1 for the Peak Months and 0.06 for the Non-Peak Months.

**"Mortgage and Security Agreement"** – the Mortgage and Security Agreement to be entered into between Seller and FPL, securing the FPL Lien and substantially in the form of Appendix N.

**"NERC"** – North American Electric Reliability Council, including any successor thereto and subdivisions thereof.

**"Net Energy Output"** or **"NEO"** – in any Monthly Billing Period, the Energy in such Monthly Billing Period.

**"Non-Peak Months"** – those Months which are not Peak Months.

**"Operating Representatives"** – the Parties' representatives designated pursuant to Section 11.0, who act in matters pertaining to detailed operating arrangements for the delivery of Capacity and Energy provided under this Contract.

**"Other Operating Mode"** – *[Insert description of each other operating mode included in Proposer's submission, Form 4.]*

**"Parent Guaranty"**– a full payment and performance guaranty from a Creditworthy Guarantor, substantially in the form of Appendix C.

**"Peak Hour"** – those hours occurring April 1 through October 31, from noon to 9:00 p.m., and November 1 through March 31, from 6:00 a.m. to 10:00 a.m. and 6:00 p.m. to 10:00 p.m. FPL shall have the right to change such Peak Hours by providing Seller a minimum ninety (90) calendar days notice. The total number of Peak Hours shall not exceed thirty eight percent (38.0%) of the total hours during a calendar year.

**"Peak Months"** – the Months of January, February, June, July, August, September and December, as such Peak Months may be modified in accordance with Section 13.12.

**"Peaking Capability"** – the maximum Capacity the Facility can achieve for a period of at least *[\_\_\_\_\_]* continuous hours and at least *[\_\_\_\_ hours]* per year, without exceeding the design pressures and temperatures recommended by the Major Equipment manufacturers. *[To include limitations from Proposer's submission, Form 4.]*

**"Performance Security"** – the security provided by or on behalf of Seller for the benefit of FPL pursuant to Section 4.2.

**"Performance Security Amount"** – the aggregate amount of Performance Security, equal to *[\_\_\_\_\_ Dollars (\$\_\_\_\_\_)]*  
*[Insert amount equal to the product of the Committed Capacity (in kW) multiplied by Ninety-Five Dollars (\$95.00) per kW.]*

**"Performance Security Liquid Amount"** – the amount of Performance Security required to be satisfied through Liquid Security, equal to the greater of (a) the difference equal to (i) the Performance Security Amount, *minus* (ii) the sum of (A) Seller's Credit Limit, *plus* (B) the Credit Limit of the Creditworthy Guarantor providing the Parent Guaranty, if any, or (b) ten percent (10%) of the Performance Security Amount.

**"Plant RTU"** – has the meaning given thereto in Section 14.1.

**"Primary Fuel"** – *[pipeline quality natural gas].*

**"Ready for Control"** – a point in time, for the most part to start at the top of the hour, when the Facility is turned over to FPL's system control center for Automatic Generation Control or manual control.

**"Receipt Point"** – (a) prior to the date service over the FPL transmission system is available under an RTO or ISO open-access transmission tariff, (i) if the Facility is directly interconnected with the FPL system, the point where the Facility interconnects with the FPL system, or (ii) if the Facility is not directly interconnected with the FPL system, the location where the transmission system of the transmission provider under the Firm TSA interconnects with FPL's transmission system, or (b) beginning on the date service over the FPL transmission system is available under an RTO or ISO open-access transmission tariff, for a Facility directly or indirectly interconnected to the FPL system, load bus or group of buses that represents FPL's electrical load center (i.e., North Broward County or South Palm Beach County service area), to be specifically designated solely by FPL at the time of the implementation of an RTO or ISO.

**"Reference Conditions"** – the ambient dry-bulb temperature, ambient relative humidity, and ambient atmospheric pressure set forth on Appendix L.

**"Records"** – has the meaning given thereto in Section 15.1.

**"RTO or ISO"** – an independent entity authorized by FERC to operate the FPL transmission system or the transmission system of the third party to which the Facility is directly interconnected.

**"RTU"** – has the meaning given thereto in Section 14.1.

**"Scheduled Capacity Delivery Date"** – June 1, 2007, as such date may be extended pursuant to Section 3.3.

**"Scheduled Outages"** – has the meaning given thereto in Section 13.12.

**"Scheduled Reduction"** – any reduction in generating capability of the Facility, expressed in the nearest whole MW, as a result of a Scheduled Outage or a Maintenance Outage.

**"Secondary Fuel"** – *[No. 2 low-sulphur fuel oil]*.

**"Security Account"** – has the meaning given thereto in Section 4.3.

**"Seller's Cost of Cover"** – has the meaning given thereto in Section 19.4.

**"Start-up Cost"** – a one-time payment, payable once per Successful Start-up, in the applicable amount set forth in Appendix E.

**"Start-up Time"** – the time it takes from the moment the Facility is Committed until it is on-line and Ready for Control.

**"Step-In Rights"** – has the meaning given thereto in Section 5.1.1.

**"Successful Start-up"** – a start-up of the Facility pursuant to an FPL Commitment of the Facility, which start-up (a) is not undertaken in connection with a Capacity Test (whether or not such Capacity Test is requested by FPL), (b) follows a shutdown of the Facility pursuant to an FPL-initiated Decommitment of the Facility, (c) results in the Facility achieving Ready for Control status, and (d) results in the Facility reaching the level of dispatch and/or commitment requested by FPL.

**"Summer Period"** – the six (6) Month period beginning immediately after 12:00 midnight on March 31 and ending at 12:00 midnight on the following September 30.

**"Tangible Net Worth"** – at any time, an amount as set forth in an entity's most recent quarterly audited financial statements, equal to (a) the total assets of an entity and its subsidiaries which would be shown as assets on a consolidated balance sheet of such entity and its subsidiaries as of such time prepared in accordance with GAAP, after eliminating all amounts properly attributable to minority interests, if any, in the stock and surplus of subsidiaries, *minus* (b) the total liabilities of such entity and its subsidiaries which would be shown as liabilities on a consolidated balance sheet of such entity and its subsidiaries as of such time prepared in accordance with GAAP, *minus* (c) the net book value of all assets, after deducting any reserves applicable thereto, which would be treated as intangible under GAAP, including good will, trademarks, trade names, service marks, brand names, copyrights, patents and unamortized debt discount and expense, organizational expenses and the excess of the equity in any subsidiary over the cost of the investment in such subsidiary.

**"Tax"** – has the meaning given thereto in Section 8.4.

**"Test Protocol"** – has the meaning given thereto in Appendix I.

**"Unscheduled Outage"** – a whole or partial interruption or reduction of the Facility's Capacity to a level below Committed Capacity, whether the Facility is on-line or off-line, expressed in the nearest whole MW, that does not qualify as a Scheduled Reduction.

"Winter Period" – the six (6) Month period beginning immediately after 12:00 midnight on September 30 and ending at 12:00 midnight on the following March 31.

- 1.2 **Rules of Construction.** In this Contract: (a) words denoting any gender include each other gender; (b) the singular includes the plural and the plural includes the singular; (c) the word "or" is not exclusive; (d) a reference to an Applicable Law includes any amendment or modification to such Applicable Law, and all regulations, rulings and other Applicable Laws promulgated under such Applicable Law; (e) a reference to a person or entity includes its successors and permitted assigns; (f) the words "include", "includes" and "including" are not limiting; (g) exhibits, schedules, annexes or appendices to any document shall be deemed incorporated by reference in such document; (h) references to any document, instrument or agreement (i) shall include all exhibits, schedules and other attachments thereto, (ii) shall include all documents, instruments or agreements issued or executed in replacement thereof, and (iii) shall mean such document, instrument or agreement, or replacement or predecessor thereto, as amended, modified and supplemented from time to time and in effect at any given time; and (i) the words "hereof," "herein" and "hereunder" and words of similar import refer to this Contract as a whole and not to any particular provision, unless otherwise indicated.

## 2.0 **CONDITIONS PRECEDENT; CONTRACT TERM**

- 2.1 **Condition Precedent to Purchase and Sale.** The obligations of Seller to generate, deliver and sell, and of FPL to accept delivery of and purchase, Capacity and Energy hereunder shall be subject to the satisfaction of the conditions precedent that: (a) the FPSC shall have issued a final Determination of Need for the Facility, which order is not subject to appeal, (b) the FPSC shall have issued a final order approving this Contract, and finding that FPL is entitled to recover from its customers all payments for Energy and Capacity, which order is no longer subject to appeal, (c) the FERC shall have issued a final order authorizing Seller to make the sales of electrical energy and capacity contemplated by this Contract, which order is no longer subject to appeal, and (d) each other Governmental Authority having jurisdiction over this Contract shall have issued a final order approving this Contract or otherwise authorizing sales of electrical energy and capacity under this Contract, as applicable, which orders are no longer subject to appeal. FPL and Seller shall be co-petitioners on the application for such Determination of Need, and each Party shall cooperate in making such application (and each other application for a Governmental Approval under this Section 2.1) promptly after execution of this Contract, and shall prosecute

such application diligently and in good faith; provided, that nothing in this Section 2.1 shall be construed to require FPL to consent to any modification of this Contract or any other condition or requirement imposed on FPL relating to such application, which modifications, conditions or requirements may be rejected by FPL in its sole and absolute discretion.

2.2 **Completion Security.** All obligations and liabilities of FPL hereunder, and all rights of Seller hereunder, shall be subject to the satisfaction of the condition precedent that Seller shall have delivered the Completion Security to FPL not later than the Commencement Date.

2.3 **Failure of Conditions Precedent.**

2.3.1 If the condition precedent set forth in Section 2.1 shall not have been satisfied on or prior to the first anniversary of the Commencement Date, (a) FPL by thirty (30) days notice to Seller may terminate this Contract without penalty or further liability, and (b) FPL shall return any undrawn Completion Security to Seller within thirty (30) days of the effective date of such termination.

2.3.2 If the condition precedent set forth in Section 2.2 shall not have been satisfied on or prior to the Commencement Date, FPL by notice to Seller may terminate this Contract without penalty or further liability for FPL.

2.4 **Contract Term.** The term of this Contract (the "Contract Term") shall commence on the Commencement Date and shall expire on \_\_\_\_\_ 20\_\_, [Insert term, of not less than ten (10) years nor more than twenty-five (25) years from Scheduled Capacity Delivery Date, from Proposer's submission] unless sooner terminated in accordance with Section 3.0 or Section 19.0 hereof.

### 3.0 CONTRACT MILESTONES

3.1 **Contract Milestones.** Seller shall achieve each of the milestones set forth in Parts A and B of Appendix M in connection with its ownership, development and construction of the Facility (a "Milestone") on or (except in the case of Capacity Delivery Date) prior to the milestone date set forth on Appendix M corresponding to such Milestone (a "Milestone Date"). Time is of the essence of this Contract with respect to Seller's obligation to meet each Milestone (including each Major Milestone).

3.2 **Failure to Achieve Milestone(s).**

- 3.2.1 If Seller fails to achieve any Milestone (including any Major Milestone) by the corresponding Milestone Date, then (a) Seller shall give FPL notice of such failure as provided in Section 12.2, and (b) FPL shall have the right, but not the obligation, to exercise Step-In Rights as provided in Section 5.0.
- 3.2.2 If Seller fails to achieve any Major Milestone by the corresponding Milestone Date (including failure to achieve the Capacity Delivery Date by the Scheduled Capacity Delivery Date) or upon any other Seller Event of Default prior to the Capacity Delivery Date, then, except as provided in Section 3.3 (and provided that FPL is not then exercising Step-In Rights with respect to such failure and that Seller is not paying delay liquidated damages as provided in Section 3.2.3), FPL shall be entitled to terminate this Contract by notice to Seller as provided in Section 19.0. Upon such termination, Seller shall pay to FPL, on demand, in immediately available funds (or if not so paid, FPL shall be entitled to draw upon the Completion Security or to exercise its remedies under the Mortgage and Security Agreement), liquidated damages at the rate set forth on Appendix M with respect to such Major Milestone (or, in the case of an Event of Default other than failure to achieve a Major Milestone by the corresponding Milestone Date, at the rate set forth therein with respect to the next unmet Major Milestone).
- 3.2.3 Notwithstanding the provisions of Section 3.2.2, if Seller fails to achieve the Capacity Delivery Date by the Scheduled Capacity Delivery Date, then, except as provided in Section 3.3, and provided that FPL is not then exercising Step-In Rights with respect to such failure, Seller may extend the Scheduled Completion Date day-for-day to a date not later than the Final Capacity Delivery Date by paying to FPL delay liquidated damages at a rate equal to [           Dollars (\$           )] [*Insert amount equal to product of Committed Capacity (in kW) multiplied by \$0.115 per kW*] per day. FPL shall not be entitled to terminate this Contract with respect to such failure unless Seller shall have failed to pay such liquidated damages, shall have failed to comply with the security requirements set forth in Section 4.0, or shall have failed to achieve the Capacity Delivery Date by the Final Capacity Delivery Date, whereupon FPL shall be entitled to terminate this

Contract as provided in Section 19.0. Upon such termination, Seller shall pay to FPL, on demand, in immediately available funds (or if not so paid, FPL shall be entitled to draw upon the Completion Security or to exercise its remedies under the Mortgage and Security Agreement), liquidated damages at the rate set forth on Appendix M with respect to such failure.

### 3.3 Effect of Force Majeure; Final Capacity Delivery Date.

3.3.1 The Milestone Dates (including, for avoidance of doubt, the Scheduled Capacity Delivery Date) may be extended upon the occurrence of an event of Force Majeure as and to the extent provided in Section 18.0; provided, that in no event shall the total number of days of all the extensions made pursuant to this Section 3.3 and Section 18.0 as a result of Force Majeure exceed one hundred eighty (180) days in the aggregate; provided, further, that if Seller shall fail to achieve the Capacity Delivery Date on or prior to the Final Capacity Delivery Date, then to the extent such failure is excused for Force Majeure as provided in Section 18.0, such failure shall not be deemed an Event of Default by Seller, but FPL shall be entitled to terminate this Contract as provided in Section 19.3.

3.3.2 The Final Capacity Delivery Date shall not be extended for any reason, including payment of liquidated damages, renewal or replenishment of Completion Security, or Force Majeure.

## 4.0 **COMPLETION SECURITY; PERFORMANCE SECURITY**

4.1 Completion Security. Not later than the Commencement Date, and as a condition thereto, Seller shall provide FPL security for completion of the Facility when and as required hereunder, and for performance of all of Seller's other obligations hereunder to be performed on or prior to the Capacity Delivery Date (the "Completion Security"). Such Completion Security shall be in an amount equal to the Completion Security Amount, and may be provided in the form of one or both of a Parent Guaranty or Liquid Security; provided, that the amount of Liquid Security provided by Seller with respect thereto shall not at any time be less than the Completion Security Liquid Amount at such time.

4.2 Security for Performance. Not later than Capacity Delivery Date, and as a condition thereto, Seller shall provide FPL security for performance of all of Seller's obligations hereunder to be performed

after the Capacity Delivery Date (the "Performance Security"). Such Performance Security shall be in an amount equal to the Performance Security Amount, and may be provided in the form of one or both of a Parent Guaranty or Liquid Security; provided, that the amount of Liquid Security provided by Seller with respect thereto shall not at any time be less than the Performance Security Liquid Amount at such time.

4.3 **Security Account.** All cash deposits or other Liquid Security shall be held in an account designated by FPL (the "Security Account") for the benefit of FPL, free and clear of all liens (including the liens of the Lenders) of any person or entity other than FPL. Any Security Account shall be established and maintained at the expense of Seller and held by a depository bank or securities intermediary acceptable to FPL pursuant to a control agreement in form and substance acceptable to FPL. Prior to the establishment of any Security Account, or to the entering into or refinancing of any loan, credit, or reimbursement agreement, indenture, other debt or security arrangement with any Lender, Seller shall obtain the express written waiver of the Lenders (in form and substance satisfactory to FPL) which are entitled to liens at that time, to any and all rights in and to the Completion Security or Performance Security, as applicable, and the proceeds therefrom.

4.4 **Replacement of Security.**

4.4.1 Seller shall maintain the applicable security required under this Contract as set forth herein at all times during the Contract Term. Seller shall give FPL notice thirty (30) days prior to the date, if any, on which any Completion Security or Performance Security is due to expire, advising FPL of the scheduled expiration of such security. Seller shall replace any such security not later than ten (10) business days prior to such expiration with security meeting the requirements of this Contract. Seller shall replenish any amount drawn by FPL against the Completion Security or the Performance Security within five (5) business days of such draw.

4.4.2 FPL shall have the right to monitor the financial condition of Seller and of the issuer of any Parent Guaranty or letter of credit, and Seller shall notify FPL within three (3) business days of becoming aware that any such entity does not have an Investment Grade Credit Rating. In addition, Seller shall provide to FPL, no later than the Commencement Date and at the beginning of each calendar quarter thereafter until the Capacity Delivery

Date, and again on the Capacity Delivery Date and at the beginning of each calendar quarter thereafter, evidence satisfactory to FPL sufficient to establish that Seller is in compliance with the security requirements set forth in this Section 4.0, including such evidence sufficient to establish that Seller, any Creditworthy Guarantor, or any issuer of a letter of credit as set forth herein has an Investment Grade Credit Rating, as applicable, and sufficient to establish the Credit Limit of Seller and any Creditworthy Guarantor, as applicable.

4.4.3 In the event that the financial condition of any such entity has deteriorated to a level below Investment Grade Credit Rating or its Credit Limit has been reduced, such that the amount of Liquid Security provided by Seller to or for the benefit of FPL is less than the Completion Security Liquid Amount or the Performance Security Liquid Amount, as applicable, Seller shall replace such Completion Security or Performance Security, or shall provide additional Liquid Security, such that the aggregate amount of Liquid Security is not less than the Completion Security Liquid Amount or the Performance Security Liquid Amount, as applicable, which replacement security shall be issued by an entity with an Investment Grade Credit Rating, as applicable, and otherwise shall meet the requirements of this Section 4.0, within five (5) business days following the date Seller becomes aware of such failure to maintain an Investment Grade Credit Rating or reduction in Credit Limit or the date of any public announcement of such failure or reduction in Credit Limit.

4.5 **Achievement of Capacity Delivery Date.** If the Capacity Delivery Date occurs on the Scheduled Capacity Delivery Date (as extended pursuant to Section 3.0) and Seller has provided the Performance Security as provided herein, then Seller shall be entitled to require FPL to terminate and refund or release to Seller any undrawn portion of the Completion Security. Any refund of Completion Security pursuant to this Section 4.5 shall be made at within thirty (30) calendar days after Seller's application for such release is received and accepted by FPL.

5.0 STEP-IN RIGHTS; FPL'S LIEN

5.1 Operation by FPL Following Missed Milestone or Event of Default by Seller.

- 5.1.1 Upon the occurrence of (a) the failure of Seller to meet any Milestone by the corresponding Milestone Date, or (b) any Event of Default by Seller (whether before or after the Capacity Delivery Date) and the failure of Seller to cure such Event of Default within the applicable cure period, FPL or its designee shall have the right, but not the obligation, to enter upon and complete the licensing, permitting, construction, start-up, testing and commissioning of, or operate and maintain, the Facility as agent for Seller ("Step-In Rights"), until the earliest of (x) the date upon which Seller shall provide to FPL a certificate of an independent engineer reasonably acceptable to FPL or otherwise demonstrate to FPL's reasonable satisfaction that the circumstance which gave rise to such Event of Default no longer exists, (y) the date FPL in its sole discretion elects by notice to Seller to cease exercising Step-In Rights, or (z) the expiration or earlier termination of this Contract.
- 5.1.2 Subject to Section 5.1.3, during any period of exercise of Step-In Rights by FPL, FPL (a) shall exercise good faith efforts to complete the licensing, permitting, construction, start-up, testing and commissioning of the Facility as provided herein, or operate and maintain the Facility in accordance with Seller's obligations hereunder, and in accordance with all existing agreements to which Seller is a party and all applicable Governmental Approvals, and (b) shall continue to pay Monthly Capacity Payments and Monthly Energy Payments to the extent otherwise required to be paid hereunder.
- 5.1.3 Seller shall reimburse, indemnify and hold harmless FPL, within fifteen (15) days of submission of a reimbursement request by FPL, for the reasonable and necessary costs and expenses incurred by FPL or its designee in exercising Step-In Rights, including costs and expenses incurred in completing the licensing, permitting, construction, start-up, testing and commissioning of the Facility, or in the operation and maintenance of the Facility, on behalf of Seller, costs and expenses (including reasonable fees and expenses of counsel) in enforcing its Step-In Rights, and the cost of funds with respect to such all costs and

expenses at FPL's overall cost of capital, in each case supported by reasonable documentation. FPL shall provide ten (10) days notice in reasonable detail to Seller of the need for any capital expenses, or any other extraordinary expenses in excess of Five Hundred Thousand Dollars (\$500,000.00) not approved by the Operating Representatives, and shall obtain the consent of Seller for such capital expenses or other extraordinary expenses, such consent not unreasonably to be withheld or delayed. Without limiting any other right or remedy of FPL with respect thereto, FPL shall be entitled to draw amounts to which it is entitled to be reimbursed for or indemnified or held harmless against under this Section 5.1 from the Completion Security or the Performance Security, as applicable, or by set-off of amounts due to Seller hereunder; provided, that any amounts due to Seller hereunder after payment of such amounts and Seller's debt service to the Lenders shall be remitted to Seller.

- 5.1.4 In connection with the exercise of Step-In Rights, FPL and its employees and representatives designated in writing to Seller shall be entitled to access Seller's agreements, books and records, operating manuals, and other documents relating to the Facility and the Facility Site, and shall have access to the Facility and the Facility Site, for the purpose of exercising Step-In Rights, subject to reasonable safety and confidentiality requirements. FPL shall notify Seller of any documents or actions by Seller reasonably necessary for FPL to exercise its Step-In Rights, which shall be subject to the consent of Seller, such consent not unreasonably to be withheld or delayed.
- 5.1.5 During any period that FPL or its designee is in possession of the Facility and the Facility Site upon exercise of Step-In Rights, Seller shall retain legal title to and ownership and risk of loss of the Facility and the Facility Site, and FPL or its designee shall complete the licensing, permitting, construction, start-up, testing and commissioning of, or operate and maintain, the Facility as an agent of Seller in accordance with this Contract. Upon the termination of FPL's exercise of its Step-In Rights pursuant to Section 5.1.1, FPL or its designee shall relinquish the Facility and the Facility Site to Seller.
- 5.1.6 FPL's exercise of its Step-In Rights shall not be deemed a termination of this Contract or an assumption, release, or waiver by FPL of any liability of Seller to third parties or

of any obligation or liability of Seller to FPL or (except as expressly provided in Section 3.2 or Section 19.5) any right or remedy of FPL with respect thereto; provided, that this Section 5.1.6 shall not excuse any liability of FPL expressly assumed in writing or incurred by FPL in its own right and not in its capacity as Seller's agent or attorney-in-fact in acting in Seller's stead and on Seller's behalf in connection with the exercise of its Step-In Rights.

5.1.7 Seller hereby constitutes and appoints FPL or its designee its agent and true and lawful attorney-in-fact to exercise Step-In Rights, and to act thereafter in Seller's stead and on Seller's behalf, as provided in this Section 5.0. This power is a power coupled with an interest and is irrevocable for the Contract Term.

5.2 **FPL's Lien.**

5.2.1 As security for Seller's performance of all of its obligations hereunder, including payment of any amounts owed by Seller to FPL pursuant to this Contract, Seller or FPL shall execute and record, as appropriate, the Mortgage and Security Agreement and all other agreements, documents, or instruments required or useful to provide FPL with a fully perfected subordinated security interest and mortgage lien in the Facility, the Facility Site, and any and all real and personal property rights, contractual rights, or other rights that Seller acquires or requires in order to develop, procure, construct, operate and maintain the Facility ("FPL's Lien"). FPL's Lien shall be subordinate in right of payment, priority and remedies only to the interests of the Lenders in accordance with the terms of the Intercreditor Agreement. The collateral secured by the Mortgage and Security Agreement shall not include the pledge, assignment, or other interest in any stock or ownership interest in Seller; provided, that Seller shall not pledge or assign, or cause or permit to be pledged or assigned, any stock or ownership interest in Seller as collateral to any party other than the Lenders party to the Intercreditor Agreement.

5.2.2 FPL and Seller shall confirm, define, and perfect FPL's Lien by executing, filing, and recording, at the expense of Seller, the Mortgage and Security Agreement no later than the Milestone Date set forth at the Major Milestone A.1 on Appendix M. In addition, Seller agrees to execute and to

authorize FPL to file such financing statements under the Uniform Commercial Code, and to take such further action and execute such further instruments, as reasonably shall be requested by FPL to confirm and continue the validity, priority, and perfection of FPL's Lien. The granting of FPL's Lien shall not be to the exclusion of, nor be construed to limit, the amount of any further claims, causes of action or other rights accruing to FPL by reason of any breach or default by Seller under this Contract or the termination of this Contract prior to the expiration of its term. FPL's Lien and the Mortgage and Security Agreement shall be discharged and released, and FPL shall take any steps reasonably required by Seller to effect and record such discharge and release, upon the expiration of the Contract Term and satisfaction by Seller of all of its obligations hereunder. Seller shall reimburse FPL for its reasonable costs associated with the discharge and release of the Mortgage and Security Agreement and any other documents evidencing FPL's Lien.

- 5.3 **Permits and Contracts.** Seller shall (a) use all reasonable efforts to ensure that all Governmental Approvals and environmental emission allowances, credit or approvals required for the construction and operation of the Facility and powers of attorney related to such Governmental Approvals and environmental emission allowances, credits or approvals are transferable to FPL or its designee or exercisable by FPL or its designee upon exercise of Step-In Rights or upon exercise of remedies by FPL with respect to FPL's Lien, (b) shall ensure that such Step-In Rights and FPL's Lien are recognized by Seller's Lenders, vendors, suppliers and subcontractors and are recognized in any employment or labor contract respecting the Facility's work force, and that FPL's exercise thereof will not cause a breach, default, or lien under, or permit the termination of, any material contract relating to the Facility or the Facility Site, and (c) shall use its best efforts to effect the transfer of such Governmental Approvals, emissions allowances, credits, or approvals, powers of attorney, and contracts to FPL or its designee upon such exercise to the extent requested by FPL.

## 6.0 SALE OF ENERGY AND CAPACITY

- 6.1 **Test Energy.** Commencing on the Initial Synchronization Date and until the Capacity Delivery Date, Seller shall sell to FPL, and FPL shall purchase from Seller, all Energy, but no Capacity, in excess of Seller's internal consumption of electric energy in accordance with Section 7.0, except to the extent that FPL is not obligated to purchase such Energy under the terms of this Contract other than

Section 6.3; provided, that FPL shall not be required to accept delivery of or purchase such Energy to the extent FPL would be required to back down its own baseload generation or baseload generation under firm contract to accommodate such deliveries, and Seller shall schedule all tests accordingly.

6.2 **Energy and Capacity.** Commencing on the Capacity Delivery Date, Seller shall sell to FPL and FPL shall purchase from Seller all Energy and Capacity in excess of Seller's internal consumption of energy and capacity, in accordance with Section 7.0, except to the extent that FPL is not obligated to purchase such Energy and Capacity under the terms of this Contract.

6.3 **Purchase Obligation Excused.**

6.3.1 FPL shall not be obligated to purchase, and may require interrupted or reduced deliveries of, Energy for any reason, or for no reason at all, whenever FPL deems it appropriate, in its sole and absolute discretion.

6.3.2 FPL shall not be obligated to purchase any Capacity in excess of the Committed Capacity for any reason, or for no reason at all, whenever FPL deems it appropriate, in its sole and absolute discretion.

6.3.3 FPL in the exercise of its Dispatch and Control Rights shall not be obligated to accept delivery of any Energy or Capacity not dispatched by FPL pursuant thereto.

6.4 **Exclusivity; Specific Performance.**

6.4.1 Except to the limited extent of unintentional sales of imbalance energy upon formation of an RTO or ISO as contemplated by Section 13.20, or upon an Event of Default by FPL under Section 19.2, Seller shall have no right to sell electrical energy or capacity or Ancillary Services from the Facility to anyone other than FPL. Seller expressly agrees that it shall have no right to sell electrical energy or capacity or Ancillary Services from the Facility to anyone other than FPL, except in the limited circumstances provided in this Section 6.4.1, notwithstanding any default by FPL, any event of Force Majeure, or any other circumstances whatsoever.

6.4.2 Seller acknowledges that, throughout the term of this Contract, FPL will have a need for the Capacity, Energy, and Ancillary Services required to be provided by Seller hereunder, will be relying on the Facility to meet those

needs and, notwithstanding the provisions of Section 4.0, would have no adequate remedy at law in the event Seller were to supply such capacity, energy, or ancillary services to any person or entity other than FPL in breach of this Contract; and Seller therefore agrees that, in such event, FPL would be entitled to specific performance of Seller's obligations to supply Capacity, Energy, and Ancillary Services to FPL as provided herein.

## **7.0 PAYMENT BY FPL**

- 7.1 **Test Energy.** Prior to the Capacity Delivery Date, subject to Section 6.1, FPL shall pay Seller for each MWh of Energy delivered by the Facility at the Receipt Point at a rate equal to ninety percent (90%) of FPL's Avoided Cost.
- 7.2 **Payments for Energy.** Beginning on the Capacity Delivery Date, and thereafter for the Contract Term, FPL shall pay Seller for each MWh of Energy delivered pursuant to this Contract at the Receipt Point during each hour as provided in Appendix A; provided, that without limiting the generality of Section 6.3, FPL shall not be required to accept delivery of or to pay Seller for any Energy produced by the Facility during any periods which FPL has Decommited the Facility pursuant to Section 13.7.
- 7.3 **Payments for Capacity.**
- 7.3.1 Beginning on the Capacity Delivery Date, and thereafter for the Contract Term, FPL shall pay to Seller the Monthly Capacity Payments for the Committed Capacity at rates set forth in Appendix A; provided, that FPL shall have no obligation to make any Monthly Capacity Payments if any Event of Default as to Seller shall have occurred and is continuing.
- 7.3.2 For the Monthly Billing Period in which the Capacity Delivery Date occurs, the Monthly Capacity Payment shall be prorated by multiplying (a) the Monthly Capacity Payment calculated as set forth in Appendix A, times (b) the ratio calculated by dividing the number of hours from the commencement of the day after the Capacity Delivery Date through the end of the month by the total number of hours in the month.
- 7.4 **Start-up Costs.** FPL shall pay Seller the Start-up Costs for each Successful Start-up in the Monthly Billing Period.

- 7.5 **Ancillary Services.** The Energy and Capacity purchased by FPL hereunder pursuant to Section 6.0 shall include all Ancillary Services produced by or related to the Facility, and Seller shall be entitled to no separate payment with respect thereto. All financial or other benefits relating to such Ancillary Services shall accrue to and be the property of FPL.
- 7.6 **Transmission.** *[FPL shall pay Seller for transmission costs incurred under the Firm TSA, as provided in Section 10.3.]*
- 7.7 **Payment by FP&L.** The payment with regard to the sale and purchase of Capacity and Energy and Ancillary Services shall be computed based upon the components listed in Sections 7.1 through Section 7.6. Notwithstanding the itemization of these components, payment from FP&L represents a combined charge solely for the sale and purchase of Capacity, Energy and Ancillary Services.

## 8.0 BILLING AND PAYMENT

- 8.1 **Monthly Billing Statement.** On a monthly basis, FPL shall prepare a Monthly Billing Statement summarizing the quantities of Energy and Capacity received by FPL for the preceding Monthly Billing Period and any payments, calculated in accordance with Section 7.0, due to Seller arising from such receipt. Not later than the twentieth (20<sup>th</sup>) business day following the calendar day that ends the billing cycle, FPL shall mail to Seller the Monthly Billing Statement. FPL shall pay all amounts due, by wire transfer in immediately available funds, by the tenth (10<sup>th</sup>) day thereafter; provided, that in the event that Seller has not provided FPL with the necessary instruction for the payment by wire transfer, the payments shall be made by check.
- 8.2 **Correction of Monthly Billing Statement.** Within twenty (20) business days of its receipt of a Monthly Billing Statement, Seller shall review its contents and advise FPL in writing of any errors or misstatements contained therein. If any errors or misstatements arise in connection with any portion of any Monthly Billing Statement, FPL and Seller agree to proceed in good faith to expeditiously settle any such items. After any such items are settled between the Parties, adjustments in prior months' invoices shall be added to, or credited against, the next Monthly Billing Statement.
- 8.3 **Late Payments.** If either Party is late in making any payment due under this Contract, and the reason for such delay is solely and exclusively within the control of such Party, such payment shall accrue interest at a per annum rate equal to the product of (a) 1.25, multiplied by (b) the thirty (30) day U.S. Treasury Bill rate for the

period from and including the first day such payment is late to and including the day payment is sent.

8.4 **Taxes.**

8.4.1 Except as specified in Section 8.4.2, the payment of any and all present or future federal, state, county, or municipal property, ad-valorem, franchise, pollution, or other similar taxes on or respecting the Facility, including with respect to real property or tangible or intangible personal property, or any other taxes imposed by any other Governmental Authority in connection with the development, permitting, design, engineering, procurement, construction, testing, completion, ownership, leasing, operation or maintenance of the Facility or any related infrastructure, transmission or transportation facilities ("Taxes") shall be the sole and exclusive responsibility and obligation of Seller. FPL shall provide to Seller for payment by Seller any invoice or assessment for any such Tax received by FPL from any Governmental Authority.

8.4.2 The Parties agree to oppose by all reasonable lawful means any federal, state, county or municipal Tax that is sought to be imposed upon the purchase or sale of the Committed Capacity Energy, or Ancillary Services from the Facility; provided, that any such tax which nevertheless is imposed upon Seller (other than any taxes which Seller is required by law to collect from FPL in connection with this Contract) shall be the sole and exclusive responsibility and obligation of Seller and any such tax which nevertheless is imposed upon FPL (other than any taxes which FPL is required by law to collect from Seller in connection with this Contract) shall be the sole and exclusive responsibility and obligation of FPL.

## 9.0 TESTING AND CAPACITY RATING

### 9.1 Capacity Delivery Date; Declared Capacity.

- 9.1.1 The Capacity Delivery Date shall not occur before the Scheduled Capacity Delivery Date. In addition, in order to achieve the Capacity Delivery Date, Seller shall (or shall cause the Facility to) satisfy the following conditions and the same shall have been accepted by FPL:
- (a) the Initial Synchronization Date shall have occurred, the Facility shall be in compliance with the Interconnection Agreement and shall have met FPL's requirements for AGC, and the Facility shall have demonstrated the reliability of its communication systems with FPL;
  - (b) the Facility shall have demonstrated a Continuous Capability equal to or greater than the Minimum Capacity in an Initial Test completed successfully in accordance with Section 9.0 prior to the Capacity Delivery Date, as set forth in Seller's certified test report;
  - (c) Seller shall have delivered to FPL a certificate of a responsible officer of Seller certifying that Fuel Contracts meeting the requirements of Section 13.5 are in full force and effect as of the Capacity Delivery Date, such certificate to attach true and complete copies of such Fuel Contracts;
  - (d) Seller shall have provided to FPL certificates of insurance coverage, dated as of the Capacity Delivery Date, and copies of the insurance policies required to be maintained by Seller under Section 16.0;
  - (e) each of the representations and warranties of Seller set forth in Section 23.1 shall be true and correct as of the Capacity Delivery Date, and Seller shall have provided to FPL a certificate of a responsible officer of Seller to such effect;
  - (f) no Event of Default by Seller, and no event which, with the passage of time or giving of notice would become an Event of Default, shall have occurred and be continuing;

- (g) Seller shall have provided to FPL the Performance Security;
- (h) Seller shall have provided to FPL a certificate dated no later than the Capacity Delivery Date from an independent, registered engineer, reasonably acceptable to FPL, stating that the Facility has been designed, engineered and constructed in accordance with Good Engineering and Operating Practices and the terms of this Contract; and
- (i) a certificate of a responsible officer of Seller, dated no later than the Capacity Delivery Date, shall have been delivered to FPL, certifying that Seller has obtained all Governmental Approvals (other than the Deferred Governmental Approvals) required under Applicable Law for the ownership, operation and maintenance of the Facility.

9.1.2 The initial Declared Capacity and the initial Level 1 Declared Capacity of the Facility shall be effective on the Capacity Delivery Date, and shall be determined by Seller upon completion of such Initial Test as provided in Section 9.2.

9.1.3 The Declared Capacity and the Level 1 Declared Capacity shall be designated upon completion of the Initial Test or of any Capacity Test to the nearest whole MW unit of Capacity, and shall be effective on the date of such test (or the Capacity Delivery Date, in the case of the Initial Test).

9.1.4 The maximum Capacity associated with each incremental mode of operation will be designated upon completion of the Initial Test or any other subsequent Capacity Test.

## 9.2 **Initial Test.**

9.2.1 Seller shall provide to FPL a proposed Test Protocol not less than one hundred twenty (120) days before the Initial Test for FPL's review and approval. Such Test Protocol shall be consistent with the capacity demonstration testing guidelines attached as Appendix I. The Parties shall meet promptly to address any FPL concerns about the Test Protocol and shall endeavor to agree on the Test Protocol by the date forty-five (45) days prior to the Initial Test.

9.2.2 Seller shall notify FPL of the date and time when Seller will attempt the Initial Test for the Facility; provided, that

the date for such Initial Test shall be no earlier than the date [\_\_\_\_ (\_\_\_\_) days] prior to the Scheduled Capacity Delivery Date. [Fill in date to be agreed.] If the Initial Test for the Facility is completed successfully in accordance with this Section 9.0, Seller shall set the Declared Capacity at any level not less than the Minimum Capacity and not greater than the lesser of (a) the Continuous Capability demonstrated by the most recent run of the Initial Test, or (b) Committed Capacity. If such test is not completed successfully, Seller shall provide notice to FPL as to when the Facility will be ready to reconduct the Initial Test. Subject to Section 9.4, Seller may perform the Initial Test any number of times prior to the Capacity Delivery Date until the Initial Test is completed successfully in accordance with this Section 9.0; provided, that nothing in this Section 9.0 shall be construed to extend the Scheduled Capacity Delivery Date.

9.2.3 The Level 1 Declared Capacity shall be the lesser of (a) the Level 1 Committed Capacity or (b) the incremental Capacity associated with the Level 1 Mode of Operation demonstrated in the Initial Test.

9.2.4 The maximum Capacity associated with each incremental mode of operation will not exceed the maximum incremental Capacity demonstrated by the most recent run of Capacity Tests for each operating mode.

9.3 **Retesting.**

9.3.1 Subject to Section 9.4, after the Capacity Delivery Date, in order to establish a new level of Declared Capacity, Seller may perform up to a maximum of four Capacity Tests per Contract Year.

9.3.2 FPL may require Seller to perform Capacity Tests:

- (a) Once per each Summer Period and once per each Winter Period at FPL's sole discretion;
- (b) At any time Seller claims it is unable to comply with any material obligation under this Contract for a period of thirty (30) days or more in the aggregate as a consequence of an event of Force Majeure;
- (c) At any time Seller fails two consecutive times to meet the operating level prescribed by FPL, as described in Section 13.11.

9.3.3 Upon completion of such Capacity Test(s), if any, Seller shall set the following:

- (a) the new Declared Capacity, at a level not less than the Minimum Capacity and not greater than the lesser of (i) the Continuous Capability demonstrated by the most recent Capacity Test, or (ii) Committed Capacity. Seller may not establish a new level of Declared Capacity except upon completion of a Capacity Test;
- (b) the Level 1 Declared Capacity at the lesser of (i) the Level 1 Committed Capacity, or (ii) the incremental Capacity associated with Level 1 Mode of Operation demonstrated by the most recent Capacity Test; and
- (c) the maximum level of incremental Capacity associated with each Other Operating Mode at the maximum level demonstrated by the most recent Capacity Test for each applicable Other Operating Mode.

9.4 **Conduct of Tests.** Seller shall perform each Capacity Test at a time approved by FPL (such approval not to be unreasonably withheld) not less than five (5) business days nor more than fourteen (14) calendar days after receipt of notice of such test by the Party not requesting such test. FPL may be present on-site to monitor each such Capacity Test. Seller shall provide to FPL a complete written report of all test results of each such test, certified by a responsible officer of Seller, for FPL's review and verification, promptly upon becoming available to Seller. Each Capacity Test shall be performed in compliance with all Environmental Requirements and in accordance with the capacity demonstration testing guidelines in Appendix I and the Test Protocol agreed under Section 9.1.

9.5 **Effectiveness of Capacity Tests.**

9.5.1 No Capacity Test shall be successful unless such Capacity Test demonstrates a Continuous Capability equal to or greater than the Minimum Capacity. At any time, the last Capacity Test performed (whether or not successful and whatever the Continuous Capability demonstrated) shall be the effective test as of such time.

9.5.2 If any Capacity Test demonstrates a Continuous Capability less than the Minimum Capacity, then Seller shall promptly take corrective action to restore the Continuous

Capability to a level equal to or greater than the Minimum Capacity, and shall reschedule a Capacity Test to demonstrate such Continuous Capability at a time approved by FPL (such approval not to be unreasonably withheld) as soon thereafter as practicable but in any event not less than five (5) business days nor more than fourteen (14) calendar days after receipt of notice of such rescheduled test by FPL. Any period following an unsuccessful Capacity Test until a successful Capacity Test is completed as provided herein shall be deemed to be an Unscheduled Outage.

## **10.0 INTERCONNECTION AND DELIVERY OF ENERGY, COMMITTED CAPACITY, AND ANCILLARY SERVICES; METERING**

### **10.1 Interconnection.**

- 10.1.1 Seller shall make all arrangements necessary to interconnect the Facility to the system of a third party or to the FPL system, as applicable.
- 10.1.2 As between FPL and Seller, Seller shall (a) be solely responsible for all costs of interconnection to a third party system, (b) be solely responsible for obtaining any credits against transmission charges available from the third party related to such interconnection costs, and (c) retain all rights to any such credits.
- 10.1.3 If the Facility is directly interconnected to the FPL system, the costs of such interconnection, including any transmission credits for such costs, shall be determined in accordance with FPL's open-access transmission tariff or an RTO or ISO open-access transmission tariff, as applicable.

### **10.2 Delivery of Energy, Committed Capacity.**

- 10.2.1 This Section 10.2.1 shall apply (a) if the Facility is directly interconnected with the FPL system, prior to the date service over the FPL transmission system is available under an RTO or ISO open-access transmission tariff, or (b) if the Facility is not directly interconnected with the FPL system, prior to the date service over the FPL transmission system is available under an RTO or ISO open-access transmission tariff:

10.2.1.1 Seller shall deliver all Energy and Capacity required to be provided by Seller hereunder to the Receipt Point. Seller shall be responsible for all costs (including, losses pursuant to Section 10.2.1.2, balancing energy pursuant to Section 13.20 and congestion costs) associated with the delivery of such Energy and Capacity to the Receipt Point.

10.2.1.2 Seller shall be paid hereunder based upon the amount of Capacity and Energy delivered to the Receipt Point. Seller shall be responsible for all losses incurred to deliver such Energy and Capacity to the Receipt Point.

10.2.2 This Section 10.2.2 shall apply (a) if the Facility is directly interconnected with the FPL system, beginning on the date service over the FPL transmission system is available under an RTO or ISO open-access transmission tariff, or (b) if the Facility is not directly interconnected with the FPL system, beginning on the date service over the FPL transmission system is available under an RTO or ISO open-access transmission tariff:

10.2.2.1 FPL shall designate the Facility as a network resource or its replacement or equivalent under the RTO or ISO open-access transmission tariff, and shall pay the applicable access charge under the RTO or ISO open-access transmission tariff, provided that FPL only shall be responsible for such charge to the extent it recovers the applicable transmission owner's or owners' transmission revenue requirements. If an access charge includes costs over and above the amount FPL is responsible for because of the Facility, such costs shall be allocated to Seller.

10.2.2.2 Seller shall deliver all Energy and Capacity required to be provided by Seller hereunder to the Receipt Point. Seller shall be responsible for all costs (including losses pursuant to Section 10.2.2.2, balancing energy pursuant to Section 13.20 and congestion costs) associated with the delivery of such Energy and Capacity to the Receipt Point.

10.2.2.3 Seller shall be paid hereunder based upon the amount of Capacity and Energy delivered to the Receipt Point. Seller shall be responsible for all losses incurred to deliver such Energy and Capacity to the Receipt Point.

**10.3 Third Party TSA** If the Facility is not directly interconnected with the FPL system:

10.3.1 Seller shall within thirty (30) days of the date this Agreement is executed apply for any firm point-to-point transmission service required on a third party system to deliver all Energy and Capacity required to be provided by Seller hereunder to the Receipt Point. Seller shall use best efforts to obtain any firm point-to-point transmission service required on a third party system to deliver such Energy and Capacity to the Receipt Point, and to obtain or have the third party transmission provider obtain any necessary Governmental Approvals of the Firm TSA, within one year of the date this Contract is executed. Prior to executing the Firm TSA, or seeking or requesting the third party transmission provider to seek any necessary Governmental Approval of the Firm TSA, Seller shall seek FPL approval of the Firm TSA in the form to be executed or filed, such approval not unreasonably to be withheld or delayed. Prior to execution or filing, Seller shall use best efforts to revise the Firm TSA in such manner specified by FPL in its reasonable discretion, as provided in writing by FPL to Seller, provided that Seller shall not execute the Firm TSA or consent to any filing of the Firm TSA until such time as FPL grants approval of such execution or filing, such approval not unreasonably to be withheld or delayed. The Firm TSA shall provide Seller a right to terminate the Firm TSA effective on such date that transmission service over the third party's transmission system is available under an RTO or ISO open-access transmission tariff.

10.3.2 Upon execution of the Firm TSA, Seller shall assign all scheduling, dispatch, and operational rights under the Firm TSA to FPL, including all rights to transmit all Energy and Capacity required to be provided by Seller hereunder to alternate points of delivery, pursuant to the Assignment of Firm TSA. As between FPL and Seller, FPL shall have the right to resell any unused transmission rights under the Firm TSA, and shall retain all revenues associated with any such sale.

10.3.3 Seller shall be responsible for all payment obligations under the Firm TSA and any additional payment obligations incurred for transmission service on the third party system. Subject to Section 10.3.4, Seller shall have the right to charge FPL for all costs incurred under the Firm TSA. Seller shall separately invoice FPL for all such costs charged to FPL for inclusion on the monthly invoice prepared by FPL under Section 7.0.

10.3.4 Upon receiving notice from FPL, Seller shall terminate the Firm TSA on such date that transmission service over the FPL transmission system or the third party transmission system is available under an RTO or ISO open-access transmission tariff, or any other subsequent date specified by FPL. Upon the termination of the Firm TSA, (a) Seller shall not charge, and FPL shall not pay, any costs subsequently incurred by Seller for transmission service on the third-party system, and (b) FPL shall retain all scheduling, dispatch, and operational rights associated with the Facility under the RTO or ISO open-access transmission tariff.

10.4 **Metering.** Metering equipment necessary for determining the Energy and Capacity (real and reactive) for billing purposes shall comply with FPL's metering requirements for this installation and Contract. Metering equipment shall include, but not be limited to, kWh and kvar meters, metering cabinets, metering panels, conduits, cabling, metering units, current transformers and potential transformers directly or indirectly providing input to meters or transducers, meter recording devices, telephone circuits, signal or pulse dividers, transducers, pulse accumulators and any other equipment necessary to implement the provisions of this Contract. All energy meters for billing purposes will be revenue billing grade devices and have an accuracy of at least +/- 0.3%. All instrument transformers used for metering will be metering class devices with an accuracy of at least +/- 0.3%. Current transformer ratios will be chosen to measure minimum power within the devices accuracy range. FPL shall, at Sellers expense, design, own, purchase, install and maintain such metering equipment unless FPL agrees in writing to allow another party to design, own, purchase, install or maintain the metering equipment. FPL shall have approval rights over design and location of such installations. Seller shall be responsible for securing adequate space for such installations and shall assure FPL reasonable access to all metering equipment if installed at a facility other than a facility owned by FPL.

10.4.1 A primary meter and associated recording device shall measure and record the flow of Energy and Capacity (real

and reactive) associated with the Facility. The meter shall measure the unidirectional watt-hour and var-hour quantities (or other quantities required by FPL) and shall be used to determine the amount of Energy and Capacity received by FPL from the Seller.

- 10.4.2 A complete set of equivalent continuously operating redundant, back-up metering and recording devices shall be installed, at Seller's expense, and used for billing purposes only if the primary meters fail or are out of service for any reason.
- 10.4.3 FPL shall test, at Seller's expense, all metering equipment used to measure and record the receipt by FPL of Energy and Capacity for payment purposes. In those cases where FPL is not the owner of metering equipment used for measurement of Energy and Capacity for payment purposes, Seller shall test all such equipment in the presence of an FPL representative.
- 10.4.4 All metering equipment used by FPL for billing purposes pursuant to this Contract shall be sealed and shall be opened only by FPL in the presence of a representative of Seller, provided Seller elects to be present pursuant to Section 10.4.6.
- 10.4.5 Seller shall be responsible for the costs incurred by FPL in maintaining and upgrading the metering equipment required pursuant to this Contract.
- 10.4.6 At least every twelve months and, in addition, upon reasonable prior notice by Seller or FPL, meter tests will be conducted in accordance with the provisions for meter testing in FPL's approved Terms and Conditions for Supplying Electricity as filed with the FPSC. Seller may have a representative present during any metering inspection, test, or adjustment made by FPL. FPL shall provide Seller reasonable notice prior to such test, inspection, or adjustment. When, as a result of such a test, a meter is found to be no more than three tenths of one percent (0.3%) fast or slow because of incorrect calibration, no adjustment will be made in the amount paid to Seller for Energy and Capacity delivered to FPL. If the meter is found to be more than three tenths of one percent (0.3%) fast or slow, FPL will calculate the correct amount delivered to FPL for the actual period during which inaccurate measurements were made or, if the actual

period cannot be determined to the mutual satisfaction of the Parties, for a period equal to one-half of the time elapsed since the most recent test, but in no case for a period in excess of twelve (12) months. The previous payments by FPL for this period shall be subtracted from the amount of payments that were calculated to have been owed under this Contract. The difference shall be offset against or added to the next payment to either Party as appropriate under this Contract.

- 10.5 Seller shall be entitled to any physical or financial transmission rights allocated by an RTO or ISO associated with any transmission rights Seller obtained from a third party transmission provider for the delivery of Energy and Capacity from the Facility to the Receipt Point. FPL shall be entitled to all other physical or financial transmission rights allocated by an RTO or ISO associated with the delivery of Energy and Capacity.

#### 11.0 OPERATING REPRESENTATIVES

- 11.1 **Operating Representatives.** At least nine months prior to the Scheduled Capacity Delivery Date, each Party shall appoint a member and an alternate member as Operating Representatives, and provide notice of such appointments to the other Party. Such appointments may be changed at any time by similar notice. The respective Operating Representatives shall meet as necessary at a mutually agreeable time and place upon prior notice. Each Operating Representative and alternate shall be a responsible person working with the day-to-day operations of each respective power system. Seller's Operating Representative shall be in direct contact with the Facility Site if the Facility's operator is a different entity than Seller. The Operating Representatives shall represent the Parties in all matters arising under this Contract which may be delegated to them by mutual agreement of the Parties.
- 11.2 **Duties.** The duties of the Operating Representatives shall include those specifically identified elsewhere in this Contract, plus the following consistent with the provisions of this Contract:
  - 11.2.1 Coordinate operation outage schedules;
  - 11.2.2 Establish control and operating procedures;
  - 11.2.3 Provide a list of Operating Representatives of each Party; and
  - 11.2.4 Such other duties as may be conferred upon them by mutual agreement of the Parties.

- 11.3 **Decisions/Disputes.** Each Party shall cooperate in providing to the Operating Representatives all information required in the performance of their duties. If the Operating Representatives are unable to agree on any matter falling under their jurisdiction, such matter shall be referred by the Operating Representatives to their principals for decision. All decisions and agreements made by the Operating Representatives or principals shall be evidenced in writing. The Operating Representatives shall have no authority to amend, modify, or waive this Contract, and no such decision or agreement of the Operating Representatives shall be considered an amendment, modification or waiver of this Contract, which only may be amended, modified, or waived as provided in Section 24.2.

## 12.0 PRE-OPERATION PERIOD

- 12.1 **Design, Engineering, Procurement, and Construction of Facility.** Seller shall design, engineer, procure, and construct the Facility in accordance with Good Engineering and Operating Practices, including Environmental Requirements, and shall ensure that all equipment to be installed in the Facility shall be suitable for service in a regulated electric utility system, and shall be suitable for the use intended, and shall meet the requirements of applicable codes and standards. During the design, engineering, procurement and construction of the Facility, Seller shall provide to FPL such information as FPL may reasonably request regarding the design, engineering, procurement, and construction of the Facility.

### 12.2 **Provision of Information.**

- 12.2.1 Seller shall update and maintain the CPM Schedule as a detailed, integrated schedule for the development, permitting, design, engineering, procurement, construction, testing, and completion of the Facility, which shall identify key milestone dates and activities consistent with the Milestones and Milestone Dates set forth on Appendix M.
- 12.2.2 Seller shall submit to FPL a start-up and test schedule for the Facility, at least one year prior to start-up and testing of the Facility, identifying key start-up and testing dates and activities.
- 12.2.3 Promptly after becoming aware that a Milestone Date reasonably could be expected to be missed, and in any event no later than five (5) business days after any missed Milestone Date, Seller shall notify FPL and shall submit to FPL for its review and comment a written recovery plan

setting forth in reasonable detail, and with reasonable supporting documentation, (a) the causes and expected duration of the delay, and (b) Seller's plan to recover lost time and achieve the Capacity Delivery Date by the Scheduled Capacity Delivery Date.

12.2.4 Each calendar month until the Capacity Delivery Date, Seller shall submit progress reports in a form reasonably satisfactory to FPL, attaching reasonable supporting documentation and including an updated CPM Schedule, indicating percentage completion of each major task, including each Milestone, and reporting on any potentially significant developments that may delay the construction schedule, including the achievement of any Milestone (including the Capacity Delivery Date) and, if Seller shall have missed a Milestone Date and FPL shall not have exercised Step-In Rights or, with respect to a Major Milestone, terminated this Contract, updating FPL on Seller's progress in returning to the Milestone Date schedule set forth on Appendix M and in achieving the Capacity Delivery Date by the Scheduled Capacity Delivery Date.

12.3 **Development of Operating Procedures.** Seller and FPL shall mutually develop written system operating procedures no later than sixty calendar days prior to the Initial Synchronization Date. The operating procedures shall be consistent with the requirements of this Contract and will be intended as a guide for how to integrate the Facility's Energy and Capacity into FPL's electrical system. Topics covered shall include, but not necessarily be limited to, dispatch procedures, including dispatch procedures during system emergencies; deliveries of Energy during start-up and testing of the Facility; the method of day-to-day communications between the Facility operators and the FPL system operators; key personnel lists for both Seller and FPL operating centers; clearance and switching practices; outage scheduling; daily Available Capacity and Energy reports; and Facility operations log and reactive power output. The Operating Representatives, designated pursuant to Section 11.1, shall be responsible for developing and modifying, from time to time, these operating procedures in writing to reflect agreed upon changes.

12.4 **Submission of Operation and Maintenance Plans.** Prior to the Initial Synchronization Date, Seller shall deliver an initial schedule and operation and maintenance plan covering the first five Contract Years. Such plan shall address ongoing maintenance, reliability, environmental compliance, spare parts inventory, and shall include

an operation and maintenance plan for less frequent major overhaul work when required on the Facility's generator, turbine, boilers and auxiliary equipment, including spare parts replacements. Seller shall, at Seller's expense, cause an independent party with recognized experience in the electrical generation industry as may be chosen by Seller and approved by FPL (which approval shall not be unreasonably withheld or delayed) to conduct a review of the proposed operation and maintenance plan to ascertain whether such plan is (a) effective and consistent with Good Engineering and Operating Practices and (b) adequate to allow the Facility to operate reliably in accordance with this Contract. Seller shall provide FPL an updated plan meeting the requirements of this Section 12.4 by the last day of each May with respect to the succeeding five Contract Years or the remaining Contract Term, if less.

- 12.5 **Approval of Operation and Maintenance Plan.** The evaluation of the initial operation and maintenance plan by the independent party specified in Section 12.4 shall be provided to FPL, in writing, at least sixty calendar days prior to the Initial Synchronization Date. Seller shall make all changes to the proposed operation and maintenance plan developed pursuant to Section 12.4, which the independent party determines are necessary for such plan to be (a) effective and consistent with Good Engineering and Operating Practices, (b) consistent with the requirements of this Contract, and (c) adequate to allow the Facility to operate as specified in this Contract, unless (i) Seller disagrees with such determination(s), (ii) Seller provides FPL with a written explanation of the basis for such disagreement and the basis for Seller's belief that the proposed change is not needed to assure the reliable operation of the Facility as specified in Section 12.4 or is inconsistent with Good Engineering and Operating Practices or this Contract, and (iii) (A) FPL concurs, or (B) a second qualified independent engineering firm which shall be chosen by Seller and approved by FPL (which approval shall not be unreasonably withheld or delayed) concludes, and provides a reasonable explanation thereof, that the change recommended by the first qualified independent engineering firm (x) is not needed under Good Engineering and Operating Practices, (y) is inconsistent with this Contract, or (z) is not needed to assure the reliable operation of the Facility as specified in this Contract. Seller shall perform Facility maintenance in accordance with such plan; provided, that Seller may vary from such plan when necessary due to changed circumstances, if said variance is required by Good Engineering and Operating Practices. Seller shall notify FPL within five business days any such change, including a detailed explanation of the change, the reasons for the change, and the expected impact on Facility operations or maintenance, and shall provide to FPL such supporting documentation as FPL reasonably may require.

12.6 **Initial Synchronization Date.** Seller shall provide notice to FPL confirming the Initial Synchronization Date no less than six calendar months prior to such date, which synchronization shall not occur before the date on which all protective equipment shall have been installed and tested and is operating as required by this Contract or the Interconnection Agreement. FPL shall have the right to have representatives present and witness the synchronization at such time. Seller shall notify FPL immediately upon any change in the Initial Synchronization Date, and in no event shall synchronization occur without FPL's prior approval, which shall not be unreasonably withheld or delayed.

12.7 **Public Notice and Outreach.**

12.7.1 Seller shall use commercially reasonable efforts to undertake public outreach activities with the local community. Such outreach activities shall be designed to enhance, and implemented in a manner which reasonably could be expected to enhance, the likelihood that the Facility will receive all local Governmental Approvals required to construct, test, operate and maintain the Facility in a timely manner. FPL, in its sole and absolute discretion, may elect to review and assist with such outreach activities, but such assistance, if undertaken, shall not be construed to limit Seller's obligations hereunder or to create any liability on the part of FPL.

12.7.2 Seller shall comply with all public notice and publication requirements under Applicable Laws.

**13.0 DISPATCH, CONTROL, OPERATION AND MAINTENANCE OF THE FACILITY**

13.1 **Technical Requirements.** Power supplied by Seller hereunder shall be in the form of three-phase 60 Hertz alternating current, at a nominal operating voltage of [       kV] and power factor dispatchable and controllable in the range of 85% lagging to 90% leading as measured at the high side of the generator step-up transformer to maintain system operating parameters, as specified by FPL, with a net generation Capacity equal to the Committed Capacity. *[Insert voltage appropriate to interconnection point.]*

13.2 **System Protection.** Seller shall operate the Facility with all system protective equipment in service whenever the Facility is connected to, or is operated in parallel with, FPL's system. Seller shall provide adequate system protection and control devices to ensure safe and

protected operation of all energized equipment during normal operation, testing and repair. Seller shall have qualified personnel test and calibrate all system protective equipment at regular intervals not to exceed two (2) years. A unit functional trip test shall be performed after each overhaul of a turbine, generator or boilers prior to returning the equipment to service. The specifics of the unit functional trip test shall be as recommended by the manufacturers, in accordance with applicable codes and standards (e.g., NFPA 85) and otherwise consistent with Good Engineering and Operating Practices and as agreed by the Parties. If, at any time, FPL has reason to doubt the integrity of the Facility's system protective equipment and reasonably suspects that such loss of integrity would in any way jeopardize the reliability of the FPL system or FPL's supply of electric energy to its customers, Seller shall be required to demonstrate to FPL's satisfaction the correct calibration and operation of the equipment in question.

13.3 **Additions, Deletions and Alterations.** Seller shall not, without prior written approval of FPL, make or cause to be made any additions, deletions or alterations to the Facility's protective equipment, which equipment is necessary for or would affect the safety, reliability or integrity of FPL's system or FPL's supply of electric energy to its customers.

13.4 **Reconnection with FPL System.** If the Facility is separated from the FPL system for any reason, under no circumstances shall Seller reclose into FPL's system without first obtaining FPL's specific approval in each instance, in the appropriate form, as determined by the Operating Representatives. Seller has no right of connection to the FPL system absent FPL's express direction to do so.

13.5 **Fuel.**

13.5.1 Seller shall, commencing on the Milestone Date set forth at Major Milestone A.2 on Appendix M and until the expiration of the Contract Term, execute and maintain (and shall deliver copies to FPL within thirty (30) days of execution) long-term contract(s) for supply of Primary Fuel and any necessary transportation or associated service contract(s) for Primary Fuel between Seller and its Primary Fuel supply or transportation suppliers, which: (a) have a term of at least until the end of the Contract Term, (b) provide for supply and transportation of at least seventy-five percent (75.0%) of the Facility's Fuel requirements during such term, and (c) include remedies to address protracted inadequate deliverability or poor quality

performance (such contracts, collectively, the "Fuel Contracts").

13.5.2 Seller shall maintain at all times in on-site storage facilities at the Facility Site sufficient quantities of Secondary Fuel to operate the Facility solely on Secondary Fuel for a minimum of seventy-two (72) continuous hours at the Committed Capacity. Seller shall replace any Secondary Fuel so consumed promptly and in no event in less than ten (10) business days.

13.6 Control of Facility.

13.6.1 Seller shall operate the Facility consistent with FPL's Dispatch and Control Rights. Control of the Facility will either be by Seller's manual control under the direction of FPL (whether orally or in writing) or by Automatic Generation Control by FPL's system control center as determined by FPL. FPL shall have Dispatch and Control Rights to control the Facility within the Facility Operating Capabilities up to [    MW] above the Level 1 Available Capacity so as to be able to receive the Level 1 Available Capacity on an integrated hourly basis and to schedule the voltage desired by FPL for the Facility to maintain. *[Insert number of MW appropriate to Proposer's facility.]*

13.6.2 FPL may at times request that the real power output be equal to the Peaking Capability of the Facility but shall not require the real power output of the Facility to be below the Minimum Load without Decommitting the Facility. Seller shall meet this request or, within ten calendar days, notify FPL of the engineering or operational circumstances which prevented Seller from complying with FPL's request. FPL's request shall be made orally with as much prior notice to Seller as practicable. Failure to operate at any point above the highest operating level specified in Appendix A pursuant to such request shall not be deemed to be an Unscheduled Outage.

13.6.3 FPL shall not be entitled, pursuant to its Dispatch and Control Rights, to Commit the Facility more than [       (   )] times per Contract Year *[Insert limit on start-ups from Proposer's submission, Form 4.]*; provided, that if FPL Commits the Facility and such Commitment does not result

in a Successful Start-up, such Commitment shall not be deemed a Commitment for purposes of this limitation.

13.6.4 FPL's exercise of its rights under this Section 13.6 shall not give rise to any liability on the part of FPL, including any claim for breach of contract or for breach of any covenant of good faith and fair dealing.

13.7 **Notice of Shutdown.** Seller shall Decommit the Facility whenever directed to do so by FPL, whether orally or in writing. Whenever FPL requests Seller to Decommit the Facility, such requests should not cause the Facility to exceed the Facility Operating Capabilities, except as provided in this Section 13.7. For purposes of exercising its Dispatch and Control Rights, FPL agrees that the minimum notice period between an FPL request to Decommit and the time at which the Facility shall have completed shutdown shall be [\_\_\_\_ hours] and the minimum run time between Successful Start-up and shutdown shall be [\_\_\_\_ hours] [*Insert minimum shutdown notice and minimum run time from Proposer's submission, Form 4.*]. Such notice and reference to the Facility Operating Capabilities shall not apply (a) to the extent determined by FPL to be necessary for safe and reliable operation and maintenance of any part of FPL's system, or (b) if FPL determines that a failure to interrupt or reduce deliveries of Energy is likely to endanger life or property, or is likely to result in significant disruption of electric service to FPL's customers. In the event FPL requests Seller to Decommit the Facility with less than [\_\_\_\_ hours] [*Insert minimum notice and minimum run time from Proposer's submission, Form 4*], Seller shall make all reasonable efforts to comply with such request.

- 13.8 **Startup of Facility.** Seller shall Commit the Facility whenever directed to do so by FPL, whether orally or in writing. Whenever FPL requests Seller to Commit the Facility, such requests should not cause the Facility to exceed the Facility Operating Capabilities except as provided in this Section 13.8. For purposes of exercising its Dispatch and Control Rights, FPL agrees that the minimum notice period between an FPL request to Commit and the time at which the Facility shall have met its assigned Ready for Control shall be [\_\_\_\_ hours] and the minimum run time between Successful Start-up and shutdown shall be [\_\_\_\_ hours] *[Insert minimum shutdown notice and minimum run time from Proposer's submission, Form 4.]* Such notice and reference to the Facility Operating Capabilities shall not apply (a) to the extent determined by FPL to be necessary for safe and reliable operation and maintenance of any part of FPL's system, or (b) if FPL determines that a failure to start up the Facility is likely to endanger life or property, or is likely to result in significant disruption of electric service to FPL's customers. In the event FPL requests Seller to Commit the Facility with less than [\_\_\_\_ hours] *[Insert minimum startup notice and minimum shutdown time from Proposer's submission, Form 4]*, Seller shall make all reasonable efforts to comply with such request.
- 13.9 **Projections of Available Capacity.** During the term of this Contract, Seller shall provide FPL, on a daily basis, projections of the Available Capacity, Level 1 Available Capacity, and the Capacity associated with any Other Operating Mode, for each hour of the current day and the next six (6) days. Such estimates shall be furnished by 8:00 a.m., prevailing Eastern Time, each day, unless otherwise agreed in writing by the Parties, and shall be updated on a daily basis by 3:00 p.m. each day. Notwithstanding the above, Seller shall keep FPL informed at all times as to any change in the generation capability of the Facility, including Available Capacity, Level 1 Available Capacity, any Unscheduled Outages, including Level 1 Unscheduled Outages, or any unscheduled outages associated with any Other Operating Mode and applicable Scheduled Outages, as well as any Fuel-related operating, or maintenance concerns that could affect the generation capability of the Facility.

- 13.10 **Estimated Schedule of Operations.** FPL shall, by 4:00 p.m. prevailing Eastern time each calendar day, provide Seller with an estimated schedule of operations for the next calendar day, consistent with the Facility Operating Capabilities, including a Ready for Control, if applicable. FPL shall have the right to change such time by giving Seller a minimum of thirty (30) days notice. If the Facility fails to meet the Ready for Control specified by FPL, Seller shall declare the difference between the scheduled Ready for Control and the actual Ready for Control an **Unscheduled Outage** of the Facility, provided the specified Ready for Control was within the Facility Operating Capabilities of the Facility and consistent with Section 13.7 and Section 13.8.
- 13.11 **Failure to Achieve Operating Levels.**
- 13.11.1 For each instance where Seller fails, after oral notification from FPL, or the Facility fails through automatic control while under Automatic Generation Control, to achieve the operating level requested by FPL up to the Available Capacity, the difference between Available Capacity and the actual operating level shall be designated an **Unscheduled Outage** for the Facility for the previous twenty-four (24) hour period.
- 13.11.2 For each instance where Seller fails, after oral notification from FPL, or the Facility fails through automatic control while under Automatic Generation Control, to achieve the Level 1 Available Capacity, the difference between the Level 1 Available Capacity and the actual incremental Capacity provided above the Base Operation Mode shall be designated an **Unscheduled Outage** for the Facility for the previous twenty-four (24) hour period.
- 13.12 **Outages.** No later than May 1, 2006, and no later than May 1 of each year thereafter during the term of this Contract, Seller shall submit to FPL, in writing, Seller's preliminary desired scheduled outages for the following calendar year ("**Scheduled Outages**"); **provided**, that under no circumstances shall Seller be permitted to request **Scheduled Outages** during the Peak Months. The Facility shall be treated as being subject to a **Scheduled Outage** only for the period(s) of time it actually experiences a reduction in Capacity due to the work being performed on the Facility by Seller. Following the Capacity Delivery Date, Seller may request FPL's approval for additional outages for the purpose of performing work on specific components of the Facility that would limit the Facility's output and which should not, in the reasonable opinion of Seller, be postponed until the next **Scheduled Outage** (a "**Maintenance Outage**"). In no

event shall the total of requested Scheduled Outage Hours and Maintenance Outage Hours exceed the total number of Planned and Maintenance Outage Hours included in (and as defined in) Appendix G in any calendar year. The preliminary outage schedule submitted May 1 of each year may be revised by Seller by September 15 of each year. By October 31 of each year, FPL shall notify Seller whether the requested Scheduled Outages are acceptable. If FPL cannot accept any of the requested Scheduled Outages or Maintenance Outages, FPL shall advise Seller of the time period closest to the requested period(s) when the outage(s) can be scheduled. Such approval of Scheduled Outages and Maintenance Outages shall not be withheld unreasonably. In the event FPL requests Seller to change a Scheduled Outage or Maintenance Outage, Seller shall make all reasonable efforts to comply with such request. Except as may be specified within this Section 13.12, Seller shall perform Facility maintenance in accordance with such plan.

FPL shall have the right, upon giving twelve (12) months prior notice to Seller, to change the Months that shall be treated as Peak Months, provided, however, the total number of Peak Months in a calendar year shall never be greater than seven.

13.13 **Maintenance of Records.** Each Party, respectively, shall keep and maintain complete and accurate records and all other data required by each of them for the purposes of proper administration of this Contract.

13.13.1 Seller shall maintain an accurate and up-to-date operating log at the Facility with records of (a) real and reactive power production for each clock hour; (b) changes in operating status, Scheduled Outages, and outages and deratings using the latest version of the NERC operating guidelines; and (c) any unusual conditions found during inspections.

13.13.2 Seller shall maintain accurate maintenance records showing work history and schedule for all scheduled and unscheduled maintenance work performed.

13.13.3 Starting with the second (2<sup>nd</sup>) calendar month immediately following the Initial Synchronization Date, Seller shall provide a report to FPL by the fifteenth (15<sup>th</sup>) calendar day of each calendar month, utilizing the format detailed in Appendix D, as may be revised by FPL from time to time.

- 13.13.4 Either Party shall have the right from time to time, and upon at least fourteen (14) calendar days' notice to the other Party, to examine the records and data of the other Party relating to this Contract during the period the records are required to be maintained.
- 13.14 **Reports, Etc.** During the financing term and to the extent that Seller has access, Seller will ensure that FPL receives copies of any construction progress reports, maintenance evaluations or maintenance reports and environmental compliance reports to be provided to any third party with a financial security interest in or lien on the Facility, including evaluations or reports generated at the request of such third party or performed by a consultant engaged by such third party.
- 13.15 **Qualified Personnel.** During the term of this Contract, Seller shall employ qualified and trained personnel for managing, operating and maintaining the Facility and for coordinating such with FPL. Seller shall ensure that such personnel are on duty at the Facility Site at all times, twenty-four (24) hours every calendar day during the term of this Contract.
- 13.16 **Compliance with Reliability Requirements.** The Parties recognize that FPL is a member of NERC and FRCC, and that, to ensure continuous and reliable electric service, FPL operates its system in accordance with the operating criteria and guidelines of NERC and/or FRCC or to the extent applicable an RTO or ISO. If an emergency is declared by FPL, FPL shall verbally notify Seller's personnel and, if requested by FPL, Seller's personnel shall place the Capacity of the Facility within exclusive control of FPL or its designee for the duration of such emergency.
- 13.17 **Emergency Plans.** Seller shall cooperate with FPL in establishing emergency plans, including recovery from a local or widespread electrical blackout, or a voltage reduction, in order to effect load curtailment, and other plans which may be necessary. Seller shall make technical references available concerning Start-up Times, black-start capabilities and minimum load carrying ability.
- 13.18 **Cooperation During Emergency.** Seller shall, during an emergency, supply Energy to FPL as required by FPL orally or in writing up to the Facility's Peaking Capability that FPL is able to receive. If the Facility has any Unscheduled Outages or Scheduled Outages during such an emergency, Seller shall make all good faith efforts to reschedule the outage(s) or, if the outage(s) has begun, expedite the completion thereof.

13.19 **Operation of Facility.**

- 13.19.1 Seller shall operate and maintain the Facility in accordance with Good Engineering and Operating Practices, including Environmental Requirements, and shall ensure that all equipment to be installed in the Facility shall be suitable for the intended purpose, and shall meet the requirements of applicable codes and standards.
- 13.19.2 Seller shall operate the Facility with all automatic controls (except the Automatic Generation Control) and protection equipment, speed governors and voltage regulators and safety interlock controls at the Facility in service whenever the Facility is connected to, or operated in parallel with, the FPL system. The Automatic Generation Control shall be operated pursuant to FPL's Dispatch and Control Rights.

13.20 **Responsibility for Imbalance Payments under RTO or ISO or Standard Electric Market Rules.** In the event that: (i) an RTO or ISO is established that owns or exercises operational control over FPL's transmission system; or (ii) FERC establishes or approves electric market rules ("Market Rules") that apply to FPL's system, then responsibility for imbalance or other payments associated with imbalances required to be paid by or to the RTO or ISO or under the Market Rules shall be as follows:

- 13.20.1 Seller shall be responsible for imbalance payments associated with Seller's failure to follow FPL's dispatch instructions issued pursuant to Section 13.0 or dispatch instructions of an RTO or ISO, in an amount equal to the sum of (a) the product of (i) the difference between Facility's actual output during each applicable hour and the output level requested by FPL or an RTO or ISO, multiplied by (ii) the positive difference, if any, of (x) price required to be paid by FPL to the RTO or ISO for any imbalance during such hour, minus (y) the price FPL would have paid Seller for the energy that Seller failed to deliver which caused the imbalance, plus (b) any other associated penalties, amounts or costs to FPL.
- 13.20.2 If Seller operates at the levels specified in FPL's dispatch instructions issued pursuant to Section 13.0, then Seller shall not be responsible for any imbalance payments.
- 13.20.3 For avoidance of doubt, in no event shall Seller be entitled to compensation for any Energy generated by the Facility

in excess of the level requested by FPL during any hour that the Facility's actual output exceeds the output level requested by FPL. All Energy payments shall be in accordance with Section 7.0.

- 13.21 **Seller as Operator.** Except with the prior written consent of FPL, Seller or an affiliate thereof shall be the sole operator of the Facility; provided, that Seller shall be entitled to appoint a qualified third-party operator in its place, with FPL's consent, such consent not to be unreasonably withheld. No appointment of an affiliate or third-party operator by Seller shall relieve Seller of any obligation or liability under this Contract.
- 13.22 **Dispatch, Control, Operation and Maintenance of the Facility.** With respect to control, operation, and maintenance of the Facility, it is agreed by the Parties that Seller and not FP&L is solely responsible for implementation of all control, operating and maintenance procedures which relate to the possession, control, use or custody of the Facility.

#### 14.0 DATA ACQUISITION

- 14.1 **Installation of Equipment.** Except as may be provided in this Section 14.1 and Section 14.3, Seller shall, at its own expense, design, engineer, purchase, install, connect, operate, repair, maintain and own all telemetering equipment, the generator control unit and the generator control panel for the Facility as may reasonably be required in compliance with the specifications for such equipment and software set forth in Appendix J or as updated from time to time by FPL by notice to Seller in order to receive telemetry and to control the Energy and Capacity from the Facility as required to dispatch the Facility and to provide for the safe and reliable operation of FPL's electric system. Such equipment shall meet FPL's reasonable specifications for transmission of telemetered data to and from locations specified by FPL. Telemetering equipment shall include, but not be limited to, transducers, meters, test switches for transducers and meters, alternating current and direct current sources, telephone lines and interconnecting wiring with proper identification for supervisory and communication equipment. FPL shall, at Seller's expense, own, design, engineer, purchase, install, connect, terminate, repair, maintain, replace, relocate and remove a work station and/or remote terminal unit ("RTU") to link the Facility and FPL's system control center ("Plant RTU"). Seller shall provide adequate space for the FPL work station and/or Plant RTU, coordinate planning and installation of the FPL work station and/or Plant RTU and provide FPL twenty-four hour access each day to the FPL work station and/or Plant RTU.

14.2 **Data Acquisition Equipment.** The data acquisition equipment shall monitor analog and digital signals deemed necessary and shall meet FPL specifications set forth in Appendix J or otherwise reasonably determined as necessary from time to time by FPL to implement the provisions of this Contract. Such data acquisition equipment and software shall be state-of-the-art at the time it is purchased, be compatible at all times with the computer master equipment and software receiving the telemetry signals (including Automatic Generation Control) and supply status information, MWh, voltage, MW and MVAR analog information, certified site data including dry bulb, wet bulb, or relative humidity and barometric pressure, as well as any other data reasonably required by FPL or Seller from time to time, with respect to the Facility. Such data acquisition equipment and software shall be separate from, or capable of operating independently of, any equipment and software of any person or entity other than Seller or any equipment and software of Seller other than the Facility located at the Facility Site. Data available on such data acquisition equipment shall not be accessible to any person or entity other than Seller without the prior written approval from FPL. Seller agrees to treat as proprietary to FPL and confidential any and all data available on such data acquisition equipment.

14.3 **FPL Switchyard RTU.** If required by FPL, the FPL switchyard RTU shall be installed by FPL to provide interconnection telemetry exclusively to the FPL system control center. The FPL switchyard RTU shall be in addition to the Plant RTU provided for in Section 14.1, and any other RTUs which may be installed in the future to supply data to or from FPL. The FPL switchyard RTU shall, at Seller's expense, be owned, designed, engineered, purchased, installed, repaired, maintained, replaced, relocated or removed by FPL, subject to Seller approval.

## 15.0 RECORDS AND AUDITS

15.1 **Books and Records.** Seller's books, records and accounts, correspondence, accounting procedures and practices and any other supporting evidence pertaining to the Facility or this Contract (all the foregoing hereinafter referred to as "Records") shall be open to inspection, audit and reproduction, during normal working hours by FPL or its authorized representative on ten (10) calendar days prior notice, to the extent necessary to permit adequate evaluation and verification of any invoices, payments or claims based on Seller's actual costs incurred. For the purpose of evaluating or verifying such actual or claimed costs incurred or units expended, FPL and its authorized representatives shall have access to said Records from

the Commencement Date until seven (7) years after the close of each Contract Year to which such Records relate.

15.2 **Inspection; Construction; Environmental and Operating Records.**

15.2.1 Subject to Seller's reasonable safety and security requirements, FPL employees or its agents shall have the right to monitor the licensing, permitting, construction, start-up, testing, and commissioning of the Facility, either onsite or off-site. Seller shall comply with all reasonable requests of FPL for information resulting therefrom.

15.2.2 FPL-authorized representatives may, from time to time during normal business hours and with reasonable advance written or verbal notice, have access to the Facility to inspect the environmental and operation and maintenance records of the Facility or for other purposes necessary to determine Seller's performance under the terms of this Contract, provided that FPL's inspections do not unreasonably interfere with Seller's operation and maintenance of the Facility.

15.3 **FPL Audit Rights.** Seller shall cooperate in such physical inspections of the Facility as may be reasonably required by FPL during and after completion of construction. FPL or its authorized representative shall have access during normal working hours to all necessary facilities of Seller, and shall be provided adequate and appropriate work space, in order to conduct the audits in compliance with the provisions of this Section 15.0.

16.0 **INSURANCE**

16.1 **Liability Insurance.** Seller shall procure or cause to be procured a policy or policies of liability insurance issued by an insurer satisfactory to FPL on a standard "Insurance Services Office" commercial general liability form, or an Associated Electric and Gas Insurance Services ("AEGIS") form or other industry form acceptable to FPL. Said policy(ies) shall cover liabilities which might arise under, or in the performance or nonperformance of, this Contract. A Certificate of Insurance shall be delivered to FPL at least fifteen (15) calendar days prior to the start of any interconnection work. At a minimum, said policy(ies) shall contain (i) an endorsement providing coverage, including products liability/completed operations coverage for the term of the Contract, and (ii) a broad form contractual liability endorsement for FPL Entities. Effective at least fifteen (15) calendar days prior to the

Initial Synchronization Date, the policy(ies) shall be amended to include coverage for interruption or curtailment of power supply in accordance with industry standards.

- 16.2 **Coverage Required.** The policy(ies) described in Section 16.1 shall have a limit of not less than Ten Million Dollars (\$10,000,000.00) per occurrence, combined single limit, for personal injury, bodily injury (including death), and property damage; provided, that in the event that such insurance becomes totally unavailable or procurement becomes commercially impracticable, such unavailability or impracticability shall not constitute an Event of Default under this Contract, but FPL and Seller shall enter into negotiations to develop substitute protection for FPL Entities which FPL, in its reasonable judgment, deems adequate. Any premium assessment or deductible shall be for the account of Seller and not FPL Entities.
- 16.3 **Conditions of Coverage.** In the event that the policy(ies) is on a "claims made" basis, the retroactive date(s) of the policy(ies) shall be the Commencement Date or such other date as to protect the interests of FPL Entities. Furthermore, if the policy(ies) is on a "claims made" basis, Seller's duty to provide such coverage shall survive the termination of this Contract until the expiration of the maximum statutory period of limitations in the State of Florida for actions based in contract or in tort; if coverage is on an "occurrence" basis, such insurance shall be maintained by Seller during the entire period of interconnection and performance by the Parties under this Contract. The policy(ies) shall not be canceled or materially altered without at least thirty (30) calendar days' written notice from the insurer to FPL. Coverage must be reasonably acceptable to FPL.
- 16.4 **FPL as Additional Insured, Etc.** Depending on the policy procured by Seller, and with FPL's concurrence, FPL Entities shall be designated either as an additional named insured or as an additional insured for all policies specified in Section 16.1, and each policy(ies) shall be endorsed to be primary to any insurance which may be maintained by, or on behalf of, FPL Entities. All policies shall include waivers of subrogation in favor of FPL Entities.
- 16.5 **Property Insurance.** Seller shall procure or cause to be procured "All Risk" property insurance, including boiler and machinery insurance, in an amount equal to the replacement cost of the Facility to provide comprehensive coverage for the Facility. Such policy(ies) shall include waivers of subrogation in favor of FPL Entities.

- 16.6 **Environmental Pollution Liability Insurance.** Seller shall procure or cause to be procured environmental pollution liability insurance, which shall include clean up, bodily injury and property damage for existing and new pollution conditions both on and offsite. Such insurance shall be in an amount of no less than Ten Million Dollars (\$10,000,000.00) per occurrence and in the policy aggregate and contain a deductible of no more than One Million Dollars (\$1,000,000.00) per occurrence. Environmental pollution liability may be written on a claims made form. FPL Entities shall be designated as an additional insured for such policy(ies), and such policy(ies) shall be endorsed to be primary to any insurance which may be maintained by, or on behalf of, FPL Entities. Such policy(ies) shall include waivers of subrogation in favor of FPL Entities.
- 16.7 **Copies of Policies.** Certificates of insurance or a copy of the policy(ies) referenced in Sections 16.1, 16.5, and 16.6 shall be made available for inspection by FPL at Seller's offices upon reasonable advance notice to Seller.

#### **17.0 COMPLIANCE WITH LAWS, RULES AND REGULATIONS**

- 17.1 **Compliance with Applicable Laws.** Seller shall operate and maintain the Facility in compliance with all Applicable Laws.
- 17.2 **Governmental Approvals.** Seller hereby agrees to seek, obtain, maintain, comply with and, as necessary, renew, replace, or modify from time to time, at Seller's sole expense, and in a timely manner, any and all Governmental Approvals, including Environmental Licenses, which are required by Applicable Law as prerequisites to engaging in the activities envisioned by this Contract.

17.3 **Design and Permitting.**

17.3.1 Seller shall design, engineer, procure, construct, operate and maintain the Facility, and shall obtain and maintain Governmental Approvals and environmental emission allowances, credits or approvals on terms and conditions, such that Seller will be in compliance with, and the Facility will be designed, engineered, constructed, procured, operated and maintained, in accordance with the requirements of this Contract (including pursuant to FPL's Dispatch and Control Rights) without violating Applicable Laws, including Environmental Requirements, and Seller shall not be excused from any obligation under this Contract nor shall any right of FPL (including FPL's Dispatch and Control Rights) be limited because of any conflict between the requirements hereof and the requirements of Applicable Law, including Environmental Requirements, or because of any failure to obtain or maintain any Governmental Approval or environmental emissions allowance, credit or approvals.

17.3.2 Without limiting the generality of Section 17.1, 17.2, or 17.3.1, Seller shall design, engineer, procure, construct, test, operate and maintain the Facility, and shall obtain and maintain Governmental Approvals on terms and conditions, such that:

- (a) at the point in time when the Facility is Ready for Control, the Facility shall have full load-following capability equal to the Maximum Sustained Rate;
- (b) the Peaking Capability shall be not less than [     MW] in the Winter Period and [     MW] in the Summer Period [*Insert numbers of MW from Proposer's submission*]; and
- (c) the Facility shall operate in accordance with the Facility Operating Capabilities.

17.3.3 Seller shall use commercially reasonable efforts to obtain and maintain all Governmental Approvals required to allow, and shall design, engineer, procure, construct, and, subject to receipt of such Governmental Approvals, test, operate and maintain the Facility, such that:

- (a) the Facility shall be capable of operating on Secondary Fuel at the Committed Capacity for up to five hundred (500) hours per calendar year;
- (b) the Facility shall be capable of operating for a minimum of seventy-two (72) continuous hours at the Committed Capacity using Secondary Fuel stored at the Facility Site without replenishment;
- (c) the Facility shall be capable of achieving Successful Start-up operating solely on Secondary Fuel; and
- (d) the Facility shall be capable of switching from the Primary Fuel to the Secondary Fuel without interruption or diminution in output and without disconnecting from the transmission system.

17.4 **Environmental Reporting.**

17.4.1 Seller shall submit to FPL an annual environmental summary report describing the Facility's status and stating whether or not Seller is in compliance with all applicable Environmental Requirements and Environmental Licenses, including certification conditions under the Florida Electrical Power Plant Siting Act and the National Environmental Policy Act, if necessary. Such report shall be submitted annually, on or before the anniversary of the Commencement Date, or coincident with periodic reports to Governmental Authorities.

17.4.2 Seller shall notify FPL within five (5) business days of any violations or alleged violations of Environmental Requirements (as evidenced by agency warning letters, notices of violations, or similar written or verbal communications to or from any environmental agency), describing the matter in reasonable detail, including the anticipated resolution, and attaching copies of such communications and Seller's responses, if any.

17.5 **Environmental Allowances.** Seller shall be responsible for obtaining, at its expense, all applicable environmental allowances, offsets or credits, if any, necessary under Applicable Law and Governmental Approvals for the construction or operation of the Facility as required by this Contract.

17.6 **EEO Compliance.** Seller shall conform to the requirements of the Equal Employment Opportunity clause in Section 202, Paragraphs 1

through 7 of Executive Order 11246, as amended; applicable portions of Executive Orders 11701 and 11758, relative to Equal Employment Opportunity; Section 503 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, as amended; the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended; and the Implementing Rules and Regulations of the Office of Federal Contract Compliance Programs; and shall impose such requirements on its applicable contractors, subcontractors, vendors and suppliers.

**17.7 Rate Regulation.**

17.7.1 Notwithstanding anything to the contrary in this Contract, if FPL, at any time during the term of this Contract, fails to obtain or is denied the authorization of the FPSC, or the authorization of any other legislative, administrative, judicial or regulatory body which now has, or in the future may have, jurisdiction over FPL's rates and charges, to recover from its customers all of the payments required to be made to Seller under the terms of this Contract or any subsequent amendment hereto, FPL may, at its sole option, adjust the payments made under the Contract to the amount(s) which FPL is authorized to recover from its customers. In the event that FPL so adjusts the payments to which Seller is entitled under this Contract, then, Seller may, at its sole option, terminate this Contract upon ninety (90) days notice to FPL. If such determination of disallowance is ultimately reversed and such payments previously disallowed are recovered, FPL shall pay all withheld payments. Seller acknowledges that any amounts initially received by FPL from its customers, but for which recovery is subsequently disallowed and charged back to FPL, may be offset or credited, against subsequent payments to be made by FPL to Seller under this Contract.

17.7.2 If, at any time, FPL receives notice that the FPSC or any other legislative, administrative, judicial or regulatory body seeks or will seek to prevent full recovery by FPL from its customers of all payments required to be made under the terms of this Contract or any subsequent amendments to this Contract, then FPL shall, within thirty (30) days of such notice, give notice thereof to Seller. FPL shall use reasonable efforts to defend and uphold the validity of this Contract and its right to recover from its customers all payments required to be made by FPL hereunder, and will cooperate in any effort by Seller to intervene in any proceeding challenging, or to otherwise

be allowed to defend, the validity of the Contract and the right of FPL to recover from its customers all payments to be made by it hereunder.

The Parties do not intend this Section 17.7 to grant any rights or remedies to any third party(ies) or to any legislative, administrative, judicial or regulatory body; and this Section 17.7 shall not operate to release any person from any claim or cause of action which Seller may have relating to, or to preclude Seller from asserting, the validity or enforceability of any obligation undertaken by FPL under this Contract.

17.8 **No Application to FERC.** This Contract shall not be subject to change through application to the FERC pursuant to the provisions of Sections 205 or 206 of the Federal Power Act absent the prior written agreement of each of the Parties.

17.9 **Community Relations.** Seller shall maintain good relations with labor, suppliers, vendors, Governmental Authorities, and the local community.

## 18.0 FORCE MAJEURE

18.1 **Force Majeure Relief.** Except as otherwise provided in this Contract, each Party shall be excused, pursuant to the procedures set forth in this Section 18.0, from performance to the extent its nonperformance is caused by Force Majeure.

18.2 **Notice of Force Majeure, Etc.**

18.2.1 In the event of any delay or nonperformance resulting from Force Majeure, the Party suffering an occurrence of Force Majeure shall notify the other of the nature, cause, date of commencement thereof and the anticipated extent of such delay, and shall indicate whether any date(s) for performance may be affected thereby. Such notice shall be given to the other Party as soon as practicable but in no event later than five (5) business days after the claiming Party's awareness of the Force Majeure, i.e., the effect of such event or circumstance, and in no event later than thirty (30) days after the occurrence of such event or circumstance, and shall provide such substantiating documentation as may be required to verify such event or circumstances and its effects within fifteen (15) days of such notice. The Party claiming Force Majeure shall endeavor in good faith to notify the other Party earlier than

five (5) business days but shall not be in breach of this Contract for any failure to provide such notice any sooner than five (5) business days, and shall notify the other Party of the status of its efforts in such form and with such frequency as the other Party reasonably may request under the circumstances (but not less than weekly). When the Party claiming Force Majeure is able to resume performance of its obligations under this Contract, such claiming Party shall give the other Party prompt notice to such effect.

18.2.2 The suspension of performance shall be of no greater scope and of no greater duration than the cure for the Force Majeure requires. Prior to the Capacity Delivery Date, no event of Force Majeure shall be deemed to extend, or to excuse failure of Seller to achieve, any Milestone under Section 3.0, to extend the Schedule Capacity Delivery Date, or to excuse failure to achieve the Capacity Delivery Date by the Scheduled Capacity Delivery Date, except to the extent such event of Force Majeure (a) substantially impairs a critical-path item on the CPM Schedule, and (b) cannot be overcome by revising, rearranging, expediting, or accelerating such CPM Schedule or by the payment of money to expedite or accelerate such CPM Schedule.

18.3 **Mitigation of Force Majeure.** Any Party suffering an occurrence of Force Majeure shall use commercially reasonable efforts to remedy the cause(s) preventing its performance of this Contract as promptly as possible.

18.4 **Effect of Force Majeure on Capacity Payments.** If in any Month the Available Capacity of the Facility is decreased with respect to any hour or Peak Hour as a result of Force Majeure, then:

18.4.1 With respect to the first seven hundred twenty (720) hours in the aggregate in any rolling thirty-six (36) month period during which the Available Capacity of the Facility is so decreased, the Hourly Capacity Factor and Hourly Peak Capacity Factor shall be deemed to be equal to the ACF or the APCF, as applicable, of the preceding Monthly Billing Period.

18.4.2 Without limiting the generality of Section 18.3, Seller shall endeavor diligently to cause the Available Capacity of the Facility to be restored promptly to a level not less than the Minimum Capacity, and Seller shall cause a

Capacity Test to be conducted as promptly thereafter as possible as provided in Section 9.0. Any whole or partial interruption or reduction in the Facility's Capacity to a level below Committed Capacity after the conclusion of the seven hundred twenty (720) hours in the aggregate in any thirty-six (36) month period described in Section 18.4.1 until the conclusion of such Capacity Test shall be deemed to be an Unscheduled Outage.

- 18.4.3 Upon conclusion of the Capacity Test, if the Continuous Capability is less than the Minimum Capacity, and if Seller provides to FPL evidence reasonably satisfactory to FPL that such shortfall is a direct consequence of such event of Force Majeure, and that Seller, notwithstanding Seller's efforts to mitigate the effects of such Force Majeure, has not been able to restore the Facility, then, until the earlier of the demonstration by Seller in a Capacity Test that the Continuous Capability is not less than the Minimum Capacity or the expiration of the Force Majeure Aggregate Allowance:
- (a) the Committed Capacity shall be deemed to be equal to the Continuous Capability demonstrated by the most recent Capacity Test;
  - (b) Seller shall set the Declared Capacity at a level not more than such Continuous Capability; and
  - (c) FPL's Dispatch and Control Rights, and its payment obligations hereunder, shall be prorated accordingly.

- 18.5 **Limitation.** FPL at its option may terminate this Contract as provided in Section 19.3 to the extent that (a) performance by Seller of its obligations hereunder shall have been excused pursuant to this Section 18.0 for a period in excess of the Force Majeure Aggregate Allowance, or (b) Seller shall have been excused pursuant to this Section 18.0 from achieving the Capacity Delivery Date by the Final Capacity Delivery Date.

## 19.0 DEFAULT AND TERMINATION

- 19.1 **Seller Events of Default.** Each of the following shall constitute an Event of Default by Seller:

- 19.1.1 Seller abandons construction or operation of the Facility;

- 19.1.2 Seller fails to achieve a Major Milestone by the corresponding Milestone Date (other than failure to achieve the Capacity Delivery Date by the Scheduled Capacity Delivery Date) and Seller has failed to cure such failure within thirty (30) days of such Milestone Date;
- 19.1.3 Seller (a) fails to achieve the Capacity Delivery Date by the Scheduled Capacity Delivery Date and fails to pay delay liquidated damages or otherwise fails to comply with the provisions of Section 3.2.3; or (b) fails to achieve the Capacity Delivery Date by the Final Capacity Delivery Date;
- 19.1.4 After the Capacity Delivery Date, the Facility fails to maintain a Capacity Billing Factor of at least sixty-four percent (64%);
- 19.1.5 The Facility fails to demonstrate a Continuous Capability at least equal to the Minimum Capacity in three successive Capacity Tests after the Capacity Delivery Date;
- 19.1.6 Seller sells electrical capacity or energy or Ancillary Services from the Facility to a third party other than as expressly provided in Section 13.20;
- 19.1.7 Seller (a) fails to make a payment to FPL that is not subject to a good-faith dispute within thirty (30) days after notice from FPL that such payment is due under this Contract, or (b) fails to pay any liquidated damage amount as and when due hereunder;
- 19.1.8 If (a) a receiver or liquidator or trustee of Seller or Seller's guarantor or of a substantial part of the assets of Seller or Seller's guarantor is appointed by order of a court of competent jurisdiction, and such receiver or liquidator or trustee is not discharged within a period of sixty calendar days; (b) by decree of such a court, Seller or Seller's guarantor is adjudicated bankrupt or insolvent or a substantial part of the assets of Seller or Seller's guarantor are sequestered, and such decree continues undischarged and unstayed for a period of sixty (60) calendar days after the entry thereof; (c) a petition to declare bankruptcy or to reorganize a party pursuant to any of the provisions of the Federal bankruptcy laws, as they now exist or may hereafter be amended, or pursuant to any other similar state statute applicable to Seller or Seller's guarantor, as now or hereafter in effect, is filed against Seller or Seller's

guarantor and is not dismissed within sixty (60) calendar days after such filing; (d) Seller or Seller's guarantor files a voluntary petition to declare bankruptcy or to reorganize pursuant to any bankruptcy law or insolvency law, or consents to the filing of any bankruptcy or reorganization petition against it under any similar law; or (e) without limitation of the generality of the foregoing, Seller or Seller's guarantor files a petition or answer or consent seeking relief or assisting in seeking relief in a proceeding under any of the provisions of the Federal bankruptcy laws, as they now exist or may hereafter be amended, or pursuant to any other similar state statute applicable to Seller or Seller's guarantor, as now or hereafter in effect, or Seller or Seller's guarantor files an answer admitting the material allegations of a petition filed against it in such a proceeding;

- 19.1.9 Seller is in default of any material provision of this Contract not specifically mentioned in this Section 19.1 and Seller has failed to cure such default within thirty (30) days after notice of such default from FPL to Seller; provided, that so long as such default of Seller is not a failure to pay money, (a) if it is not feasible to correct such default within thirty (30) days after FPL has delivered notice of such default to Seller, but it remains feasible to correct within sixty (60) days, and (b) if within ten days after said notice from FPL, Seller provides FPL notice of its intention to cure such default and evidence that it remains feasible to correct such default within sixty (60) days after such notice from FPL, it shall not constitute an Event of Default hereunder until the earliest feasible date within such sixty (60) day period when a cure could be effected so long as (w) corrective action by Seller is instituted within ten days following the notice from FPL, (x) such corrective action is diligently pursued, (y) Seller provides FPL bi-weekly written reports as to the nature and progress of such corrective action, and (z) such cure is effected within sixty (60) days of the notice from FPL; or
- 19.1.10 Seller fails to provide and maintain the Completion Security or the Performance Security required under Section 4.0, or FPL shall have made a drawing on any Liquid Security and such Liquid Security shall not have been replaced or replenished when and as required by Section 4.0.

19.2 **FPL Events of Default.** Each of the following shall constitute an Event of Default by FPL:

19.2.1 FPL fails to make a payment due to Seller that is not subject to a good-faith dispute within thirty (30) days after notice from Seller that such payment is due under this Contract; or

19.2.2 If (a) a receiver or liquidator or trustee of FPL or of a substantial part of the assets of FPL is appointed by order of a court of competent jurisdiction, and such receiver or liquidator or trustee is not discharged within a period of sixty calendar days; (b) by decree of such a court, FPL is adjudicated bankrupt or insolvent or a substantial part of the assets of FPL are sequestered, and such decree continues undischarged and unstayed for a period of sixty (60) calendar days after the entry thereof; (c) a petition to declare bankruptcy or to reorganize a party pursuant to any of the provisions of the Federal bankruptcy laws, as they now exist or may hereafter be amended, or pursuant to any other similar state statute applicable to FPL, as now or hereafter in effect, is filed against FPL and is not dismissed within sixty (60) calendar days after such filing; (d) FPL files a voluntary petition to declare bankruptcy or to reorganize pursuant to any bankruptcy law or insolvency law, or consents to the filing of any bankruptcy or reorganization petition against it under any similar law; or (e) without limitation of the generality of the foregoing, FPL files a petition or answer or consent seeking relief or assisting in seeking relief in a proceeding under any of the provisions of the Federal bankruptcy laws, as they now exist or may hereafter be amended, or pursuant to any other similar state statute applicable to FPL, as now or hereafter in effect, or FPL files an answer admitting the material allegations of a petition filed against it in such a proceeding.

19.3 **Termination for Prolonged Force Majeure.** To the extent any event or events of Force Majeure (a) excuse Seller from achieving the Capacity Delivery Date by the Final Capacity Delivery Date pursuant to the provisions of Section 18.0, or (b) after the Capacity Delivery Date, excuse Seller from performing any of its material obligations hereunder pursuant to the provisions of Section 18.0 for four thousand, three hundred twenty (4,320) hours in the aggregate (whether resulting from the same or multiple events or circumstance and whether or not continuous) (the "Force Majeure Aggregate Allowance"): (i) FPL may terminate this Contract without penalty

or further liability for either Party upon thirty (30) days notice to Seller, and (ii) upon such termination, FPL shall return any undrawn Completion Security or Performance Security within sixty (60) days of the effective date of such termination.

19.4 **Remedies.** Upon the occurrence of any Event of Default, the non-defaulting Party may, at its option:

19.4.1 Terminate this Contract without penalty or further obligation by the non-defaulting Party, by notice to the defaulting Party, and, if prior to the Capacity Delivery Date, Seller shall pay FPL liquidated damages as provided in Section 3.0;

19.4.2 Offset from any payment(s), due from the non-defaulting Party to the defaulting Party, any amount otherwise due from the defaulting Party to the non-defaulting Party;

19.4.3 In the case of an Event of Default by Seller, draw on the Completion Security or the Performance Security, as the case may be, in the amount of the non-defaulting party's damages (including liquidated damages payable under Section 3.0);

19.4.4 In the case of an Event of Default by Seller, FPL, at its option, may apply to any court of competent jurisdiction for the appointment of a receiver to take charge of, manage, preserve, protect, complete construction of, and operate the Facility, to make all necessary and needed repairs to the Facility, and to pay all taxes and assessments against the Facility and insurance premiums for insurance thereof, it being hereby agreed that, upon occurrence of an Event of Default, (a) FPL shall be entitled to such appointment; (b) upon application by FPL, the court may forthwith appoint such receiver with the usual powers and duties thereof; (c) Seller consents, and Seller shall not object to such appointment; and (d) appointment of a receiver under this Section 19.4 shall not in and of itself terminate this Contract;

19.4.5 In the case of an Event of Default by Seller, if (and only if) FPL shall have terminated this Contract pursuant to Section 3.0 or Section 19.0 as a consequence of such Event of Default, FPL may, at its option, but subject to the Intercreditor Agreement, exercise any or all of its remedies under the Mortgage and Security Agreement;

19.4.6 In the case of an Event of Default by FPL, then, notwithstanding the exclusivity requirement set forth in Section 6.4, Seller may cover FPL's obligations to pay for Capacity under this Contract by selling such capacity to a third party, in which event FPL shall pay to Seller, within ten (10) days after Seller's invoice (with such supporting documentation as may be required to verify such failure and the amounts set forth on such invoice), an amount equal to the amount, if any, by which the amount received by Seller from reselling such Capacity at the Receipt Point, acting in a commercially reasonable manner, is less than the amount required to be paid by FPL to Seller hereunder with respect to such Capacity ("Seller's Cost of Cover");

19.4.7 Exercise any other right or remedy available to it in equity or, subject to Section 19.5, any other right or remedy available to it hereunder or at law or in equity;

19.5 **Liquidated Damages.** The Parties acknowledge and agree that the damages which FPL would actually suffer as a result of (a) delay by Seller in achieving the Capacity Delivery Date by the Scheduled Capacity Delivery Date, or (b) termination of this Contract upon Seller's failure to achieve a Major Milestone under Section 3.0, including failure to achieve the Capacity Delivery Date as provided therein, or upon any other Seller Event of Default prior to the Capacity Delivery Date, are now, and will in the future remain, incapable of determination with any mathematical precision or certainty, and that the mutually agreed liquidated damages required to be paid upon such failure hereunder (i) are in the nature of liquidated damages, (ii) are not unconscionable, (iii) do and will not constitute a conversion by or unjust enrichment of FPL, (iv) are unequivocal, fair and reasonable under the circumstances and not a penalty, (v) shall constitute FPL's sole and exclusive damages upon such delay or termination (FPL hereby waiving, in consideration of the right to such liquidated damages in such events, any rights it may have to seek damages in excess of such agreed delay or termination liquidated damages), and (vi) were bargained for and derived through mutual negotiations and agreement between Seller and FPL and constitute a material and integral part of the agreement between the Parties; provided, that nothing herein shall limit FPL's rights to seek any equitable remedies otherwise available to FPL; provided, further, that such liquidated damages shall not be FPL's sole and exclusive damages with respect to any default or Event of Default not expressly described in Section 3.2, with respect

to which FPL shall continue to have all rights and remedies described herein; and provided, further, that during any period in which FPL has exercised Step-In Rights and has not relinquished possession of the Facility and the Facility Site to Seller or terminated this Contract as provided in Section 5.1 or this Section 19.0, Seller shall not be obligated to pay such liquidated damages.

**19.6 FPL's Cost of Cover.**

19.6.1 If Energy or Capacity is not delivered or made available from the Facility at the Receipt Point due to Unscheduled Outage(s) or for any reason in breach of Seller's obligations hereunder, and FPL in its absolute and sole discretion, for any reason it deems appropriate, or for no reason at all, elects to cover Seller's obligations to deliver Capacity and Energy under this Contract by obtaining deliveries of electrical capacity and electrical energy from a third party:

- (a) unless Seller's failure is excused pursuant to Section 18.0, Seller shall pay to FPL, within ten business days of Seller's receipt of the Monthly Billing Statement, an amount equal to the amount, if any, by which the cost to FPL of obtaining such deliveries at the Receipt Point, acting in a commercially reasonable manner (including without duplication brokerage or other transaction costs, generation charges, fuel charges, reservation charges, start-up costs, transmission charges, transmission losses, and charges for ancillary services) exceeds the amount required to be paid by FPL to Seller hereunder with respect to such Energy or Capacity ("FPL's Cost of Cover");
- (b) any capacity used in the production of such replacement capacity or energy shall not be treated as Committed Capacity, Declared Capacity, or Available Capacity for purposes of this Contract unless purchased by FPL from an entity with an Investment Grade Credit Rating (or which has provided security equivalent to the security required to be provided by Seller hereunder) pursuant to a firm contract with a term not less than the remaining portion of the Contract Term, which means, in any hour or Peak Hour, that neither such capacity nor the energy delivered by such capacity in replacement of Energy or Capacity shall be

treated as Committed Capacity, Declared Capacity or Available Capacity or as Energy delivered in such hour or Peak Hour hereunder, including for purpose of clauses (a)(i) or (b)(i) of the definition of "Hourly Capacity Factor" or "Hourly Peak Capacity Factor"; and

- (c) for avoidance of doubt, FPL shall not have any obligation to obtain or continue such deliveries.

19.6.2 For avoidance of doubt, Seller shall have no right to substitute electrical capacity or energy, at the Receipt Point or otherwise, generated at any facility other than the Facility, for Capacity or Energy which Seller has failed for any reason to generate at the Facility and to deliver or make available at the Receipt Point.

19.7 **Survival of Rights; Remedies Cumulative.** No termination under this Section 19.0 (or otherwise under this Contract) shall affect the liability of either Party for obligations arising prior to such termination or for damages, if any, resulting from breach of this Contract. Except as expressly provided in Section 19.5, the rights and remedies of the Parties hereunder shall not be exclusive of any other right or remedy available hereunder or at law or in equity and shall be cumulative.

## 20.0 INDEMNIFICATION

20.1 **Indemnification.** FPL and Seller shall each be responsible for its own facilities, for protection of its own generating system, and for ensuring adequate safeguards for FPL customers, and the personnel and equipment of Seller and FPL. Seller shall indemnify and save FPL Entities harmless, and FPL shall indemnify and save Seller Entities harmless, from any and all claims, demands, costs or expenses (including court costs and attorneys' fees related to any claim, administrative proceeding, pretrial, trial or appellate proceeding), for loss, damage or injury to persons or property caused by, arising out of, or resulting from (a) any act or omission by the respective Party or that Party's contractors, agents, servants and employees in connection with the installation or operation of that Party's generation system or Facility, or the operation thereof in connection with the other Party's system or Facility, (b) any defect in, failure of, or fault related to, a Party's system or Facility, or (c) the negligence of the respective Party or negligence of that Party's contractors, agents, servants or employees.

20.2 **Environmental Indemnity.** Seller agrees to hold FPL Entities harmless from any liability associated with on-site or off-site contamination or other environmental damage resulting from any prior uses or from construction and operating activities except as and to the extent such contamination or other environmental damage was the direct result of FPL actions, other than actions performed pursuant to FPL's rights under this Contract.

## 21.0 LIMITATIONS OF LIABILITY

- 21.1 **Limitation on Seller's Liability.** No Seller Entity shall be liable (in contract or in tort, including negligence, or otherwise) to FPL for indirect, incidental or consequential damages resulting from Seller's performance, nonperformance or delay in performance of its obligations under this Contract; provided, that this Section 21.1 shall not be construed to limit any liability Seller otherwise may have for liquidated damages under this Contract, any liability of any Seller Entity due to its gross negligence or willful misconduct, or any other right or remedy of FPL Entities expressly set forth in this Contract.
- 21.2 **Limitation on Liability of FPL Entities.** No FPL Entity shall be liable (in contract or in tort, including negligence, or otherwise) to Seller or its suppliers or its subcontractors for indirect, incidental or consequential damages resulting from FPL's performance, nonperformance or delay in performance of its obligations under this Contract; provided, that this Section 21.2 shall not be construed to limit any liability of any FPL Entity due to its gross negligence or willful misconduct, or any other right or remedy of Seller Entities expressly set forth in this Contract.
- 21.3 **Effect of Security.** The liability of Seller hereunder shall not be affected by the existence, amount, waiver, or release of, or exercise or failure to exercise remedies with respect to, FPL's Lien, Step-In Rights, any Completion Security, any Performance Security, or any other security for Seller's obligations hereunder. FPL may draw on or exercise other rights or remedies with respect to, all or any part of such security to the extent available hereunder, and from all such forms, and in any sequence, as FPL in its sole discretion may elect, except as such rights are specifically limited in the express provisions of this Contract.
- 21.4 **Cost of Cover.** Seller and FPL acknowledge and agree that among other things, FPL's Cost of Cover and Seller's Cost of Cover constitute direct damages and shall not be limited by Section 21.1 or Section 21.2, respectively.

**22.0 NOTICES**

22.1 **Notices.** All notices required under this Contract shall be in writing unless expressly specified otherwise herein, and shall be delivered in person, by certified mail or by a nationally recognized overnight courier, return receipt requested, or by facsimile transmission with confirmation by voice or automatic answer-back service, as specified below:

To Seller:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Fax: ( ) \_\_\_\_ - \_\_\_\_\_  
Telephone: ( ) \_\_\_\_ - \_\_\_\_\_

To FPL:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Fax: ( ) \_\_\_\_ - \_\_\_\_\_  
Telephone: ( ) \_\_\_\_ - \_\_\_\_\_

22.2 **Notices Effective.** Notices shall be effective upon receipt; provided, that in the event a Party fails to notify the other of the correct person and address for notices pursuant to Section 22.3 below, any notice to that Party shall be deemed effective on the third day following the date such notice is sent to the person and address last provided by such Party.

22.3 **Designation of New Notice Recipients.** Either Party may, at any time, by notice designate any different person(s) or different address(es) or phone number(s) for receipt of notices and correspondence.

**23.0 REPRESENTATIONS AND WARRANTIES**

23.1 **Seller's Representations and Warranties.** Seller hereby represents and warrants as follows:

23.1.1 Seller is a *[type of entity]* duly organized, validly existing and in good standing under the laws of the State of *[State]* and is qualified in each other jurisdiction where the failure to so qualify would have a material adverse effect upon the

business or financial condition of Seller; and Seller has all requisite power and authority to conduct its business, to own its properties, and to execute, deliver, and perform its obligations under this Contract.

23.1.2 The execution, delivery, and performance of its obligations under this Contract by Seller have been duly authorized by all necessary [*corporate, company, partnership*] company action, and do not and will not:

- (a) Require any consent or approval of Seller's [*governing body or owners*], other than that which has been obtained and is in full force and effect;
- (b) Violate any provision of Applicable Law or violate any provision in any [*constitutive documents*] of Seller, the violation of which could have a material adverse effect on the ability of Seller to perform its obligations under this Contract;
- (c) Result in a breach or constitute a default under Seller's [*constitutive documents*], or under any agreement relating to the management or affairs of Seller or any indenture or loan or credit agreement, or any other agreement, lease, or instrument to which Seller is a party or by which Seller or its properties or assets may be bound or affected, the breach or default of which could reasonably be expected to have a material adverse effect on the ability of Seller to perform its obligations under this Contract; or
- (d) Result in, or require the creation or imposition of any mortgage, deed of trust, pledge, lien, security interest, or other charge or encumbrance of any nature upon or with respect to any of the assets or properties of Seller now owned or hereafter acquired, the creation or imposition of which could reasonably be expected to have a material adverse effect on the ability of Seller to perform its obligation under this Contract.

23.1.3 This Contract is a valid and binding obligation of Seller, enforceable against Seller in accordance with its terms (except as such enforcement may be limited by bankruptcy, insolvency, or similar laws affecting the rights of creditors, or by general principles of equity).

23.1.4 The execution, delivery, and performance of this Contract will not conflict with or constitute a breach or default under any contract or agreement of any kind to which Seller is a party or any judgment, order, statute, or regulation that is applicable to Seller or the Facility.

23.1.5 All approvals, authorizations, consents, or other action required by any Governmental Authority to authorize Seller's execution, delivery, and performance under this Contract have been duly obtained and are in full force and effect, except for those approvals described in Section 2.1 or the Deferred Governmental Approvals.

23.2 **FPL's Representation and Warranties.** FPL hereby represents and warrants the following:

23.2.1 FPL is a corporation duly organized, validly existing and in good standing under the laws of the State of Florida and is qualified in each other jurisdiction where the failure to so qualify would have a material adverse effect upon the business or financial condition of FPL; and FPL has all requisite power and authority to conduct its business, to own its properties, and to execute, delivery, and perform its obligations under this Contract.

23.2.2 The execution, delivery, and performance of its obligations under this Contract by FPL have been duly authorized by all necessary corporate action, and do not and will not:

- (a) Require any consent or approval of FPL's Board of Directors, or shareholders, other than that which has been obtained and is in full force and effect;
- (b) Violate any provision of Applicable Law or violate any provision in any corporate documents of FPL, the violation of which could have a material adverse effect on the ability of FPL to perform its obligations under this Contract;
- (c) Result in a breach or constitute a default under FPL's corporate charter or bylaws, or under any agreement relating to the management or affairs of FPL or any indenture or loan or credit agreement, or any other agreement, lease, or instrument to which FPL is a party or by which FPL or its properties or assets may be bound or affected, the breach or default of which could reasonably be

expected to have a material adverse effect on the ability of FPL to perform its obligations under this Contract; or

- (d) Result in, or require the creation or imposition of any mortgage, deed of trust, pledge, lien, security interest, or other charge or encumbrance of any nature (other than as may be contemplated by this Agreement) upon or with respect to any of the assets or properties of FPL now owned or hereafter acquired, the creation or imposition of which could reasonably be expected to have a material adverse effect on the ability of FPL to perform its obligation under this Contract.

23.2.3 This Contract is a valid and binding obligation of FPL, enforceable against FPL in accordance with its terms (except as such enforcement may be limited by bankruptcy, insolvency, or similar laws affecting the rights of creditors or by general principles of equity).

23.2.4 The execution, delivery, and performance of this Contract will not conflict with or constitute a breach or default under any contract or agreement of any kind to which FPL is a party or any judgment, order, statute, or regulation that is applicable to FPL.

23.2.5 Except for those approvals described in Section 2.1, all Governmental Approvals required by any Governmental Authority to authorize FPL's execution, delivery, and performance under this Contract have been duly obtained and are in full force and effect.

## 24.0 MISCELLANEOUS

### 24.1 Assignment or Sale, Etc.

24.1.1 Seller may not (a) assign any of its rights or obligations under this Contract (whether directly or through the assignment, sale, lease, transfer or other disposition of any direct or indirect interest in Seller by any direct or indirect owner of Seller) or (b) sell, lease, assign, transfer or otherwise dispose of all or a portion of the Facility (whether directly or through the assignment, sale, lease, transfer or other disposition of any direct or indirect interest in Seller by any direct or indirect owner of Seller) without the prior written consent of FPL, which consent

shall not be unreasonably withheld; provided, that (subject to the Mortgage and Security Agreement and the Intercreditor Agreement) without the prior consent of FPL, Seller may assign its rights and interests under this Contract to the Lenders as collateral security, or create a security interest in favor of the Lenders over its rights and interests in this Contract; provided, further, that it shall be a condition to any such assignment, sale, lease, transfer, or other disposition (including any collateral assignment or any exercise of remedies by the lenders pursuant thereto) that all security required under Section 4.0 or Section 5.0, as applicable, shall be, or shall remain, in place notwithstanding such disposition, or that replacement security in form, substance and amount reasonably satisfactory to FPL shall have been provided prior to such disposition.

- 24.1.2 Prior to any assignment, sale, lease, transfer, or other disposition (a) by Seller of all or any portion of the Facility (other than sales of surplus or used equipment no longer required for operation of the Facility in accordance with this Contract), or (b) any assignment, sale, lease, transfer, or other disposition by any direct or indirect owner of Seller of its direct or indirect ownership interest in Seller, Seller shall (or shall cause such owner to) give FPL at least thirty (30) days prior written notice of the complete, material proposed terms and conditions of such disposition. FPL at its sole and absolute option shall have the exclusive right to acquire the Facility or such portion thereof, or such direct or indirect ownership interest, proposed to be transferred for the same consideration and on terms and conditions no less favorable to Seller than those offered by the proposed transferee. To give effect to this right of first refusal, FPL shall notify Seller of its intent to purchase (together with a proposed purchase contract) within ten (10) business days after the expiration of the thirty (30) day notice of proposed terms and conditions required above, and the resulting transaction shall close within thirty (30) days after such notice of intent to purchase from FPL; provided, that failure by FPL to give the notice of intent to purchase within ten business days shall be deemed to be an election by FPL not to exercise such right. In the event FPL notifies Seller that regulatory approval is useful or required for the close of the transaction, FPL shall take all actions required to seek

approval of such closing within the second thirty (30) day period including the submittal of all necessary applications, and the second thirty (30) day period shall be extended for the period of time necessary to obtain final and non-appealable approvals. Seller shall cause all contracts, agreements, or other understandings with respect to any such assignment, sale, lease, transfer or other disposition described in this Section 24.1 to specifically set forth and acknowledge FPL's exclusive right of first refusal set forth in this Section 24.1.2. Seller immediately shall notify (or shall cause such direct or indirect owner to notify) FPL of any material change to the terms or conditions set forth in Seller's notice to FPL of such proposed disposition, and upon receipt of such notice the time periods set forth in this Section 24.1.2 shall be extended and shall be deemed to have begun on the effective date of such second notice from Seller or such owner.

24.1.3 Seller shall not be released from its obligations hereunder by virtue of any assignment, sale, lease, transfer, or other disposition described in this Section 24.1 unless such release is expressly agreed upon by FPL in writing.

24.1.4 Any attempt by Seller to make any assignment, sale, lease, transfer or other disposition described in this Section 24.1 in violation of this Section 24.1 shall be void ab initio and shall not be effective.

24.2 **Amendments.** This Contract shall not be amended or modified, and no waiver of any provision hereof shall be effective, unless set forth in a written instrument authorized and executed by the Parties and, if requested by FPL, approved by the FPSC. This Contract, as it may be amended from time to time, shall be binding upon, and inure to the benefit of, the Parties' respective successors-in-interest and permitted assigns.

24.3 **Conflict in Provisions.** In case of conflict between this Contract's Sections 1.0 through 24.0 and appendices to this Contract, Sections 1.0 through 24.0 shall take precedence.

24.4 **Survival.** The obligations, rights, and remedies of the Parties hereunder, which by their nature survive the termination of this Contract, shall survive such termination and inure to the benefit of the Parties.

24.5 **No Waiver.** Any waiver by either Party of its rights with respect to a default (including Events of Default) under this Contract, or with

respect to any other matters arising in connection with this Contract, shall not be deemed a waiver with respect to any subsequent default (including Events of Default) or other matter. The failure of either Party to enforce strict performance by the other Party of any of the provisions of this Contract or to exercise any rights under this Contract shall not be construed as a waiver or relinquishment to any extent of such Party's right to assert or rely upon any such provisions or rights in that or any other instance.

- 24.6 **Section Headings.** Section headings appearing in this Contract are inserted for convenience only and shall not be construed as interpretations of text.
- 24.7 **Purchase and Sale.** This Contract is intended to provide for the purchase and sale of goods and services not subject to Florida sales/use tax and is not intended and shall not be construed, interpreted, or applied to create a lease, license or similar arrangement for the use, possession, custody or control of property.
- 24.8 **Review, Approval, Etc. by FPL.** The Parties explicitly acknowledge and agree that FPL's reviews, agreement, comment, approvals, disapprovals and authorizations pursuant to this Contract are administrative in nature and do not relieve Seller of its obligations for the design, engineering, procurement, construction, operation, or maintenance of the Facility including Environmental Licensing and compliance with Environmental Requirements or other Applicable Laws or Governmental Approvals, or impose any such obligations on FPL, and that FPL's technical review and inspections of the Facility, or of drawings, plans, or other technical data, whether before or after the Capacity Delivery Date, and resulting requests, if any, shall not be construed as endorsing the design thereof or as any warranty as to the safety, durability or reliability of the Facility or relieve Seller of any of its obligations, duties or responsibilities hereunder.
- 24.9 **Construction of Contract.** The Parties expressly agree that no provision of this Contract should be construed against or interpreted to the disadvantage of any Party by any court or other governmental or judicial authority by reason of such Party having been deemed to have structured or dictated such provision.
- 24.10 **Complete Agreement.** This Contract is intended as the complete and exclusive statement of the agreement between the Parties. Parol or extrinsic evidence shall not be used to vary or contradict the express terms of this Contract and recourse may not be had to alleged prior drafts, negotiations, prior dealings, usage of trade,

course of dealing or course of performance to explain or supplement the express terms of this Contract.

24.11 **Counterparts.** This Contract may be executed and delivered in counterparts, and may be delivered by facsimile transmission.

24.12 **Severability.** In the event that any provision of this Contract shall be held invalid or unenforceable by a court of competent jurisdiction, the remainder of this Contract or the application of the provisions hereof to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby.

24.13 **Good Faith.** The Parties agree to act in accordance with the principles of good faith and fair dealing in the performance of this Contract.

24.14 **No Partnership.** Nothing contained in this Contract shall be construed to create an association, trust, partnership or joint venture between Seller and FPL or, except as expressly set forth in Section 5.0, an agency relationship between Seller and FPL. Each Party shall be individually and severally liable for its own obligations under this Contract.

24.15 **GOVERNING LAW; SUBMISSION TO JURISDICTION.**

24.15.1 **THIS CONTRACT AND THE RIGHTS AND THE OBLIGATIONS OF THE PARTIES HEREUNDER (OTHER THAN APPENDIX C) SHALL BE CONSTRUED UNDER, AND IN ACCORDANCE WITH, THE LAWS OF THE STATE OF FLORIDA.**

24.15.2 **ANY LITIGATION BETWEEN THE PARTIES SHALL BE CONDUCTED IN THE COURTS OF THE STATE OF FLORIDA OR IN FEDERAL COURTS SITUATED IN FLORIDA AND THE PARTIES HEREBY SUBMIT TO THE EXCLUSIVE JURISDICTION OF SUCH COURTS; PROVIDED, THAT IF A FLORIDA COURT OR FEDERAL COURT SITUATED IN FLORIDA SHALL HAVE DETERMINED THAT IT CANNOT ACCEPT JURISDICTION OVER ANY ACTION BECAUSE OF THE FAILURE TO JOIN AN INDISPENSABLE PARTY, THEN ANY PARTY HERETO MAY BRING AN ACTION IN ANY STATE OR FEDERAL COURT OF COMPETENT JURISDICTION.**

24.15.3 EACH OF THE PARTIES HEREBY IRREVOCABLY WAIVES ALL RIGHT OF TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF OR IN CONNECTION WITH THIS CONTRACT OR ANY MATTER ARISING HEREUNDER.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be executed by their respective duly authorized officers.

[SELLER]

**FLORIDA POWER & LIGHT COMPANY,  
a Florida corporation**

By: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Attest: \_\_\_\_\_  
[Secretary]  
(Corporate Seal)

Attest: \_\_\_\_\_  
Assistant Secretary  
(Corporate Seal)

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX A

### MONTHLY CAPACITY AND ENERGY PAYMENT CALCULATION

#### I. Monthly Capacity Payment ( $MCP_{Total}$ )

The Monthly Capacity Payment for each Monthly Billing Period shall be determined according to the following formula:

$$MCP_{Total} = MCP_{Base} - MCD_{Level 1} + MCP_{other}$$

##### A. Calculation of $MCP_{Base}$

In the event that the  $CBF < 64\%$ , then no MCP shall be due

$$MCP_{Base} = 0$$

In the event that the CBF is greater than or equal to 64% but less than 94%, then

$$MCP_{Base} = CC * [B \text{ \$/kW-Month}] * [(98 - 2*(94-CBF))/100]$$

In the event that the CBF is equal to or greater than 94% but less than 98%, then

$$MCP_{Base} = CC * [B \text{ \$/kW-Month}] * [(100 - 0.5*(98 - CBF))/100]$$

In the event that the CBF is equal to or greater than 98%, then

$$MCP_{Base} = CC * [B \text{ \$/kW-Month}]$$

Where:

CC = Committed Capacity, expressed in kW

B =  $\text{\$/kW - Month}$  [Insert the adjusted price of the capacity, measured in  $\text{\$/kW-Month}$ , taking into account the Base and Level 1 mode of operation (i.e.,  $(\text{Base \$/kW-Month} * CC \text{ in kW}) + (\text{Level 1 \$/kW-Month} * \text{Level 1 Incremental Capacity in kW}) / (CC \text{ in kW})$ , from Proposer's submission.]

CBF = Capacity Billing Factor for such Monthly Billing Period

##### B. Calculation of $MCD_{Level 1}$

In the event that the L1BF is equal to or greater than 98%, then

$$MCD_{Level 1} = 0; \text{ i.e., no dollars are to be subtracted from } MCP_{Base}$$

In the event that the L1BF is equal to or greater than 94% but less than 98%, then

$$MCD_{Level 1} = L1CC * [X \text{ \$/kW-Month}] * [(98 - L1BF)/100]$$

In the event that the L1BF is greater than or equal to 75% but less than 94%, then

$$MCD_{Level 1} = L1CC * [X \text{ \$/kW-Month}] * [.04 + (3*(94 - L1BF))/100]$$

In the event that the  $L1BF < 75\%$ , then all of the dollars associated with operating the Facility Level 1 Mode of Operation are to be subtracted from  $MCP_{Base}$ , and

$$\text{MCD}_{\text{level 1}} = \text{L1CC} * [\text{\$ X /kW-Month}]$$

Where:

L1CC = Level 1 Incremental Committed Capacity, expressed in kW.

$X = \underline{\hspace{1cm}}$  \$/kW-Month [*Insert the price per kW-Month submitted by Proposer for Level 1 Mode of Operation*]

L1BF = Level 1 Capacity Billing Factor calculated based on the performance for such Monthly Billing Period, as follows:

$$\text{L1BF} = \sum_{k=1}^n (\text{L1AC}/\text{L1CC}) / n$$

L1AC = the Level 1 Available Capacity for Level 1 Mode of Operation for such Monthly Billing Period, expressed in kW. L1AC shall never be greater than L1CC.

n = number of hours in the Monthly Billing Period

k = each hour, for the Monthly Billing Period

**C. Calculation Of Payments Associated With Other Modes Of Operation (MCP<sub>other</sub>)**

*[Payments for incremental capacity provided from other operating modes included in Proposer's submission, which include additional operating limitations and/or are not able to be placed under FPL'S AGC, to be inserted here, taking account of the following:*

1. *The amount of the incremental capacity associated with the specific operating mode proposed in the Submittal.*
2. *The availability of the incremental capacity.*
3. *The operating limitations associated with supplying the incremental level of capacity (e.g., notice period, continuous capability, limitations per cycle etc.).*
4. *Actual measured performance associated with incremental capacity.*
5. *The incremental heat rate will be taken into account for the pricing of energy.*

*Corresponding changes will be made to definitions and to substantive provisions of PPA, to address such matters as testing, dispatch, etc.]*

## II. Energy Payment

The Energy Payment for each Monthly Billing Period shall be determined according to the following formula:

$$EP = [\sum_{k=1}^n (NEO1_k * GHR1_k * HAF1_k * FP1)] + [\sum_{k=1}^n (NEO2_k * GHR2_k * HAF2_k * FP2)] + [\sum_{k=1}^n (NEO1_k + NEO2_k * VOM)] + SP$$

Where:

EP = the Energy Payment, expressed in dollars, for the Monthly Billing Period;

NEO1= the hourly Net Energy Output generated using the Primary Fuel for hour k of the Monthly Billing Period, expressed in MWh, not to exceed the Capacity level of dispatch in any hour during such Monthly Billing Period;

NEO2= the hourly Net Energy Output generated using the Secondary Fuel for hour k of the Monthly Billing Period, expressed in MWh, not to exceed the Capacity level of dispatch in any hour during such Monthly Billing Period;

GHR1 = Guaranteed Heat Rate, expressed in mmBtu/MWh, equal to *[To be inserted from Proposer's submission based on heat rate data associated with the Primary Fuel.]*;

GHR2 = Guaranteed Heat Rate, expressed in mmBtu/MWh, equal to *[To be inserted from Proposer's submission based on heat rate data associated with the Secondary Fuel.]*;

HAF1 = heat rate adjustment factor associated with the Primary Fuel for hour k of the Monthly Billing Period, calculated pursuant to Exhibit 1 to Appendix A

HAF2 = heat rate adjustment factor associated with the Secondary Fuel for hour k of the Monthly Billing Period, calculated pursuant to Exhibit 1 to Appendix A

FP1 = Fuel (commodity and transportation) Price, expressed in dollars per mmBtu, equal to *[To be inserted from Proposer's submittal<sup>1</sup> based on the Facility's Primary Fuel type]*;

FP2 = Fuel (commodity and transportation) Price, expressed in dollars per mmBtu, equal to *[To be inserted from Proposer's submittal<sup>1</sup> based on the Facility's Secondary Fuel type]*;

VOM = Variable Operations and Maintenance charge, expressed in dollars per MWh, equal to *[To be inserted from Proposer's submission.]*;

n = number of hours in the Monthly Billing Period;

k = each hour, for the Monthly Billing Period: and

SP = any Start-up Cost(s) for such Monthly Billing Period for which Seller is entitled to payment.

<sup>1</sup> Fuel Prices may be as guaranteed in the proposal or indexed to a mutually acceptable benchmark.

A sample calculation of the Monthly Capacity Payment and the Energy Payment is attached hereto as Exhibit 2 for illustrative purposes only.

HEAT RATE ADJUSTMENT FACTOR TABLE FOR PRIMARY FUEL

<u>NEO/DC</u> <u>Range</u>	<u>HAF1</u>
> 1.0	1.?
0.81- 1.0	1.0
0.61 – 0.8	1.?
0.41 – 0.6	1.??
0.21 – 0.4	1.???

*[Insert ranges and heat rate factors provided by Proposer.]*

HEAT RATE ADJUSTMENT FACTOR TABLE FOR SECONDARY FUEL

<u>NEO/DC</u> <u>Range</u>	<u>HAF2</u>
> 1.0	1.?
0.81- 1.0	1.0
0.61 – 0.8	1.?
0.41 – 0.6	1.??
0.21 – 0.4	1.???

*[Insert ranges and heat rate factors provided by Proposer.]*

### SAMPLE PAYMENT CALCULATION

#### Capacity Payment Calculation for a Monthly Billing Period

##### Assumptions

CC = 100,000 kW  
L1CC = 30,000 kW  
CBF = 98%  
L1BF = 94%  
Base \$/kW-Month = 8  
Level 1 \$/kW-Month = 5  
B = adjusted price =  $[(100,000 * 8) + (30,000 * 5)] / 100,000 = 9.50$  \$/kW-Month

##### Calculation

$MCP_{Total} = MCP_{Base} - MCD_{Level 1}$   
 $MCP_{Base} = 100,000 * 9.50$   
 $MCP_{Base} = \$950,000$   
 $MCD_{Level 1} = 30,000 * 5 * [(98-94)/100]$   
 $MCD_{Level 1} = \$6,000$   
 $MCP_{Total} = 950,000 - 6,000 = \$944,000$

#### Energy Payment Calculation

##### Assumptions

NEO1 = 74,100 MWh  
NEO2 = 0 MWh  
GHR = 7 mmBtu/MWh  
HAF1 = 1.1 for 70 hours Facility was dispatched to Level 1 AC  
HAF1 = 1 for all other hours Facility was available during the Monthly Billing Period (i.e., 650 hours)  
FP1 = 5 \$/mmBtu  
VOM = 3 \$/MWh  
SP = \$ 0

##### Calculation

$EP = [\sum_{k=1}^n (NEO1 * GHR1 * HAF1 * FP1)] + [\sum_{k=1}^n (NEO1 + NEO2) * VOM] + SP$   
 $EP = 650 (100 * 7 * 1.0 * 5) + 70 (130 * 7 * 1.1 * 5) + (74,100 * 3) + 0$   
 $EP = 2,275,000 + 350,350 + 222,300 + 0$   
 $EP = \$2,847,650$

**APPENDIX B**

**DEFERRED GOVERNMENTAL APPROVALS**

*[Seller to provide.]*

APPENDIX C

[FORM OF] PARENT GUARANTY

This Guaranty (the "Guaranty") is given as of this \_\_\_ day of \_\_\_\_\_, 20\_\_\_, by *[Creditworthy Guarantor,]* a \_\_\_\_\_ *[type of entity]* ("Guarantor") to Florida Power & Light Company, a Florida corporation ("FPL").

WHEREAS, Guarantor *[owns, directly or indirectly, [all] of the outstanding [shares of capital stock]]* of *[Seller]* ("Seller");

WHEREAS, Seller *[wishes to enter][has entered]* into *[an agreement]* with FPL *[, dated as of \_\_\_\_\_, 20\_\_\_,]* for the purchase and sale of electrical energy and capacity from Seller's *[Facility]* located at *[\_\_\_\_\_]* (as the same may be amended, modified or supplemented from time to time in accordance with its terms, the "Contract");

WHEREAS, capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed thereto in the Contract;

WHEREAS, *[FPL is willing to enter into the Contract on the condition that Guarantor enters into this Guaranty] [pursuant to the terms of the Contract, Seller is required, under the circumstances set forth therein, to provide Completion Security or Performance Security to FPL, which security may include a guaranty from a Creditworthy Guarantor, substantially in the form of this Guaranty];*

WHEREAS, Guarantor will benefit from the transactions contemplated by the Contract;

NOW, THEREFORE, in consideration of the foregoing, *[and as an inducement to FPL to enter into the Contract,]* Guarantor hereby agrees as follows:

1. Guaranty. Guarantor does hereby absolutely, unconditionally and irrevocably guarantee to FPL, as primary obligor and not merely as a surety, the due and punctual payment and performance by Seller of all obligations to be paid or performed by Seller under the Contract, all as and when required to be paid or performed under the Contract, in all respects strictly in accordance with the terms, conditions and limitations contained in the Contract (the "Obligations"). This Guaranty is a continuing guarantee of the full and punctual payment and performance of the Obligations and is in no way conditioned upon any requirement that FPL first attempt to enforce any of the Obligations against Seller, any other guarantor of the Obligations, or any other person or entity, or

resort to any other means of obtaining payment or performance of any of the Obligations. This Guaranty is a guarantee of performance and payment and not of collection.

2. Guaranty Absolute. This Guaranty shall continue in full force and effect until Seller or Guarantor shall have performed or discharged all of the Obligations in full. Further, this Guaranty shall remain in full force and effect without regard to, and shall not be affected or impaired by, any of the following:

(a) any invalidity, irregularity or unenforceability in whole or in part of this Guaranty or the Contract;

(b) the existence of any claim, setoff, defense or other right which Guarantor or Seller may have against FPL or any other person or entity;

(c) any release or discharge (whether by operation of law or otherwise) of Seller, Guarantor, or any other person or entity from its obligations under the Contract;

(d) the occurrence or continuance of any event of bankruptcy, reorganization or insolvency with respect to Seller, Guarantor, or any other person or entity, or the dissolution, liquidation or winding up of Seller, Guarantor, or any other person or entity;

(e) any amendment, supplement, reformation or other modification of the Contract;

(f) the exercise, non-exercise or delay in exercising, by FPL or any other person or entity of any of its rights or remedies under this Guaranty or the Contract;

(g) any assignment or other transfer of this Guaranty by FPL, or any assignment or other transfer of the Contract in whole or in part;

(h) any sale, transfer or other disposition by Guarantor of any direct or indirect interest it may have in Seller;

(i) the absence of any notice to, or knowledge by, Guarantor of the existence or occurrence of any of the matters or events set forth in the foregoing clauses; or

(j) any other event, occurrence or circumstance that might otherwise constitute or give rise to a defense to performance by a surety or a guarantor.

3. Waivers by Guarantor. In addition to waiving any defenses to which clauses (a) through (j) of Section 2 may refer, Guarantor hereby unconditionally and irrevocably waives, as a condition precedent to the performance of its obligations hereunder, (a) notice of acceptance hereof, (b) notice of any action taken or omitted to be taken by FPL in reliance hereon, (c) any requirement that FPL be diligent or prompt in making demands hereunder or giving notice to Guarantor of any default by Seller, (d) any requirement that FPL exhaust any right, power or remedy or proceed against Seller under the Contract or any other agreement or instrument referred to therein, or against any other person or entity under any other guarantee of any of the Obligations, and (e) any claim or defense that FPL shall have impaired any right of Guarantor against Seller, any other guarantor of any of the Obligations, or any other person or entity, by way of reimbursement, subrogation or otherwise. Without limiting the generality of the foregoing, it is agreed that the occurrence of any one or more of the following shall not affect the liability of Guarantor hereunder:

(i) at any time or from time to time, without notice to Guarantor, the time for any performance of or compliance with any of the Obligations shall be extended, or such performance or compliance shall be waived;

(ii) any of the acts mentioned in any of the provisions of the Contract or any other agreement or instrument referred to therein shall be done or omitted; or

(iii) any of the Obligations shall be modified, supplemented or amended in any respect in accordance with the terms of the Contract with or without notice to Guarantor.

4. Limit. The liability of Guarantor hereunder shall not exceed at any time the sum of (a) the amount payable by Guarantor pursuant to Section 11, *plus* (b) an amount equal to (i) on or prior to the Capacity Delivery Date, the difference equal to (A) the Completion Security Amount, *minus* (B) the amount of Liquid Security provided by Seller to FPL at such time, or (ii) after the Capacity Delivery Date, the difference equal to (A) the Performance Security Amount, *minus* the amount of Liquid Security provided by Seller to FPL at such time.

5. Bankruptcy; Reinstatement; Subrogation.

(a) Guarantor shall not commence or join with any other person or entity in commencing any bankruptcy, reorganization or insolvency proceedings of or against Seller. Guarantor understands and acknowledges that by virtue of this Guaranty, Guarantor specifically has assumed any and all risks of a bankruptcy or reorganization case or similar proceeding with respect to Seller. As an example and not in any way a limitation, a subsequent modification of the Obligations or any rejection or disaffirmance thereof by any trustee, receiver or liquidating agency of Seller or of any of its respective properties, or any settlement or compromise of any claim made in any such case, in any reorganization case concerning Seller, shall not affect the obligations of Guarantor to pay and perform the Obligations in accordance with their original terms.

(b) The obligations of Guarantor under this Guaranty automatically shall be reinstated if and to the extent that for any reason any payment by or on behalf of Seller in respect of the Obligations is rescinded or must be otherwise restored by any holder of any of the Obligations, whether as a result of any proceedings in bankruptcy or reorganization or otherwise.

(c) Subrogation. Guarantor hereby agrees that until the performance and satisfaction in full of all Obligations and the expiration and termination of all Obligations, it shall not exercise any right or remedy arising by reason of the performance of any of its obligations under this Guaranty, whether by reimbursement, subrogation or otherwise, against Seller, or any other guarantor of any of the Obligations, or any security for any of the Obligations.

6. Representations and Warranties. Guarantor represents and warrants as follows:

(a) Due Organization. Guarantor is a [*corporation*] duly organized and validly existing under the laws of the state of its formation.

(b) Power and Authority. Guarantor has full [*corporate*] power, authority and legal right to enter into this Guaranty and to perform its obligations hereunder.

(c) Due Authorization. This Guaranty has been duly authorized, executed and delivered by Guarantor.

(d) Enforceability. This Guaranty constitutes the legal, valid and binding obligation of Guarantor, enforceable against Guarantor in accordance with its terms, except as enforceability may be limited by applicable bankruptcy,

insolvency, moratorium or other similar laws affecting creditors' rights generally and except as enforceability may be limited by general principles of equity (whether considered in a suit at law or in equity).

(e) No Conflicts. The execution and delivery by Guarantor of this Guaranty and the performance by Guarantor of its obligations hereunder will not (i) violate the provisions of Guarantor's [*certificate of incorporation or bylaws*]; (ii) violate the provisions of any Applicable Law; or (iii) result in a breach of or constitute a default under any agreement to which Guarantor is a party or by which it or its assets or property are bound.

(f) No Proceedings. There is no action, suit or proceeding at law or in equity or by or before any Governmental Authority now pending or, to the best knowledge of Guarantor, threatened against Guarantor which reasonably could be expected to have a material adverse effect on Guarantor's ability to perform its obligations under this Guaranty.

(g) Financial Condition. The balance sheet of Guarantor as of \_\_\_\_\_, 20\_\_, and the related statement of income for the 12-month period ending on such date, heretofore furnished by Guarantor to FPL, present fairly the financial condition and results of operations of Guarantor as of such date and for such period in conformity with generally accepted accounting principles and practices applied on a consistent basis. Guarantor on such date did not have any material contingent liabilities, liabilities for taxes, unusual forward or long-term commitments, swap obligations or guarantee obligations, or unrealized or anticipated losses from any unfavorable commitments that are not reflected or provided for in said financial statements as of such date. Since such date, there has been no material adverse change in the financial condition, operations or properties of Guarantor. Guarantor was solvent immediately after the execution and delivery of this Guaranty, and since that time no winding up order has been made or any resolution passed for the winding up of Guarantor and no administration order has been made and no receiver, administrative receiver, administrator or liquidator has been appointed in respect of Guarantor. Guarantor is a Creditworthy Guarantor and the amount set forth in Section 4 does not exceed Guarantor's Credit Limit.

## 7. Affirmative Covenants.

(a) Existence. Guarantor shall preserve and maintain its [*corporate*] existence.

(b) Rights, Franchises. Guarantor shall preserve and maintain all of its rights, privileges and franchises necessary or desirable in the

normal conduct of its business, except where the failure to maintain any such right, privilege, or franchise could not reasonably be expected to have a material adverse effect on the ability of Guarantor to perform its obligations hereunder.

(c) Compliance with Law. Guarantor shall comply with the requirements of Applicable Law, except where the failure to comply could not reasonably be expected to have a material adverse effect on the ability of Guarantor to perform its obligations hereunder.

(d) Interest in Seller. Guarantor shall cause to be maintained and preserved the [corporate] existence of Seller, and Guarantor shall maintain, directly or indirectly, legal and beneficial ownership (free and clear of any lien or encumbrance of any kind) of at least fifty percent (50%) of the ownership interests in Seller.

(e) Financial Status. Guarantor at all times shall be and remain a Creditworthy Guarantor.

8. Independent and Separate Obligations. The obligations of Guarantor hereunder are independent of the obligations of Seller with respect to all or any part of the Obligations and, in the event of any default hereunder, a separate action or actions may be brought and prosecuted against Guarantor whether or not any other such obligations exist, whether or not Guarantor is the alter ego of Seller, and whether or not Seller is joined therein or a separate action or actions are brought against Seller.

9. Payment. All payments hereunder shall be made in the currency and type of funds specified for payments in the Contract. Any and all payments made hereunder shall be made free and clear of and without deduction for any and all present or future taxes, levies, imposts, deductions, charges or withholdings, and all liabilities with respect thereto, or any set-off or counterclaim.

10. Full Recourse. The obligations of Guarantor set forth herein constitute the full recourse obligations of Guarantor, enforceable against Guarantor to the full extent of all the assets and properties of Guarantor.

11. Indemnification. Guarantor shall indemnify and hold harmless FPL from and against any and all loss, liability and expense (including reasonable fees and disbursements of counsel to FPL) which may be sustained or incurred by or on behalf of FPL in enforcing any obligations of Guarantor hereunder.

12. Amendments; Waivers; Etc. Neither this instrument nor any term hereof may be changed, waived, discharged or terminated orally, but only by an instrument in writing signed by FPL and Guarantor. No delay or failure by FPL to exercise any remedy against Seller or Guarantor will be construed as a waiver of that right or remedy. No failure on the part of FPL to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder against Guarantor preclude any exercise of such right against or any other or further exercise thereof against Guarantor or the exercise of any other right against Guarantor. The remedies herein provided are cumulative and not exclusive of any remedies provided at law or in equity.

13. Severability. In the event that the provisions of this Guaranty should be claimed or held to be inconsistent with any other instrument evidencing or securing the Obligations, the terms of this Guaranty shall remain fully valid and effective. If any one or more of the provisions of this Guaranty should be determined to be illegal or unenforceable, all other provisions shall remain effective.

14. Assignment.

(a) Assignability. Guarantor shall not assign any of its rights or obligations under this Guaranty. FPL may, at any time and from time to time, assign, in whole or in part, the rights of FPL hereunder to any person or entity to whom FPL may assign all or any of its rights or obligations under the Contract, whereupon such assignee shall succeed to the rights of FPL hereunder to the extent so assigned.

(b) Successors and Assigns. Subject to Section 14(a) hereof, this instrument shall be binding upon Guarantor and its successors and assigns and shall inure to the benefit of FPL and its successors and assigns.

15. Address for Notices. All notices and other communications provided for hereunder shall be given in accordance with the notice requirements of the Contract, and if to Guarantor, at the address specified below the space for its execution of this Guaranty.

16. JURISDICTION.

(a) SERVICE OF PROCESS. **GUARANTOR IRREVOCABLY CONSENTS TO THE SERVICE OF ANY PROCESS, PLEADING, NOTICE OR OTHER PAPERS BY THE MAILING OF COPIES THEREOF BY REGISTERED, CERTIFIED OR FIRST CLASS**

MAIL, POSTAGE PREPAID, TO GUARANTOR AT ITS ADDRESS SPECIFIED BELOW THE SPACE FOR ITS EXECUTION OF THIS GUARANTY OR BY ANY OTHER METHOD PROVIDED OR PERMITTED UNDER NEW YORK LAW.

(b) NON-EXCLUSIVE JURISDICTION.

GUARANTOR HEREBY IRREVOCABLY AND UNCONDITIONALLY: (i) AGREES THAT ANY SUIT, ACTION OR OTHER LEGAL PROCEEDING ARISING OUT OF THIS AGREEMENT SHALL BE CONDUCTED IN THE COURTS OF THE STATE OF NEW YORK OR IN FEDERAL COURTS SITUATED IN NEW YORK AND THE PARTIES HEREBY SUBMIT TO THE EXCLUSIVE JURISDICTION OF SUCH COURTS; PROVIDED, THAT IF A NEW YORK COURT OR FEDERAL COURT SITUATED IN NEW YORK SHALL HAVE DETERMINED THAT IT CANNOT ACCEPT JURISDICTION OVER ANY ACTION BECAUSE OF THE FAILURE TO JOIN AN INDISPENSABLE PARTY, THEN FPL MAY BRING AN ACTION IN ANY STATE OR FEDERAL COURT OF COMPETENT JURISDICTION; (ii) CONSENTS TO THE JURISDICTION OF ANY SUCH COURT IN ANY SUCH SUIT, ACTION, OR PROCEEDING; AND (iii) WAIVES ANY OBJECTION WHICH GUARANTOR MAY HAVE TO THE LAYING OF VENUE OF ANY SUCH SUIT, ACTION, OR PROCEEDING IN ANY SUCH COURT. GUARANTOR AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW. GUARANTOR AT FPL'S OPTION MAY BE JOINED IN ANY PROCEEDING AGAINST SELLER.

17. GOVERNING LAW. THIS GUARANTY SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO PRINCIPLES OF CHOICE OF LAW (OTHER THAN SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW).

18. WAIVER OF JURY TRIAL. GUARANTOR HEREBY KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVES ANY RIGHTS IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION BASED HEREON OR ARISING OUT OF, UNDER, OR IN CONNECTION WITH, THIS AGREEMENT OR THE CONTRACT, OR ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENT (WHETHER ORAL OR WRITTEN), OR ACTION OF GUARANTOR, SELLER, OR FPL.

19. Entire Agreement. This Guaranty contains the complete agreement of Guarantor with respect to the matters contained herein and supersedes all other negotiations or agreements, whether written or oral, with respect to the subject matter hereof.

20. Section Headings. Section headings contained herein are for convenience of reference only and shall not be considered in the interpretation or enforcement of the provisions hereof.

IN WITNESS WHEREOF, Guarantor has duly executed and delivered  
this Guaranty effective as of \_\_\_\_\_, 20\_\_.

*[CREDITWORTHY GUARANTOR]*

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address:

\_\_\_\_\_

\_\_\_\_\_

Attn: \_\_\_\_\_

Telephone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

**APPENDIX D**  
**FACILITY ACTUAL NET GENERATION**  
**AND PERFORMANCE DATA**  
**MONTH OF: \_\_\_\_\_**

*[FPL to provide form appropriate to Proposer's project.]*



APPENDIX E  
START-UP COSTS

<u>Type of Start -up</u>	<u>Cost</u> <u>(Dollars per Successful Start-up)</u>
Hot (0-4 hours offline)	_____
Warm/Hot (4-12 hours offline)	_____
Warm/Cold (12-48 hours offline)	_____
Cold (greater than 48 hours offline)	_____

*[Insert numbers and dollars from Form 5 of Proposer's submission.]*

**APPENDIX F**

**FACILITY OPERATING CAPABILITIES**

*[To include, among other things, types of information in Proposer's submission, Form 4]*

**APPENDIX G**

**PLANNED OUTAGE HOURS**

*[Define Planned Outage Hours and attach schedule from Proposer's submission, Form 4.]*

**APPENDIX H**  
**RECEIPT POINT**

*[Insert description of initial Receipt Point from Proposer's submission, Form 9.]*

## APPENDIX I

### CAPACITY DEMONSTRATION TESTING GUIDELINES

#### **1.0 Introduction**

This document provides guidelines for conducting capacity demonstration testing on a power plant unit and its components. Capacity demonstration tests may be conducted as the Initial Test or as periodic Capacity Test. The objective of the Initial Test and of each other Capacity Test described in Section 9.0 of the Contract is to establish the Facility's Continuous Capability and incremental Capacity associated with each applicable mode of operation above the Base Operation Mode.

#### **2.0 Capacity Demonstration Test Protocol Development**

Seller will develop, and submit to FPL for review and approval, a Capacity demonstration test protocol (the "Test Protocol") that will be used to perform the Initial Test and periodic Capacity Tests required by the PPA. The following describes the essential components of the Test Protocol and identifies specific areas of focus.

##### *2.1 Instrumentation*

An instrument list will be developed identifying the instruments to be used for test data. The instrument list will include identification of type, accuracy, location, and calibration requirements for all instruments utilized in the test(s). If temporary instrumentation is to be used, the specified accuracy and connection points for such instrumentation will be described. Continuous Capability will be metered by the billing meters.

##### *2.2 Test Uncertainty*

Provisions will be included for a pre-test and post-test uncertainty analysis. This analysis is to be used as a measure of the quality of the test only, and should conform to the guidance in ASME 19.1.

##### *2.3 Test Tolerance*

No test tolerance is to be applied in calculation procedures or in comparison of test results to Committed Capacity or to Minimum Capacity. Continuous Capability will be the corrected as-tested Capacity (see part 2.8) less calculated post-test uncertainty, as determined under part 2.2.

##### *2.4 Fuel Heat Content*

Fuel heat content will be measured using Fuel samples drawn during each Capacity Test procedure. If the Facility has an on-line gas chromatograph, these samples may be compared with the measured values in order to establish accuracy of the gas chromatograph. Future tests may rely solely on the gas chromatograph assuming calibration status and associated documentation are provided to the satisfaction of FPL.

### *2.5 Test Conditions*

The Test Protocol will detail the plant operational condition(s) under which the test will be conducted. The description will include a mechanical valve lineup, an electrical distribution lineup, definition of steady-state conditions and the status of various power augmentation equipment/systems (including inlet air treatment devices) during the test(s). These conditions will be in general agreement with the guidance of ASME PTC-46.

Each incremental Capacity level (e.g., Base Operation Mode, Level 1 Mode of Operation [*Add Other Operating Modes, if any*]) will be specifically defined and described such as to represent a separate demonstration test lineup in accordance with Section 9.0 of the Contract.

The Test Protocol will provide for initial and periodic Capacity demonstrations of the Facility to be conducted in part while on the Secondary Fuel. As part of this demonstration, the unit will successfully transition from the primary to the Secondary Fuel without disconnecting from the grid. In a separate test, Seller will demonstrate the ability of the Facility to start up using only the Secondary Fuel.

Facility operation during the Capacity Tests must conform to all Applicable Laws, including all Environmental Licenses. Compliance with emissions requirements will be demonstrated through the Facility's CEMS system. The CEMS system must be certified at the time of the Initial Test and each other Capacity Test.

The test periods will be defined as three one-half hour test periods, all run in a single continuous four hour period. The corrected results for each period must satisfy the repeatability requirements of ASME PTC-46.

### *2.6 Data Collection*

The Test Protocol will detail all data collection requirements. The description will include minimum data intervals and DCS or equipment control system settings (dead-bands, compression, averaging, etc.) to be used during the test period.

### *2.7 Correction Curves*

The Test Protocol will provide plant correction curves only for ambient dry-bulb temperature, ambient atmospheric pressure, ambient relative humidity and Fuel constituents to correct test conditions to Reference Conditions. Seller will be required to demonstrate the methods and models used to develop the plant correction curves including the individual equipment data and correction curves utilized to develop the Facility-level corrections.

### *2.8 Results*

The Test Protocol will define the calculation of the test results in keeping with the requirements of the PPA. The corrected as-tested Capacity of the Facility will be the average of the three qualified test periods, and the Continuous Capability of the Facility will be the corrected as-tested Capacity less the post-test uncertainty (as determined under part 2.2).

### *2.9 Reporting*

The Test Protocol will describe the content and time requirements to provide preliminary and final reports for the Initial Test and periodic Capacity Tests.

## **3.0 References**

The following are identified as the reference documents to be used in the general development of the Test Protocol. Where these references are non-committal, or there is a potential for conflicting interpretation, the Test Protocol will specify the mutually agreed interpretation to be used.

- ASME PTC 1-1991, General Instructions
- ASME PTC 19.1, Instrument Uncertainty
- ASME PTC 46-1996, Performance Test Code on Overall Plant Performance
- ASTM D1945-1996, Standard Test Method for Analysis of Natural Gas by Gas Chromatography
- ASTM D3588-1998, Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels
- AGA Report No. 8 - 1994, Compressibility and Supercompressibility for Natural Gas and Other Hydrocarbon Gases
- ASME MFC 3M-1989 (ISO 5167), Measurement of Fluid Flow in Pipes Using Orifice, Nozzle, and Venturi
- ASME Steam Tables, 1967
- ASHRAE Psychrometric Charts

## APPENDIX J

### TELEMETERING SPECIFICATIONS

Each installation shall be evaluated separately for SCADA requirements because of the many possible agreements and interconnection configurations. Generally, equipment will be specified capable of supporting the following data points:

- Megawatt-hours received
- Megawatt-hours delivered
- KQ-hours received
- KQ-hours delivered
- Voltage
- Current
- +/- Megawatts
- +/- Megavars
- Breaker and Switch positions
- Equipment Trouble Alarms
- Generator Voltage Regulator Status, and
- other Generator Parameters.

Quantities shall be provided to various Parties through various information or communication systems. Specific designs will be developed to meet those requirements. Multi-ported remote terminal units (RTUs) accessible by all appropriate Parties shall be used, provided the appropriate security levels are implemented. Equipment control of breakers, switches and other devices via SCADA shall be provided to only one responsible Party.

Power for SCADA or metering communication equipment shall be provided by the station battery. Office power systems and switching networks are not acceptable.

APPENDIX K

**DESCRIPTION OF FACILITY SITE**

*[Proposer to provide site description.]*

**APPENDIX L**

**REFERENCE CONDITIONS**

*[Insert information from Proposer's submission, Form 4.]*

APPENDIX M

MILESTONES

**A. Major Milestones**

<b>MAJOR MILESTONE</b>	<b>MILESTONE DATE</b>	<b>LIQUIDATED DAMAGES AMOUNT FOR FAILURE TO MEET MAJOR MILESTONE</b>
1. Seller (a) shall place firm, irrevocable orders for all Major Equipment; and (b) shall (i) obtain legal title to, or a valid and binding leasehold interest in, the Facility Site, and (ii) shall enter into the Mortgage and Security Agreement	February 1, 2005	<i>[Insert product of \$119.00 per kW multiplied by Committed Capacity]</i>
2. Seller shall execute and deliver, and provide copies to FPL, Fuel Contracts meeting the requirements of Section 13.5	June 1, 2005	<i>[Insert product of \$140.00 per kW multiplied by Committed Capacity]</i>
3. Seller (a) shall achieve the closing on the full amount of construction loan from the Lenders for the Facility and shall make the first draw on such loan, and the Lenders shall enter into the Intercreditor Agreement; and (b) shall issue full notice to proceed to the Facility construction contractor and such contractor shall commence mobilization at the Facility Site and initiation of construction	October 1, 2005	<i>[Insert product of \$148.00 per kW multiplied by Committed Capacity]</i>
4. Seller shall achieve the Capacity Delivery Date	The Scheduled Capacity Delivery Date	<i>[Insert product of \$188.00 per kW multiplied by Committed Capacity]</i>
5. Seller shall achieve the Capacity Delivery Date as extended pursuant to Section 3.2.3	The Final Capacity Delivery Date (or earlier failure to comply with Section 3.2.3)	<i>[Insert product of \$188.00 per kW multiplied by Committed Capacity]</i>

**B. Additional Milestones**

MILESTONE	MILESTONE DATE <sup>1</sup>
1. Seller shall obtain all Governmental Approvals required to be obtained from local, state, and Federal authorities (including the FERC) under Applicable Law to construct, own and operate the Facility and to perform its obligations under the Contract, in final and non-appealable form	
2. Seller shall have entered into the Firm TSA and assigned the Firm TSA to FPL if required under Section 10.3	
3. The major equipment shall be delivered to the site.	
4. Construction of the HRSG Foundation(s) complete.	
5. The Fuel interconnection shall be tested and the Primary Fuel shall be available to the Facility under the Fuel Contracts	
6. The Initial Synchronization Date of the Facility STG shall be achieved	
7. All air emissions/RATA tests shall be completed successfully	
8. Performance tests of the Facility shall demonstrate that the Facility meets all minimum performance guarantees under the Facility construction contract	
9. Seller shall complete the Initial Test	

<sup>1</sup> *[Milestone Dates for Milestones other than Major Milestones to be established based on agreed CPM Schedule.]*

**APPENDIX N**

**FORM OF MORTGAGE AND SECURITY AGREEMENT**

*[Attach form of Mortgage and Security Agreement [to be provided]]*

**APPENDIX O**

**FORM OF ASSIGNMENT OF FIRM TSA**

*[Attach form of Assignment of Firm TSA [to be provided]]*

APPENDIX P

CPM SCHEDULE

*[Attach agreed CPM Schedule.]*

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**APPENDIX B**

**Evaluation Methodology**

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# Evaluation Methodology

## I. INTRODUCTION

### A. Overview

The objective of the evaluation methodology is to determine the best portfolio of one or more capacity options that satisfies FPL's capacity need requirement for 2007. Individual proposals that partially satisfy the need requirement will be paired with other capacity options to develop feasible portfolio combinations that meet the need requirement.

The evaluation of how well a portfolio satisfies the need requirement is accomplished by evaluating the portfolio using economic and non-economic criteria. The results of this combined analysis are 1) a measure of the economic performance of the portfolio that is based on the system economics when the portfolio is included, and 2) a judgment of the relative risks presented by that portfolio.

Portfolios will be compared to determine the top portfolios which best satisfy the need requirement in an economic evaluation. Non-economic information will be used to 1) determine that there is no critical and unforeseen fatal flaw in an otherwise eligible proposal, and 2) develop a non-economic assessment for the best portfolios as indicated by the economic evaluation. The economic cost and non-economic assessment offered by a given portfolio will be used in a fair comparison with the next planned generating unit to determine the best candidate portfolio(s).

The primary economic analysis will be conducted by FPL's Resource Assessment & Planning Department. An external consultant will conduct parallel evaluations with an independent model.

A second external consultant will provide transmission integration, transmission loss, and transmission-related increased operational cost calculations for the top-ranked portfolios. A third external consultant will provide "upstream" gas pipeline cost estimates for these portfolios.

The non-economic analysis will be conducted by a number of FPL departments which may also utilize other independent consultants in this assessment. The overall non-economic analysis work will be

coordinated by FPL's Resource Assessment & Planning Department.

The evaluation of individual capacity options and portfolios, up to the point of a selection of Finalists, will involve a six (6) – step process.

### **Step 1: Eligibility Determination**

This initial step screens out proposals that do not satisfy the Minimum Requirements as stated in Section III. E of the Request for Proposal (RFP). Proposals that are deemed to have failed this screening will be returned to the Proposer, along with 75% of the RFP Fee, and will not be analyzed further.

### **Step 2: Economic Evaluation of Individual Proposals**

In order to assist in the analysis of a potentially large number of proposals, an economic ranking of each individual eligible proposal and FPL self-build option may be made based on their individual impact to the FPL system. This ranking could then be used as a criteria to enable the computationally intensive later steps of the evaluation to focus on the best capacity options, particularly if there are a large number of proposals received in response to the RFP.

The ranking evaluation of individual capacity options, plus all subsequent analyses of these options, will examine impacts to FPL's system revenue requirements. These analyses will be made using the EGEAS model. In addition to using the cost and performance information for each eligible proposal and for the FPL self-build options, the model will utilize the September 2003 fuel cost forecast and appropriate filler capacity cost and performance assumptions. The filler unit characterization will be selected prior to the Proposal Due Date. (This filler capacity is needed in the analyses to ensure that FPL's reserve margin requirements are met for each year in the analysis.)

### **Step 3: Initial Economic Evaluation of Portfolios**

At least the top performing options identified in Step 2 will then be evaluated in a portfolio analyses. Capacity options that cannot, by themselves, meet FPL's full capacity need for 2007 will be combined by EGEAS with other options to create portfolios of options that can fully meet this need. The creation of the portfolios will be carried out through the EGEAS model, which will determine the most

economical combinations of resource options based on capacity (MW) offered, the duration of the proposed capacity, the costs associated with the proposed capacity, and the system fuel cost impacts.

FPL envisions that three (3) types of portfolios may be constructed:

- "All Outside" portfolios that consists solely of one or more proposals received in response to the RFP;
- an "All FPL" portfolio that consists solely of FPL's next planned generating unit; and
- "Combination" portfolios that consist of a combination of one or more proposals and the FPL CT option.

At the conclusion of these portfolio analyses, a selected number of portfolios will be carried forward into Step 4. The number of portfolios to be carried forward will be based upon the EGEAS results of the portfolio evaluation and an initial estimate of the costs to be calculated in Step 4. Portfolios whose cost difference from the lowest cost portfolio is greater than the estimated incremental costs in Step 4 will likely be eliminated from further consideration.

#### **Step 4: Final Economic Evaluation of Portfolios**

The remaining portfolios will be examined for final economic and non-economic criteria concurrently in steps 4 and 5. In Step 4, the evaluation will address four types of costs that are not captured in the EGEAS analyses but which are needed to obtain a complete assessment of costs associated with each remaining portfolio. These costs are: (1) transmission-related costs, (2) natural gas pipeline-related costs, (3) the impact on FPL's cost of capital due to incurring a purchased power obligation, and (4) the Fuel Switching Credit discussed in Section II. D. In addition, FPL may conduct sensitivity analyses as part of this step.

#### **Transmission Costs**

The following transmission-related costs will be calculated:

- transmission integration costs;
- costs related to system capacity (MW) losses at FPL's system peak hour;
- costs related to system annual energy (MWH) losses; and

- increased costs of operating existing FPL generation units in Southeast Florida to maintain reliability.

The transmission integration facilities that are needed for each portfolio will be determined first. Next, costs for these integration facilities will be calculated. A transmission system analysis will then be conducted assuming that these integration facilities are in place. This analysis will be used to estimate the transmission system capacity and annual energy losses associated with the portfolio. Finally, the projected impact of each portfolio on the costs of operating existing FPL generation units in Southeast Florida to maintain reliability will be determined.

These transmission-related costs, plus transmission interconnection costs and the costs of 3<sup>rd</sup> party transmission services (if applicable) that are to be supplied by the Proposer for each individual proposal, are discussed in more detail in Appendix E.

#### **Natural Gas Infrastructure Costs**

The second type of cost not captured in EGEAS are “upstream” capital costs for each portfolio associated with additional natural gas pipeline and/or compression facilities that will be needed to supply adequate gas to all options contained in the portfolio. Estimates for these costs will be developed and incorporated in the analysis.

#### **Equity Adjustment**

The third type of cost that is not captured in EGEAS but that is needed in order to have a complete cost picture of each portfolio are impacts on FPL’s cost of capital associated with entering into a purchased power agreement with a proposed term-of-service of more than 3 years (i.e., an equity adjustment). An explanation of the equity adjustment evaluation that will be made, including an example calculation, is presented in Appendix C.

#### **Fuel Switching Credit**

As previously discussed in Section II. D, FPL will apply a Fuel Switching Credit to each capacity option in a portfolio that offers the capability of switching between natural gas and residual fuel oil, where that opportunity is to the benefit of FPL’s customers. The value of the option will be determined using the September fuel cost forecast and FPL’s option pricing model.

## **Sensitivity Analyses**

Depending upon the nature of the proposals received, and the differences in the economic evaluation results based on the September fuel cost forecast and filler unit assumptions, FPL may conduct “sensitivity” analyses for the best portfolios using other than the “most-likely” fuel cost forecast and/or filler unit assumptions. The analyses would be conducted in the same manner as described above, using modified input assumptions. The purpose of the analysis would be to add depth to the analysis highlighting scenarios that, while not the most-likely, may provide additional information.

## **Step 5: Non-Price Evaluation of Portfolios**

A non-economic evaluation will also be conducted on those parameters that, by their nature, are unable to be integrated into the economic evaluation. These parameters describe factors that represent elements of risk that the utility must evaluate in all generation addition scenarios. The result of the non-economic evaluation will be a summary report on the risk areas that may be considered with the results of the economic evaluation to select Finalists. Detailed information requirements are outlined in the submittal forms in this RFP that are presented and discussed in Appendix D. These submittal forms will be used to evaluate specific non-economic parameters that can be summarized as falling into one or more of the following 3 areas:

### **Environmental Area**

- Items related to the Proposer’s ability to successfully complete the permitting and siting aspects of the project as proposed.

### **Technical/Operational Area**

- Items related to the long-term operational performance, reliability, and maintainability of the proposed generating alternatives.

### **Project Execution Area**

- Items related to the exceptions stated to the RFP and/or PPA and the impact of those exceptions on the proposed portfolio.

- Items that relate to the Proposer's ability to complete the development and construction aspects of the project as proposed.
- Items that relate to the project's financial viability.

Proposals that exhibit strong potential in the economic evaluation will be considered for a Panel Review. The Panel Review would be an interview-style exchange between the Proposer(s) and FPL panelists representing the non-economic evaluation areas. This will allow for a more complete exchange of ideas in the important areas.

The specific parameters for each of these 3 areas are described in Tables B-1 through B-3.

**Table B - 1 Environmental Area Parameters**

<b>Compliance Experience</b> Control Technology Violation/ Non - Compliance
<b>Proposed Project</b> Licensing/Permitting PPSSA/Permitting Issues PSD/NSR Issues Land Use Issues Zoning Issues Variance Required Exceptions Required Community Outreach Plan Water Supply Strategy Water Discharge Strategy
<b>Florida Permitting Experience</b> PPSA Non - PPSA
<b>Other Infrastructure</b> Water Supply or Discharge Easements Fuel Supply Easements Transmission Line Easements

**Table B - 2 Technical/Operational Area Parameters**

<b>Technology</b> (Major Equipment Technology/Supplier)
<b>Configuration</b> (Type and Configuration of Unit)
<b>Operational Limitations</b> (Limitations in hrs/yr. and/or Time of Year Usage)
<b>Fuel</b>
<b>Guaranteed Firm Capacity, Net MWs</b> (@GSU Transformer High Side)
<b>Guaranteed Heat Rate</b> (@Guaranteed Firm Capacity) Btus/kWh (HHV)
<b>Generator(s) VAR Capability</b> (Lead/Lag)
<b>Commercial Availability</b> Minimum % (Annual)
<b>Startup Time, minutes</b> (to committed Capacity) Cold Start (offline:>48 hrs.) Cold/Warm Start (off-line:12-48 hrs.) Warm/Hot Start (off-line:4-12 hrs.) Hot Start (offline:<4 hrs.)
<b>Minimum Load, MWs</b> (@GSU Transformer High Side)
<b>Startup Time, minutes</b> (to Minimum Load) Cold Start (offline:>48 hrs.) Cold/Warm Start (off-line:12-48 hrs.) Warm/Hot Start (off-line:4-12 hrs.) Hot Start (offline:<4 hrs.)
<b>Ramp Rate, MWs/minute</b> (Minimum > Guaranteed)
<b>Generating Units' Operating &amp; Maintenance Experience</b> Scope of Historical O&M Experience Performance Results Relevance

**Table B - 3 Project Execution Area Parameters**

<b>Nature of Exceptions</b>
<b>Impact to Risk Profile</b>
<b>Departure from Scope</b>
<b>Probability of Resolution</b>
<b>Development Experience</b>
<b>Design/Construct Experience</b>
<b>Operational Experience</b>

**Step 6: Selection and Announcement of a Short List**

At the completion of parallel Steps 4 and 5, the complete economic results and non-economic review for each remaining portfolio will be examined and compared. In the event that two (or more) portfolios present equivalent/similar economic performance, the non-economic factors will help identify which portfolio offers the more desirable risk profile. FPL will use these evaluation results to determine Finalists, resulting in a Short List of Proposers and their corresponding proposals.

**B. Negotiations and FPL's Construction Projects/Contract Extension Options**

In the Initial Negotiating period, the selected Proposers will be asked to provide a Best and Final Offer and to provide answers to questions that have been identified during the evaluation process. Based on the Best and Final Offers and the answers to these questions, FPL will decide whether to continue negotiations with one or more of those Proposers.

**APPENDIX C**

**Explanation of Equity Adjustment  
With Example Calculation**

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## **Explanation of Equity Adjustment with Example Calculation**

### **I. INTRODUCTION**

#### **A. Explanation of Equity Adjustment**

In order to fairly evaluate the total cost of competing generation portfolios, FPL will consider the impact that the potential selection of each portfolio would have on FPL's overall capital structure. FPL's self-build options assume financing of incremental costs at 55% equity, 45% debt. These financing costs are included in the total cost of the FPL self-build options. Portfolios that include the purchase of facilities by FPL will also be evaluated assuming they are financed with 55% equity, 45% debt.

Consistent with that approach an adjustment will be made to the total cost of generation alternative portfolios containing long-term purchased power obligations (proposed terms-of-service greater than three years) to reflect the fact that such obligations draw upon the debt capacity of FPL and, other things being equal, must be offset by increasing the ratio of equity in FPL's capital structure. This is necessary to ensure that alternatives are compared against one another and to FPL's self-build option in a manner that is neutral relative to FPL's capital structure. Rating agencies explicitly evaluate purchase power obligations and, based on that examination, the rating agencies attribute a portion of the net present value (NPV) of the obligations under each power purchase agreement to the utility's balance sheet as a debt equivalent. The effect of this adjustment is to increase the relative share of debt and debt-like instruments in the capital structure. Therefore, FPL will calculate the incremental cost of the equity required to rebalance the capital structure at 55% equity, 45% debt to obtain a complete assessment of the related costs to FPL associated with the potential selection of each portfolio.

Standard & Poor's (S & P) methodology will be used to calculate the debt equivalent that would be added to FPL's capital structure. (S & P's methodology is outlined in the article presented in Attachment Two of this RFP.) S & P begins by taking the NPV of the annual capacity payments over the life of the contract using a 10% discount factor. To determine the debt equivalent, the NPV is then multiplied by a risk factor. As a general guideline, S & P determines the risk factor for a vertically integrated utility as follows:

1. Contracts where purchased power costs are included as an operating expense in base tariffs would receive a risk factor of 50%.
2. For utilities in supportive regulatory jurisdictions with a precedent for timely and full cost recovery of fuel and purchased-power costs, a risk factor of as low as 30% could be used.
3. Distribution utilities where recovery of purchased power costs has been legislated may receive a risk factor of 10% to 20%.

Based on the guidelines provided by S & P, a 30% risk factor will be used to calculate the debt equivalent.

Once the debt equivalent has been determined, the amount of equity required to rebalance the capital structure will be calculated. The equity adjustment represents the net present value of the incremental cost of equity (vs. debt) required to rebalance the capital structure. A detailed example of the calculation of the equity adjustment is provided on pages C-6, C-7, and C-8.

## **B. Mitigating Factors**

While the S & P methodology takes a broad look at the debt equivalence of purchase power obligations, there may be other factors which may be considered as mitigating the effect of such purchased power obligations. In conducting the equity adjustment evaluation, FPL has reviewed the presence or absence of mitigating factors. Some of the factors reviewed did not provide mitigation, or could not be practicably and reasonably quantified. Other factors have been quantified. The following discusses those factors that, in FPL's review, may offer some mitigation and can be quantified. These factors will be reflected as credits in the development of a modified equity adjustment factor. Other mitigating factors that can be quantified may come to light in the review of the proposals received.

### **1) Mitigation Offered by Completion Security**

When FPL enters into a purchased power agreement (PPA) associated with a unit to be constructed, the Proposer will provide Completion Security to address the delivery risks associated with completing the project. Many of these risks can be combined and represented as the risk of delivering less capacity than that proposed, and upon which the selection was made and a PPA was

executed. Under an FPL self-build option, there is some small probability that such an event might occur, and that impact might not be mitigated by FPL's contractual arrangements. If this occurred and it was determined by the FPSC that FPL was not imprudent, any incremental cost caused by such a delivery shortage may be allowed to be recovered from FPL's customers.

If this same sequence of events occurred under a PPA, in the form contemplated by FPL, the Completion Security could mitigate the impact of those costs on FPL's customers<sup>1</sup>. This would be the source of mitigation provided by the PPA Completion Security that is different from an FPL self-build option.

In order to assess a quantitative value that could be assigned to this mitigation, both the risk of occurrence and the economic magnitude of the occurrence of a delivery shortage must be estimated.

FPL reviewed the history of FPL self-build projects relevant to this RFP to determine the probability of a delivery shortage. These projects represented 4,237 MW of promised capacity. The data showed that some projects over-delivered while others under-delivered. As a conservative approach, overages were not allowed to offset shortages. On this basis, a total shortage of 12 MW was seen over the promised 4,237 MW resulting in a probability of delivery shortage of 0.28%.

The economic impact of a delivery shortage can be identified as represented by the Completion Security amount established by FPL. It is noted that this amount could be mitigated by many factors for specific occurrences (i.e., component performance guarantees, EPC guarantees and LD's, etc.), but represents a "worst case" value that is conservatively derived and applied to the favor of the Proposer in developing the mitigation credit.

The value of the mitigation provided by a PPA would be the product of the probability of delivery shortage (risk) and the Completion Security amount (magnitude) identified in Section II.H of the RFP.

Example:

$$P_{DS} = \text{Probability of FPL Delivery Shortage} = 0.28\%$$
$$CS = \text{Completion Security} = \$188,000 \text{ per MW}$$

$$CS \text{ Mitigation} = CS * (P_{DS}) = 188,000 * (0.0028) = \$526 \text{ per MW}$$

## 2) Mitigation offered by Performance Security

Similarly, one could consider that the Performance Security required by a purchased power arrangement offers similar mitigation against the possibility of under performance assuming that such under performance would be borne by FPL's customers. In the case of the FPL self-build option, this mitigation would not be provided in the same manner. To develop the value of such mitigation one must consider both the probability of the occurrence and the economic impact of the occurrence.

FPL reviewed the forced outage factor of Units 3 and 4 at the Martin facility from initial COD in 1994 through calendar year 2002. These units represent very similar technology to that proposed as the Next Planned Generating Unit; however these units were some of the early F technology units in commercial operation. Therefore the forced outage rate information includes outages as a result of technology immaturity issues that are no longer present in the F fleet. Thus, use of this data without modification is highly conservative and to the benefit of a Proposer. The review showed an average annual forced outage factor of 2.12% for these combined units over the period of analysis. This is used as a proxy for the probability of under performance of an FPL self-build option.

The economic impact is related to the amount established for performance security in the RFP. Similarly, FPL asserts that this is a conservative value as significant experience has been gained with the technology and current estimates for forced outage factor are much smaller than that used here.

The value of the mitigation would then be the product of the probability of under performance (risk) and the Performance Security amount (magnitude) identified in Section II.H of the RFP.

Example:

$P_{UP}$  = Probability of FPL Under Performance = 2.12%

PS = Performance Security = \$95,000 per MW

PS Mitigation = PS \* ( $P_{OF}$ ) = 95,000 \* (0.0212) = \$2,014 per MW

### **3) Application**

The above mitigations will be added as credits to (reducing the magnitude of) the equity adjustment to obtain the mitigated equity adjustment. A sample calculation of the application is provided on page C-8.

#### **C. Example Equity Adjustment Calculation**

The equity adjustment calculation FPL will use in its evaluation of purchased power Proposals received in response to its 2003 RFP is explained below using example assumptions and a hypothetical Proposal for 500 MW for a 10-year period at a constant price of \$7/kw-month.

### Explanation of Equity Adjustment

The equity adjustment calculation FPL will use in its evaluation of power purchase proposals received in response to its 2003 RFP is explained below using example assumptions and a hypothetical proposal for 500 MW for a 10-year period. The adjustment uses Standard & Poor's current methodology to calculate the off-balance sheet obligation S & P would add back to Florida Power & Light Company's outstanding debt when evaluating the Company's credit.

**Example Assumptions:**

Discount Rate applied to capacity charges(per Standard & Poor's)	10.00%	Discount Rate (FPL's incremental after-tax cost of capital) =	7.8%
Adjustment Factor (per Standard & Poor's methodology)	30%	Equity vs. Debt Cost Difference =	11.5%
Equity Percentage (FPL's target equity ratio) =	55%	Proposal's Proposed Firm Capacity (MW) =	500
Effective Tax Rate =	38.58%		
Cost of Debt (FPL's incremental cost)	6.4%		
Cost of Equity =	11.0%		

#### Example Equity Adjustment Calculation

Year	(1) Monthly Capacity Payments (\$/kw-month)	(2) Annual Capacity Payments (\$000)	(3) NPV Capacity Payments (\$000)	(4) Debt Equivalence (\$000)	(5) Equity Replaced to Rebalance (\$000)	(6) Equity Adjustment (\$000)
2003	0.00	\$0	\$0	\$0	\$0	\$0
2004	0.00	\$0	\$0	\$0	\$0	\$0
2005	0.00	\$0	\$0	\$0	\$0	\$0
2006	0.00	\$0	\$0	\$0	\$0	\$0
2007	7.00	\$42,000	\$258,072	\$77,422	\$42,582	\$4,900
2008	7.00	\$42,000	\$241,879	\$72,564	\$39,910	\$4,593
2009	7.00	\$42,000	\$224,067	\$67,220	\$36,971	\$4,255
2010	7.00	\$42,000	\$204,474	\$61,342	\$33,738	\$3,883
2011	7.00	\$42,000	\$182,921	\$54,876	\$30,182	\$3,473
2012	7.00	\$42,000	\$159,213	\$47,764	\$26,270	\$3,023
2013	7.00	\$42,000	\$133,134	\$39,940	\$21,967	\$2,528
2014	7.00	\$42,000	\$104,448	\$31,334	\$17,234	\$1,983
2015	7.00	\$42,000	\$72,893	\$21,868	\$12,027	\$1,384
2016	7.00	\$42,000	\$38,182	\$11,455	\$6,300	\$725
2017	0.00	\$0	\$0	\$0	\$0	\$0
2018	0.00	\$0	\$0	\$0	\$0	\$0
2019	0.00	\$0	\$0	\$0	\$0	\$0
2020	0.00	\$0	\$0	\$0	\$0	\$0
2021	0.00	\$0	\$0	\$0	\$0	\$0
2022	0.00	\$0	\$0	\$0	\$0	\$0
2023	0.00	\$0	\$0	\$0	\$0	\$0
2024	0.00	\$0	\$0	\$0	\$0	\$0
2025	0.00	\$0	\$0	\$0	\$0	\$0
2026	0.00	\$0	\$0	\$0	\$0	\$0
2027	0.00	\$0	\$0	\$0	\$0	\$0
2028	0.00	\$0	\$0	\$0	\$0	\$0
2029	0.00	\$0	\$0	\$0	\$0	\$0
2030	0.00	\$0	\$0	\$0	\$0	\$0
2031	0.00	\$0	\$0	\$0	\$0	\$0
2032	0.00	\$0	\$0	\$0	\$0	\$0
						NPV Total = <b>\$18,106</b>

**Explanation of calculation by column:**

**Column [1]** = Monthly Capacity Payments (\$/kw-month)

**Column [2]** = ((Capacity Payments (\$/kw-month) \* Proposal's Firm Capacity (MW) \* 1000 kW/MW\*12 months))/1000

**Column [3]** = Net Present Value (NPV) of the total sum of remaining annual capacity payments with values discounted at the discount rate used by Standard & Poor's to value off-balance sheet purchase power obligations.

Example: For 2007: NPV of capacity payments for (2007-2016)  
For 2008: NPV of capacity payments for (2008 – 2016)  
For 2009: NPV of capacity payments for (2009 – 2016)  
Etc:

**Column [4]** = (Column [3]\* Adjustment Factor)

**Column [5]** = (Column [4] \* Equity Percentage)

**Column [6]** = (Column [5]\* Equity vs. Debt Cost Difference)  
Where Equity vs. Debt Cost Difference = ((Cost of Equity)/(1- Effective Tax Rate)) – Cost of debt

NPV Total is discounted back to current year (2003) using after tax cost of capital discount rate.

**Mitigation Example**

The mitigating factors would be credited by applying the amounts indicated above. Specifically, the mitigating factor would be applied as:

(CS mitigation/MW+ PS mitigation/MW) \* Capacity = Total Mitigation

$$(\$526 + \$2,014) * 500 \text{ MW} = \$1,270,000$$

The Modified Equity Adjustment would then be:

$$\$18,106,000 - \$1,270,000 = \$16,836,000$$

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**APPENDIX D**

**Forms to be Completed for Each Proposal**

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## Forms to be Completed for Each Proposal

### A. Overview of the Required Eleven (11) Forms

There are eleven (11) forms that all Proposers must complete and return to FPL's RFP Contact Person by 4:00 p.m. EDT on the Proposal Due Date. These completed forms and requested attachments to these forms will, collectively, comprise a Proposer's proposal. If a Proposer is submitting more than one proposal, a separate set of forms must be completed for each proposal. These eleven forms are described in the remainder of this Appendix D.

The Proposer must submit five (5) bound hard copies of the proposal that contains the forms and requested information, and an electronic copy of the completed EXCEL spreadsheets, along with the RFP fee.

As previously discussed in Section III. C., FPL intends to treat as confidential all information contained in proposals which is clearly identified as Proprietary and Confidential except for the information to be submitted on Form # 1, Public Information Regarding Proposal. To clearly identify confidential information, the Proposer must (1) stamp each such page with "Confidential Information" and (2) highlight/shade the confidential information on the pages stamped "Confidential Information". (A blanket statement that an entire page or proposal is proprietary and confidential will not be considered clear identification.)

FPL will attempt to maintain the confidentiality of the clearly identified proprietary and confidential information in the proposals. **NOTICE: All proposal information will be disclosed to the Florida Public Service Commission and FPL may deem it necessary to disclose, pursuant to order or confidential agreement, all or part of the information to third parties, including other Proposers, in regulatory and/or legal proceedings.**

### B. Form # 1: Public Information Regarding Proposal

In order to provide general information to the public about the proposals received in response to this RFP, FPL requires that all proposal submittals include a completed Public Information Regarding Proposal form that includes a list of projects undertaken (constructed and/or operated) by the Proposer that are similar to the project now being proposed. The information contained in this form

will be treated as non-confidential and non-proprietary and may be released to the public at the sole discretion of FPL.

**C. Form # 2: Executive Summary of the Proposal**

A one (1) page summary of the proposed project and the Proposer is sought on this form. This executive summary should highlight any major value-added features of the proposal.

**D. Form # 3: Financial Information**

To mitigate risk, FPL will examine the Proposer's and, if applicable, the parent/affiliate guarantor's credit/corporate profile and financial guarantees. The credit/corporate profile information includes the corporate bond rating, the commercial paper rating, and the Dunn & Bradstreet Credit Appraisal Rating.

If a Proposer will be relying on any parent /affiliate guarantees, the Proposer shall also include a description of the corporate relationship between the Proposer and the guarantor and provide a description regarding the proposed guarantor's willingness to guarantee the Proposer's obligations and the terms of the guarantee.

In addition, the proposal shall include audited financial statements for the last two years for the Proposer or, if the Proposer is relying on any parent/affiliate guarantees, for the guarantor.

**E. Form # 4: Operations & Engineering Information**

Form # 4 requests a variety of information that will be used in the economic evaluation and/or non-economic evaluation of proposals. The requested information is to be filled in on the following 9 information categories of this form:

1. Power Generation Proposal Type
2. Technology/Configuration
3. Operational Considerations
4. Fuel Information & Barometric Pressure
5. Guaranteed Firm Capacity
6. Guaranteed Heat Rate
7. Emission Rate Information
8. Natural Gas Pipeline Connection(s)
9. Generating Units' Operating & Maintenance Experience/Performance

In addition, a marked up version of a U.S. Geological Survey Map is also requested as explained on the Natural Gas Pipeline Connection(s) section of this form.

**F. Form # 5: Pricing Information for Purchased Power or System Sale Proposals**

Pricing for firm capacity and energy proposals that offer power purchases or system sales only, or that initially offer power purchases prior to sale of a unit to FPL, must be presented on Pricing Information Form # 5. (Pricing for proposals that offer the sale of facilities to FPL must be presented on Pricing Information Form # 6.)

Note that FPL requires actual prices to be filled in for each year of the proposed term-of-service. Proposals indicating a first-year price only followed by a formula for escalating that price from year-to-year are not acceptable and constitute grounds for declaring a proposal ineligible.

**1) Guaranteed Capacity Payments**

The Proposer must provide Guaranteed Capacity Payment values for the term of the proposed contract. Guaranteed Capacity Payment values in terms of \$/kw-month must be supplied for each operational mode (base operation, Incremental Level 1, Incremental Level 2, etc.) as specified on Form # 4. Proposals must include all costs of delivering capacity and energy to the FPL System including delivery over intervening transmission systems. Utilize the Guaranteed Firm Capacity rating for Summer (95 degrees the relative humidity specified, and the appropriate barometric pressure value from the chart supplied on Form # 4) in developing the denominator for the \$/kw-month values.

**2) Guaranteed Energy Pricing & Payments**

**a) Fuel Prices**

The Proposer may submit a Guaranteed Fuel Commodity Price (\$/mmBTU) for the proposed term of the contract. If the Proposer does not wish to provide Guaranteed Fuel Commodity Prices, FPL will use its own fuel commodity cost projections from one of the two existing pipelines (FGT or Gulfstream) for the purposes of proposal evaluation.

The Proposer may submit a Guaranteed Fuel Transportation Price (\$/mmBTU) for the proposed term of the contract. If

the Proposer does not wish to provide Guaranteed Fuel Transportation Prices, the Proposer must either designate "FGT" or "Gulfstream" as the gas supplier, in which case FPL will use its own fuel transportation cost projections for the purposes of proposal evaluation.

**b) Variable O&M Payments**

In addition, the Guaranteed Variable O&M Prices (in \$/MWH) of the proposal for each year of the proposed term-of-service for the base operational mode and for any other operational mode must be provided.

In calculating these values, assume an annual capacity factor of 85% for system - or baseload generating unit - based proposals and 15% for peaking capacity - based proposals, and utilize the Guaranteed Firm Capacity rating for Summer (95 degrees).

**3) Guaranteed Startup Payments**

The Proposer's guaranteed startup prices including fuel in \$/startup must also be provided. Successful starts are limited to one per dispatch cycle.

**4) Costs and Information Included in the Payments**

Proposals that are based partially or totally on generators that need to be constructed and connected to the transmission system must include transmission interconnection costs in their Guaranteed Capacity Pricing in Section 1) of Form # 5.

These proposals, plus proposals that are based on existing generating units, must also include the cost of third party transmission service (including the impact of third party transmission service losses, if appropriate, in their Guaranteed Capacity Pricing in section 1) of Form # 5.

In section 4) of Form # 5, each Proposer must also separately provide the specific costs of transmission interconnection, in 2003 dollars, that are the basis for these transmission-related costs that are included in the Guaranteed Capacity Pricing values for 2007 – on. The Proposer must also provide information related to third party transmission service (if applicable)

The information that follows pertains to these transmission interconnection costs and third party transmission service information.

a). Transmission Interconnection Costs:

- All proposals that are based partially or totally on generators that need to be constructed and connected to the transmission system must demonstrate that they have a valid completed application for Generator Interconnection Service (GIS) in the FPL GIS Queue, or with the applicable third party to the extent the new generator is connected to a third party's transmission system.
- The process for requesting GIS and having a completed GIS application on the FPL system is delineated on FPL's OASIS website (<http://floasis.siemens-asp.com/OASIS/FPL/INFO.HTM>) in a document entitled "Generator Interconnection Procedures". Additionally, and as discussed in FPL's Generator Interconnection Procedures, connections of new generators to the FPL system must be in accordance with FPL Facility Connection Requirements (which are also provided on FPL's OASIS website mentioned above) that are in compliance with North American Electric Reliability Council (NERC) Standards.
- To the extent the generator(s) is connecting to the FPL system, and a transmission interconnection study that has been performed and completed by FPL Transmission providing cost estimates is available, the Proposer shall provide an interconnection cost estimate based on the transmission interconnection study, along with a copy of this study. This cost estimate in 2003 dollars shall include all materials, labor, land, permitting, and overhead adders associated with upgrades of existing facilities and construction of incremental facilities required as a result of the connection, and short circuit and stability impacts on the transmission system. Note that if a new transmission switchyard must be constructed to connect the proposed generator(s), the cost of the transmission switchyard, including land, all necessary permits, filling and grading must be included in the cost estimate.
- To the extent a completed transmission interconnection study is not available and the generator(s) for which the capacity is being offered is to be connected to the FPL system, the

Proposer will provide a cost estimate for the interconnection along with the basis for this estimate. Such cost estimate in 2003 dollars shall include all materials, labor, land, permitting, and overhead adders associated with upgrades of existing facilities and construction of incremental facilities required as a result of the connection, and short circuit and stability impacts on the transmission system. Note that if a new transmission switchyard must be constructed to connect the proposed generator(s), the cost of the transmission switchyard, including land, all necessary permits, filling and grading, must be included in this cost estimate.

FPL reserves the right to review such cost estimates for reasonableness. To the extent that FPL determines that this cost estimate is materially incorrect, FPL reserves the right to adjust this cost estimate as it deems necessary during the evaluation process in order to reflect more reasonable interconnection costs. (The actual cost of connecting the generator to the FPL system would be based on the specific GIS Queue process and the attendant studies. These actual costs will need to be addressed if the Proposer is ultimately selected.)

- To the extent the generator(s) for which the capacity is being offered is not directly connected to the FPL system, the Proposer shall provide the best available cost estimate and the assumptions or studies upon which this cost estimate was based. Such cost estimate in 2003 dollars shall include all materials, labor, land, permitting, and overhead adders associated with upgrades of existing facilities and construction of incremental facilities required as a result of the connection, and short circuit and stability impacts on the transmission system.

b). Third Party Transmission Service Information:

To the extent the generator(s) is connected to the transmission system of a third party, the Proposer shall:

- State whether third party transmission rights have been requested and/or already procured for a portion of or all of the generation capacity being offered. To the extent a request for such long-term firm transmission right have been requested, but not yet procured, provide all available studies associated with the request; and,

- Provide the projected transmission losses associated with the third party transmission service.

**G. Form # 6: Pricing Information for Sale of a new or an Existing Unit**

Pricing-related information required for the proposed sale of a new or an existing facility is as follows:

- Date (month/day/year) of the proposed sale of the facility to FPL;
- Guaranteed total sale price of the proposed facility on the Sale Date (in 2007 dollars) ;
- Projected annual Fixed O&M costs (\$/Guaranteed Firm Capacity rating in kw for Summer at 95 degrees);
- Projected annual Variable O&M costs (\$/MWH) using an annual capacity factor of 85% for system or baseload capacity and an annual capacity factor of 15% for peaking capacity, plus the Guaranteed Firm Capacity rating for Summer (95 degrees);
- Projected annual Capital Replacement costs (\$/Guaranteed Firm Capacity rating in kw for Summer (95 degrees).

Note that the total sale price for a Sale of a New or an Existing Unit proposal must cover all costs of delivering power to the FPL system over a third party transmission system(s).

**H. Form # 7: Environmental & Permitting Information**

In order to fully evaluate the environment and permitting aspects of proposals, Form # 7 requests a variety of information from 11 major categories that will be used to evaluate proposals. Each Proposer shall be more inclusive rather than exclusive when responding to the information requested. If the category or information requested does not apply to the proposal, an explanation shall be provided. The following are the 11 major information categories of this form:

1. Description of Pollution Control Equipment
2. Compliance History
3. Required Permits Or Approvals To License Facility
4. PSD/NSR Permitting
5. Land Use Strategies
6. Zoning Issue Strategies
7. Proposed Community Outreach Activities
8. Water Supply Strategy

9. Water Discharge Strategy
10. Other Infrastructure Needs Or Requirements
11. Permitting experience in Florida of Proposer and environmental support contractors and consultants

**I. Form # 8: Key Milestones**

FPL's ability to maintain a certain level of system reliability for its customers and/or meet its customer's needs will be dependent upon the Proposer's ability to meet the contracted Capacity Delivery Date (CDD). Since there is a possibility that the Proposer will not meet this date, FPL may have to make alternate arrangements to cover the capacity and energy shortfall. This will require FPL to monitor the Proposer's progress. Therefore, the Proposer must provide the expected completion dates for certain key project milestones on this form. When providing these key project milestones, a Proposer should carefully review the Project Milestone Schedule Minimum Requirements for the specific milestones listed in item # 13 of Section III. E. of the RFP.

A proposal that requires new power plant construction falling under the Siting Act will have to demonstrate permitting, construction, etc. schedules that allow the new plant to be in-service on or before FPL's needed in-service date of June 1, 2007.

**J. Form # 9: Receipt Point(s) to FPL**

This form is intended to identify the location of the receipt point(s) (as defined in the PPA, Appendix A) of each proposed capacity source(s). Listing of the nearest substations is requested.

The Proposer must also attach a readable transmission map (8.5 x 11) highlighting the receipt point(s) listed above.

**K. Form # 10: Proposer Exceptions**

All Proposers must complete and return the Proposer Exceptions form as part of their proposal submittal. On this form, the Proposer must either indicate that they take no exceptions to any of the terms, conditions, or other facets of the RFP and/or PPA or must indicate that they do take exception(s). In the case in which one or more exceptions are taken, then for each term, condition, or other RFP and/or PPA facet to which an exception is taken, the Proposer must present their desired revised language.

FPL will consider the number and significance of exceptions in its non-economic evaluation. FPL will not consider proposed exceptions to the RFP's Minimum Requirements.

**L. Form # 11: Proposal Certification**

All Proposers must complete and return the Proposal Certification form as part of their proposal submittal. An Officer of the proposing company is to certify that: (i) all information contained in the Proposer's proposal is complete and accurate and that the pricing contains all applicable costs for the proposed full term of service; (ii) that the terms, conditions, and other facets of the RFP and/or PPA are acceptable, except as specifically noted by the Proposer on Form # 10; (iii) the Completion Security and Performance Security described in Section II.H. are acceptable and there are no pending legal or civil actions that would affect the ability of the Proposer and/or its guarantor to maintain these security amounts; (iv) the proposal has been submitted in the legal name of the entity which would be bound by any resulting contract; (v) and that the proposal is firm and will remain open for 120 days from the Proposal Due Date.

The copies of this form that are included in the five (5) bound hard copies of the proposal each must be signed by an officer of the proposing company.

**M. Proposer's Forms**

The blank forms that follow on the remaining pages of this Appendix are the required forms which must be completed by all Proposers for each project they wish to offer.

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 1: Public Information Regarding Proposal**

Facility Name: \_\_\_\_\_

1) Name of Proposing Company: \_\_\_\_\_

2) Type of Generating Unit: \_\_\_\_\_

3) Type of Project (Check One):  
Purchased Power from Existing Unit: \_\_\_\_\_  
Purchased Power from New Unit: \_\_\_\_\_  
System Sale: \_\_\_\_\_  
Sale of Existing Unit: \_\_\_\_\_  
EPC Turnkey Project: \_\_\_\_\_  
Distributed Generation: \_\_\_\_\_  
Qualifying Facility: \_\_\_\_\_  
Other(Specify): \_\_\_\_\_

4) Location of Generating Facility (City/County): \_\_\_\_\_

5) Fuel: Primary: \_\_\_\_\_

Secondary/Backup: \_\_\_\_\_

6) Proposer Classification (Check One):  
Utility (retail serving): \_\_\_\_\_  
Independent Power Producer: \_\_\_\_\_  
Small Power Producer: \_\_\_\_\_  
Cogenerator: \_\_\_\_\_  
Other (explain): \_\_\_\_\_

7) Proposed Total Guaranteed Firm Capacity (Net MW) Delivered to FPL system (must match information on Form # 4, item 5), Guaranteed Firm Capacity):

Summer (95F): \_\_\_\_\_ Winter(35F): \_\_\_\_\_

8) Proposed Capacity Delivery Start Date: \_\_\_\_\_

9) Proposed Capacity Delivery End Date: \_\_\_\_\_

10) Use the space below to list all major projects undertaken (constructed and/or operated) by the Proposer or Proposer's affiliates/parent company during the last five (5) years which are similar to the project being proposed by the Proposer in response to FPL's RFP.

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 2: Executive Summary of the Proposal*

Facility Name: \_\_\_\_\_

Please provide a one (1) page summary of the proposed project and the Proposer.

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 3: Financial Information**

Facility Name: \_\_\_\_\_

1) Proposer's Legal Name: \_\_\_\_\_

2) Physical Address: \_\_\_\_\_  
\_\_\_\_\_

3) Financial/Credit Contact Person:

Name: \_\_\_\_\_

Position Title: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

4) Federal Tax Identification Number: \_\_\_\_\_

5) Proposer is (check all that apply):

_____ Corporation	_____ Sole Proprietorship
_____ Partnership	_____ Limited Liability Company
_____ Joint Venture	_____ Limited Liability Partnership
	_____ Other (attach description)

6) State in which Proposer is incorporated or organized: \_\_\_\_\_

7) Proposer Information:

a) Dunn & Bradstreet Identification Number: \_\_\_\_\_

b) Corporate Bond Ratings: \_\_\_\_\_ Sources: \_\_\_\_\_  
\_\_\_\_\_

c) Commercial Paper Ratings: \_\_\_\_\_ Sources: \_\_\_\_\_  
\_\_\_\_\_

d) Dunn & Bradstreet Credit Appraisal Rating: \_\_\_\_\_

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 3: Financial Information*

Facility Name: \_\_\_\_\_

8) (If applicable) Parent/Affiliate Guarantor Information:

- a) Name of parent/affiliate guarantor: \_\_\_\_\_
- b) Dunn & Bradstreet Identification Number: \_\_\_\_\_
- c) Corporate Bond Ratings: \_\_\_\_\_ Sources: \_\_\_\_\_  
\_\_\_\_\_
- d) Commercial Paper Ratings: \_\_\_\_\_ Sources: \_\_\_\_\_  
\_\_\_\_\_
- e) Dunn & Bradstreet Credit Appraisal Rating: \_\_\_\_\_

9) If Proposer is relying on any parent/affiliate guarantees, use the space below to describe the corporate relationship between the Proposer and the guarantor. Also, provide a statement regarding the proposed guarantor's willingness to guarantee the Proposer's obligation pursuant to the form of guarantee that is to be attached to the PPA.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10) Provide audited financial statements for the last two years for the Proposer and, if applicable, the proposed guarantor.

Florida Power & Light Company's  
2003 Request for Proposal

Form # 4: Operations & Engineering Information

Facility Name: \_\_\_\_\_

1) Power Generation Proposal Type: (Check one)

- a) Purchased Power from Existing Unit: \_\_\_\_\_
- b) Purchased Power from New Unit: \_\_\_\_\_
- c) System Sale: \_\_\_\_\_ Provide an attachment detailing the proposed system sale including an explanation of how the proposing utility will maintain its reserve margin/reliability requirements in regard to commitments to its Public Service Commission.
- d) Sale of Existing Unit(s): \_\_\_\_\_ (Commercial Operation Date of Existing Unit: \_\_\_\_\_)
- e) EPC Turnkey Project: \_\_\_\_\_
- f) Distributed Generation: \_\_\_\_\_
- g) Qualifying Facility: \_\_\_\_\_
- h) Other: \_\_\_\_\_ Provide details:

\_\_\_\_\_  
\_\_\_\_\_

2) Technology/Configuration

- a) Type of Generating Unit (Combustion Turbine, etc.): \_\_\_\_\_
- b) Configuration:(e.g Combined Cycle Unit with 2 CTG/HRSG trains w/duct firing and 1 Steam Turbine, Cooling Tower with makeup water from Source A; etc):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

c) Major Equipment Technology, Supplier, Model (Combustion Turbine, Steam Turbine; Boiler/HRSG/Catalyst Systems):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d) Generation/Operation Modes (Specify/describe basis for proposed Generation/Operation Mode(s)):

- Base Operation: \_\_\_\_\_
- Incremental Level 1: \_\_\_\_\_
- Incremental Level 2: \_\_\_\_\_
- Other(s): \_\_\_\_\_

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 4: Operations & Engineering Information**

Facility Name: \_\_\_\_\_

**3) Operational Considerations: Outage Hours & Operating Time Limitations**

**a) Outage Hours:**

Contract Year	Base Operational Mode		Other Operational Modes	
	Projected *	Projected *	Projected *	Projected *
	Annual Planned Outage Hours	Annual Forced Outage Hours	Annual Planned Outage Hours	Annual Forced Outage Hours
2007				
2008				
2009				
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
2027				
2028				
2029				
2030				
2031				
2032				

Note: The specified outage hour values must reflect realistic values over the life of the proposed capacity, not "new & clean" unit values for all years.

\* Assume average annual capacity factors of 85% for baseload and system-based proposals and 15% for simple cycle combustion turbine-based proposals. Do not include Maintenance Outage Hours in these projections.

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 4: Operations & Engineering Information**

Facility Name: \_\_\_\_\_

**b) Operating Time Limitations:**

Provide explanation (s) for any operating time limitations attributable to facility design, permits, environmental regulations, maintenance and/or other factors:

Note that FPL requires that the Guaranteed Firm Capacity value quoted for Base Operation on item 5 of this form be capacity without run-time limitations. All other Guaranteed Firm Capacity values quoted for the remaining operational modes provided on item 5 of this form should incorporate the run-time limitations listed below.

<u>Generation/Operation Mode</u>	<u>Run-Time Limitations (e.g. hrs/vr.)</u>	<u>Explanation</u>
Base Operation:	(Not Applicable)	(Not Applicable)
Incremental Level 1:	_____	_____
Incremental Level 2:	_____	_____
Other(s):	_____	_____

**4) Fuel Information and Barometric Pressure**

a) Primary Type of Fuel: \_\_\_\_\_

b) Secondary/Backup Type of Fuel: \_\_\_\_\_

Secondary/Backup Fuel Stored On-Site(check one) \_\_\_\_\_ Yes \_\_\_\_\_ No

If "Yes", specify total operating time that unit can run at full capacity using actual on-site Secondary/Backup fuel without this stored fuel being replenished. (See Minimum Requirement # 11 in Section III.E.) \_\_\_\_\_ Hrs.

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 4: Operations & Engineering Information**

Facility Name: \_\_\_\_\_

4) Fuel Information and Barometric Pressure (continued)

c) Natural Gas Fuel - Typical Properties (for specifying unit performance values)

*Proposer's facility shall be designed to handle the expected range of fuels from its source(s). However, all specified unit performance values provided by Proposer shall be based on the "Average Fuel Analysis" that follows below:*

**Wide Range Fuel Data - Natural Gas**

Property Constituents (Mole%)	Average
Methane	94.7324
Ethane	2.7526
Propane	0.3913
Normal Butane	0.0706
Iso Butane	0.06
Normal Pentane	0.0153
Iso Pentane	0.0229
Neo Pentane	0.0002
Hexane	0.04
Carbon Dioxide	0.792
Nitrogen	1.1227
TOTAL (MOLE %)	100
Btu/SCF (HHV)	1025
Btu/SCF (LHV)	924
Btu/lb (HHV)	22835
Btu/lb (LHV)	20584
HHV/LHV Ratio	1.109

Notes:

- 1 The constituent mole % values are normalized from the AVERAGE.
- 2 All constituent heating values are from the 1981 GPSA Engineering Data Book.
- 3 FPL does not warrant or guarantee that this fuel information is the actual that will be received during operation.

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 4: Operations & Engineering Information*

Facility Name: \_\_\_\_\_

4) Fuel Information and Barometric Pressure

d) Barometric Pressure Conditions (*for specifying performance values*):

The generating unit performance values specified hereinafter shall be based on barometric pressure conditions as follows:

**Ambient Barometric Pressure Chart**

Centerline of CTG inlet bell mouth elevation (ft.)	Barometric Pressure (PSIA)
Sea Level	14.696
25	14.687
50	14.674
75	14.661
100	14.648
150	14.622
200	14.596
250	14.5704
300	14.5445

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 4: Operations & Engineering Information**

Facility Name: \_\_\_\_\_

5) Guaranteed Firm Capacity (Net MWs @ GSU Transformer High Side unless otherwise noted \*\*\*)

a) On Primary Fuel

Ambient Conditions	Generation/Operation Mode				Total Guaranteed Firm Capacity
	Base Operation	Incremental Level 1	Incremental Level 2	Other(s) (Specify)	
95F, 50%RH					
35F, 60%RH					
95F, 50%RH ***					
35F, 60%RH ***					

b) On Secondary Fuel

Ambient Conditions	Generation/Operation Mode				Total Guaranteed Firm Capacity
	Base Operation	Incremental Level 1	Incremental Level 2	Other(s) (Specify)	
95F, 50%RH					
35F, 60%RH					
95F, 50%RH ***					
35F, 60%RH ***					

\* Guaranteed firm capacity for Base Operation must be capacity without run-time limitations. Guaranteed firm capacity for all remaining operational modes proposed must incorporate the run-time limitations listed for item 3 b) of this form.

\*\* Generation/Operation Mode: "Incremental Level 1" values shall be specified as incremental to "Base Operation" values; "Incremental Level 2" values shall be specified as incremental to "Incremental Level 1 values; and so forth. (Example: Base Operation may be combined cycle w/o HRSG duct burners in operation. "Incremental 1" may be the incremental performance from use of HRSG duct burners.)

\*\*\* As delivered to FPL's system adjusted for any 3rd Party transmission system losses( if applicable).

Note: The guaranteed capacity values shown above must reflect "average" capacity values over the proposed term-of-service to FPL, not "new & clean" unit values.

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 4: Operations & Engineering Information**

Facility Name: \_\_\_\_\_

6) Guaranteed Heat Rates (BTU/kWh (HHV) @ Guaranteed Firm Capacity as delivered to FPL system adjusted for any 3rd Party transmission system losses)

a) On Primary Fuel

Ambient Conditions	Generation/Operation Mode			
	Base Operation	Incremental Level 1 *	Incremental Level 2 *	Other(s) (Specify)*
95F, 50%RH				
75F, 60%RH				

b) On Secondary Fuel

Ambient Conditions	Generation/Operation Mode			
	Base Operation	Incremental Level 1 *	Incremental Level 2 *	Other(s) (Specify)*
95F, 50%RH				
75F, 60%RH				

\* Generation/Operation Mode: "Incremental Level 1" values shall be specified as incremental to "Base Operation" values; "Incremental Level 2" values shall be specified as incremental to "Incremental Level 1" values; and so forth. (Example: Base Operation may be combined cycle w/o HRSG duct burners in operation. "Incremental 1" may be the incremental performance from use of HRSG duct burners.)

Note: The guaranteed heat rates values shown above must reflect "average" values over the proposed term-of-service to FPL, not "new & clean" unit values.

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 4: Operations & Engineering Information**

Facility Name: \_\_\_\_\_

**7) Emission Rate Information**

Provide the emission rate information requested below for the incremental MW supplied by each applicable operational mode on both the primary and secondary fuel.

**a) On Primary Fuel**

	Base Operation <u>@ Full Load</u>	Incremental <u>Level 1</u>	Incremental <u>Level 2</u>	<u>Other</u>
<i>NO<sub>x</sub> emission rate: lbs./mmBTU =</i>	_____	_____	_____	_____
<i>SO<sub>2</sub> emission rate: lbs./mmBTU =</i>	_____	_____	_____	_____
<i>PM<sub>10</sub> emission rate: lbs./mmBTU =</i>	_____	_____	_____	_____
<i>CO emission rate: lbs./mmBTU =</i>	_____	_____	_____	_____

**b) On Secondary Fuel**

	Base Operation <u>@ Full Load</u>	Incremental <u>Level 1</u>	Incremental <u>Level 2</u>	<u>Other</u>
<i>NO<sub>x</sub> emission rate: lbs./mmBTU =</i>	_____	_____	_____	_____
<i>SO<sub>2</sub> emission rate: lbs./mmBTU =</i>	_____	_____	_____	_____
<i>PM<sub>10</sub> emission rate: lbs./mmBTU =</i>	_____	_____	_____	_____
<i>CO emission rate: lbs./mmBTU =</i>	_____	_____	_____	_____

Florida Power & Light Company's  
2003 Request for Proposal

Form # 4: Operations & Engineering Information

Facility Name: \_\_\_\_\_

8) Natural Gas Pipeline Connection(s)

a) Identify the projected source of natural gas supply (FGT, Gulfstream, etc) \_\_\_\_\_

b) Designate the power generating facility, proposed gas pipeline delivery point and any proposed lateral line facilities on a hard copy submittal of marked-up U.S. Geological Survey Map(s) indicating the Section(s), Township(s) and Range(s). Include one hard copy of this USGS map(s) in each of the five bound collection of these completed forms.

c) Provide a written description of these proposed lateral line facilities to connect the gas pipeline to the generating facility: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d) Provide minimum acceptable natural gas delivery pressure: \_\_\_\_\_ (psig) and specify the location of this pressure requirement (e.g. @ interconnection with gas pipeline, @ end of proposed lateral line, @ generating facility inlet, etc.)

e) Provide the Maximum Daily Natural Gas Consumption Requirement at Generating Facility: \_\_\_\_\_ (mmBTU/day)

f) Provide the portion of the Maximum Daily Natural Gas Consumption Requirement identified in e) above that must be obtained on a firm basis: \_\_\_\_\_ (mmBTU/day)

g) Provide the Maximum Hourly Natural Gas Consumption Requirement at Generating Facility: \_\_\_\_\_ (mmBTU/hour)

h) Provide the portion of the Maximum Hourly Natural Gas Consumption Requirement identified in g) above that must be obtained on a firm basis: \_\_\_\_\_ (mmBTU/hour)

9) Generating Units' Operating & Maintenance Experience/Performance

Use attachment(s) to specify the name, address, etc. of the responsible Operating & Maintenance Group/ Company and pertinent U.S. experience/performance information (i.e., Actual Performance Track-Record):

For all generating plants in its U.S. domestic portfolio, provide a listing of individual generating unit names, location, state, guaranteed/demonstrated MW capacity, in-service year, technology type, primary fuel, start year of Operating Entity experience with the unit. From these, provide composite experience summaries as follows:

- General - Cumulative MW-years of experience through July, 2003 with ALL present generating capacity
- Specific - Cumulative MW-years of experience through July, 2003 with SPECIFIC generating technologies being proposed (e.g. Combined Cycle, Peaking CT/GT, Coal-Steam).

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 5: Pricing Information for Purchased Power or System Sale Proposals**

Facility Name: \_\_\_\_\_

1) Guaranteed Capacity Payments: \*,\*\*

Provide guaranteed total capacity pricing for each operational mode identified on Form # 4. Please insert "NA" for operational modes that are not applicable to your proposal.

Contract Year	for: Base Operational Mode	for: Incremental Level 1 Operational Mode	for: Incremental Level 2 Operational Mode	for: Other (specify) Operational Mode
	Guaranteed Capacity Payment (\$/kw-month)	Guaranteed Capacity Payment (\$/kw-month)	Guaranteed Capacity Payment (\$/kw-month)	Guaranteed Capacity Payment (\$/kw-month)
2007				
2008				
2009				
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
2027				
2028				
2029				
2030				
2031				
2032				

\* Guaranteed capacity pricing values must include all proposed payments for at least the following:  
 - generation capital, fuel delivery capital, and infrastructure capital;  
 - fixed O&M and capital replacement;  
 - transmission interconnection and 3rd party transmission service (as applicable) over other utility system.  
 (See page 3 of 3 of this form.)

\*\* Please refer to instructions in Section F.1) of this Appendix.

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 5: Pricing Information for Purchased Power or System Sale Proposals**

Facility Name: \_\_\_\_\_

2) Guaranteed Energy Pricing Payments:

Contract Year	Guaranteed Fuel Commodity Price (if applicable) * (\$/mmBTU)	Guaranteed Fuel Transportation Price (if applicable) ** (\$/mmBTU)	(for Base Operational Modes) Guaranteed Variable O&M Payment *** (\$/MWH)	(for all Other Operational Modes) Guaranteed Variable O&M Payment *** (\$/MWH)
2007				
2008				
2009				
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
2027				
2028				
2029				
2030				
2031				
2032				

\* If left blank, FPL will use its own fuel price forecast for purposes of proposal evaluation.

\*\* Please fill in the blanks with one of the following: "FGT", "Gulfstream", or a numerical \$/mmBTU value. If filled in with either "FGT" or "Gulfstream", FPL will use its forecast for FGT or Gulfstream firm gas transportation costs for purposes of proposal evaluation. If filled in with a numerical \$/mmBTU value, FPL will use that value for evaluation purposes. For evaluation purposes, FPL will apply the Guaranteed Fuel Transportation Cost to the capacity associated with the Base Operational Mode only.

\*\*\* Please refer to instructions in Section F.2) b) of this Appendix.

Florida Power & Light Company's  
2003 Request for Proposal

Form # 5: Pricing Information for Purchased Power or System Sale Proposals

Facility Name: \_\_\_\_\_

- 3) Guaranteed Startup Payments (\$/startup) including fuel: \* \* \*
  - \_\_\_\_\_ (Cold Start: off-line >48hrs.)
  - \_\_\_\_\_ (Cold/Warm: off-line 12 - 48 hours )
  - \_\_\_\_\_ (Warm/Hot Start: off-line 4-12 hrs.)
  - \_\_\_\_\_ (Hot Start: off-line < 4 hrs.)

\* \* \* Successful starts are limited to one per dispatch cycle.

- 4) Costs and Information Included in the Payments:

a) Transmission Interconnection Costs:

Transmission interconnection cost included in the Guaranteed Capacity Payment values provided in Section 1) of this form = \_\_\_\_\_ (millions, 2003\$)

Basis for this cost estimate is : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b) Third Party Transmission Service Information:

State whether third party transmission service rights have been requested and/or already procured for a portion of or all of the generation capacity being offered. To the extent a request for such long-term firm transmission rights have been requested, but not yet procured, provide all available studies associated with such requests.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Transmission losses (MW) associated with the third party transmission service (which are accounted for in developing the Total Guaranteed Firm Capacity (As Delivered to FPL's System) values on Form # 4):

\_\_\_\_\_  
\_\_\_\_\_

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 6: Pricing Information for Sale of a New or an Existing Unit**

Facility Name: \_\_\_\_\_

- 1) Date (month/day/year) of the proposed sale of the facility to FPL:      \_\_\_/\_\_\_/\_\_\_
- 2) Guaranteed total sale price of the proposed facility on the Sale Date (2007\$):      \_\_\_\_\_
- 3) Projected Annual O&M and Capital Replacement Costs:

Contract Year	Fixed O&M Cost (\$/kw)	Variable O&M Cost (\$/MWH)	Capital Replacement Cost (\$/kw)
2007	_____	_____	_____
2008	_____	_____	_____
2009	_____	_____	_____
2010	_____	_____	_____
2011	_____	_____	_____
2012	_____	_____	_____
2013	_____	_____	_____
2014	_____	_____	_____
2015	_____	_____	_____
2016	_____	_____	_____
2017	_____	_____	_____
2018	_____	_____	_____
2019	_____	_____	_____
2020	_____	_____	_____
2021	_____	_____	_____
2022	_____	_____	_____
2023	_____	_____	_____
2024	_____	_____	_____
2025	_____	_____	_____
2026	_____	_____	_____
2027	_____	_____	_____
2028	_____	_____	_____
2029	_____	_____	_____
2030	_____	_____	_____
2031	_____	_____	_____
2032	_____	_____	_____

**Florida Power & Light Company's  
2003 Request for Proposal**

**Form # 7: Environmental & Permitting Information**

Facility Name: \_\_\_\_\_

1) Description of Pollution Control equipment proposed (provide sufficient detail to characterize maturity at size/  
scale proposed, e.g. mature, emerging, or new application):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

a) Industry Experience:

# of Units in operation: \_\_\_\_\_

Years Experience: \_\_\_\_\_

Operational Issues: \_\_\_\_\_

Other: \_\_\_\_\_

b) Proposer Experience:

# of Units in operation: \_\_\_\_\_

Years Experience: \_\_\_\_\_

Operational Issues: \_\_\_\_\_

Other: \_\_\_\_\_

2) Compliance History (Last 5 years, i.e., 1999-2003)

Total and type of violation/non-compliance: \_\_\_\_\_

Total dollars in:

Fines: \_\_\_\_\_

Penalties: \_\_\_\_\_

Payments or other in-kind contribution for settlement: \_\_\_\_\_

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 7: Environmental & Permitting Information*

Facility Name: \_\_\_\_\_

3) Provide a listing of all required permits or approvals to license or permit the facility.

Include a major milestone permitting schedule \*:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\* FPL is requiring that a Proposer's Site Certification Application must be filed by April 1, 2004 (see Minimum Requirement # 13 in Section III.E.) and is recommending that this application be filed by January 15, 2004 (see Schedule of Milestones for 2003 RFP Process in Section II.G.)

Identify the need for any Variances to substantive standards and describe strategy to obtain same:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Identify the need for Exceptions to substantive standards and strategy to obtain same:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4) PSD/NSR Permitting

Provide anticipated emission rates for each regulated pollutant.

Lbs./hr \_\_\_\_\_  
Lbs./mmBTU \_\_\_\_\_  
ppm \_\_\_\_\_  
TPY \_\_\_\_\_

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 7: Environmental & Permitting Information*

Facility Name: \_\_\_\_\_

4) PSD/NSR Permitting (Continued):

Describe the overall strategy for permitting the proposed Pollution Control Technology for all regulated pollutants:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe the emissions credit strategy:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Provide HAPs emission rates (Lbs./hr. and TPY) for individual and total:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe the basis for all regulated pollutant emission rates (e.g., vendor guarantee, EPA emissions factor, operating experience, etc.):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Provide the expected cooling tower emission rates for regulated pollutants (lbs.hr. & TPY):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe treatment/maintenance chemicals (including cycles of concentration):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 7: Environmental & Permitting Information*

Facility Name: \_\_\_\_\_

4) PSD/NSR Permitting (Continued):

Describe compliance with AAQS, PSD increments and AQRVs:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5) Describe strategy to address Land Use issues (current and proposed changes, if any; status or work plan required):

Comprehensive Plan/Amendment (current and proposed changes, if any; status or work plan required):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Identify the need for Variances and the strategy to obtain same:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Identify the need for Exceptions and the strategy to obtain same:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6) Describe strategy to address zoning issues (current and proposed changes, if any; status or work plan)

Identify the need for Variances and the strategy to obtain same:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Florida Power & Light Company's  
2003 Request for Proposal*

**Form # 7: Environmental & Permitting Information**

Facility Name: \_\_\_\_\_

6) Describe the strategy to address zoning issues (current and proposed changes, if any; status or work plan) - (continued)

Identify the need for Exceptions and the strategy to obtain same:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe the strategy for compliance with noise standards:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe the strategy for compliance with other standards:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7) Describe experience with Community Outreach Plans and set forth the proposed outreach activities for proposed facilities:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8) Description of the Water Supply Strategy:

Identify source(s) quantity and quality (monthly or seasonal differences):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe agreement(s) or authorization status (timetable or plan to acquire water supply):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 7: Environmental & Permitting Information*

Facility Name: \_\_\_\_\_

8) Description of the Water Supply Strategy(Continued):

Identify any conflicts with regional WMD goals or plans:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9) Description of the Water Discharge Strategy:

Location(s) of discharge(s):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Quality and quantity (monthly or seasonal differences):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

List of any required agreements or permits and provide status (timetable or work plan to acquire same):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Identify any conflicts with WMD goals and FDEP rules:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TMDLs:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 7: Environmental & Permitting Information*

Facility Name: \_\_\_\_\_

9) Description of the Water Discharge Strategy (Continued):

Wetlands Impacts:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Compatibility with adjacent land uses:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10) Identify other infrastructure needs or requirements:

Water supply or discharge line ROW and easements - and the strategy to obtain same:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Fuel supply ROW and easements - and the strategy to obtain same:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Transmission line ROW and easements - and the strategy to obtain same:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11) Florida permitting experience of Proposer and of environmental support contractors and consultants:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 8: Key Milestones*

Facility Name: \_\_\_\_\_

Key Milestones	<u>Projected Date</u>
a) Site Certification Application Filed	_____
b) Air Permit Application Filed	_____
c) Interconnection Application Filed	_____
d) Granted Site Certification	_____
e) Granted Air Permit	_____
f) Irrevocable Order Placed for All Major Equipment	_____
g) Firm Fuel Transportation Arrangement(s) Executed	_____
h) Contractor Mobilized, Financing Closed	_____
i) Construction Start	_____
j) Major Equipment Deliveries (specify all)	_____
k) Acceptance Testing (specify all)	_____
l) Capacity Delivery Date	_____

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 9: Receipt Point(s) to FPL*

Facility Name: \_\_\_\_\_

1) State the receipt point(s) to the FPL system including nearest substation(s):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2) Attach a transmission map highlighting the receipt point(s) listed above.

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 10: Proposer Exceptions \**

Facility Name: \_\_\_\_\_

\* Note: FPL will not consider proposed exceptions to the RFP's Minimum Requirements for proposal eligibility.

1) With regard to this proposal, the Proposer takes no exception to terms, conditions, or other facets of the RFP and/or PPA (Check One): \_\_\_\_\_ Agrees \_\_\_\_\_ Disagrees

2) If the answer to item (1) above is "Disagrees", then for each term, condition, or other facet of the RFP and/or PPA which the Proposer takes exception to, use the space below to:

a) identify the language (citing page and paragraph) in the RFP and/or PPA for which an exception is made; and,

b) write out the Proposer's desired revised language.

*Florida Power & Light Company's  
2003 Request for Proposal*

*Form # 11: Proposal Certification*

Facility Name: \_\_\_\_\_

The undersigned certifies that (i) all of the information submitted in its proposal to FPL is complete and accurate, and that the pricing includes all of the following applicable costs for the proposal for the proposed full term of service including, but not limited to, the following costs:

- generator construction;
- generator operation and maintenance;
- transmission interconnection and 3rd party transmission service;
- gas pipeline interconnection (or other fuel delivery capital and O&M costs); and
- cost of fuel (as applicable);

(ii) the terms, conditions, and other facets of the RFP and/or PPA are acceptable, except as specifically noted on Form # 10; (iii) the Completion Security and Performance Security described in Section II.H. are acceptable and there are no pending legal or civil actions that would affect the ability of the Proposer and/or its guarantor to maintain these security amounts; (iv) the proposal has been submitted in the legal name of the entity which would be bound by any resulting contract; and (v) the proposal is firm and will remain open for 120 days from the Proposal Due Date.

Name of Legal Entity: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

Business Address: \_\_\_\_\_

Name of Person Certifying Proposal: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Telephone: \_\_\_\_\_

Signature:\* \_\_\_\_\_

(\* An Officer of the proposing company must sign a copy of this form which is included in each of the five (5) bound hard copies of the proposal.)

*(This page is left intentionally blank.)*

**APPENDIX E**

**FPL Transmission System – Related Costs**

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## FPL Transmission System – Related Costs

In its evaluation of proposals received in response to this RFP, FPL will be incorporating five cost aspects of FPL's transmission system for individual capacity options or for portfolios of these options. These five costs are:

- 1) transmission interconnection costs;
- 2) third party transmission service costs (as applicable);
- 3) transmission integration costs;
- 4) costs of transmission system losses; and
- 5) the impact on costs of operating existing FPL generation units in Southeast Florida to maintain reliability.

This appendix discusses each of these five costs. The interconnection and third party transmission service costs are to be provided by each Proposer for their individual proposal(s). Transmission integration costs, as well as the costs of transmission system losses and increased operating costs of FPL generation units located in Southeast Florida to maintain reliability (increased operating costs), will be developed by FPL and incorporated in the economic evaluation of portfolios. FPL anticipates that the determination of integration costs, as well as the determination of the costs of losses and increased operating costs, will be carried out for a selected number of the most promising portfolios as indicated by the initial steps of the economic evaluation.

### A) Transmission Interconnection Costs

As discussed in Appendix D for Form # 5, a Proposer whose proposal is based partially or totally on generators that need to be constructed and connected to a transmission system must include all costs of this interconnection in their proposal's Guaranteed Capacity Payment. In addition, these interconnection costs must be separately broken out on Form # 5 so that FPL may judge the reasonableness of this estimate. FPL reserves the right to review and, if it deems necessary, to adjust this estimate accordingly to provide a more accurate interconnection cost based on FPL's knowledge and experience with the transmission system. Proposers will be notified of any such adjustments affecting their proposal(s).

All proposals that are based partially or totally on generators that need to be constructed and connected to the transmission system must also demonstrate on Form # 5 that they have a valid completed application for Generator Interconnection Service (GIS) in the FPL GIS Queue, or with the applicable third party if the new generator is to be connected to a third party's transmission system.

The process for requesting GIS and having a completed GIS application on the FPL system is delineated on FPL's OASIS website (<http://floasis.siemens-asp.com/OASIS/FPL/INFO.HTM>) in a document entitled "Generator Interconnection Procedures". Additionally, and as discussed in FPL's Generator Interconnection Procedures, connections of new generators to the FPL system must be in accordance with FPL Facility Connection Requirements (which are also provided on FPL's OASIS website mentioned above) that are in compliance with North American Electric Reliability Council (NERC) Standards.

**B) Third Party Transmission Service Costs (as applicable)**

As discussed in Appendix D for Form # 5, to the extent the generator(s) is connected to the transmission system of a third party, the Proposer shall include these third party transmission service costs in the Guaranteed Capacity Payment.

In addition, the Proposer shall state on Form # 5 whether such long-term transmission rights for third party transmission service has been requested and/or already procured for a portion of or all of the generation capacity being offered. To the extent a request for such long – term firm transmission rights has been made, but not yet procured, the Proposer shall provide all available studies associated with such request(s).

Finally, the Proposer shall also state on Form # 5 the transmission losses associated with the third party transmission service which are accounted for in developing the Total Guaranteed Firm Capacity (as delivered to FPL's system) values on Form # 4.

**C) Transmission Integration Costs**

The transmission integration costs are based on all modifications (new facilities, and facility upgrades) to the FPL transmission system that are necessary to physically transfer the proposed power consistent with reliability standards. The latest available Florida Reliability Coordinating Council (FRCC) peak load flow case representing the year 2007 (updated as necessary to reflect the latest available information subsequent to the release of such load flow cases) will be used as the basis for determining the transmission integration modifications needed. Once these modifications are determined, costs for these modifications will be estimated. These costs will then be assigned to the portfolio in question. The process of determining the needed transmission integration modifications generally consists of three steps.

### **Step 1: Identify Needed New/Upgraded Facilities**

The first step is to perform screening studies to identify new facilities and facility upgrades that would be needed to integrate the capacity resources in each portfolio into the transmission system as a network resource for FPL. The type of studies that will be performed are considered screening type studies since they are not as comprehensive as studies that are normally performed for a specific request for transmission service. However, the screening type studies are sufficient to provide a reasonable estimate of the upgrades and facilities necessary to integrate each portfolio for comparison purposes. The analysis will assure that the FPL transmission system is planned with sufficient capability such that FPL can serve its customers and meet its transmission service obligations in year 2007 consistent with NERC, FRCC and FPL standards.

Each of the portfolios will be subjected to contingency screening of all transmission elements and generators, and the transmission system is monitored for violations of NERC, FRCC and FPL standards. Contingency screening tests will be performed at summer peak load conditions with all FPL generators/facilities assumed available and economically dispatched, and also with the most critical generator in the Southeastern Florida area assumed unavailable and the remaining FPL generators dispatched to mitigate, if practicable, violation of reliability criteria for all contingencies tested. Violations of reliability criteria found on the FPL system are resolved by acceptable remedial action (e.g., switching), facility upgrades, or by new facilities, as appropriate. All proposed solutions will be subsequently introduced into the appropriate case and tested in order to verify the completeness of the solution.

The following applies to violations noticed on third party transmission systems. Such violations will be listed for informational purposes only. Since the mitigation measures employed for the violations on third party systems will be at the discretion of, and based on the expertise of, third parties for their own transmission systems, identified violations will need to be communicated by the Proposer to the third party transmission system owner. Resolution of identified violations will be necessary if the subject portfolio is selected to potentially meet FPL's need. As a result, any upgrades or facilities required on a third party system and attendant costs must be developed and provided by the Proposer so that they may be taken into consideration in the final evaluation.

## **Step 2: Determine Total Cost of Needed Facilities**

Once a list of new facilities and upgrades on the FPL system required for integration is identified, the second step of the evaluation process of developing cost estimates for the new and upgraded transmission facilities commences. Based on the need for incremental transmission facilities identified in each portfolio, a cost estimate for the facilities is developed in a consistent manner for each portfolio. The estimates will be based on engineering judgment and readily available cost information, including cost information previously obtained from equipment manufacturers for transmission reinforcements of the type and capacity required for each portfolio. The estimates do not involve any field inspections, or detailed analysis of the type that would be performed in response to a specific request for interconnection or transmission service, but are adequate for their intended purpose.

## **Step 3: Develop Monthly Cash Flows**

The final step in the process involves transforming the total transmission integration cost for each portfolio developed in Step 2 into an estimated monthly cash flow (including AFUDC, as appropriate) of the costs for the transmission projects.

### **D) Costs of Transmission System Losses**

Each portfolio will contain capacity additions at specific locations in relation to the FPL transmission system. Therefore, each portfolio will present a unique transmission loss impact when combined with the existing FPL transmission system. In general, the difference in the economic impacts between portfolios related to losses will be captured and applied in the economic comparison of portfolios.

There are two components that comprise transmission losses. In this analysis, the generation capacity required to compensate for transmission losses is based on losses during peak load conditions. Energy losses that occur over the entire year will be estimated based on losses during peak load as well as losses during average system load conditions.

Transmission losses will vary from year-to-year with load growth, transmission system additions, and resource additions. It is not practicable to predict the amount of such variations due to the almost infinite combinations of future scenarios. It is, however, both certain and practical to assess the impact each portfolio would have in the initial year of operation. As a result, losses for all future years are calculated based

on expected 2007 system conditions, while only accounting for changes in a particular portfolio over time as discussed below.

The losses for a given portfolio are determined, and costs are assigned to these losses, in a 3-step procedure discussed below. This discussion utilizes a hypothetical example to explain the loss evaluation and cost assignment methodologies. This example was developed to address the most complex case, a portfolio containing components of different terms of service. Most portfolios, and the corresponding analyses, will be greatly simplified. The hypothetical portfolio is comprised of three separate capacity options: a 500 MW, 25-year option in South Florida, a 250 MW, 15-year option in Central Florida, and a 250 MW, 10-year option in Georgia.

### **Step 1: Calculation of Peak Load and Average Load Losses**

#### **a) Peak Load Losses**

The required FPL transmission system integration upgrades will be incorporated into the FRCC load flow base case, resulting in a modified, portfolio-specific load flow case. The modified load flow case is set up with the portfolio resources on-line at full output, and the remaining system resources are dispatched economically. The losses (MW) at the peak load hour on the FPL transmission system (Peak Load Losses) are then calculated for the portfolio.

The portfolio associated with the lowest system Peak Load Losses for the year 2007 will be designated as the "reference" portfolio for both the Peak Load Losses and Average Load Losses analyses. The difference between system Peak Load Losses associated with each portfolio and with the reference portfolio will be calculated for each year. Starting with the year 2007, the total losses will remain constant for each portfolio until one of the components (capacity options) making up the portfolio reaches the end of its proposed term-of-service. If there are no changes to the reference portfolio during this period, the difference in transmission losses between the specific portfolio being evaluated and the reference portfolio will also be unchanged over this period.

In the example, the initial 50 MW difference in system Peak Load Losses associated with the hypothetical portfolio and with the reference portfolio can be seen in Column (10) of Table E - 1 for the year 2007. In this example, the 50 MW difference is held constant for the first 10 years since the shortest term-of-service for a component in this portfolio is 10 years and since none of the components of the reference portfolio terminates prior to the end of the analysis period.

For portfolios (including the actual reference portfolio) that have components whose proposed terms-of-service end prior to the end of the analysis period (as is the case with this hypothetical portfolio), the portfolio-specific load flow case mentioned above will be further modified. This additional modification will reflect the termination of a specific component along with a corresponding adjustment to the FPL load. The system Peak Load Losses associated with only the portfolio's remaining components are first calculated. Then, in order to compensate for the loss of the expired component's capacity, an equal amount of Filler capacity and load is introduced. This Filler capacity is assumed to have losses equal to FPL's current system average transmission losses (2.19%).<sup>1</sup>

The losses associated with the reference portfolio are subtracted from the system Peak Load Losses associated with the remaining portfolio components, plus the Filler losses. The resulting system Peak Load Loss value associated with the portfolio is carried forward until another component of the portfolio reaches the end of its proposed term-of-service (if applicable).

These resulting Peak Load Loss values of the hypothetical portfolio, relative to the reference portfolio can be seen in Column (10) of Table E - 1 in the rows addressing the years 2017 – 2031. This process is continued until the end of the analysis period.

#### **b) Average Load Losses**

Another, separate load flow case is then created for each portfolio. This second load flow case represents a specific portfolio that was added in 2007, FPL's average system load (i.e., 60% of peak), and typical operation of FPL's system (e.g., peaking generation type components off-line at this load level). For each portfolio, the transmission system is modified to include the same transmission upgrades required for that portfolio as applied to the load flow cases used for the Peak Load Losses evaluation. This system representation is used to calculate the FPL transmission system losses at average system load (Average Load Losses) for each portfolio including the reference portfolio defined in the Peak Load Losses calculations.

The difference between system Average Load Losses associated with each portfolio and the reference portfolio will be calculated and carried forward for each year until one of the components making up the

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<sup>1</sup> Note that the system average transmission losses mentioned here are not the same as the Average Load Losses discussed in Section b) below.

portfolio (or one of the components in the reference portfolio) reaches the end of its proposed term-of-service.

In the example, the 30 MW difference between the system Average Load Losses associated with the hypothetical portfolio and with the reference portfolio can be seen in Column (10) of Table E – 2 for year 2007. In this example, the 30 MW difference is held constant for the first 10 years since the shortest term-of-service for a component in this portfolio is 10 years and there is no change in the losses for the reference portfolio in this same time frame.

For portfolios that have components whose proposed terms-of-service end prior to the end of the analysis period and which would have been on-line in the typical operation of the system at FPL's system average load, that component would be replaced with Filler capacity. The loss calculations in these instances are based on the same 2007 load flow case used for the initial years, but with the FPL load reduced by the amount of expired capacity and the existing FPL resources and the remaining portfolio resource components dispatched to represent typical operation of FPL's system (e.g. peaking type components off-line at this load level). In those circumstances in which a component is not typically in operation at FPL's average system load and whose term-of-service ends prior to the end of the analysis period, no Filler capacity is introduced for this analysis. In the example, the system Average Load Losses for such years associated with the hypothetical portfolio can be seen in Column (8) of Table E – 2 in the rows addressing the years 2017 – 2031. The difference between the Average Load Losses of the hypothetical portfolio and the reference portfolio is shown in Column (10) of Table E – 2.

Table E - 1

Peak Load Losses Calculation for Hypothetical Portfolio: 500 MW South Florida option, 250 MW Central Florida option, and 250 MW Georgia option with 1000 MW FPL Capacity Need

Year	(1) South Florida Option (MW)	(2) Central Florida Option (MW)	(3) Georgia Option (MW)	(4) Filler Capacity Needed to Replace Portfolio's Expired Components (MW)	(5) Filler Capacity Losses (%)	(6) Filler Capacity Losses (MW)  =(4)*(5)	(7) FPL Transmission System Losses with Portfolio's Remaining Components (MW)	(8) FPL Transmission System Losses with Portfolio's Remaining Components + Filler Capacity Losses (MW)  =(6)+(7)	(9) FPL Transmission System Losses with the Reference Portfolio (MW)	(10) Difference in FPL Transmission System Losses between Portfolio in question and Reference Portfolio (MW)  = (8) - (9)
2007	500	250	250	0	2.19%	0	550	550.00	500	50.00
2008	500	250	250	0	2.19%	0	550	550.00	500	50.00
2009	500	250	250	0	2.19%	0	550	550.00	500	50.00
2010	500	250	250	0	2.19%	0	550	550.00	500	50.00
2011	500	250	250	0	2.19%	0	550	550.00	500	50.00
2012	500	250	250	0	2.19%	0	550	550.00	500	50.00
2013	500	250	250	0	2.19%	0	550	550.00	500	50.00
2014	500	250	250	0	2.19%	0	550	550.00	500	50.00
2015	500	250	250	0	2.19%	0	550	550.00	500	50.00
2016	500	250	250	0	2.19%	0	550	550.00	500	50.00
2017	500	250		250	2.19%	5.48	520	525.48	500	25.48
2018	500	250		250	2.19%	5.48	520	525.48	500	25.48
2019	500	250		250	2.19%	5.48	520	525.48	500	25.48
2020	500	250		250	2.19%	5.48	520	525.48	500	25.48
2021	500	250		250	2.19%	5.48	520	525.48	500	25.48
2022	500			500	2.19%	10.95	510	520.95	500	20.95
2023	500			500	2.19%	10.95	510	520.95	500	20.95
2024	500			500	2.19%	10.95	510	520.95	500	20.95
2025	500			500	2.19%	10.95	510	520.95	500	20.95
2026	500			500	2.19%	10.95	510	520.95	500	20.95
2027	500			500	2.19%	10.95	510	520.95	500	20.95
2028	500			500	2.19%	10.95	510	520.95	500	20.95
2029	500			500	2.19%	10.95	510	520.95	500	20.95
2030	500			500	2.19%	10.95	510	520.95	500	20.95
2031	500			500	2.19%	10.95	510	520.95	500	20.95

E-10

D-234

Table E - 2

Average Load Losses Calculation for Hypothetical Portfolio: 500 MW South Florida option, 250 MW Central Florida option, 250 MW Georgia option with 1000 MW FPL Capacity Need

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Year	South Florida Option (MW)	Central Florida Option (MW)	Georgia Option (MW)	Filler Capacity Needed to Replace Portfolio's Expired Components (MW)	Filler Capacity Losses (%)	Filler Capacity Losses (MW)	FPL Transmission System Losses with Portfolio's Remaining Components (MW)	FPL Transmission System Losses with Portfolio's Remaining Components + Filler Capacity Losses (MW)	FPL Transmission System Losses with the Reference Portfolio (MW)	Difference in FPL Transmission System Losses between Portfolio in question and Reference Portfolio (MW)
2007	500	250	250	0	2.19%	0	510	510.00	480	30.00
2008	500	250	250	0	2.19%	0	510	510.00	480	30.00
2009	500	250	250	0	2.19%	0	510	510.00	480	30.00
2010	500	250	250	0	2.19%	0	510	510.00	480	30.00
2011	500	250	250	0	2.19%	0	510	510.00	480	30.00
2012	500	250	250	0	2.19%	0	510	510.00	480	30.00
2013	500	250	250	0	2.19%	0	510	510.00	480	30.00
2014	500	250	250	0	2.19%	0	510	510.00	480	30.00
2015	500	250	250	0	2.19%	0	510	510.00	480	30.00
2016	500	250	250	0	2.19%	0	510	510.00	480	30.00
2017	500	250		250	2.19%	5.48	495	500.48	480	20.48
2018	500	250		250	2.19%	5.48	495	500.48	480	20.48
2019	500	250		250	2.19%	5.48	495	500.48	480	20.48
2020	500	250		250	2.19%	5.48	495	500.48	480	20.48
2021	500	250		250	2.19%	5.48	495	500.48	480	20.48
2022	500			500	2.19%	10.95	485	495.95	480	15.95
2023	500			500	2.19%	10.95	485	495.95	480	15.95
2024	500			500	2.19%	10.95	485	495.95	480	15.95
2025	500			500	2.19%	10.95	485	495.95	480	15.95
2026	500			500	2.19%	10.95	485	495.95	480	15.95
2027	500			500	2.19%	10.95	485	495.95	480	15.95
2028	500			500	2.19%	10.95	485	495.95	480	15.95
2029	500			500	2.19%	10.95	485	495.95	480	15.95
2030	500			500	2.19%	10.95	485	495.95	480	15.95
2031	500			500	2.19%	10.95	485	495.95	480	15.95

## **Step 2: Calculation of Peak Hour Capacity Loss Costs:**

The cost of peak hour capacity losses associated with a portfolio is the product of the annual difference in the Peak Load Losses between a portfolio and the reference portfolio (calculated in Step 1) multiplied by a proxy purchase cost (\$5/kw-month), and then escalated annually throughout the analysis period. This proxy purchase cost represents the economic value needed to bring this portfolio into equivalence with the reference portfolio.

An example of this calculation for the hypothetical portfolio is shown in Table E – 3.

Note that peak hour capacity loss costs will not be assigned for the years 2007 and 2008. Actual impacts to FPL transmission system losses from the addition of any portfolio in 2007 would first be quantified in line loss studies FPL would conduct in 2008 based on actual 2007 data. The results of these studies would then be incorporated into FPL's 2009 load forecast. Therefore, 2009 would be the first year in which loss impacts from 2007 capacity additions would result in higher or lower forecasted capacity needs, thus affecting costs to meet FPL's system capacity needs from 2009 – on.

An annual peak hour capacity loss cost is calculated for all years starting in 2009 and the annual costs are then present valued and summed. The sum of these present valued costs represents the difference in cost of peak hour capacity losses associated with the portfolio relative to the reference portfolio.

## **Step 3: Calculation of Annual Energy Loss Costs:**

Both the differences for the Peak Load Losses and Average Load Losses between a portfolio and the reference portfolio (calculated in Step 1) are first converted to energy (MWH) values. The Peak Load Loss value is multiplied by 876 hours each year (representing 10% of the annual 8760 hours) to derive an "on-peak" energy loss (MWH) value. These on-peak MWH values are then multiplied by projected on-peak marginal energy prices to derive on-peak energy loss costs for each portfolio relative to the reference portfolio.

Similarly, the Average Load Losses value is multiplied by an appropriate (to the type of capacity being offered in the portfolio) number of hours to derive an "off-peak" energy loss (MWH) value. These off-peak MWH values are then multiplied by projected off-peak marginal energy prices to derive off-peak energy loss costs for each portfolio relative to the reference portfolio.

These annual on-peak and off-peak energy loss costs are then summed to derive a total annual energy loss cost for each portfolio relative to the reference portfolio. This total annual energy loss cost is calculated for all years starting in 2007. These annual costs are then present valued and summed. The sum of these present valued

costs represents the difference in the cost of energy losses associated with the portfolio relative to the reference portfolio.

Table E – 4 presents an example of this calculation for the hypothetical portfolio. (An existing set of marginal energy costs is used for this example. FPL will use its latest available fuel cost forecast prior to the Proposal Due Date to develop projections of marginal energy costs for the subsequent RFP economic evaluations.)

Table E - 3

**Calculation of Costs for Peak Hour Capacity (MW) Losses:**

(For Hypothetical Portfolio: 500 MW South Florida option, 250 MW Central Florida option, 250 MW Georgia option)

Discount Rate =	0.07819
Purchase Proxy Starting Cost (\$/kw) =	\$5.00
Annual Escalation Rate for Proxy Purchase =	2%

Year	(1) Proxy Purchase Cost (\$/kw-mo)	(2) Discount Factor	(3) Peak Load Loss (from Column 10, Table E - 1) (MW)	(4) = (1)*(3)*12 Peak Hour Capacity Loss Cost Nominal (\$ 000)	(5) = (2)*(4) Peak Hour Capacity Loss Cost NPV (\$ 000)
2003	\$0	1.000	0	\$0	\$0
2004	\$0	0.927	0	\$0	\$0
2005	\$0	0.860	0	\$0	\$0
2006	\$0	0.798	0	\$0	\$0
2007	\$0	0.740	0	\$0	\$0
2008	\$0	0.686	0	\$0	\$0
2009	\$5.00	0.637	50.00	\$3,000	\$1,910
2010	\$5.10	0.590	50.00	\$3,060	\$1,807
2011	\$5.20	0.548	50.00	\$3,121	\$1,709
2012	\$5.31	0.508	50.00	\$3,184	\$1,617
2013	\$5.41	0.471	50.00	\$3,247	\$1,530
2014	\$5.52	0.437	50.00	\$3,312	\$1,447
2015	\$5.63	0.405	50.00	\$3,378	\$1,369
2016	\$5.74	0.376	50.00	\$3,446	\$1,295
2017	\$5.86	0.349	50.00	\$3,515	\$1,225
2018	\$5.98	0.323	50.00	\$3,585	\$1,159
2019	\$6.09	0.300	25.48	\$1,864	\$559
2020	\$6.22	0.278	25.48	\$1,901	\$529
2021	\$6.34	0.258	25.48	\$1,939	\$500
2022	\$6.47	0.239	25.48	\$1,978	\$473
2023	\$6.60	0.222	25.48	\$2,017	\$448
2024	\$6.73	0.206	20.95	\$1,692	\$348
2025	\$6.86	0.191	20.95	\$1,726	\$329
2026	\$7.00	0.177	20.95	\$1,760	\$312
2027	\$7.14	0.164	20.95	\$1,795	\$295
2028	\$7.28	0.152	20.95	\$1,831	\$279
2029	\$7.43	0.141	20.95	\$1,868	\$264
2030	\$7.58	0.131	20.95	\$1,905	\$250
2031	\$7.73	0.121	20.95	\$1,943	\$236
				<b>NPV Total (\$000) =</b>	<b>\$19,887</b>

Table E - 4

Calculation of Costs for Annual Energy Losses:

(For Hypothetical Portfolio: 500 MW South Florida option, 250 MW Central Florida option, 250 MW Georgia option)

On-Peak Hours =	876 (or 10% of all hours)
Capacity Factor =	85%
Off-Peak Hours =	6,570
Discount Factor =	0.07819

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	On-Peak Marginal Energy Cost (\$/mwh)	Off-Peak Marginal Energy Cost (\$/mwh)	Discount Factor	Peak Load Loss (from Column 10, Table E - 1) (MW)	On - Peak Hours Annual Energy Loss (MWH)	On - Peak Hours Annual Energy Loss Cost Nominal (\$ 000)	Average Load Loss (from Column 10, Table E - 2) (MW)	Off - Peak Hours Annual Energy Loss (MWH)	Off - Peak Hours Annual Energy Loss Cost Nominal (\$ 000)	Total Annual Energy Loss Cost Nominal (\$ 000)	Total Annual Energy Loss Cost NPV (\$ 000)
2003	0	0	1.000	0	0	\$0	0	0	\$0	\$0	\$0
2004	0	0	0.927	0	0	\$0	0	0	\$0	\$0	\$0
2005	0	0	0.860	0	0	\$0	0	0	\$0	\$0	\$0
2006	0	0	0.798	0	0	\$0	0	0	\$0	\$0	\$0
2007	\$45.16	\$35.49	0.740	50.00	43,800	\$1,978	30.00	197,100	\$6,994	\$8,973	\$6,639
2008	\$42.71	\$34.90	0.686	50.00	43,800	\$1,871	30.00	197,100	\$6,878	\$8,749	\$6,005
2009	\$43.04	\$35.08	0.637	50.00	43,800	\$1,885	30.00	197,100	\$6,915	\$8,800	\$5,601
2010	\$44.77	\$35.93	0.590	50.00	43,800	\$1,961	30.00	197,100	\$7,083	\$9,044	\$5,339
2011	\$46.77	\$37.44	0.548	50.00	43,800	\$2,049	30.00	197,100	\$7,379	\$9,427	\$5,162
2012	\$47.50	\$38.06	0.508	50.00	43,800	\$2,081	30.00	197,100	\$7,502	\$9,583	\$4,867
2013	\$47.79	\$38.53	0.471	50.00	43,800	\$2,093	30.00	197,100	\$7,594	\$9,687	\$4,563
2014	\$49.98	\$39.59	0.437	50.00	43,800	\$2,189	30.00	197,100	\$7,803	\$9,992	\$4,365
2015	\$52.08	\$41.06	0.405	50.00	43,800	\$2,281	30.00	197,100	\$8,093	\$10,374	\$4,204
2016	\$54.87	\$42.47	0.376	50.00	43,800	\$2,403	30.00	197,100	\$8,372	\$10,775	\$4,049
2017	\$56.08	\$43.59	0.349	25.48	22,320	\$1,252	20.48	134,554	\$5,865	\$7,117	\$2,481
2018	\$58.92	\$44.97	0.323	25.48	22,320	\$1,315	20.48	134,554	\$6,052	\$7,367	\$2,381
2019	\$60.41	\$46.10	0.300	25.48	22,320	\$1,348	20.48	134,554	\$6,203	\$7,551	\$2,264
2020	\$61.60	\$47.14	0.278	25.48	22,320	\$1,375	20.48	134,554	\$6,343	\$7,718	\$2,146
2021	\$64.52	\$48.41	0.258	25.48	22,320	\$1,440	20.48	134,554	\$6,513	\$7,953	\$2,051
2022	\$66.82	\$50.46	0.239	20.95	18,352	\$1,226	15.95	104,792	\$5,288	\$6,515	\$1,558
2023	\$67.49	\$50.97	0.222	20.95	18,352	\$1,239	15.95	104,792	\$5,341	\$6,580	\$1,460
2024	\$68.17	\$51.48	0.206	20.95	18,352	\$1,251	15.95	104,792	\$5,395	\$6,646	\$1,368
2025	\$68.85	\$51.99	0.191	20.95	18,352	\$1,263	15.95	104,792	\$5,448	\$6,712	\$1,281
2026	\$69.54	\$52.51	0.177	20.95	18,352	\$1,276	15.95	104,792	\$5,503	\$6,779	\$1,200
2027	\$70.23	\$53.04	0.164	20.95	18,352	\$1,289	15.95	104,792	\$5,558	\$6,847	\$1,124
2028	\$70.93	\$53.57	0.152	20.95	18,352	\$1,302	15.95	104,792	\$5,614	\$6,915	\$1,053
2029	\$71.64	\$54.10	0.141	20.95	18,352	\$1,315	15.95	104,792	\$5,670	\$6,985	\$986
2030	\$72.36	\$54.65	0.131	20.95	18,352	\$1,328	15.95	104,792	\$5,726	\$7,054	\$924
2031	\$74.08	\$55.20	0.121	20.95	18,352	\$1,360	15.95	104,792	\$5,784	\$7,144	\$868
										<b>NPV Total (\$000) =</b>	<b>\$73,940</b>

E-15

D-239

## **E) Increased Costs of Operating Existing FPL Generation Units in Southeast Florida to Maintain Reliability**

Each portfolio will contain capacity additions at specific locations on the FPL transmission system and associated system transmission integration requirements. The specific locations and integration requirements may result in changes in the amount of Southeast Florida generation and the import capability and the operational dispatch of regional generation to maintain NERC, FRCC and FPL reliability standards. Therefore, each portfolio will present a distinct impact on the overall need of FPL to operate the Port Everglades and Ft. Lauderdale combustion turbines to limit power flows into FPL's Southeast load region to levels consistent with reliability criteria at times when more economic generation is available outside of Southeast Florida. This is particularly true during generation overhaul periods. This results in increased operating costs for the FPL system.

These increased operating costs will be calculated for each portfolio and compared to the increased operating costs associated with a reference case. The cost difference (plus or minus) between a particular portfolio and the reference case will be charged or credited to the particular portfolio in the overall analysis. The cost compared is the NPV cost incurred from 2007 to 2031 of operating combustion turbines in Southeast Florida to maintain reliability.

### **Evaluation Model Description**

The spreadsheet model used to project these increased operating costs for a portfolio addresses the years 2007 – 2031. Basic assumptions, data and methodology applied are as follows:

- 1) Annual MWH of gas turbine operation are calculated for the years 2007 through 2011. The MWH values for the years 2012 through 2031 are assumed to be the same as the 2011 value.
- 2) The model incorporates a statistical prediction of forced outages for Southeast Florida generators. A Monte Carlo sampling technique is used to capture the effect of forced outages on the need to operate gas turbines.
- 3) Transmission import capability into Southeast Florida is determined from the latest FRCC peak flow cases, adjusted for commitments to Florida Municipal Power Agency, City of Homestead, and QF's in Southeast Florida. Additionally, import limits into Southeast Florida are further adjusted to account for necessary operational outages of transmission facilities in Southeast Florida. Also, this analysis incorporates reductions in import capability that occur when Southeast Florida units are out-of-service (planned outages plus forced outages).

- 4) The model assumes a cost differential of running gas turbines in Southeast Florida vs. running available, less expensive generation outside of Southeast Florida of \$35.00/MWH for 2007, escalated by 2% per year through 2032.
- 5) The model uses:
  - i) loads for 2007-2011 that are forecasted for Southeastern Florida (i.e., for FPL's Southern Division, FPL's Southeastern Division, and 58% of FPL's Eastern Division);
  - ii) 1999-2002 actual planned outages are the basis for projected 2007-2010 planned outages, respectively. The 2001 actual planned outage was utilized as a proxy for 2011;
  - iii) forced outage factors for Southeast Florida generating units are assumed constant for all years;
  - iv) results for year 2011 were applied to years 2012-2031 under the assumption that the system would be upgraded to maintain year 2011 import levels into Southeast Florida.
- 6) For each portfolio the model calculates the projected increased operating cost of running combustion turbines for the years 2007-2011 as a result of constrained capability to import more economical power from other FPL resources into Southeast Florida during overhaul periods defined as March, April, May, October, November and December. Results for years 2011 are used for years 2012-2031.
- 7) The difference in NPV costs between each portfolio and the reference portfolio is used to assess the relative increased operating costs impact of each portfolio. The NPV cost is expressed in 2003 dollars.

### **Example Calculation of Cost Difference for a Portfolio**

#### **Step 1: Reference Portfolio**

FPL will select a reference portfolio and will calculate the increased operating costs for that portfolio.

For example, if one assumes that the reference portfolio is FPL's proposed 1,100 MW (nominal) combined cycle unit at Turkey Point, the model shows projected increased operating costs of approximately \$12 million for the 2007-2031 time frame. This calculation is presented in Table E – 5.<sup>2</sup> (There was no assumed increase in import capability into Southeast Florida modeled for this reference portfolio.)

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<sup>2</sup> Note that the cost values shown in Tables E-5 through E-7 for the assumed cases are provided for illustrative purposes only. The actual cost impacts for each portfolio will be calculated during the overall RFP evaluation process.

## **Step 2: Individual Portfolios**

Each portfolio will have an individual model developed to determine the associated projected NPV increased operating cost. The model will recognize the addition of any Southeast Florida generation included in the portfolio. In addition, the model will incorporate any changes in the import capability into the Southeast Florida region based on the results of the transmission integration study.

A second example case includes four simple cycle combustion turbine units installed at FPL's Turkey Point Plant that adds approximately 600 MW (nominal). For this example case, no other capacity was assumed added in Southeast Florida. The projected increased operating cost for this case is approximately \$22 million NPV as shown in Table E-6. (Again, there was no increase in import capability into Southeast Florida modeled for this second alternative case.)

Finally, an illustration of the magnitude of the upper range of such costs that might be incurred by a portfolio is shown by a third example case as presented in Table E-7. In this case, no MW of new capacity are placed in-service in Southeast Florida during the period nor are additional transmission facilities installed to provide increased import capability into that region. For such a case, the projected NPV increased operating cost is projected to be approximately \$40 million NPV.

## **Step 3: Individual Portfolio vs. Reference Portfolio**

For each portfolio, including portfolios combined with FPL's Turkey Point 600 MW (nominal) CT option, the difference in the projected NPV increased operating costs relative to the reference case will be determined. This difference (plus or minus) will then be applied in the economic evaluation of the portfolio.

Table E - 5

Increased Operating Costs Example: with 1,100 MW (nominal) CC added to Turkey Point

Discount rate =	0.07819	
Diff-cost value for 2003 =	\$35.00	\$/MWh
Diff-cost escalation rate =	2.00%	

	(1)	(2)	(3)	(4) = (2)*(3)	(5)	(6) = (4) * (5)	(7) = (6) * (1)
Year	Discount Factor	Average MW-Days	Hours Per day	GT MWh	Diff-cost (\$/MWh)	Increased Operating Costs Nominal (\$ 000)	Increased Operating Costs NPV (\$ 000)
2003	1.000				35.00		
2004	0.927				35.70		
2005	0.860				36.41		
2006	0.798				37.14		
2007	0.740	113	3.86	436	37.89	\$17	\$12
2008	0.686	635	3.86	2,451	38.64	\$95	\$65
2009	0.637	2,708	3.86	10,453	39.42	\$412	\$262
2010	0.590	6,521	3.86	25,171	40.20	\$1,012	\$597
2011	0.548	9,659	3.86	37,284	41.01	\$1,529	\$837
2012	0.508	9,659	3.86	37,284	41.83	\$1,560	\$792
2013	0.471	9,659	3.86	37,284	42.66	\$1,591	\$749
2014	0.437	9,659	3.86	37,284	43.52	\$1,623	\$709
2015	0.405	9,659	3.86	37,284	44.39	\$1,655	\$671
2016	0.376	9,659	3.86	37,284	45.28	\$1,688	\$634
2017	0.349	9,659	3.86	37,284	46.18	\$1,722	\$600
2018	0.323	9,659	3.86	37,284	47.11	\$1,756	\$568
2019	0.300	9,659	3.86	37,284	48.05	\$1,791	\$537
2020	0.278	9,659	3.86	37,284	49.01	\$1,827	\$508
2021	0.258	9,659	3.86	37,284	49.99	\$1,864	\$481
2022	0.239	9,659	3.86	37,284	50.99	\$1,901	\$455
2023	0.222	9,659	3.86	37,284	52.01	\$1,939	\$430
2024	0.206	9,659	3.86	37,284	53.05	\$1,978	\$407
2025	0.191	9,659	3.86	37,284	54.11	\$2,017	\$385
2026	0.177	9,659	3.86	37,284	55.19	\$2,058	\$364
2027	0.164	9,659	3.86	37,284	56.30	\$2,099	\$345
2028	0.152	9,659	3.86	37,284	57.42	\$2,141	\$326
2029	0.141	9,659	3.86	37,284	58.57	\$2,184	\$308
2030	0.131	9,659	3.86	37,284	59.74	\$2,227	\$292
2031	0.121	9,659	3.86	37,284	60.94	\$2,272	\$276
						<b>NPV Total (\$000) =</b>	<b>\$11,611</b>

Table E - 6

Increased Operating Costs Example: with 4 CT's (600 MW nominal) added to Turkey Point

Discount rate =	0.07819
Diff-cost value for 2003 =	\$35.00 \$/MWh
Diff-cost escalation rate =	2.00%

	(1)	(2)	(3)	(4) = (2)*(3)	(5)	(6) = (4) * (5)	(7) = (6) * (1)
Year	Discount Factor	Average MW-Days	Hours Per day	GT MWh	Diff-cost (\$/MWh)	Increased Operating Costs Nominal (\$ 000)	Increased Operating Costs NPV (\$ 000)
2003	1.000				35.00		
2004	0.927				35.70		
2005	0.860				36.41		
2006	0.798				37.14		
2007	0.740	196	3.86	757	37.89	\$29	\$21
2008	0.686	1,247	3.86	4,813	38.64	\$186	\$128
2009	0.637	6,709	3.86	25,897	39.42	\$1,021	\$650
2010	0.590	12,439	3.86	48,015	40.20	\$1,930	\$1,140
2011	0.548	18,387	3.86	70,974	41.01	\$2,910	\$1,594
2012	0.508	18,387	3.86	70,974	41.83	\$2,969	\$1,508
2013	0.471	18,387	3.86	70,974	42.66	\$3,028	\$1,426
2014	0.437	18,387	3.86	70,974	43.52	\$3,089	\$1,349
2015	0.405	18,387	3.86	70,974	44.39	\$3,150	\$1,277
2016	0.376	18,387	3.86	70,974	45.28	\$3,213	\$1,208
2017	0.349	18,387	3.86	70,974	46.18	\$3,278	\$1,142
2018	0.323	18,387	3.86	70,974	47.11	\$3,343	\$1,081
2019	0.300	18,387	3.86	70,974	48.05	\$3,410	\$1,022
2020	0.278	18,387	3.86	70,974	49.01	\$3,478	\$967
2021	0.258	18,387	3.86	70,974	49.99	\$3,548	\$915
2022	0.239	18,387	3.86	70,974	50.99	\$3,619	\$866
2023	0.222	18,387	3.86	70,974	52.01	\$3,691	\$819
2024	0.206	18,387	3.86	70,974	53.05	\$3,765	\$775
2025	0.191	18,387	3.86	70,974	54.11	\$3,840	\$733
2026	0.177	18,387	3.86	70,974	55.19	\$3,917	\$693
2027	0.164	18,387	3.86	70,974	56.30	\$3,995	\$656
2028	0.152	18,387	3.86	70,974	57.42	\$4,075	\$621
2029	0.141	18,387	3.86	70,974	58.57	\$4,157	\$587
2030	0.131	18,387	3.86	70,974	59.74	\$4,240	\$555
2031	0.121	18,387	3.86	70,974	60.94	\$4,325	\$525
						<b>NPV Total (\$000) =</b>	<b>\$22,258</b>

Table E - 7

Increased Operating Costs Example: with 0 MW added in Southeast Florida

Discount rate =	0.07819
Diff-cost value for 2003 =	\$35.00 \$/MWh
Diff-cost escalation rate =	2.00%

	(1)	(2)	(3)	(4) = (2)*(3)	(5)	(6) = (4) * (5)	(7) = (6) * (1)
Year	Discount Factor	Average MW-Days	Hours Per day	GT MWh	Diff-cost (\$/MWh)	Increased Operating Costs Nominal (\$ 000)	Increased Operating Costs NPV (\$ 000)
2003	1.000				35.00		
2004	0.927				35.70		
2005	0.860				36.41		
2006	0.798				37.14		
2007	0.740	1,088	3.86	4,200	37.89	\$159	\$118
2008	0.686	4,434	3.86	17,115	38.64	\$661	\$454
2009	0.637	14,753	3.86	56,947	39.42	\$2,245	\$1,429
2010	0.590	23,668	3.86	91,358	40.20	\$3,673	\$2,168
2011	0.548	32,708	3.86	126,253	41.01	\$5,177	\$2,835
2012	0.508	32,708	3.86	126,253	41.83	\$5,281	\$2,682
2013	0.471	32,708	3.86	126,253	42.66	\$5,387	\$2,537
2014	0.437	32,708	3.86	126,253	43.52	\$5,494	\$2,400
2015	0.405	32,708	3.86	126,253	44.39	\$5,604	\$2,271
2016	0.376	32,708	3.86	126,253	45.28	\$5,716	\$2,148
2017	0.349	32,708	3.86	126,253	46.18	\$5,831	\$2,032
2018	0.323	32,708	3.86	126,253	47.11	\$5,947	\$1,923
2019	0.300	32,708	3.86	126,253	48.05	\$6,066	\$1,819
2020	0.278	32,708	3.86	126,253	49.01	\$6,187	\$1,721
2021	0.258	32,708	3.86	126,253	49.99	\$6,311	\$1,628
2022	0.239	32,708	3.86	126,253	50.99	\$6,437	\$1,540
2023	0.222	32,708	3.86	126,253	52.01	\$6,566	\$1,457
2024	0.206	32,708	3.86	126,253	53.05	\$6,698	\$1,378
2025	0.191	32,708	3.86	126,253	54.11	\$6,831	\$1,304
2026	0.177	32,708	3.86	126,253	55.19	\$6,968	\$1,233
2027	0.164	32,708	3.86	126,253	56.30	\$7,107	\$1,167
2028	0.152	32,708	3.86	126,253	57.42	\$7,250	\$1,104
2029	0.141	32,708	3.86	126,253	58.57	\$7,395	\$1,044
2030	0.131	32,708	3.86	126,253	59.74	\$7,542	\$988
2031	0.121	32,708	3.86	126,253	60.94	\$7,693	\$935
						<b>NPV Total (\$000) =</b>	<b>\$40,314</b>

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**Appendix F**

**Turnkey Offering Considerations**

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## **Turnkey Offering Considerations**

### **I. INTRODUCTION**

#### **A. Background**

Rule 25-22.082, Florida Administrative Code, indicates that “providers of turnkey offerings” should be considered as potential participants in an RFP issued under the code. Turnkey offerings refer to a type of procurement option that is characterized by an abrupt change of custody at the completion of construction phase. This style of transaction is complicated in the instance of a utility-grade power generation facility by the fact that the long-term performance, reliability, cost and capabilities of the delivered facility are not proven at the point of transfer. This can result in significantly limited accountability on the part of the Seller and/or Seller’s Contractors/Suppliers and offers limited capability to ensure the delivery of a quality facility.

Such a result is an unacceptable reliability and cost risk for FPL and its customers. Therefore, in order to accommodate a turnkey offering, FPL has developed specific considerations that must be accepted-in-concept by a Proposer of a turnkey offering. Further, specific submittals in addition to those required in the remainder of this RFP, allowing FPL to judge the desirability of a turnkey offering, are required. These considerations are described in this Appendix F.

#### **B. Origin of Special Considerations**

Due to the contractual relationships commonly assumed in a turnkey offering, FPL relinquishes control of many factors that would otherwise allow FPL to directly manage factors related to the design, schedule, equipment warranties, performance, reliability, lifecycle operating costs and useful operating life of the facility that will ultimately be its responsibility. Consequently, there is a unique set of risks associated with future asset’s performance, reliability, costs and capabilities. These risks must be managed by specific mechanisms fitted to the challenges presented by a turnkey offering.

**C. General Scope of Turnkey Offerings**

The scope of the turnkey offering must include all those aspects enumerated in the RFP, relevant to the technology proposed and necessary for full facility commercial operations (See Proposer Obligations, Section II.F, among others). Partial offerings (e.g., power island proposals, equipment-only proposals) are not appropriate responses to this RFP and will not be considered. FPL has other procurement avenues to address these sub-contract arrangements when appropriate.

**II. TURNKEY OFFERING SUBMITTALS**

In addition to the requirements enumerated in the RFP and associated Appendices, the following discusses the specific submittals needed to support a turnkey offering proposal in response to this RFP.

**A. Transmission Plan**

The proposal must include costs for transmission interconnection in their sale price. The proposal must also include a transmission plan complete with cost estimates associated with delivery of firm capacity and energy using third party transmission systems and the associated peak and average system capacity and energy losses to deliver the full output of the proposed facility to the FPL system (if necessary). FPL will develop the transmission integration, system loss and impact to cost of operations values as described in Appendix E.

**B. Fuels Plan**

The proposal must include a fuels plan complete with capital cost estimates and development schedule. In the case of natural gas-fired facilities, the fuels plan will describe cost and development activities for all interconnecting lateral pipelines and upgrades to mainline facilities necessary to provide the required flow and pressure to support full facility operation throughout the year. Solid fuel proposals must describe and include the transportation, delivery, storage and handling requirements for the proposed facility.

**C. Site Plan**

The proposal must include a site plan describing the cost and schedule associated with the acquisition and development of the

plant site and other land or infrastructure improvements necessary for the proposed facility. The site plan should include a schedule and discussion of all permits, authorizations and approvals needed to complete the project.

**D. Long Term Service Agreement**

The turnkey offering proposal price will include a Long Term Service Agreement (LTSA) of suitable term, covering the costs of major maintenance and capital replacement associated with the prime movers (Combustion Turbine Generators, Steam Turbine Generators) and backed by a credit-worthy (e.g. investment grade) entity or other security suitable to FPL. Reasonable and customary components of an LTSA include maintenance expectations, covered parts and price schedule, as well as intermediate performance guarantees.

FPL will not be obligated to enter into an LTSA; however, it considers the pricing of such a tool to be indicative of one alternative available to manage operating cost risks during operations. In lieu of a suitable LTSA, or sufficient credit support, FPL may adjust the proposal costs to match our experience associated with O&M costs, Major Maintenance and Capital Replacement expenditures.

**E. Warranty**

Proposer shall provide that all original equipment warranties are transferable to FPL. Additionally, Proposer shall provide summary warranty descriptions for all major equipment items (HRSG, STG, CT's etc.) as well as warranty wraps provided by EPC contractor, major subcontractors, and the Proposer itself.

**F. Reasonableness Review**

The nature of the turnkey approach places the cost responsibility of post-Commercial Operation Date (COD) operations on FPL. Therefore, FPL will reserve the right to conduct a reasonableness review on all post-COD cost estimates provided in the proposal. This review will be conducted using FPL and industry benchmark cost data. Should the results of the review identify additional costs that FPL will be responsible for during operations, adjustments will be made to reflect the operational costs FPL deems prudent and reasonable. The economic evaluation of the proposal will be conducted with values supported as reasonable by FPL and industry experience.

### III. CONTRACT CONCEPTS

The following concepts will be incorporated into any Contract supporting a turnkey offering entered into by FPL as a result of this RFP.

#### A. Rights of Contract Review

If a turnkey offering is selected as a finalist, FPL will conduct a review of pertinent proposed contracts associated with the project. FPL must approve any contracts associated with the procurement of major equipment (Combustion Turbine Generators, Steam Turbine Generators, Boilers/HRSGs, Catalyst System(s), Condensers, Cooling Towers, DCS systems, etc.). Specifically, FPL must concur on the EPC contractor selected (if applicable). Further, FPL must approve any contracts that obligate FPL (LTSA's, etc.) directly or by inference. Such approvals will not be unreasonably withheld.

#### B. Technical Due Diligence

As discussed in Section II.B of the RFP, customary and prudent due diligence will be concurrent to negotiations for all turnkey offerings selected as Finalists. Such due diligence will include a detailed review of the overall plant design, equipment specifications and construction specifications and specific reviews in, at least, the following areas:

Equipment Reliability	Performance Guarantees
Operations	Technical Design
Material History	Maintenance
Environmental	Human Resources
Fuels Plans	Transmission Plan
Accounting/Tax	Management
Risk/Mitigation	Supply Chain/IT
Project Schedule	

#### C. Project Milestone Payment Structure

The payment milestones of the proposal will be established to protect FPL and it's customers from the risk of under-performance by the Proposer. The milestones provide a payout that balances the exposure of the Proposer and FPL as the facility transitions through the stages of design, construction, commissioning, and initial operations. The following schedule is indicative of the Pay-

for-Performance arrangement FPL will require to consider a turnkey offering.

**Table F-1. Turnkey Offering Milestone Payment Schedule**

<b>Milestone</b>	<b>Payment Amount</b>	<b>Cumulative Payment</b>	<b>Requirements</b>
Up to Commercial Operation *	50%	50%	Facility achieves commercial deliveries on-time within all permits.
Year One Performance	10%	60%	CF, AF, EFOR, Average NPHR and defined budgetary goals achieved. Combustion inspections satisfactory.
Year Two Performance	15%	75%	CF, AF, EFOR, Average NPHR and defined budgetary goals achieved. HGP inspection satisfactory.
Year Three Performance	10%	85%	CF, AF, EFOR, Average NPHR and defined budgetary goals achieved. Combustion inspections satisfactory.
Year Four Performance	15%	100%	CF, AF, EFOR, Average NPHR and defined budgetary goals achieved. Final acceptance inspection satisfactory.

- Note: Balance of funds placed in Escrow, payment subject to future performance.

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ATTACHMENT ONE

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**FPL**

***Ten Year Power Plant Site Plan***

***2003-2012***

***Submitted To:***

***Florida Public  
Service Commission***

***Miami, Florida  
April, 2003***

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## Table of Contents

List of Figures and Tables.....	iii
List of Schedules .....	v
Overview of the Document .....	1
List of Abbreviations Used in FPL Forms .....	3
Executive Summary .....	5
I. Description of Existing Resources .....	9
A. FPL-Owned Resources .....	11
B. Non-Utility Generation .....	15
C. Demand Side Management (DSM) .....	17
D. Purchased Power .....	18
II. Forecast of Electric Power Demand .....	23
A. Long-Term Sales Forecasts .....	26
B. Net Energy for Load .....	29
C. System Peak Forecasts .....	29
D. Hourly Load Forecast .....	31
III. Projection of Incremental Resource Additions .....	39
A. FPL's Resource Planning .....	41
B. Incremental Resource Additions .....	47
C. Other Results of FPL's Recent Planning Work.....	50
D. Demand Side Management (DSM) .....	52
E. Generation Additions from Independent Power Producers .....	56
F. Transmission Plan .....	57
G. Renewable Resources .....	61
H. FPL's Fuel Mix and Price Forecasts .....	63
IV. Environmental and Land Use Information .....	85
A. Protection of the Environment .....	87
B. FPL's Environmental Statement .....	87
C. Environmental Management .....	88
D. Environmental Assurance Program .....	88
E. Environmental Communication and Facilitation .....	89
F. Preferred and Potential Sites .....	89
1. Preferred Site # 1 – Fort Myers .....	90
2. Preferred Site # 2 – Sanford .....	96
3. Preferred Site # 3 – Manatee .....	103
4. Preferred Site # 4 – Martin .....	110
5. Potential Site # 1 - Cape Canaveral .....	117
6. Potential Site # 2 - Midway.....	118
7. Potential Site # 3 - Port Everglades .....	119
8. Potential Site # 4 - Riviera.....	120
9. Potential Site # 5 - Turkey Point.....	121

<b>V.</b>	<b>Other Planning Assumptions and Information .....</b>	<b>167</b>
	Introduction .....	169
	Discussion Item #1 .....	169
	Discussion Item #2 .....	170
	Discussion Item #3 .....	171
	Discussion Item #4 .....	171
	Discussion Item #5 .....	172
	Discussion Item #6 .....	172
	Discussion Item #7 .....	173
	Discussion Item #8 .....	173
	Discussion Item #9 .....	174
	Discussion Item #10 .....	175
	Discussion Item #11 .....	176
	Discussion Item #12 .....	177

## List of Figures and Tables

Table ES.1	Projected Capacity Changes and Reserve Margins for FPL .....	7
Figure I.A.1	Capacity Resources (Map) .....	12
Figure I.A.2	FPL Substation & Transmission System Configuration (Map) .....	13
Figure I.A.3	FPL Interconnection Diagram .....	14
Table I.B.1	Florida Power & Light Company Firm Capacity and Energy Contracts with Cogenerators/Small Power Production Facilities .....	16
Table I.B.2	As-Available Energy Purchases From Non-Utility Generators in 2002 .....	16
Table I.D.1	FPL's Purchased Power MW .....	18
Figure III.A.1	Overview of FPL's IRP Process .....	42
Table III.B.1	Projected Capacity Changes for FPL .....	49
Table III.D.1	FPL's Summer MW Reduction Goals for DSM .....	56
Table III.F.1	List of Proposed Power Lines .....	57
Table IV.E.1	2002 FPL Environmental Outreach Activities .....	89
	Fort Myers .....	123
	U.S. Geological Survey (USGS) Map .....	125
	U.S. Geological Survey (USGS) Legend .....	126
	Proposed Facilities Layout Map .....	127
	Map of Site and Adjacent Area .....	128
	Sanford .....	129
	U.S. Geological Survey (USGS) Map .....	131
	U.S. Geological Survey (USGS) Legend .....	132
	Proposed Facilities Layout Map .....	133
	Map of Site and Adjacent Area .....	134

## List of Figures and Tables

<b>Manatee.....</b>	<b>135</b>
<b>U.S. Geological Survey (USGS) Map .....</b>	<b>137</b>
<b>U.S. Geological Survey (USGS) Legend .....</b>	<b>138</b>
<b>Proposed Facilities Layout Map .....</b>	<b>139</b>
<b>Map of Site and Adjacent Area .....</b>	<b>140</b>
<b>Martin.....</b>	<b>141</b>
<b>U.S. Geological Survey (USGS) Map .....</b>	<b>143</b>
<b>U.S. Geological Survey (USGS) Legend .....</b>	<b>144</b>
<b>Proposed Facilities Layout Map .....</b>	<b>145</b>
<b>Map of Site and Adjacent Area .....</b>	<b>146</b>
<b>Potential Sites .....</b>	<b>147</b>
<b>Cape Canaveral - U.S. Geological Survey (USGS) Map .....</b>	<b>149</b>
<b>Midway – U.S. Geological Survey (USGS) Map .....</b>	<b>153</b>
<b>Port Everglades - U.S. Geological Survey (USGS) Map.....</b>	<b>157</b>
<b>Riviera - U.S. Geological Survey (USGS) Map .....</b>	<b>161</b>
<b>Turkey Point - U.S. Geological Survey (USGS) Map .....</b>	<b>165</b>

## List of Schedules

Schedule 1	Existing Generating Facilities.....	19
Schedule 2.1	History and Forecast of Energy Consumption & Number of Customers by Customer Class.....	32
Schedule 2.2	History and Forecast of Energy Consumption & Number of Customers by Customer Class.....	33
Schedule 2.3	History and Forecast of Energy Consumption & Number of Customers by Customer Class.....	34
Schedule 3.1	History and Forecast of Summer Peak Demand (Base Case).....	35
Schedule 3.2	History and Forecast of Winter Peak Demand (Base Case).....	36
Schedule 3.3	History and Forecast of Annual Net Energy for Load GWH (Base Case) .....	37
Schedule 4	Previous Year Actual and Two-Year Forecast of Retail Peak Demand and Net Energy for Load by Month .....	38
Schedule 5	Fuel Requirements .....	66
Schedule 6.1	Energy Sources .....	67
Schedule 6.2	Energy % by Fuel Type.....	68
Schedule 7.1	Forecast of Capacity, Demand and Scheduled Maintenance at Time of Summer Peak.....	69
Schedule 7.2	Forecast of Capacity, Demand and Scheduled Maintenance at Time of Winter Peak.....	70
Schedule 8	Planned and Prospective Generating Facility Additions and Changes .....	71
Schedule 9	Status Report and Specifications of Proposed Generating Facilities .....	73
Schedule 10	Status Report and Specifications of Proposed Directly Associated Transmission Lines .....	81

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## **Overview of The Document**

Chapter 186, Florida Statutes, requires that each electric utility in the State of Florida with a minimum existing generating capacity of 250 megawatts (MW) must annually submit a Ten - Year Power Plant Site Plan. This plan includes an estimate of the utility's electric power generating needs, a projection of how those needs will be met, and a disclosure of information pertaining to the utility's preferred and potential power plant sites. This information is compiled and presented in accordance with rules 25-22.070, 25-22.071, and 25-22.072, Florida Administrative Code (FAC).

This Ten - Year Power Plant Site Plan (Site Plan) document is based on Florida Power & Light Company's (FPL) planning analyses that were carried out in 2002 and that were on-going in the first quarter of 2003. The forecasted information presented in this plan addresses the 2003 – 2012 time frame.

Site Plans are long-term planning documents and should be viewed in this context. A Site Plan contains tentative information, especially for the latter years of the ten - year time horizon, and is subject to change at the discretion of the utility. Much of the data submitted is preliminary in nature and is presented in a general manner. Specific and detailed data will be submitted as part of the Florida site certification process, or through other proceedings and filings.

This document is organized in the following manner:

### **Chapter I – Description of Existing Resources**

This chapter provides an overview of FPL's current generating facilities. Also included is information on other FPL resources including purchased power, demand side management, and FPL's transmission system.

### **Chapter II – Forecast of Electric Power Demand**

FPL's load forecasting methodology, and its forecast of seasonal peaks and annual energy usage, is presented in Chapter II.

### **Chapter III – Projection of Incremental Resource Additions**

This chapter discusses FPL's integrated resource planning (IRP) process and outlines FPL's projected resource additions, especially new power plants, as determined in FPL's IRP work in 2002 and early 2003.

**Chapter IV – Environmental and Land Use Information**

This chapter discusses various environmental information as well as preferred and potential site locations for additional electric generation facilities.

**Chapter V – Other Planning Assumptions and Information**

This chapter addresses twelve "discussion items" which pertain to additional specific information which is to be included in a Site Plan filing.

**FPL**  
**List of Abbreviations**  
**Used in FPL Forms**

<i>Reference</i>	<i>Abbreviation</i>	<i>Definition</i>
Unit Type	IC	Internal Combustion
	NP	Nuclear Power
	ST	Steam Unit
	CT	Combustion Turbine
	CC	Combined Cycle
	BIT	Bituminous Coal
Fuel Type	UR	Uranium
	NG	Natural Gas
	FO6	# 4,# 5,# 6 Oil (Heavy)
	FO2	# 1, # 2 or Kerosene Oil (Distillate)
	BIT	Bituminous Coal
	Pet	Petroleum Coke
	NO	None
Fuel Transportation	TK	Truck
	RR	Railroad
	PL	Pipeline
	WA	Water
	No	None
Unit/Site Status	P	Planned Unit
	OT	Other
	RP	Proposed for repowering or life extension
	T	Regulatory approval received but not under construction
	V	Under construction, more than 50% Complete

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## Executive Summary

Florida Power & Light Company's (FPL) 2003 Ten - Year Power Plant Site Plan (Site Plan) addresses FPL's plans to increase its electric generation capability as part of its efforts to meet its projected incremental resource needs for the 2003 – 2012 time period.

FPL's total generation capability is projected to significantly increase during the 2003 – 2012 time period as shown in Table ES.1. This table also shows the resulting projected Summer and Winter reserve margins for FPL over this ten-year time horizon.

Table ES.1 reflects FPL's on-going project to repower FPL's existing Sanford Unit # 4 (two existing units at Fort Myers and another existing unit at Sanford have recently been repowered), planned changes to existing generation units (due to unit overhauls, etc.), and scheduled changes in the delivered amounts of purchased power. The table also reflects the planned additions of new generating units. Although not specifically shown in this table, FPL's approved DSM goals are assumed to be implemented on schedule.

The amount of new generating capacity that will be added is driven in part by the outcome of the Florida Public Service Commission docket No. 981890-EU. This docket ended with a stipulated agreement that resulted in FPL, along with Tampa Electric Company and Florida Power Corporation, switching from a minimum reserve margin planning criterion of 15% to one of 20% beginning with the Summer of 2004. As a consequence, FPL is now planning to add significantly more new generation capacity than was shown in its Site Plans filed prior to this agreement.

As shown in Table ES.1, FPL is adding two new combustion turbines (CT's) at FPL's existing Fort Myers plant site in 2003. Also during 2003, FPL will be completing its work to repower its existing Sanford Unit # 4.

FPL has also secured capacity through early 2007 through a number of short-term, firm capacity purchases from utilities and other entities. An additional short-term, firm purchase for 2004 will replace a previous purchase agreement for this time frame that was recently terminated.

In 2005, FPL will be adding a large (1,107 Summer MW) new combined cycle (CC) unit at its existing Manatee plant site. Also in 2005, the two combustion turbines (CT's) that were added at FPL's existing Martin plant site in mid - 2001 will be converted into a 1,107

Summer MW CC unit by the addition of two additional CT's, heat recovery steam generators, and associated equipment. This conversion will add another 783 Summer MW of capability above the present capability of the existing two CT's. The additions for 2005 were selected as the best options among other FPL construction alternatives and numerous outside proposals received in response to two Request for Proposals (RFP's) FPL issued in August 2001 and April 2002, respectively. These two capacity additions were approved by the Florida Public Service Commission on November 19, 2002 and their applications for certification under the Florida Electric Power Plan Siting Act are pending.

In 2007, FPL projects a capacity need of approximately 1,050 MW of additional capacity. The results of FPL's on-going planning analyses through the first quarter of 2003 indicate that the best FPL construction option to meet this need is a new 1,107 MW (Summer) CC unit. A number of potential sites for such a unit are currently under study and these are presented in Chapter IV as a "Potential Site". FPL will continue to analyze these sites for a new CC unit, as well as other capacity options, for meeting its 2007 capacity need. FPL will inform the Florida Public Service Commission when a decision is made regarding how to best meet this need.

In regard to meeting FPL's projected capacity needs for 2008 through 2012, FPL currently projects the addition of three additional CC units: one each year in 2008, 2010, and 2012. Sites for these three additional CC units have not yet been selected. <sup>1</sup> These planned increases in electric generation capability will allow FPL to continue to maintain system reliability and integrity at a reasonable cost.

FPL's recent planning efforts have also identified two issues that are now receiving attention in FPL's ongoing resource planning work. Those two issues are: 1) the growing imbalance in Southeast Florida between regional load and generating capacity located within this region; and 2) maintaining/enhancing fuel diversity in the FPL system. FPL's approach to these two issues will be developed through on-going resource planning work.

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<sup>1</sup>FPL's current planning studies have identified new combined cycle units as the generally preferred option to meet future load growth. However, this is subject to change. Repowering of existing FPL sites remains an alternative to new construction and FPL will continue to examine this, and other, options including solid fuel options.

Projected Capacity Changes and Reserve Margins for FPL <sup>(1)</sup>				
	Net Capacity Changes (MW)		FPL Reserve Margin (%)	
	Winter <sup>(2)</sup>	Summer <sup>(3)</sup>	Winter	Summer
2003 Sanford Repowering # 4: Second Phase <sup>(4)</sup>	---	957	18%	20%
Combustion Turbines (2) Fort Myers <sup>(5)</sup>	---	298		
Purchases <sup>(6)</sup>	1,097	(140)		
Changes to existing Units	31	(32)		
2004 Combustion Turbines (2) Fort Myers <sup>(5)</sup>	366	---	27%	20%
Purchases <sup>(6)</sup>	(156)	44		
New Short-Term Purchase <sup>(7)</sup>	---	213		
Changes to existing Units	72	283		
Sanford Repowering # 4: Second Phase <sup>(4)</sup>	1,036	---		
2005 Changes to existing QF's	(10)	(10)	22%	23%
Purchases <sup>(6)</sup>	(6)	(523)		
Manatee Unit #3 Combined Cycle <sup>(8)</sup>	---	1,107		
New Short-Term Purchase <sup>(7)</sup>	---	(213)		
Conversion of MR #8 CT's to CC <sup>(8)</sup>	(363)	783		
2006 Manatee Unit #3 Combined Cycle <sup>(8)</sup>	1,201	---	28%	20%
Conversion of MR #8 CT's to CC <sup>(8)</sup>	1,198	---		
Changes to existing QF's	(133)	(133)		
Purchases <sup>(6)</sup>	(520)	---		
2007 Purchases <sup>(6)</sup>	---	(474)	25%	20%
Unsitd Combined Cycle # 1 <sup>(8)</sup>	---	1,107		
2008 Purchases <sup>(6)</sup>	(474)	---	26%	24%
Unsitd Combined Cycle # 1 <sup>(8)</sup>	1,209	---		
Unsitd Combined Cycle # 2 <sup>(8)</sup>	---	1,107		
2009 Unsitd Combined Cycle # 2 <sup>(8)</sup>	1,209	---	29%	21%
Changes to existing QF's	---	(51)		
2010 Unsitd Combined Cycle # 3 <sup>(8)</sup>	---	1,107	26%	23%
Changes to existing QF's	(51)	(44)		
2011 Unsitd Combined Cycle # 3 <sup>(8)</sup>	1,209	---	29%	20%
Changes to existing QF's	(89)	(45)		
2012 Unsitd Combined Cycle # 4 <sup>(8)</sup>	---	1,107	26%	22%
<b>TOTALS =</b>	<b>6,827</b>	<b>6,449</b>		

(1) Additional information about these resulting reserve margins and capacity changes are found on Schedule 7 & 8 respectively.

(2) Winter values are values for January of year shown.

(3) Summer values are values for August of year shown.

(4) The second phase of the repowering consists of integrating the combustion turbines, heat recovery steam generators, and steam turbines.

(5) The two CT's at Fort Myers are scheduled to be in-service in the Spring of 2003. Therefore, the CT's are included in the 2003 Summer reserve margin calculation and are included in the 2004 - on reserve margin for Summer and Winter.

(6) These are firm capacity purchases. See Section I.D and III.A. for more details.

(7) Negotiations are currently underway between FPL and several parties to secure this short - term capacity.

(8) All new combined cycle units are scheduled to be in-service in June of the year shown. Consequently, they are included in the Summer reserve margin calculation for the in-service year and in both the Summer and Winter reserve margin calculations for subsequent years.

Table ES.1

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**CHAPTER 1**

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**Description of Existing Resources**

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## **I. Description of Existing Resources**

FPL's service area contains approximately 27,650 square miles and has a population of approximately 7.8 million people. FPL served an average of 4,019,805 customer accounts in thirty-five counties during 2002. These customers were served from a variety of resources including: FPL-owned fossil and nuclear generating units, non-utility owned generation, demand side management, and interchange/purchased power.

### **I.A. FPL-Owned Resources**

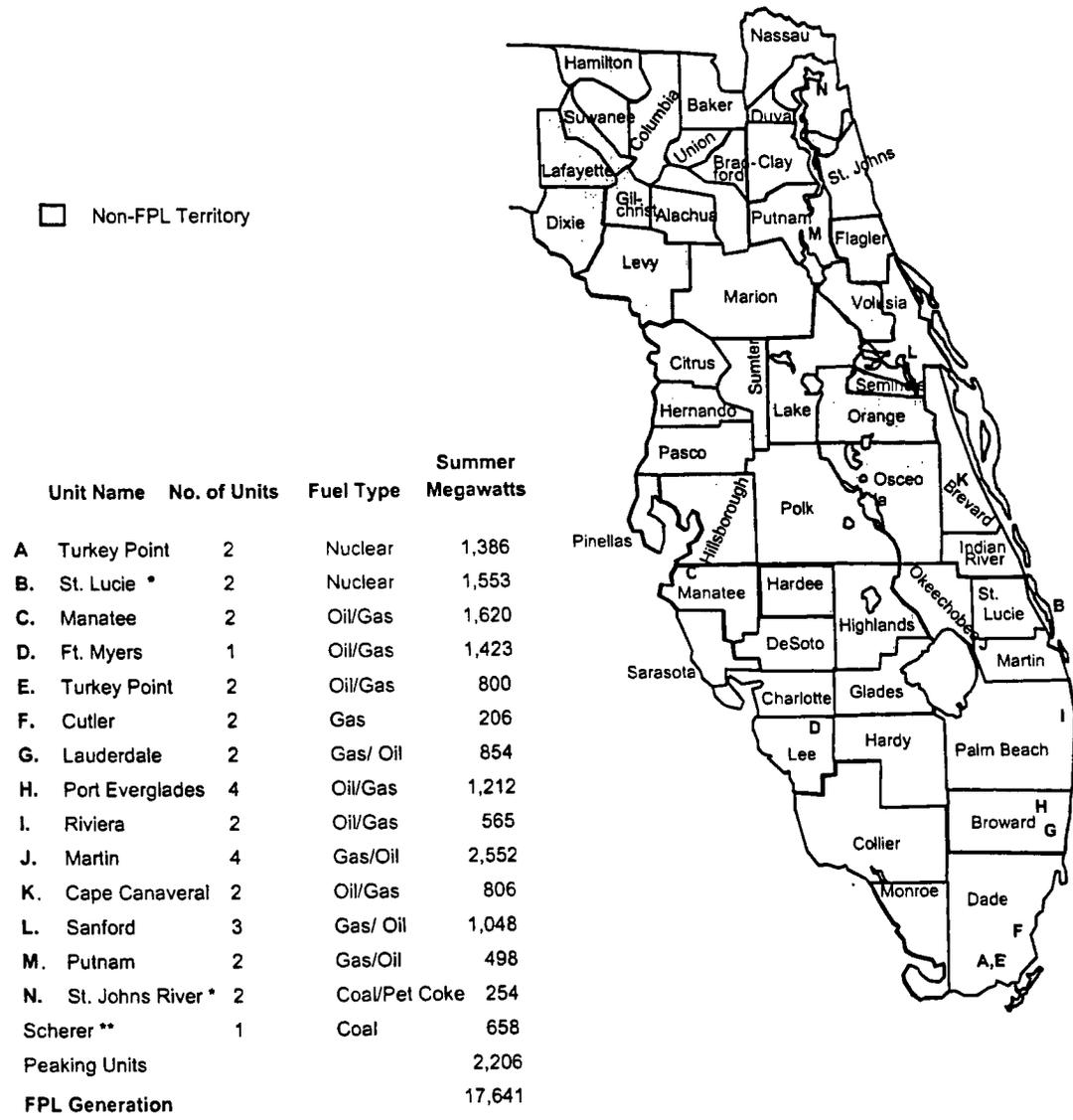
The existing FPL generating resources are located at fourteen generating sites distributed geographically around its service territory and also include partial ownership of one unit located in Georgia and two units located in Jacksonville. The current generating facilities consist of four nuclear steam units, three coal units, eight combined cycle units, eighteen fossil steam units, fifty combustion gas turbines, and five diesel units. The location of these units is shown on Figure I.A.1.

The bulk transmission system is composed of 1,105 circuit miles of 500 Kilovolt (KV) lines (including 75 miles of 500 KV lines [two 37-1/2 mile lines] between Duval Substation and the Florida-Georgia state line, which are jointly owned with Jacksonville Electric Authority) and 2,702 circuit miles of 230 KV lines. The underlying network is composed of 1,630 circuit miles of 138 KV lines, 718 circuit miles of 115 KV lines, and 178 circuit miles of 69 KV transmission lines. Integration of the generation, transmission, and distribution system is achieved through FPL's 515 substations.

The existing FPL system, including generating plants, major transmission stations, and transmission lines, is shown on Figure I.A.2. In addition, Figure I.A.3 shows FPL's interconnection ties with other utilities.

# Capacity Resources

(as of December 31, 2002)



\*Represents FPL's ownership share: St. Lucie nuclear: 100% unit 1, 85% unit 2; St. Johns River: 20% of two units.

\*\* The Scherer unit is located in Georgia and is not shown on this map.

Figure I.A.1

# FPL Substation and Transmission System Configuration

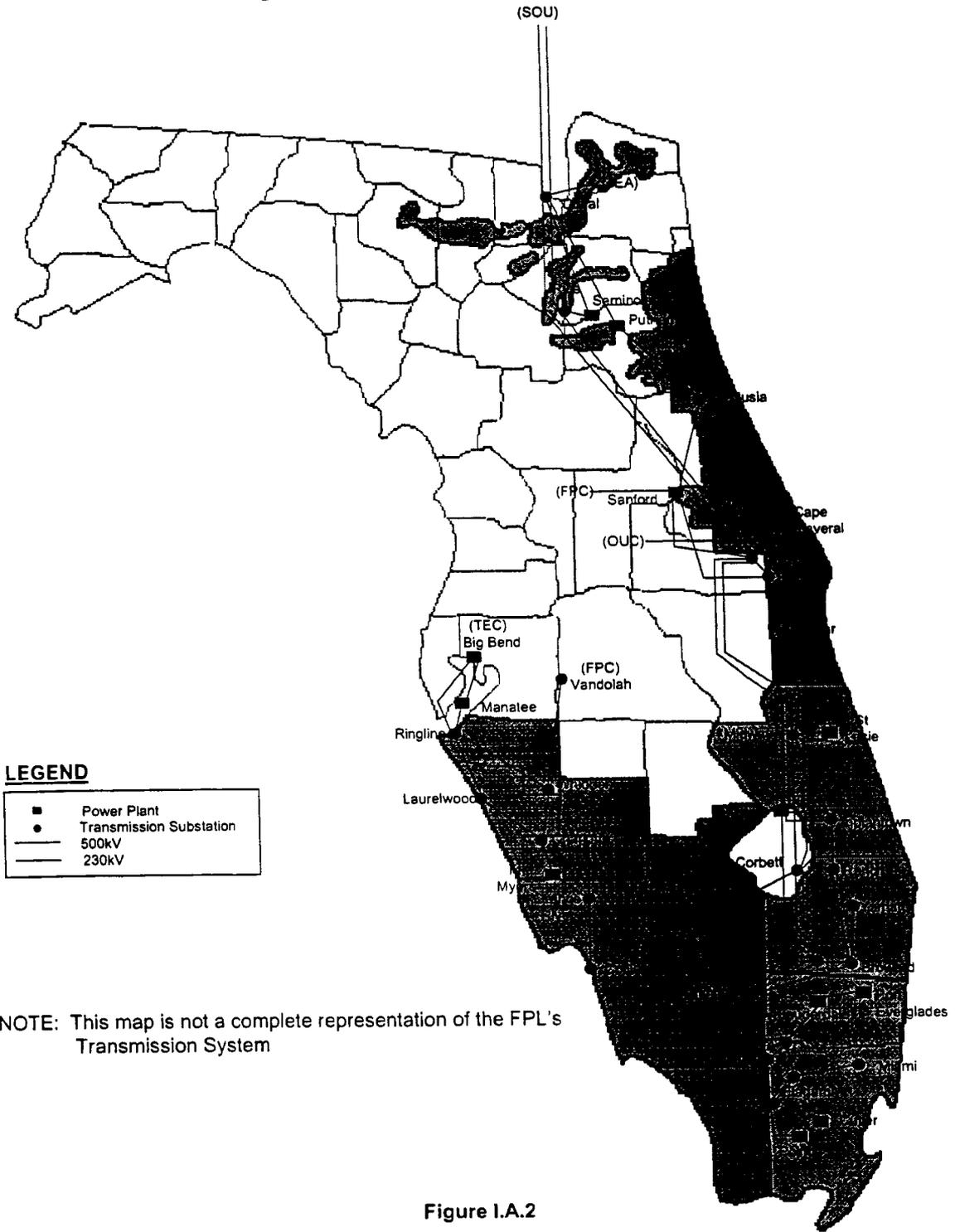


Figure I.A.2

# FPL Interconnection Diagram

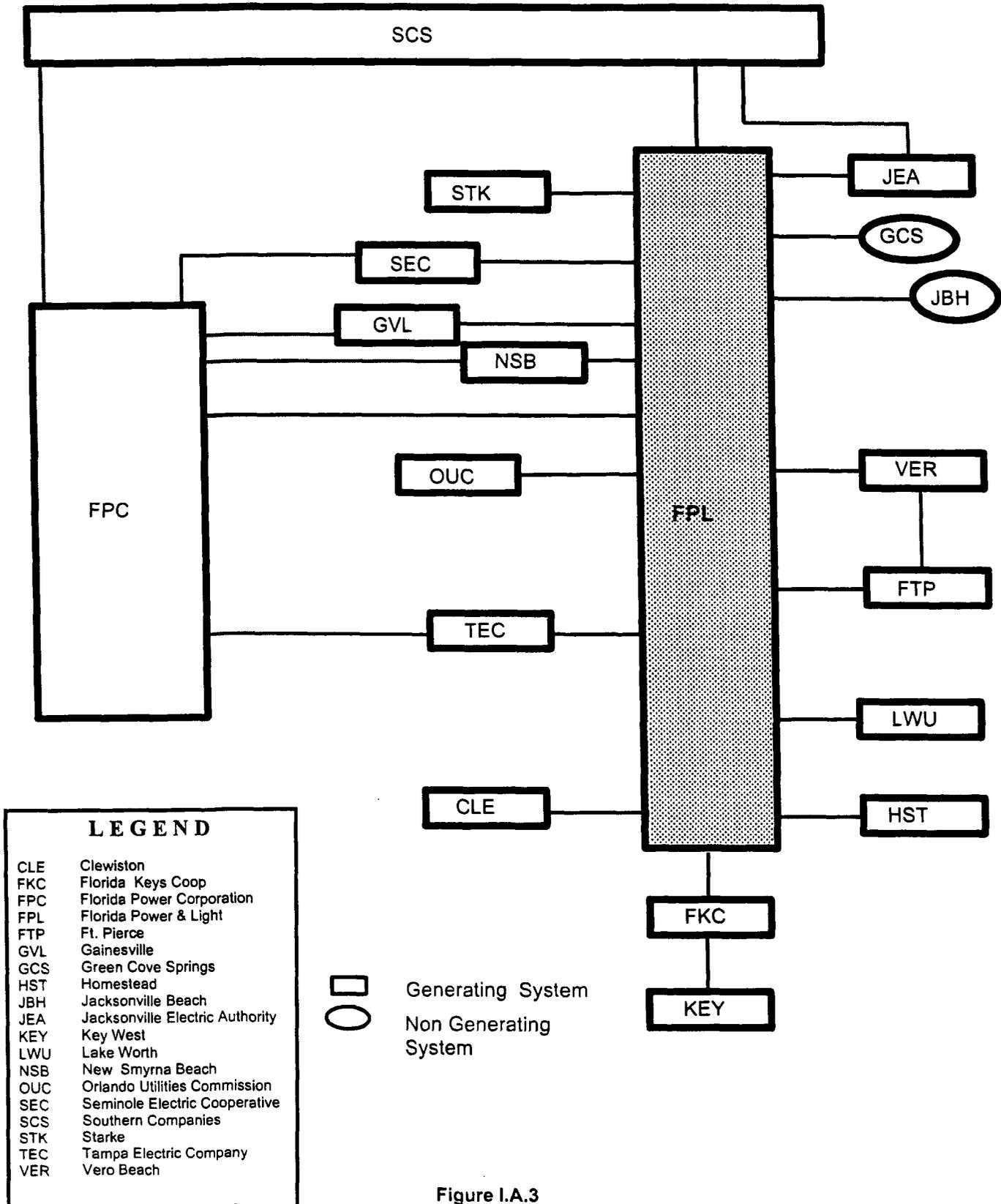


Figure I.A.3

## **I.B Non-Utility Generation**

Non-utility generation is an important part of FPL's resource mix. FPL currently has contracts with seven cogeneration/small power production facilities to purchase firm capacity and energy. A listing of these facilities appears in Table I.B.1. In addition, FPL purchases as-available (non-firm) energy from several cogeneration facilities and small power production facilities as shown in Table I.B.2.

A cogeneration facility is one which simultaneously produces electrical and thermal energy, with the thermal energy (e.g., steam) being used for industrial, commercial, or cooling and heating purposes. A small power production facility is one which does not exceed 80 MW (unless it is exempted from this size limitation by the Solar, Wind, Waste, and Geothermal Power Production incentives Act of 1990) and uses as its primary energy source (at least 50%) solar, wind, waste, geothermal, or other renewable resources.

**Florida Power & Light Company  
Firm Capacity and Energy Contracts with  
Cogeneration/Small Power Production Facilities**

<i>Project</i>	<i>County</i>	<i>Fuel</i>	<i>Capacity MW</i>	<i>In-Service Date</i>	<i>End Date</i>
Bio-Energy	Broward	Landfill Gas	10.0	5/1/98	01/01/05
Florida Crushed Stone	Hernando	Coal (PC)	110.0	4/1/92	10/31/05
			11.0	1/1/94	10/31/05
			12.0	1/1/95	10/31/05
Broward South	Broward	Solid Waste	50.6	4/1/91	08/01/09
Palm Beach SWA	Palm Beach	Solid Waste	43.5	4/1/92	03/31/10
Broward North	Broward	Solid Waste	45.0	4/1/92	12/31/10
Cedar Bay Generating Co.	Duval	Coal (CFB)	250.0	1/25/94	12/31/24
Indiantown Cogen., LP	Martin	Coal (PC)	330.0	12/22/95	12/01/25
Broward South	Broward	Solid Waste	1.4	1/1/93	12/31/26
			1.5	1/1/95	12/31/26
			0.6	1/1/97	12/31/26
Broward North	Broward	Solid Waste	7.0	1/1/93	12/31/26
			1.5	1/1/95	12/31/26
			2.5	1/1/97	12/31/26

Table I.B.1

**As Available Energy Purchases  
From Non-Utility Generators in 2002**

<i>Project</i>	<i>County</i>	<i>Fuel</i>	<i>In-Service Date</i>	<i>Energy (MWH) Delivered to FPL in 2002</i>
US Sugar-Bryant	Palm Beach	Bagasse	2/80	4,673
Tropicana	Manatee	Natural Gas	2/90	6,516
Okeelanta	Palm Beach	Bagasse/Wood	11/95	318,457
Tomoka Farms	Volusia	Landfill Gas	7/98	14,687
Georgia Pacific	Putnam	Paper By-Product	2/94	4,184

Table I.B.2

**I.C. Demand Side Management (DSM)**

FPL's DSM activities continue what has been FPL's practice since 1978 of encouraging cost-effective conservation and load management. FPL's DSM efforts through 2002 have resulted in a cumulative Summer peak reduction of approximately 2,923 MW at the meter and an estimated cumulative energy saving of 5,270 GWH at the meter.

FPL's current DSM Plan was approved by the Florida Public Service Commission in late 1999 and reflects FPL's new DSM Goals for the 2000-2009 time frame. FPL's 2003 resource plan, and the schedule for new generation additions presented in this document, are based on these approved DSM levels.

**I.D. Purchased Power**

Purchased power remains an important part of FPL's resource mix. FPL has a unit power sales (UPS) contract to purchase 929 MW, with a minimum of 380 MW, of coal-fired generation from the Southern Company. In addition, FPL has contracts with the Jacksonville Electric Authority (JEA) for the purchase of 381 MW (Summer) and 390 MW (Winter) of coal-fired generation from the St. John's River Power Park (SJRPP) Unit Nos 1 and 2 (FPL also has ownership interest in these units; that ownership amount is reflected in FPL's installed capacity shown on Schedule 1).

Finally, FPL has firm capacity purchase contracts through early 2007. These firm capacity purchase contracts are with a variety of suppliers. Table I.D.1 presents the Summer and Winter MW resulting from all firm purchased power contracts through the year 2012.

<i>FPL's Purchased Power MW <sup>(1)</sup></i>								
<i>Year</i>	<i>UPS</i>		<i>SJRPP</i>		<i>Other Firm Capacity Purchases</i>		<i>Total</i>	
	<i>Winter</i>	<i>Summer</i>	<i>Winter</i>	<i>Summer</i>	<i>Winter</i>	<i>Summer</i>	<i>Winter</i>	<i>Summer</i>
2002 <sup>(2)</sup>	929	929	390	381	50	1093	1369	2403
2003	929	929	390	381	1156	953	2475	2263
2004	929	929	390	381	1000	1210	2319	2520
2005	929	929	390	381	994	474	2313	1784
2006	929	929	390	381	474	474	1793	1784
2007	929	929	390	381	474	0	1793	1310
2008	929	929	390	381	0	0	1319	1310
2009	929	929	390	381	0	0	1319	1310
2010	929	929	390	381	0	0	1319	1310
2011	929	929	390	381	0	0	1319	1310
2012	929	929	390	381	0	0	1319	1310

**Note:**  
<sup>(1)</sup> Total reflects total resource entitlements resulting from existing agreements between FPL, Southern Companies, JEA, and from new firm purchase agreements. In addition, the UPS values reflect a projected extension or renegotiation of the UPS contracts beyond their current expiration date.  
<sup>(2)</sup> Values for 2002 are actual.

**Table I.D.1**

**Schedule 1  
Existing Generating Facilities  
As of December 31, 2002**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Plant Name	Unit No.	Location	Unit Type	Fuel		Transport.		Fuel Days Use	Commercial In-Service Month/Year	Expected Retirement Month/Year	Gen.Max. Nameplate KW	Net Capability 1/	
				Pri.	Alt.	Pri.	Alt.					Winter MW	Summer MW
Turkey Point		Dade County 27/57S/40E									<u>2,338,100</u>	<u>2,255</u>	<u>2,198</u>
	1		ST	FO6	NG	WA	PL	Unknown	Apr-67	Unknown	402,050	406	400
	2		ST	FO6	NG	WA	PL	Unknown	Apr-68	Unknown	402,050	403	400
	3		NP	UR	No	TK	No	Unknown	Nov-72	Unknown	760,000	717	693
	4		NP	UR	No	TK	No	Unknown	Jun-73	Unknown	760,000	717	693
	1-5		IC	FO2	No	TK	No	Unknown	Dec-67	Unknown	14,000	12	12
Cutler		Dade County 27/55S/40E									<u>236,500</u>	<u>212</u>	<u>206</u>
	5		ST	NG	No	PL	No	Unknown	Nov-54	Unknown	74,500	70	68
	6		ST	NG	No	PL	No	Unknown	Jul-55	Unknown	162,000	142	138
Lauderdale		Broward County 30/50S/42E									<u>1,863,972</u>	<u>1,942</u>	<u>1,694</u>
	4		CC	NG	FO2	PL	PL	Unknown	May-93	Unknown	521,250	460	425
	5		CC	NG	FO2	PL	PL	Unknown	Jun-93	Unknown	521,250	464	429
	1-12		CT	NG	FO2	PL	PL	Unknown	Aug-70	Unknown	410,736	509	420
	13-24		CT	NG	FO2	PL	PL	Unknown	Aug-72	Unknown	410,736	509	420
Port Everglades		City of Hollywood 23/50S/42E									<u>1,665,086</u>	<u>1,725</u>	<u>1,632</u>
	1		ST	FO6	NG	WA	PL	Unknown	Jun-60	Unknown	225,250	222	221
	2		ST	FO6	NG	WA	PL	Unknown	Apr-61	Unknown	225,000	222	221
	3		ST	FO6	NG	WA	PL	Unknown	Jul-64	Unknown	402,050	392	390
	4		ST	FO6	NG	WA	PL	Unknown	Apr-65	Unknown	402,050	380	380
	1-12		CT	NG	FO2	PL	PL	Unknown	Aug-71	Unknown	410,736	509	420
Riviera		City of Riviera Beach 33/42S/43E									<u>620,840</u>	<u>569</u>	<u>565</u>
	3		ST	FO6	NG	WA	PL	Unknown	Jun-62	Unknown	310,420	283	281
	4		ST	FO6	NG	WA	PL	Unknown	Mar-63	Unknown	310,420	286	284

1/ These ratings are peak capability.

**Schedule 1**  
**Existing Generating Facilities**  
**As of December 31, 2002**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Plant Name	Unit No.	Location	Unit Type	Fuel		Transport		Fuel Alt. Use	Commercial In-Service Month/Year	Expected Retirement Month/Year	Gen.Max. Nameplate KW	Net Capability <sup>1/</sup>	
				Pri.	Alt.	Pri.	Alt.					Winter MW	Summer MW
Martin		Martin County 29/29S/38E									<u>3,312,000</u>	<u>2,995</u>	<u>2,850</u>
	1		ST	NG	FO6	PL	PL	Unknown	Dec-80	Unknown	863,000	830	818
	2		ST	NG	FO6	PL	PL	Unknown	Jun-81	Unknown	863,000	812	799
	3		CC	NG	No	PL	No	Unknown	Feb-94	Unknown	612,000	495	467
	4		CC	NG	No	PL	No	Unknown	Apr-94	Unknown	612,000	496	468
	8 A & B		CT	NG	FO2	PL	PL	Unknown	Jun-01	Unknown	362,000	362	298
St. Lucie		St. Lucie County 16/36S/41E									<u>1,553,000</u>	<u>1,579</u>	<u>1,553</u>
	1		NP	UR	No	TK	No	Unknown	May-76	Unknown	839,000	853	839
	2	2/	NP	UR	No	TK	No	Unknown	Jun-83	Unknown	714,000	726	714
Cape Canaveral		Brevard County 19/24S/36F									<u>804,100</u>	<u>812</u>	<u>806</u>
	1		ST	FO6	NG	WA	PL	Unknown	Apr-65	Unknown	402,050	406	403
	2		ST	FO6	NG	WA	PL	Unknown	May-69	Unknown	402,050	406	403
Sanford		Volusia County 16/19S/30E									<u>1,754,350</u>	<u>1,161</u>	<u>1,048</u>
	3		ST	FO6	NG	WA	PL	Unknown	May-59	Unknown	150,250	142	138
	4	3/	ST	FO6	NG	WA	PL	Unknown	Jul-72	Unknown	436,100	0	0
	5		CC	NG	No	PL	No	Unknown	Jul-73	Unknown	1,168,000	1,019	910
Putnam		Putnam County 16/10S/27E									<u>580,000</u>	<u>594</u>	<u>498</u>
	1		CC	NG	FO2	PL	WA	Unknown	Apr-78	Unknown	290,000	297	249
	2		CC	NG	FO2	PL	WA	Unknown	Aug-77	Unknown	290,000	297	249

1/ These ratings are peak capability.

2/ Total capability is 853/839 MW. Capabilities shown represent the company's share of the unit and exclude the Orlando Utilities Commission (OUC) and Florida Municipal Power Agency (FMPA) combined portion of 14.89551%.

3/ This unit has been temporarily removed from service as part of the repowering project.

## Schedule 1

Existing Generating Facilities  
As of December 31, 2002

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Plant Name	Unit No.	Location	Unit Type	Fuel		Transport		Fuel	Commercial In-Service Month/Year	Expected Retirement Month/Year	Gen.Max. Nameplate KW	Net Capability 1/	
				Pri.	Alt.	Pri.	Alt.	Days Use				Winter MW	Summer MW
Fort Myers		Lee County 35/43S/25E									<u>2,483,000</u>	<u>2,345</u>	<u>2,059</u>
	2 1-12		CC CT	NG FO2	No No	PL WA	No No	Unknown Unknown	Jun-02 May-74	Unknown Unknown	1,739,000 744,000	1,576 769	1,423 636
Manatee		Manatee County 18/33S/20E									<u>1,726,600</u>	<u>1,634</u>	<u>1,620</u>
	1 2		ST ST	FO6 FO6	No No	WA WA	No No	Unknown Unknown	Oct-76 Dec-77	Unknown Unknown	863,300 863,300	817 817	810 810
St. Johns River Power Park 2/		Duval County 12/15/28E (RPC4)									<u>250,000</u>	<u>260</u>	<u>254</u>
	1 2		BIT BIT	BIT et BIT et	Cok Cok	RR RR	WA WA	Unknown Unknown	Mar-87 May-88	Unknown Unknown	125,000 125,000	130 130	127 127
Scherer 3/		Monroe, GA									<u>891,000</u>	<u>666</u>	<u>658</u>
	4		BIT	BIT	No	RR	No	Unknown	Jul-89	Unknown	891,000	666	658
Total System as of December 31, 2002 =												<u>18,749</u>	<u>17,641</u>

1/ These ratings are peak capability.

2/ The net capability ratings represent Florida Power &amp; Light Company's share of St. Johns River Park Unit No. 1 and No. 2, excluding Jacksonville Electric Authority (JEA) share of 80%.

3/ These ratings represent Florida Power &amp; Light Company's share of Scherer Unit No. 4, adjusted for transmission losses.

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## CHAPTER II

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### Forecast of Electric Power Demand

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## II. Forecast of Electric Power Demand

Long-term (20-year) forecasts of sales, net energy for load (NEL), and peak loads are developed on an annual basis for resource planning work at FPL. These forecasts are a key input to the models used to develop the Integrated Resource Plan. The following pages describe how forecasts are developed for each component of the long-term forecast: sales, NEL, and peak loads.

The primary drivers to develop these forecasts are demographic trends, weather, economic conditions, and prices of electricity. In addition, the resulting forecasts are an integration of economic evaluations, inputs of local economic development boards, weather assessments from NOAA, and inputs from FPL's own customer service planning areas. In the area of demographics, population trends by county, plus housing characteristics such as housing starts, housing size, and vintage of homes are assessed.

Forecasts for electric usage in the residential and commercial classes include end-use information such as appliance saturation studies, efficiencies, and intensity of energy use. In addition to these inputs, residential forecasts also make use of household characteristics such as ages of members in households, number of members in households, and income distributions.

The projections for the National and Florida economy are obtained from Global Insight, formerly know as DRI - WEFA. Population projections for the counties served by FPL are obtained from the Bureau of Economic and Business Research (BEBR) of the University of Florida. In addition, FPL actively participates with local development councils and universities to obtain their assessments of the local economy, specifically in the area of expansion of new businesses and retention of the current business base. These inputs are quantified and qualified using statistical models in terms of their impact on the future demand for electricity.

Weather is a key factor that affects the company's sales and peak demand. Weather variables are used in the forecasting models for energy sales and peak demand. There are two sets of weather variables developed and used in forecasting models:

1. Cooling and Heating Degree-Days are used to forecast energy sales.
2. Temperature data is used to forecast Summer and Winter peaks.

The Cooling and Heating Degree-Days are used to capture the changes in the electric usage of weather-sensitive appliances such as air conditioners and electric heaters. A composite temperature is derived using hourly temperatures across FPL's service territory (Miami, Ft. Myers, Daytona Beach, and West Palm Beach are the locations from which temperatures are obtained) weighted by regional energy sales. This composite temperature is used to derive Cooling and Heating Degree-Days which are based on starting point temperatures of 72°F and 66°F, respectively. Similarly, the maximum and minimum of the composite temperature is used for the Summer and Winter peak models.

## **II.A. Long-Term Sales Forecasts**

Long-term forecasts of electricity sales are developed for each revenue class for the forecasting period of 2003 - 2022 and are adjusted to match the Net Energy for Load (NEL) forecast. The results of these sales forecasts for the years 2003 - 2012 are presented in Schedules 2.1 - 2.3 which appear at the end of this chapter. Econometric models are developed for each revenue class using the statistical tool MetrixND. The methodologies used to develop sales forecasts for each jurisdictional revenue class are outlined below.

The first five years of the forecasts are developed using monthly models for Net Energy for Load and energy sales by class.

### **1. Residential Sales**

Residential energy sales are forecast by multiplying the residential use per customer forecast by the number of residential customers forecasted. Residential electric usage per customer is estimated by using a regression model which contains the real residential price of electricity, Florida per capita income, and Cooling and Heating Degree-Days as explanatory variables. The price of electricity plays a role in explaining electric usage since electricity, like all other goods and services, will be used in greater or lesser quantities depending upon its price. The Cooling Degree-Days variable is multiplied by the level of air conditioning saturation and the Heating Degree-Days variable is multiplied by the

level of electric heating saturation. To capture economic conditions the model includes Florida's per capita income. The degree of economic prosperity can, and does, affect residential electricity sales. For the short-term period (first five years), an econometric model is developed using monthly data. The monthly model is a function of the same variables such as Cooling Degree-Days, Heating Degree-Days, price of electricity, Florida's per capita income, and a dummy variable for the months of April, May, and October.

## **2. Commercial Sales**

The commercial sales forecast is also developed using a regression model for the long-and short-term. Commercial sales are a function of the following variables: Florida's commercial employment, commercial real price of electricity, Cooling Degree-Days and an autoregressive term. Florida's commercial employment is used to capture the economic activity in FPL's service territory. The price of electricity is also included as an explanatory variable in the model because it has an impact on customer usage. Cooling Degree-Days are used to capture weather-sensitive load in the commercial sector. The first five years of the forecast are developed from a monthly model using the same explanatory variables, and for the following years, growth rates from the annual model are applied.

## **3. Industrial Sales**

Industrial sales are forecasted through a linear multiple regression model using Florida manufacturing employment, the price of electricity, and a dummy variable for the economic recessions. Energy sales in this revenue class are primarily due to manufacturers; therefore, employment in this sector is a key variable in capturing the economic activity. The price of electricity is also included as an explanatory variable in the model because it has an impact on customer usage. For the short-term period (first five years), an econometric model is developed using monthly data. The monthly model is a function of the same variables such as Florida manufacturing employment, Cooling Degree-Days, price of electricity, and an autoregressive term. For the following years, growth rates from the annual model are applied.

#### **4. Other Public Authority Sales**

At present, this class consists of sports fields and one government account. The forecast for this class is based on historical knowledge of its characteristics.

#### **5. Street & Highway Sales and Railroad & Railways Sales**

The forecast for Street and Highway sales is developed by first assuming a constant use per customer and then multiplying that value by the number of projected customers.

The forecast of sales to Railroad & Railways is based on historical knowledge of its characteristics. This class consists of Miami-Dade County's Metrorail system.

#### **6. Resale Sales**

Resale (Wholesale) customers are composed of municipalities and/or electric cooperatives. These customers differ from jurisdictional customers in that they are not the ultimate users of the electricity they buy. Instead, they resell this electricity to their own customers.

##### **Contract Rate**

Currently, there are four customers in this class: the Florida Keys Electric Cooperative (Florida Keys), City Electric System of the Utility Board of Key West, Florida (City of Key West), Miami-Dade County, and FMPA. Sales to the Florida Keys are forecasted using a regression model. Forecasted sales to the City of Key West are based on assumptions regarding their contract demand and expected load factor. Miami-Dade County sells 60 MW to Florida Power Corporation. Line losses are billed to Miami-Dade under a wholesale contract. The forecast is calculated based on assumptions about the magnitude of line losses, the sales monthly capacity factor, and the number of hours in a particular month. FMPA has contracted for delivery of 75 MW through October 2007.

## **Total Sales**

Sales forecasts by revenue class are summed to produce a total sales forecast. After an estimate of annual total sales is obtained, an expansion factor is applied to generate a forecast of annual Net Energy for Load (NEL).

### **II.B. Net Energy for Load**

An annual econometric model is developed to produce a Net Energy for Load (NEL) forecast. The key inputs to the model are: the price of electricity, Heating and Cooling Degree-Days, Florida Non-Agricultural Employment, and an autoregressive term. The monthly model is similar, except the economic variable utilized is Florida's per capita income since the model is estimated on a per customer basis. Like the sales forecasts, the first five years are obtained from the short-term model, and forecasts for subsequent years are generated using the growth rates from the annual model.

Once an annual NEL forecast is obtained using the above-mentioned methodology, the results are then compared for reasonableness to the NEL forecast generated using the total sales forecast. The sales by class are then adjusted to match the NEL from the annual NEL model.

The forecasted NEL values for 2003 – 2012 are presented in Schedule 3.3, that appears at the end of this chapter.

### **II.C. System Peak Forecasts**

The rate of absolute growth in FPL system load has been a function of a larger customer base, varying weather conditions, continued economic growth, changing patterns of customer behavior (including an increased stock of electricity-consuming appliances), and more efficient heating and cooling appliances. FPL developed the Peak Forecast models to capture these behavioral relationships.

The forecasting methodology of Summer, Winter, and monthly system peaks is discussed below. The forecasted values for Summer and Winter peak loads for the years 2003 – 2012 are presented in Schedules 3.1 and 3.2 as well as in Schedules 7.1 and 7.2.

## **System Summer Peak**

The Summer peak forecast is developed using an econometric model. The model is a per customer model that includes: the total number of FPL's customers, the price of electricity, Real Florida income as an economic driver, and the maximum temperature as a weather variable. Also included in the model is an autoregressive term.

## **System Winter Peak**

Like the system Summer peak model, the Winter peak model is also an econometric model. The Winter peak model is a per customer model which consists of three weather-related variables: (1) the minimum Winter day temperature, (2) a weather term, which is a ratio of heating saturation and minimum Winter day temperature, and (3) Heating Degree-Hours for the prior day until 9:00 a.m. of the peak day. In addition, the model also uses an economic variable, Real Florida Income. A dummy variable, which is used to capture the effects of larger homes, is multiplied by the minimum temperature.

## **Monthly Peak Forecasts**

Monthly peaks for the 2003-2022 period are forecasted to provide information for the scheduling of maintenance for power plants and fuel budgeting. The forecasting process is basically the same as for the monthly NEL forecast and consists of the following actions:

- a. Develop the historical seasonal factor for each month by using ratios of historical monthly peaks to seasonal peak (Summer = April-October, Winter = November-March.)
- b. Apply the monthly ratios to their respective seasonal peak forecast to derive the peak forecast by month. This process assumes that the seasonal factors remain unchanged over the forecasting period.

#### **II.D. The Hourly Load Forecast**

Forecasted values for system hourly load for the period 2003 – 2022 are produced using a System Load Forecasting “shaper” program. This model uses sixteen years of historical FPL hourly system load data to develop load shapes for weekdays, weekend days, and holidays. These daily load shapes are ranked and used with forecasted monthly peaks, NEL, and calendars in developing an hourly forecast. The model allows calibration of hourly values where the peak is maintained or where both the peak and minimum load-to-peak ratio is maintained.

**Schedule 2.1  
History and Forecast of Energy Consumption  
And Number of Customers by Customer Class**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Rural &amp; Residential</b>						<b>Commercial</b>		
<u>Year</u>	<u>Population*</u>	<u>Members per Household</u>	<u>GWH</u>	<u>Average** No. of Customers</u>	<u>Average KWH Consumption Per Customer</u>	<u>GWH</u>	<u>Average** No. of Customers</u>	<u>Average KWH Consumption Per Customer</u>
1993	6,486,127	2.18	36,360	2,975,479	12,220	28,508	358,679	79,481
1994	6,660,137	2.19	38,716	3,037,629	12,745	29,946	366,409	81,729
1995	6,806,337	2.20	40,556	3,097,192	13,094	30,719	374,005	82,135
1996	6,948,942	2.20	41,302	3,152,625	13,101	31,211	380,860	81,949
1997	7,105,582	2.21	41,849	3,209,298	13,040	32,942	388,906	84,703
1998	7,249,617	2.22	45,482	3,266,011	13,926	34,618	396,749	87,255
1999	7,412,734	2.22	44,187	3,332,422	13,260	35,524	404,942	87,725
2000	7,603,543	2.23	46,320	3,414,002	13,568	37,001	415,295	89,096
2001	7,754,966	2.22	47,588	3,490,541	13,633	37,960	426,573	88,989
2002	7,896,813	2.21	50,865	3,566,167	14,263	40,029	435,313	91,955
2003	8,039,781	2.21	51,350	3,632,433	14,137	41,124	444,700	92,477
2004	8,184,322	2.21	53,373	3,695,370	14,443	42,574	454,728	93,625
2005	8,328,360	2.22	55,004	3,758,193	14,636	43,701	464,926	93,995
2006	8,471,579	2.22	56,923	3,821,542	14,895	44,852	475,338	94,358
2007	8,614,099	2.22	58,245	3,882,687	15,001	45,983	484,370	94,934
2008	8,756,620	2.22	59,842	3,944,810	15,170	47,024	492,604	95,461
2009	8,898,722	2.22	60,846	4,002,441	15,202	48,065	500,486	96,036
2010	9,041,109	2.23	62,244	4,060,676	15,328	49,157	507,970	96,772
2011	9,184,069	2.23	63,629	4,118,959	15,448	50,092	515,299	97,210
2012	9,328,059	2.23	64,921	4,176,707	15,544	51,010	522,503	97,627

\* Population represents only the area served by FPL.

\*\* Average No. of Customers is the annual average of the twelve month values.

**Schedule 2.2  
History and Forecast of Energy Consumption  
And Number of Customers by Customer Class**

(1)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
<u>Year</u>	<u>GWH</u>	<u>Industrial Average* No. of Customers</u>	<u>Average KWH Consumption Per Customer</u>	<u>Railroads &amp; Railways GWH</u>	<u>Street &amp; Highway Lighting GWH</u>	<u>Other Sales to Public Authorities GWH</u>	<u>Total** Sales to Ultimate Consumers GWH</u>
1993	3,889	14,866	261,602	79	330	665	69,830
1994	3,845	15,588	246,658	85	353	664	73,608
1995	3,883	15,140	256,481	84	358	648	76,248
1996	3,792	14,783	256,515	83	368	577	77,334
1997	3,894	14,761	263,830	85	383	702	79,855
1998	3,951	15,126	261,233	81	373	625	85,131
1999	3,948	16,040	246,112	79	473	465	84,676
2000	3,768	16,410	229,592	81	408	381	87,959
2001	4,091	15,445	264,872	86	419	67	90,212
2002	4,057	15,533	261,199	89	420	63	95,523
2003	3,974	15,663	253,732	89	434	63	97,035
2004	4,036	15,459	261,051	89	440	63	100,574
2005	4,094	15,302	267,523	90	447	63	103,397
2006	4,145	15,185	272,974	90	453	63	106,525
2007	4,165	15,186	274,281	90	463	63	109,010
2008	4,187	15,238	274,770	91	473	63	111,680
2009	4,200	15,275	274,939	91	483	63	113,748
2010	4,214	15,313	275,194	92	493	63	116,262
2011	4,231	15,372	275,212	92	503	63	118,609
2012	4,246	15,377	276,133	93	512	63	120,845

\*Average No. of Customers is the annual average of the twelve month values.

\*\*GWH Col. (16)=Col. (4) + Col. (7) + Col. (10) + Col. (13) + Col. (14) + Col. (15).

**Schedule 2.3  
History and Forecast of Energy Consumption  
And Number of Customers by Customer Class**

(1)	(17)	(18)	(19)	(20)	(21)
<u>Year</u>	<u>Sales for Resale GWH</u>	<u>Utility Use &amp; Losses GWH</u>	<u>Net* Energy For Load GWH</u>	<u>Average ** No. of Other Customers</u>	<u>Total Average*** Number of Customers</u>
1993	958	4,988	75,776	3,086	3,352,110
1994	1,400	5,367	80,376	2,560	3,422,187
1995	1,437	6,276	83,961	2,460	3,488,796
1996	1,353	5,984	84,671	2,480	3,550,748
1997	1,228	5,770	86,853	2,520	3,615,485
1998	1,326	6,205	92,662	2,584	3,660,470
1999	953	5,829	91,458	2,605	3,756,009
2000	970	7,059	95,989	2,694	3,848,401
2001	970	7,222	98,404	2,722	3,935,281
2002	1,233	7,443	104,199	2,792	4,019,805
2003	1,422	7,243	105,700	2,832	4,095,628
2004	1,441	7,510	109,525	2,865	4,168,421
2005	1,456	7,711	112,565	2,906	4,241,326
2006	1,474	7,942	115,942	2,941	4,315,007
2007	1,459	7,960	118,430	3,002	4,385,245
2008	1,092	8,126	120,899	3,061	4,455,713
2009	1,092	8,275	123,115	3,120	4,521,322
2010	1,092	8,456	125,811	3,178	4,587,137
2011	1,092	8,625	128,327	3,234	4,652,864
2012	1,092	8,787	130,724	3,289	4,717,877

\* GWH Col. (19) = Col. (16) + Col. (17) + Col. (18)

\*\* Average Number of Customers is the annual average of the twelve month values.

\*\*\* Total Col. (21) = Col. (5) + Col. (8) + Col. (11) + Col. (20)

**Schedule 3.1  
History and Forecast of Summer Peak Demand: Base Case**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Wholesale	Retail	Interruptible	Res. Load Management	Residential Conservation	C/I Load Management	C/I Conservation	Net Firm Demand
1993	15,266	397	14,869	0	311	182	320	79	14,635
1994	15,179	409	14,770	0	392	220	354	125	14,433
1995	16,172	435	15,737	0	466	259	391	193	15,315
1996	16,064	364	15,700	0	531	339	414	296	15,119
1997	16,613	380	16,233	0	615	440	432	341	15,566
1998	17,897	426	17,471	0	656	480	441	359	16,800
1999	17,615	169	17,446	0	722	565	450	397	16,443
2000	17,808	161	17,647	0	767	626	456	432	16,585
2001	18,754	169	18,585	0	798	673	483	463	17,473
2002	19,219	261	18,958	0	826	733	484	499	17,909
2003	19,773	225	19,548	0	796	43	569	22	18,343
2004	20,297	227	20,070	0	802	84	582	42	18,787
2005	20,799	230	20,569	0	809	126	592	62	19,210
2006	21,331	231	21,100	0	814	170	600	83	19,664
2007	21,851	234	21,617	0	819	214	608	103	20,107
2008	22,289	159	22,130	0	824	259	616	122	20,468
2009	22,784	159	22,625	0	828	306	622	141	20,888
2010	23,294	159	23,135	0	830	321	623	148	21,372
2011	23,783	159	23,624	0	830	321	623	148	21,861
2012	24,279	159	24,120	0	830	321	623	148	22,357

**Historical Values (1993 - 2002):**

Cols. (2) - (4) are actual values for historical summer peaks. As such, they incorporate the effects of conservation (Cols. (7&9)), and may incorporate the effects of load control if load control was operated on these peak days. Therefore, Col. (2) represents the actual Net Firm Demand. Cols. (5) - (9) represent actual DSM capabilities starting from January 1988. Note that the values for FPL's former Interruptible Rate are incorporated into Col. (8), which also includes GS-LC, CDR and GSD-LC. Col. (10) represents a HYPOTHETICAL "Net Firm Demand" if the load control values had definitely been exercised on the peak. Col. (10) is derived by the formula: Col. (10) = Col.(2) - Col.(6) - Col.(8).

**Projected Values (2003 - 2012):**

Cols. (2) - (4) represent FPL's forecasted peak w/o incremental conservation or cumulative load control. The effects of conservation implemented prior to 2002 are incorporated into the forecast. Cols. (5) - (9) represent all incremental conservation and cumulative load control. These values are projected August values and are based on projections with a 1/2002 starting point. Col. (10) represents a "Net Firm Demand" which accounts for all of the incremental conservation and assumes all of the load control is implemented on the peak. Col. (10) is derived by using the formula: Col. (10) = Col. (2) - Col. (5) - Col. (6) - Col. (7) - Col. (8) - Col. (9).

**Schedule 3.2  
History and Forecast of Winter Peak Demand:Base Case**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Firm Wholesale	Retail	Interruptible	Res. Load Management	Residential Conservation	C/I Load Management	C/I Conservation	Net Firm Demand
1993/94	12,594	278	12,316	0	317	231	342	67	11,935
1994/95	16,563	635	15,928	0	393	265	360	93	15,810
1995/96	18,096	698	17,398	0	459	310	406	143	17,231
1996/97	16,490	626	15,864	0	731	368	418	154	15,341
1997/98	13,060	239	12,821	0	823	403	429	168	11,807
1998/99	16,802	149	16,653	0	1,218	438	417	182	15,167
1999/00	17,057	142	16,915	0	1,296	469	441	193	15,320
2000/01	18,199	150	18,049	0	972	493	448	201	16,779
2001/02	17,597	145	17,452	0	1,081	534	457	242	16,060
2002/03	20,190	246	19,944	0	1,116	581	453	288	18,621
2003/04	20,081	206	19,875	0	932	80	534	15	18,520
2004/05	20,583	208	20,375	0	939	114	540	22	18,968
2005/06	21,100	209	20,891	0	946	149	546	29	19,430
2006/07	21,605	212	21,393	0	952	183	551	37	19,882
2007/08	22,046	137	21,909	0	958	218	556	44	20,270
2008/09	22,539	137	22,402	0	964	252	561	51	20,712
2009/10	23,026	137	22,889	0	968	284	564	57	21,153
2010/11	23,522	137	23,385	0	968	284	564	57	21,649
2011/12	24,024	137	23,887	0	968	284	564	57	22,151
2012/13	24,535	137	24,398	0	968	284	564	57	22,663

**Historical Values (1993/94 - 2002/03):**

Cols. (2) - (4) are actual values for historical winter peaks. As such, they incorporate the effects of conservation (Cols. (7&8)), and may incorporate the effects of load control if load control was operated on these peak days. Therefore, Col. (2) represents the actual Net Firm Demand. Cols. (5) - (9) represent actual DSM capabilities starting from January 1988. Note that the values for FPL's former Interruptible Rate are incorporated into Col. (8), which also includes GS-LC, CDR and GSD - LC. Col. (10) represents a HYPOTHETICAL "Net Firm Demand" if the load control values had definitely been exercised on the peak. Col. (10) is derived by the formula: Col. (10) = Col. (2) - Col. (6) - Col. (8).

**Projected Values (2003/04 - 2012/13):**

Cols. (2) - (4) represent FPL's forecasted peak w/o incremental conservation or cumulative load control. The effects of conservation implemented prior to 2002 are incorporated into the forecast. Cols. (5) - (9) represent all incremental conservation and cumulative load control. These values are projected January values and are based on projections with a 1/2002 starting point. Col. (10) represents a "Net Firm Demand" which accounts for all of the incremental conservation and assumes all of the load control is implemented on the peak. Col. (10) is derived by using the formula: Col. (10) = Col. (2) - Col. (5) - Col. (6) - Col. (7) - Col. (8) - Col. (9).

**Schedule 3.3**  
**History and Forecast of Annual Net Energy for Load - GWH: Base Case**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year	Total	Residential Conservation	C/I Conservation	Retail	Sales for Resale GWH	Utility Use & Losses	Net Energy For Load	Load Factor(%)
1993	76,632	553	303	75,674	958	4,988	75,776	56.7%
1994	81,493	661	456	80,093	1,400	5,367	80,376	60.4%
1995	85,415	777	677	83,978	1,437	6,276	83,961	59.3%
1996	86,708	971	1,039	85,355	1,353	5,984	84,698	60.0%
1997	89,240	1,213	1,174	88,012	1,228	5,770	86,853	59.7%
1998	95,316	1,374	1,279	93,990	1,326	6,205	92,663	59.1%
1999	94,361	1,542	1,362	93,408	953	5,829	91,458	59.3%
2000	99,094	1,674	1,431	98,123	970	7,059	95,989	61.5%
2001	101,736	1,789	1,542	100,765	970	7,222	98,404	59.9%
2002	107,754	1,917	1,637	106,520	1,233	7,443	104,199	61.9%
2003	105,700	53	17	104,278	1,422	7,243	105,630	61.0%
2004	109,525	145	52	108,084	1,441	7,510	109,328	61.6%
2005	112,565	238	88	111,108	1,456	7,711	112,239	61.8%
2006	115,942	334	124	114,468	1,474	7,942	115,484	62.0%
2007	118,430	430	159	116,970	1,459	7,960	117,841	61.9%
2008	120,899	529	193	119,807	1,092	8,126	120,177	61.9%
2009	123,115	629	225	122,023	1,092	8,275	122,261	61.7%
2010	125,811	671	240	124,719	1,092	8,456	124,900	61.7%
2011	128,327	671	240	127,235	1,092	8,625	127,416	61.6%
2012	130,724	671	240	129,631	1,092	8,787	129,813	61.5%

**Historical Values (1993 - 2002):**

Col. (2) represents derived "Total Net Energy For Load w/o DSM". The values are calculated using the formula: Cols. (2) = (3) + (4) + (8).  
 Cols. (3) & (4) are DSM values starting in January, 1988 through 2002 which contributed to the values in Cols. (5) - (9).  
 Cols. (5) & (6) are a breakdown of Net Energy For Load in Col (2) into Retail and Wholesale .  
 Col. (9) is calculated using Col. (8) from this page and Col. (2), "Total", from Schedule 3.1. Col. (9) = ((Col. (8)\*1000) / ((Col.(2) \* 8760))

**Projected Values (2003 - 2012):**

Col. (2) represents Net Energy for Load w/o DSM values. The values are calculated using the formula: Cols. (2) = (3) + (4) + (8).  
 Cols. (3) - (4) are forecasted values of the reduction on sales from incremental conservation.  
 Cols. (5) & (6) are a breakdown of Net Energy For Load in Col (2) , into Wholesale and Retail .  
 Col. (9) is calculated using Col. (2) from this page and Col. (2), "Total", from Schedule 3.1. Col. (9) = ((Col. (2)\*1000) / ((Col. (2) \* 8760))

**Schedule 4**  
**Previous Year Actual and Two-Year Forecast of**  
**Retail Peak Demand and Net Energy for Load (NEL) by Month**

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2002 ACTUAL		2003* FORECAST		2004* FORECAST	
Month	Total Peak Demand MW	NEL GWH	Total Peak Demand MW	NEL GWH	Total Peak Demand MW	NEL GWH
JAN	17,597	7,588	20,190	8,248	20,081	7,959
FEB	13,851	6,524	16,828	6,878	16,737	7,959
MAR	15,459	7,866	15,538	7,735	15,454	8,000
APR	16,862	8,570	16,398	8,125	16,833	8,358
MAY	18,067	9,019	18,128	8,991	18,609	9,221
JUN	18,574	9,262	18,999	9,845	19,503	10,193
JUL	19,084	9,660	19,337	10,310	19,849	10,636
AUG	19,219	10,412	19,773	10,431	20,297	10,825
SEP	19,152	10,330	19,180	10,178	19,689	10,503
OCT	18,172	9,574	17,838	9,004	18,311	9,339
NOV	17,588	8,101	16,928	8,030	16,837	8,351
DEC	14,221	7,294	17,271	7,924	17,178	8,181
<b>TOTALS</b>		104,199		105,700		109,525

\* Forecasted Peaks & NEL do not include the impacts of cumulative load management and incremental conservation.

**CHAPTER III**

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**Projection of Incremental Resource Additions**

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### **III. Projection of incremental Resource Additions**

#### **III.A FPL's Resource Planning:**

FPL developed an integrated resource planning (IRP) process in the early 1990's and has since utilized the process to determine when new resources are needed, what the magnitude of the needed resources are, and what type of resources should be added. The timing and type of potential new power plants, the primary subjects of this document, are determined as part of the IRP process work. This section discusses how FPL applied this process in its 2002 and early 2003 planning work.

#### **Four Fundamental Steps of FPL's Resource Planning:**

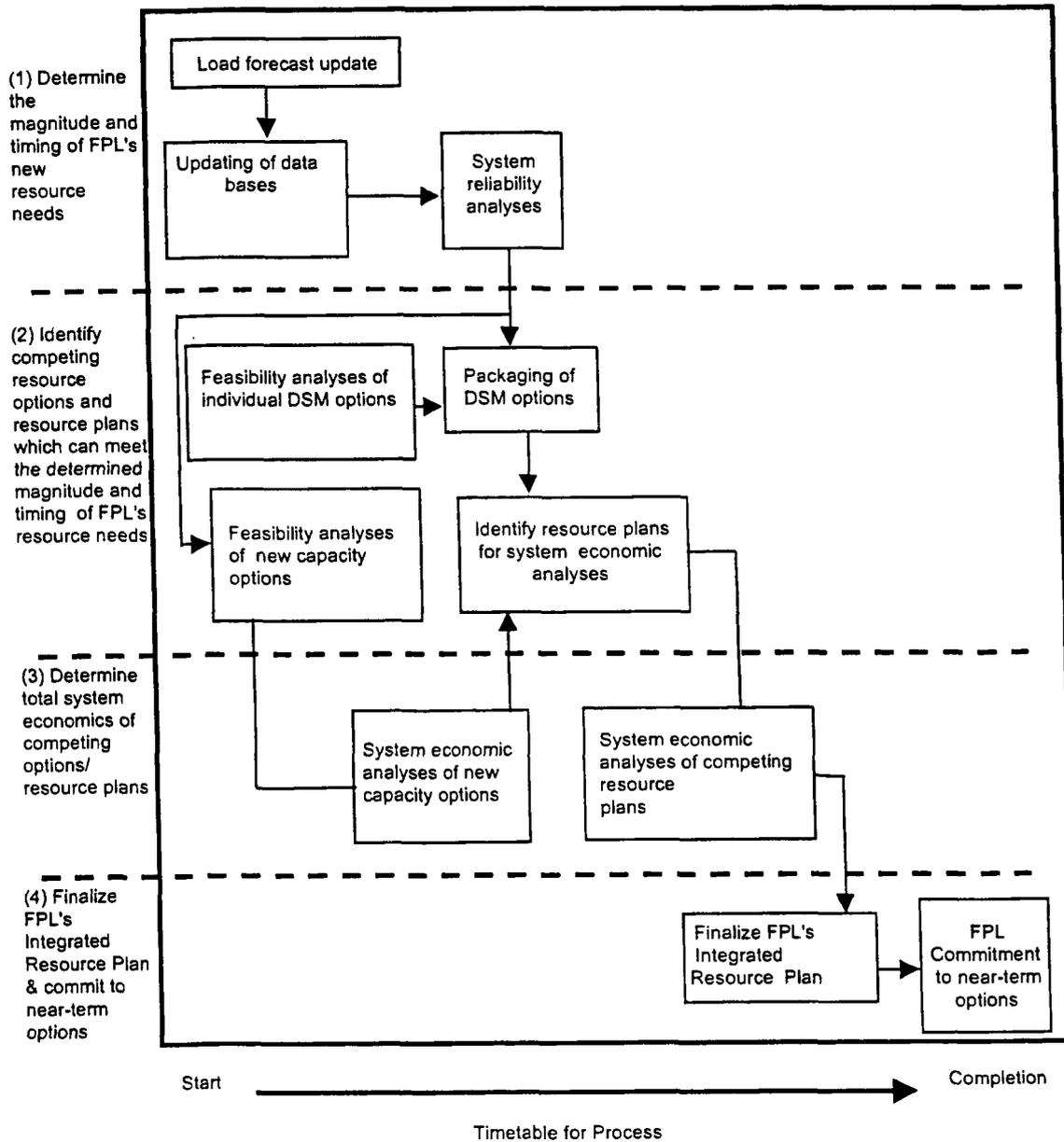
There are 4 fundamental "steps" to FPL's resource planning. These steps can be described as follows:

- Step 1: Determine the magnitude and timing of FPL's new resource needs;
- Step 2: Identify which resource options and resource plans can meet the determined magnitude and timing of FPL's resource needs (i.e., identify competing options and resource plans;
- Step 3: Determine the economics for the total utility system with each of the competing options and resource plans; and,
- Step 4: Select a resource plan and commit, as needed, to near-term options.

Figure III.A.1 graphically outlines the 4 steps.

# Overview of FPL's IRP Process

## Fundamental IRP Steps



(Normal time period: approx. 6-7 months)

Figure III.A.1

## **Step 1: Determine the Magnitude and Timing of FPL's New Resource Needs:**

The first of these four resource planning steps – determining the magnitude and timing of FPL's resource needs – is essentially a determination of how many megawatts (MW) of load reduction, new capacity additions, or a combination of both load reduction and new capacity additions are needed. Also determined in this step is when the MW are needed to meet FPL's planning criteria. This step is often referred to as a reliability assessment for the utility system.

Step 1 starts with an updated load forecast. Several databases are also updated in this first fundamental step, not only with the new information regarding forecasted loads, but also with other information which is used in many of the fundamental steps in resource planning. Examples of this new information include: delivered fuel price projections, current financial and economic assumptions, and power plant capability and reliability assumptions. During its recent IRP work, FPL utilized four assumptions regarding near-term construction capacity additions, short-term, firm capacity purchase additions, long-term DSM implementation, and the projected extension or renegotiation of the UPS contracts.

The first of these assumptions is based on FPL's announced plans to add near-term capacity through various construction projects. These construction projects include the repowering of an existing unit and the addition of several new units. FPL committed in 1998 to repower both existing steam units at its Fort Myers plant site and two of the three existing steam units at its Sanford plant site. The Fort Myers repowering work is completed, as is the repowering work of one of the Sanford units. The repowering of the other Sanford unit (Unit # 4) will be completed by mid-2003. This Sanford repowering was a "given" in FPL's resource planning work.

Another part of FPL's construction capacity addition assumption was its previously announced decision to add two new CT's during 2003 at FPL's existing Fort Myers site. FPL's resource planning work assumed that this capacity addition would also be a "given".

The final part of FPL's construction capacity addition assumption was the addition of a new combined cycle (CC) unit at Manatee and the conversion of two existing CT's at Martin into a new combined cycle unit. Both additions are scheduled for

mid-2005. Both capacity additions were approved by the Florida Public Service Commission in November 2002 after comparing them to 134 competing bids that were received in response to two Requests for Proposals (RFP's) that solicited bids for meeting FPL's 2005/2006 capacity needs.

The second of these assumptions involves short-term, firm capacity purchase additions. FPL decided through its 2000 resource planning work to secure an amount of purchase capacity for the next few years through short-term, firm capacity purchases. These firm capacity purchases are from a combination of utility and independent power producers. The total capacity and duration of these purchases have changed somewhat from what was presented in last year's Site Plan. These changes are due to two factors: new information regarding transmission limitations for several of the new capacity purchases, and a decision to secure additional short-term purchase capacity for 2004 due to the termination of one of the previously signed short-term purchases. The annual total capacity values for these purchases are presented in Table I.D.1. These purchase amounts were also assumed as a "given" in FPL's resource planning work.

The third of these assumptions involves DSM. Since 1994, FPL's resource planning work has used the DSM MW called for in FPL's approved DSM goals as a "given" in its analyses. This was again the case in FPL's most recent planning work, as its approved DSM goals through the year 2009 were taken as a "given".

The fourth of these assumptions is a projected extension or renegotiation of the UPS purchases that are currently scheduled to end in 2010. No final decision has been reached on this matter, but FPL has initiated discussions with Southern Company regarding a possible extension or renegotiation of these purchases. The inclusion, for planning purposes, of the assumption that these coal-by-wire purchases will continue beyond the current expiration date reflects an interest in maintaining/enhancing fuel diversity in FPL's system.

The first place in which these assumptions and much of the other updated information and assumptions are used is the first fundamental step: the determination of the magnitude and the timing of FPL's resource needs. This determination is accomplished by system reliability analyses which are typically based on a dual planning criteria of a minimum peak period reserve margin of 15% (FPL applies this to both Summer and Winter peaks) and a maximum loss-of-load

probability (LOLP) of 0.1 day per year. Both of these criteria are commonly used throughout the utility industry. The reserve margin criterion increases from 15% to 20% starting in mid-2004 due to a voluntary agreement reached among FPL, FPC, and TECO, and accepted by the FPSC in the FPSC's Docket No. 981890-EU.

Historically, two types of methodologies, deterministic and probabilistic, have been employed in system reliability analysis. The calculation of excess firm capacity at the annual system peaks (reserve margin) is the most common method, and this relatively simple deterministic calculation can be performed on a spreadsheet. It provides an indication of how well a generating system can meet its native load during peak periods. However, deterministic methods do not take into account probabilistic-related elements such as: unit numbers and sizes (i.e., two 50 MW units which can be counted on to run 90% of the time are more valuable in regard to utility system reliability than is one 100 MW unit which can also be counted on to run 90% of the time); and the value of being part of an interconnected system.

Therefore, probabilistic methodologies have been used to provide additional information on the reliability of a generating system. There are a number of probabilistic methods that are being used to perform system reliability analyses. Of these, the most widely used is loss-of-load probability or LOLP. Simply stated, LOLP is an index of how well a generating system may be able to meet its demand (i.e., a measure of how often load may exceed available resources). In contrast to reserve margin, the calculation of LOLP looks at the daily peak demands for each year, while taking into consideration such probabilistic events as the unavailability of individual generators due to scheduled maintenance or forced outages.

LOLP is expressed in units of the "number of times per year" that the system demand could not be served. The standard for LOLP accepted throughout the industry is a maximum of 0.1 day per year. This analysis requires a more complicated calculation methodology than does the reserve margin analysis. LOLP analyses are typically carried out using the Tie Line Assistance and Generation Reliability (TIGER) model.

The end result of the first fundamental step of resource planning is a projection of how many new MW of resources are needed to meet both reserve margin and LOLP criteria, and thus maintain system reliability, and of when the MW are needed. This information is used in the second fundamental step: identifying

resource options and resource plans that can meet the determined magnitude and timing of FPL's resource needs.

**Step 2: Identify Resource Options and Plans Which can Meet the Determined Magnitude and Timing of FPL's Resource Needs:**

The initial activities associated with this second fundamental step of resource planning generally proceed concurrently with the activities associated with Step 1. During Step 2, feasibility analysis of new capacity options are carried out to determine which new capacity options appear to be the most competitive on FPL's system. These analyses also establish capacity size (MW) values, projected construction/permitting schedules, and operating parameters and costs.

The individual new capacity options are then "packaged" into different resource plans which are designed to meet the system reliability criteria. In other words, resource plans are created by combining individual resource options so that the timing and magnitude of FPL's new resource needs are met. The creation of these competing resource plans is typically carried out using dynamic programming techniques. For planning purposes, only FPL construction options were included in FPL's most recent planning analyses.

At the conclusion of the second fundamental resource planning step, a number of different combinations of new resource options (i.e., resource plans) of a magnitude and timing necessary to meet FPL's resource needs were identified. These resource plans were then compared on an economic basis.

**Step 3: Determining the Total System Economics:**

At the completion of fundamental steps 1 & 2, the most viable new resource options have been identified, and these resource options have been combined into a number of resource plans which meet the magnitude and timing of FPL's resource needs. The stage is set for comparing the system economics of these resource plans. FPL combines the resource options into resource plans using the EGEAS (Electric Generation Expansion Analysis System) computer model from the Electric Power Research Institute (EPRI) and Stone & Webster Management Consultants, Inc. The EGEAS model is also used to perform the basic economic analyses of the resource plans.

The basic economic analyses of the competing resource plans focus on total system economics. The standard basis for comparing the economics of competing resource plans is their relative impact on FPL's electricity rate levels, with the intent of minimizing FPL's leveled system average rate (i.e., a Rate Impact Measure or RIM methodology). However, in cases such as existed for FPL's most recent planning work in which the DSM contribution was taken as a "given" and the only competing options were new generating units, comparisons of competing resource plans' impacts on electricity rates and on system revenue requirements are equivalent. Consequently, the competing options and plans were evaluated on a present value system revenue requirement basis.

The basic economic analyses carried out with the EGEAS model focus on the capital and operating costs of new capacity options plus the impact these new capacity options have on FPL's system fuel costs.

At the conclusion of the analyses carried out in Step 3, a determination of FPL's preferred resource plan was made.

#### **Step 4: Finalizing FPL's Current Resource Plan**

The results of the previous three fundamental steps activities were evaluated by FPL management and a decision was made as to what FPL's current resource plan would be. This plan is presented in the following section.

#### **III.B Incremental Resource Additions**

FPL's projected incremental generation capacity additions/changes for 2003 through 2012 are depicted in Table III.B.1 (The planned DSM additions are shown separately in Table III.C.1). These capacity additions/changes will result from a variety of actions including: changes to existing units (which are frequently achieved as a result of plant component replacements during major overhauls), changes in the amounts of purchased power being delivered under existing contracts as per the contract schedules or by entering into new purchase contracts, repowering of an existing steam unit, projected construction of new units, and conversion of CT's into a CC unit.

As shown in Table III.B.1, the bulk of the capacity additions are made up of the following items: a completion of the repowering of FPL's Sanford Unit # 4 that is projected to be completed by the Summer, 2003; the construction of two new CT's by mid – 2003 at FPL's existing Fort Myers site; the addition of one or more new short-term purchases for 2004 that replaces a previous purchase agreement; the conversion of two CT's into a larger CC unit in 2005 at FPL's Martin site; the addition of a new CC unit, also in 2005, at FPL's Manatee site; and the construction of four additional CC units in the 2007 through 2012 time frame. Sites for these four CC units that are currently projected to be added in the 2007 through 2012 timeframe have not yet been selected.

<i>Projected Capacity Changes and Reserve Margins for FPL <sup>(1)</sup></i>		
	<i>Net Capacity Changes (MW)</i>	
	<i>Winter <sup>(2)</sup></i>	<i>Summer <sup>(3)</sup></i>
2003 Sanford Repowering # 4: Second Phase <sup>(4)</sup>	---	957
Combustion Turbines (2) Fort Myers <sup>(5)</sup>	---	298
Purchases <sup>(6)</sup>	1,097	(140)
Changes to existing Units	31	(32)
2004 Combustion Turbines (2) Fort Myers <sup>(5)</sup>	366	---
Purchases <sup>(6)</sup>	(156)	44
New Short-Term Purchase <sup>(7)</sup>	---	213
Changes to existing Units	72	283
Sanford Repowering # 4: Second Phase <sup>(4)</sup>	1,036	---
2005 Changes to existing QF's	(10)	(10)
Purchases <sup>(6)</sup>	(6)	(523)
Manatee Unit #3 Combined Cycle <sup>(8)</sup>	---	1,107
New Short-Term Purchase <sup>(7)</sup>	---	(213)
Conversion of MR #8 CT's to CC <sup>(8)</sup>	(363)	783
2006 Manatee Unit #3 Combined Cycle <sup>(8)</sup>	1,201	---
Conversion of MR #8 CT's to CC <sup>(8)</sup>	1,198	---
Changes to existing QF's	(133)	(133)
Purchases <sup>(6)</sup>	(520)	---
2007 Purchases <sup>(6)</sup>	---	(474)
Unsitd Combined Cycle # 1 <sup>(8)</sup>	---	1,107
2008 Purchases <sup>(6)</sup>	(474)	---
Unsitd Combined Cycle # 1 <sup>(8)</sup>	1,209	---
Unsitd Combined Cycle # 2 <sup>(8)</sup>	---	1,107
2009 Unsitd Combined Cycle # 2 <sup>(8)</sup>	1,209	---
Changes to existing QF's	---	(51)
2010 Unsitd Combined Cycle # 3 <sup>(8)</sup>	---	1,107
Changes to existing QF's	(51)	(44)
2011 Unsitd Combined Cycle # 3 <sup>(8)</sup>	1,209	---
Changes to existing QF's	(89)	(45)
2012 Unsitd Combined Cycle # 4 <sup>(8)</sup>	---	1,107
<b>TOTALS =</b>	<b>6,827</b>	<b>6,449</b>

(1) Additional information about these resulting reserve margins and capacity changes are found on Schedules 7 & 8 respectively.

(2) Winter values are values for January of year shown.

(3) Summer values are values for August of year shown.

(4) The second phase of the repowering consists of integrating the combustion turbines, heat recovery steam generators, and steam turbines.

(5) The two CT's at Fort Myers are scheduled to be in-service in the Spring of 2003. Therefore, the CT's are included in the 2003 Summer reserve margin calculation and are included in the 2004 - on reserve margin for Summer and Winter.

(6) These are firm capacity purchases. See Section I.D and III.A. for more details.

(7) Negotiations are currently underway between FPL and several parties to secure this short - term capacity.

(8) All new combined cycle units are scheduled to be in-service in June of the year shown. Consequently, they are included in the Summer reserve margin calculation for the in-service year and in both the Summer and Winter reserve margin calculations for subsequent years.

Table III.B.1

### III.C Other Results of FPL's Recent Planning Work

In the course of FPL's 2002 and early 2003 planning efforts, two issues were identified that are now receiving attention in FPL's on-going resource planning work. Those two issues are: 1) the need to address the growing imbalance in Southeast Florida between regional load and generating capacity located within this region; and 2) the desire to maintain/enhance fuel diversity in the FPL system.

In regard to the first issue, currently there exists a significant imbalance between the very high peak load in the Southeast Florida region of FPL's service territory and the installed generating capacity in that region. Because of the continuing load growth in this region, the imbalance between generation and load will increase significantly during the next few years unless additional generation is sited in the Southeast Florida region.

If a majority of the generation capacity additions required to meet FPL system needs for 2007 and 2008 are not sited in Southeast Florida, FPL expects that in 2009 and 2010 it will have to either add generating capacity within this region, or add substantial amounts of transmission facilities that are likely to be costly to bring power generated outside the region into Southeast Florida in order to continue to reliably serve this load. At present, FPL believes that adding generation capacity within the region is the preferred approach.

The second issue, the desire to maintain/enhance fuel diversity in the FPL system, is not explicitly reflected in the resource plan presented in this Site Plan. The plan to meet capacity needs beyond 2007, reflected in the Tables and Schedules of this document, consists of the construction of three additional CC units in the 2008 through 2012 time frame at sites yet to be selected. However, these resources additions are subject to change.

FPL intends to identify and evaluate alternatives that would enhance fuel diversity in its capacity resource mix. These alternatives include: extending and/or expanding existing solid fuel-based power purchases such as the UPS contract, building new solid fuel-based generation capacity in FPL's system, obtaining access to non-traditional sources of natural gas, such as through suppliers who deliver natural gas to Florida from international sources of production, and

maintaining the ability to utilize fuel oil at FPL's existing units. Therefore, the new gas-fired CC units currently shown as capacity additions for 2008, 2010, and 2012 are subject to change in the future as FPL evaluates the feasibility and cost-effectiveness of various alternatives to enhance fuel diversity.

FPL believes that the earliest that one of these alternatives to enhance fuel diversity, adding new solid fuel-based generating capacity, could be permitted and built in Florida is 2009. In addition, FPL believes it is more likely that such a unit would be sited at some site north of the Southeast Florida region due to permitting and fuel transportation considerations.

As a result, FPL believes that the time and location aspects of these two issues will likely result in an approach in which FPL attempts to address the Southeast Florida imbalance first when it finalizes plans for meeting its 2007 and/or 2008 need. Such an approach would accomplish two things. First, it would address the immediate concern regarding this growing regional imbalance. Second, to the extent the 2007 and/or 2008 capacity additions effectively address the Southeast Florida imbalance concern, solid fuel-based capacity additions north of the Southeast Florida region would be more feasible and cost-effective.

FPL's approach to these two issues will be developed through on-going resource planning work.

### III.D Demand Side Management (DSM)

#### 1. FPL's Current DSM Programs

FPL's currently approved DSM programs are summarized as follows:

**Residential Conservation Service:** This is an energy audit program designed to assist residential customers in understanding how to make their homes more energy-efficient through the installation of conservation measures/practices.

**Residential Building Envelope:** This program encourages the installation of energy-efficient ceiling insulation in residential dwellings that utilize whole-house electric air conditioning.

**Duct System Testing and Repair:** This program encourages demand and energy conservation through the identification of air leaks in whole-house air conditioning duct systems and by the repair of these leaks by qualified contractors.

**Residential Air Conditioning:** This is a program to encourage customers to purchase higher efficiency central cooling and heating equipment.

**Residential Load Management (On-Call):** This program offers load control of major appliances/household equipment to residential customers in exchange for monthly electric bill credits.

**New Construction (BuildSmart):** This program encourages the design and construction of energy-efficient homes that cost-effectively reduce coincident peak demand and energy consumption.

**Business Energy Evaluation:** This program encourages energy efficiency in both new and existing commercial and industrial facilities by identifying DSM opportunities and providing recommendations to the customer.

**Commercial/Industrial Heating, Ventilating, and Air Conditioning:** This program encourages the use of high-efficiency heating, ventilation, and air conditioning (HVAC) systems in commercial/industrial facilities.

**Commercial/Industrial Efficient Lighting:** This program encourages the installation of energy-efficient lighting measures in commercial/industrial facilities.

**Business Custom Incentive:** This program encourages commercial/industrial customers to implement unique energy conservation measures or projects not covered by other FPL programs.

**Commercial/Industrial Load Control:** This program reduces peak demand by controlling customer loads of 200 kW or greater during periods of extreme demand or capacity shortages in exchange for monthly electric bill credits. (This program was closed to new participants in 2000).

**Commercial/Industrial Demand Reduction:** This program (which started in 2002) is similar to the Commercial/Industrial Load Control mentioned above by continuing the objective to reduce peak demand by controlling customer loads of 200 kW or greater during periods of extreme demand or capacity shortages in exchange for monthly electric bill credits.

**Commercial/Industrial Building Envelope:** This program encourages the installation of energy-efficient building envelope measures such as window treatments and roof/ceiling insulation for commercial/industrial facilities.

**Business On Call:** This program offers load control of central air conditioning units to both small, non-demand-billed and medium, demand-billed commercial/industrial customers in exchange for monthly electric bill credits.

## 2. Research and Development

FPL's DSM Plan continues to support research and development activities. Historically, FPL has performed extensive DSM research and development. FPL will continue such activities not only through its Conservation Research and Development program, but also through individual research projects. These efforts will examine a wide variety of technologies that build on prior FPL research where applicable and will expand the research to new and promising technologies as they emerge.

## **Conservative Research and Development Program**

FPL's Conservation Research and Development Program is designed to evaluate emerging conservation technologies to determine which are worthy of pursuing for program development and approval. FPL has researched a wide variety of technologies and from that research has been able to develop new programs such as Residential New Construction, Commercial/Industrial Building Envelope, and Business On Call.

## **Low Income Weatherization Retrofit Project**

This R&D project is investigating cost-effective methods of increasing the energy efficiency in the homes of FPL's low-income customers. The research project addresses the needs of low-income housing retrofits by providing monetary incentives to various housing authorities including weatherization agency providers (WAPS), and non-weatherization agency providers (non-WAPS). These incentives are used by the housing authorities to leverage their funds to increase the overall energy efficiency of the homes they are retrofitting. FPL either conducts a home energy survey, trains housing authority employees to perform FPL home energy surveys, accepts the National Energy Audit (NEAT) (as supplemented to capture water heating recommendations not included in the NEAT audit), or approves similar FPL approved audits conducted by weatherization providers to determine the need for energy efficient retrofit measures for each home. FPL has designed the project so as to minimize extra work for the retrofit housing authorities.

## **Photovoltaic Research, Development and Education Project**

Photovoltaic (PV) roof-tile systems are a relatively new technology which directly replaces existing roofing materials such as shingles and standing-rib roofing with PV materials. These PV materials have the same waterproofing characteristics as conventional roofing materials. This project is consistent with the Federal Government's Million Solar Roofs Initiative. However, based on FPL's research to-date, a primary hurdle to the physical installation of PV systems, whether roofing materials or flat plate modules, is the lack of awareness, understanding, and acceptance by local building officials. For the most part, these officials are unclear about how these systems work and how to address these systems as part of the building, permitting, and inspection process. This creates barriers toward the use

of this technology. As part of this project FPL will be holding workshops to address this issue.

### **Green Energy Project**

Under this project, FPL is examining the feasibility of purchasing electric energy generated from new renewable resources including solar-powered technologies, biomass energy, landfill methane, wind energy, low impact hydroelectric energy, and/or other renewable sources. Customers who participate would then be charged higher premiums for utilizing electric energy derived from these sources.

FPL has determined that there is a level of customer acceptance and desire for a Green Power pricing program. A petition was submitted on May 3, 2002 for a declaratory statement (Docket No.020397 – EQ) asking the FPSC whether FPL may pay higher than avoided costs for energy from renewable sources devoted to a Green Power program. A favorable order was received on August 6, 2002. FPL is continuing its development of this project.

### **Real-Time Pricing**

Although not part of FPL's approved DSM Plan, FPL continues to research new conservation/efficiency options such as real-time pricing. This option is an experimental service offering for large C/I customers that is designed to evaluate customer load response to hourly, marginal cost-based energy prices provided on a day-ahead basis.

### **On Call Pilot**

In March 2003, FPL received FPSC Commission approval to perform a pilot for its On Call program. Under the pilot FPL will offer to new participants a residential load control service similar to the On Call Program at a reduced incentive level. The offering of this pilot will allow FPL to test its market research data and gauge whether FPL can repackage its current residential load control service, minimize customer attrition, achieve current goals for residential load control, and, ultimately, change On Call incentive levels without damaging system reliability.

FPL will begin implementing the pilot in April 2003 and it will last up to 3 years.

**3. FPL's DSM MW Goals**

FPL's DSM implementation plan is designed to meet currently approved DSM goals for through 2009. The combined total residential and commercial/industrial Summer MW reduction values from FPL's DSM goals for 2000 – 2009 are presented in Table III. D.1. FPL's DSM efforts through 2002 have resulted in a cumulative Summer peak reduction of approximately 2,923 MW at the meter.

**FPL's Summer MW Reduction Goals for DSM  
(At the Meter)**

Year	Goal Cumulative Summer MW
2000	122
2001	200
2002	269
2003	339
2004	410
2005	484
2006	554
2007	625
2008	697
2009	765

**Table III.D.1**

**III.E Generation Additions From Independent Power Producers**

As previously mentioned in Section III.A, FPL recently entered into a number of new short-term, firm capacity purchases that extend through early 2007. The capacity supplied by these purchases are summarized in Table I.D.1. The vast majority of the capacity from these purchases is from independent power producers.

Tables I.B.1 and Table I.B.2 present the previously contracted cogeneration/small power production facilities which are addressed in FPL's resource planning.

### III.F Transmission Plan

The transmission plan will allow for the reliable delivery of the required capacity and energy for FPL's retail and wholesale customers. The following table presents FPL's proposed future additions of 230 kV and 500 kV bulk transmission lines irrespective of whether they directly correspond to proposed generating facilities or whether they must be certified under the Transmission Line Siting Act.

**List of Proposed Power Lines**

(1) LINE OWNERSHIP	(2) TERMINALS (To)	(3) TERMINALS (From)	(4) LINE LENGTH CKT. MILES	(5) COMMERCIAL IN-SERVICE DATE (MO/YR)	(6) NOMINAL VOLTAGE (kV)	(7) CAPACITY (MVA)
FPL	Broward	Delmar	3	Jun-03	230	514
FPL	Charlotte	Whidden #3	29	Jun-03	230	1191
FPL	Cortez	Johnson	11	Jun-03	230	596
FPL/GPC *	Duval-Kingsland	Yulee-Oneil	7	Jun-03	230	478
FPL	Cedar	Lauderdale	1	Oct-03	230	514
FPL	Collier	Orange River	9	Nov-03	230	759
FPL	Coast	Peachland	7	Dec-03	230	596
FPL	Andytown	Pennsuco	2	Jun-04	230	508
FPL	Bridge	Indiantown	10	Dec-04	230	1067
FPL	Broward-Corbett	Rainberry-Clintmoore	6	Jun-04	230	514
FPL	Dade	Overtown	11	Jun-04	230	759
FPL	Delmar	Yamato	2	Jun-04	230	514
FPL	Indiantown	Martin #2	13	Dec-04	230	1067
FPL/PGN *	Whidden	Vandola	27	Jun-04	230	799
FPL	Whidden	Charlotte #2	27	Jun-04	230	1067
FPL	Conservation	Oakland Park	13	Jun-05	230	759
FPL	Collier	Orange River	TBD	Dec-05	230	TBD

- \* GPC = Georgia Power Corporation
- PGN = Progress Energy

**Table III.F.1**

In addition, there will be transmission facilities needed to connect several of FPL's committed capacity additions to the system transmission grid. These transmission facilities for the projected capacity additions at FPL's existing Fort Myers, Manatee, and Martin sites are described below. (No additional transmission facilities are needed for the repowering of Sanford Unit # 4).

Since the projected capacity additions for 2007 through 2012 are as-yet unsited, no transmission facilities information is provided. This information will be provided in future Site Plan documents once sites are selected.

### **III.F.1 Transmission Facilities at Fort Myers**

The work required for the Fort Myers capacity expansion for two new CT units with the FPL grid is projected to be as follows:

#### **I. Substation:**

1. Build one collector bus with 2 breakers for each CT. Add another breaker to the collector bus for the station service transformer.
2. Add the two main step-up transformers (225MVA/each), one for each CT.
3. Add the station service transformer.
4. Connect the new Fort Myers collector bus to the Fort Myers 230kV switchyard.
5. Replace 4 breakers at the existing Fort Myers 230 kV switchyard.
6. Add relay and other protective equipment at Fort Myers switchyard.

#### **II. Transmission:**

1. All transmission work at Fort Myers is complete.

### **III.F.2 Transmission Facilities at Manatee**

The work required for the new capacity addition at Manatee with the FPL grid is projected to be as follows:

#### **I. Substation:**

1. Build new collector yard containing two collector busses with 6 breakers to connect the four CT's, and one ST.
2. Construct two string busses to connect the collectors and main switchyard.
3. Add five main step-up transformers (4-225MVA, 1- 450MVA) one for each CT, and one for the ST.
4. Add two breakers in bay # 6 to connect the collector bus at the Manatee switchyard.
5. Add two breakers in bay # 5 at the Manatee switchyard to connect the other collector bus.
6. Add relays and other protective equipment.
7. Upgrade 13-230kV circuit breakers to 2 cycle Independent Pole breakers at Manatee switchyard.
8. Upgrade the existing line terminal at Johnson to 3000 Amps.
9. Expand site and relay vault for two new line terminals at Manatee switchyard.

#### **II. Transmission:**

1. Upgrade the Calusa-Charlotte 230kV transmission line to 1875 Amps.
2. Upgrade the Johnson- Manatee 230kV transmission line to 2710 Amps.
3. Upgrade the Manatee-Ringling # 3 230kV transmission line to 2710 Amps.
4. Upgrade the Charlotte-Fort Myers # 2 230kV transmission line to 1565 Amps.

### III.F.3 Transmission Facilities at Martin

The work required for the incremental capacity planned to be added at Martin (convert the existing two CT's to a new four-on-one combined cycle unit) with the FPL grid is projected to be as follows:

#### I. Substation:

1. Build new collector yard containing one collector buss with 4 breakers each to connect the two CT's and one ST.
2. Add one station service transformer in the existing CT yard.
3. Add three main step-up transformers (2-225 MVA, 450MVA) one for each CT, and one for the ST.
4. Add two breakers in bay # 3 to connect the collector bus in the main switchyard.
5. Add relays and other protective equipment.
6. Install phase reactors and string buss in main switchyard to limit fault current.
7. Add breaker in bay # 7 (7WE) for new Indiantown # 2 transmission line. Tap existing 69kV auto-transformer off east 230kV operating bus.
8. Add breaker in Bay # 3 (3WS) at Indiantown Substation for Bridge line.
9. Create new bay 4. Add breakers 4WM, 4WS for Indiantown-Martin #2 line at Indiantown Substation.
10. Create new bay # 1 at Bridge Substation with breakers 1WW and 1WM. Add breakers 2WW and 2WE to convert station configuration from ring buss.
11. Construct one string bus to connect the collector and main switchyard.

#### II. Transmission:

1. Construct 230kV Martin-Indiantown # 2 transmission line.
2. Construct 230kV Indiantown – Bridge # 2 transmission line.
3. Various OHGW replacements due to increased fault current.
4. Upgrade the Ranch-Homeland 230kV transmission line to 1330 Amps.

### III.G. Renewable Resources

FPL has been the leading Florida utility in examining ways to utilize renewable energy technologies to meet its customers' current and future needs. FPL has been involved since 1976 in renewable energy research and development and in facilitating the implementation of various technologies.

FPL assisted the Florida Solar Energy Center (FSEC) in the late 1970's in demonstrating the first residential solar photovoltaic (PV) system east of the Mississippi. This PV installation at FESC's Brevard County location was in operation for over 15 years and provided valuable information about PV performance capabilities on both a daily and annual basis in Florida. FPL later installed a second PV system at the FPL Flagami substation in Miami. This 10-Kilowatt (KW) system was placed into operation in 1984. (After the testing of this PV installation was completed, the system was removed in 1990 to make room for substation expansion.)

For a number of years, FPL maintained a thin-film PV test facility located at the FPL Martin Plant Site. The FPL PV test facility was used to test new thin-film PV technologies and to identify design, equipment, or procedure changes necessary to accommodate direct current electricity from PV facilities into the FPL system. Although this testing has ended, the site is now the home for PV capacity which was installed as a result of FPL's recent Green Pricing effort (which is discussed on the following page).

In terms of utilizing renewable energy sources to meet its customers' needs, FPL initiated the first and only utility-sponsored conservation program in Florida designed to facilitate the implementation of solar technologies by its customers. FPL's Conservation Water Heating Program, first implemented in 1982, offered incentive payments to customers choosing solar water heaters. Before the program was ended (due to the fact that it was not cost-effective), FPL paid incentives to approximately 48,000 customers who installed solar water heaters.

In the mid-1980's, FPL introduced another renewable energy program. FPL's Passive Home Program was created in order to broadly disseminate information about passive solar building design techniques which are most applicable in Florida's climate. As part of this program, three Florida architectural firms created

complete construction blueprints for 6 passive homes with the assistance of the FSEC and FPL. These designs and blueprints were available to customers at a low cost. During its existence, this program was popular and received a U.S. Department of Energy award for innovation. The program was eventually phased out due to a revision of the Florida Model Energy Building Code (Code). This revision was brought about in part by FPL's Passive Home Program. The revision incorporated into the Code one of the most significant passive design techniques highlighted in the program: radiant barrier insulation.

In early 1991, FPL received approval from the Florida Public Service Commission to conduct a research project to evaluate the feasibility of using small PV systems to directly power residential swimming pool pumps. This research project was completed with mixed results. Some of the performance problems identified in the test may be solvable, particularly when new pools are constructed. However, the high cost of PV, the significant percentage of sites with unacceptable shading, and various customer satisfaction issues remain as significant barriers to wide acceptance and use of this particular solar application.

More recently, FPL has analyzed the feasibility of encouraging utilization of PV in another, potentially much larger way. FPL's basic approach does not require all of its customers to bear PV's high cost, but allows customers who are interested in facilitating the use of renewable energy the means to do so. FPL's initial effort to implement this approach allowed customers to make voluntary contributions into a separate fund that FPL used to make PV purchases in bulk quantities. PV modules were then installed and delivered PV-generated electricity directly into the FPL grid. Thus, when sunlight is available, the PV-generated electricity displaces an equivalent amount of fossil fuel-generated electricity.

FPL's basic approach, which has been termed Green Pricing, was initially discussed with the FPSC in 1994. FPL's initial efforts to implement this approach were then formally presented to the FPSC as part of FPL's DSM Plan in 1995 and FPL received approval from the FPSC in 1997 to proceed. FPL initiated the effort in 1998 and received approximately \$89,000 in contributions (that significantly exceeded the goal of \$70,000). FPL has purchased the PV modules and installed them at FPL's Martin Plant site.

As previously discussed, FPL initiated two new renewable efforts in 2000. FPL's first new initiative in 2000 was the Green Energy Project which is a second, different attempt to implement the basic Green Pricing approach. Under this project FPL would purchase electric energy generated from new renewable sources. The project would offer to supply to FPL's electrical grid the equivalent of all, or part of, a customer's monthly kWh usage with electricity generated from these new renewable resources. Participants would be residential (and possibly commercial) customers who would pay higher ("green" rates) for electricity provided from these renewable sources. FPL issued a Request for Proposals (RFP) in 2001 to solicit proposals to potentially supply energy only (MWH) from new renewable sources.

The second effort initiated in 2000 is FPL's Photovoltaic Research, Development, and Education Project. This demonstration project's objectives are to increase the public awareness of roof tile PV technologies, provide data to determine the durability of this technology and its impact on FPL's electric system, collect demand and energy data to better understand the coincidence between PV roof tile system output and FPL's system peaks (as well as the total annual energy capabilities of roof tile PV systems), and assess the homeowner's financial benefits and costs of PV roof tile systems.

Finally, FPL has also facilitated renewable energy projects (facilities which burn bagasse, waste wood, municipal waste, etc.). Firm capacity and energy and as-available energy have been purchased by FPL from these developers. (Please refer to Tables I.B.1 and I.B.2).

### **III.H FPL's Fuel Mix and Fuel Price Forecasts**

#### **1. FPL's Fuel Mix**

Until the mid-1980's, FPL relied primarily on a combination of oil, natural gas, and nuclear energy to generate electricity. In the early 1980's FPL began to purchase "coal-by-wire." In 1987, coal was first added to the fuel mix, through FPL's partial ownership and additional purchases from, the St. Johns River Power Park (SJRPP). This allowed FPL to meet its customers' energy needs with a more diversified mix of energy sources. Additional coal resources were added with the partial acquisition (76%) of Scherer Unit # 4 in 1989. Starting in 1997, petroleum

coke was added to the fuel mix as a blend stock with coal at the St. Johns River Power Park.

The trend in recent years has been a steady increase in the amount of natural gas that is used by FPL to provide electricity due, in part, to the introduction of highly efficient and cost-effective combined cycle generating units. Although this planning document reflects a continuation of this trend, FPL's proposed capacity additions for the years 2008 through 2012 present a plan that is subject to change. FPL's future resource planning work will increasingly focus on identifying and evaluating alternatives that would maintain/enhance FPL's long-term fuel diversity. These fuel diversity-enhancing alternatives may include: extending and/or expanding existing solid/fuel-based power purchases, the construction of, and the purchase of power from, new solid fuel-based (coal and petroleum coke) facilities; obtaining access to diversified sources of natural gas such as from suppliers of natural gas from international production areas; and preserving FPL's ability to utilize fuel oil at its existing units. The feasibility and cost-effectiveness of these, and possibly other, alternatives will be analyzed in future planning cycles.

FPL's current use of various fuels to supply energy to customers, plus a projection of this "fuel mix" through 2012 based on the resource plan presented in this document, is presented in Schedules 5, 6.1, and 6.2.

## **2. Fuel Price Forecasts**

FPL's long-term oil price forecast assumes that worldwide demand for petroleum products will grow moderately throughout the planning horizon. Non-OPEC crude oil supply is projected to increase as new and improved drilling technology and seismic information will reduce the cost of producing crude oil and increase both recoveries from existing fields and new discoveries. However, the rate of increase in non-OPEC supply is projected to be slower than that of petroleum demand, resulting in an increase in OPEC's market share throughout the planning horizon. As OPEC gains market share, prices for petroleum products are projected to increase.

FPL's natural gas price forecast assumes that domestic demand for natural gas will grow throughout the planning horizon, primarily due to increased requirements for electric generation. Domestic natural gas production will increase as new and

improved drilling technology and seismic information will reduce the cost of finding, developing, and producing natural gas fields. The rate of increase in domestic natural gas production is assumed to be slower than that of demand nationally, with the balance being supplied by increased Canadian and liquefied natural gas (LNG) imports. As demand for natural gas in Florida grows, it is anticipated that the Florida Gas Transmission (FGT) pipeline system will be augmented/expanded. This anticipated expansion of FGT's pipeline, combined with the new Gulfstream pipeline and potential sources of non-domestic/international natural gas (such as off-shore suppliers), should result in sufficient gas for FPL's continued needs.

FPL's coal price forecast assumes an ample supply of domestic coal, and the availability of imported coal, to meet a slow, but steady increase in domestic demand in the electric generation sector over the planning horizon. The coal price forecast for FPL's existing coal plant at St. Johns River Power Park (SJRPP) and Plant Scherer assume the continuation of the existing mine-mouth and transportation contracts unit expiration, along with the purchase of spot coal, to meet generation requirements. FPL's petroleum coke price forecast assumes that the petroleum industry will continue to cokers in the U.S., as well as in the Caribbean Basin in order to maximize refinery production of light products. This trend will continue to result in sufficient availability of petroleum coke, at delivered prices significantly below delivered coal prices. To support a slow, but steady growth in the use of petroleum coke in the U.S. electric utility industry.

**Schedule 5  
Fuel Requirements <sup>1/</sup>**

<u>Fuel Requirements</u>	<u>Units</u>	<u>Actual <sup>2/</sup></u>		<u>Forecasted</u>									
		<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
(1) Nuclear	Trillion BTU	263	276	251	251	255	251	250	255	250	249	254	251
(2) Coal	1,000 TON	3,078	3,070	3,823	3,717	3,703	3,701	3,701	3,685	3,632	3,631	3,634	3,636
(3) Residual (FO6)- Total	1,000 BBL	40,995	29,791	28,180	31,431	24,819	22,042	19,464	14,692	10,393	7,823	8,310	6,904
(4) Steam	1,000 BBL	40,995	29,791	28,180	31,431	24,819	22,042	19,464	14,692	10,393	7,823	8,310	6,904
(5) Distillate (FO2)- Total	1,000 BBL	381	473	911	103	28	44	22	5	2	0	1	0
(6) CC	1,000 BBL	75	29	772	10	0	0	0	0	0	0	0	0
(7) CT	1,000 BBL	306	444	139	93	28	44	22	5	2	0	1	0
(8) Steam	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(9) Natural Gas -Total	1,000 MCF	212,956	286,112	276,757	292,979	341,174	388,315	417,293	452,382	492,761	528,380	543,930	568,789
(10) Steam	1,000 MCF	79,157	78,017	33,537	38,373	31,538	27,994	26,358	20,758	16,191	13,015	12,937	11,865
(11) CC	1,000 MCF	109,778	195,106	240,319	251,320	308,827	359,448	390,419	430,914	476,108	515,042	530,473	556,537
(12) CT	1,000 MCF	24,022	12,988	2,901	3,265	810	873	516	710	462	323	521	387

1/ Reflects fuel requirements for FPL only.

2/ Source: A Schedules.

**Schedule 6.1  
Energy Sources**

Energy Sources	Units	Actual 1/		Forecasted									
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
(1) Annual Energy Interchange 2/	GWH	7,701	10,287	10,701	10,590	10,396	10,255	10,208	10,088	9,634	9,601	9,561	9,641
(2) Nuclear	GWH	24,070	25,295	23,870	23,848	24,280	23,869	23,766	24,331	23,795	23,688	24,173	23,924
(3) Coal	GWH	6,267	5,977	7,287	7,102	7,073	7,068	7,072	7,044	7,013	7,006	7,016	7,018
(4) Residual(FO6) -Total	GWH	25,802	18,708	18,133	20,224	16,014	14,221	12,570	9,516	6,734	5,068	5,376	4,469
(5) Steam	GWH	25,802	18,708	18,133	20,224	16,014	14,221	12,570	9,516	6,734	5,068	5,376	4,469
(6) Distillate(FO2) -Total	GWH	163	188	664	52	13	20	10	2	1	0	1	0
(7) CC	GWH	41	18	598	7	0	0	0	0	0	0	0	0
(8) CT	GWH	122	170	66	45	13	20	10	2	1	0	1	0
(9) Steam	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(10) Natural Gas -Total	GWH	24,496	34,541	37,516	39,533	46,912	53,644	57,935	63,242	69,359	74,634	76,921	80,520
(11) Steam	GWH	7,588	7,549	3,132	3,588	2,949	2,616	2,468	1,943	1,520	1,225	1,214	1,117
(12) CC	GWH	14,849	25,986	34,117	35,646	43,890	50,952	55,422	61,235	67,796	73,380	75,659	79,367
(13) CT	GWH	2,060	1,006	267	299	73	76	46	65	42	30	46	35
(14) Other 3/	GWH	9,905	9,202	7,529	8,176	7,878	6,865	6,869	6,675	6,580	5,814	5,279	5,152
Net Energy For Load 4/	GWH	98,404	104,199	105,700	109,525	112,565	115,942	118,430	120,899	123,115	125,811	128,327	130,724

1/ Source: A Schedules

2/ The projected figures are based on estimated energy purchases from SJRPP and the Southern Companies.

3/ Represents a forecast of energy expected to be purchased from Qualifying Facilities, Independent Power Producers, etc.

4/ Net Energy For Load is also shown in Column 19 on Schedule 2.3.

**Schedule 6.2  
Energy % by Fuel Type**

Energy Source	Units	Actual <sup>1/</sup>		Forecasted									
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
(1) Annual Energy Interchange <sup>2/</sup>	%	7.8	9.9	10.1	9.7	9.2	8.8	8.6	8.3	7.8	7.6	7.5	7.4
(2) Nuclear	%	24.5	24.3	22.6	21.8	21.6	20.6	20.1	20.1	19.3	18.8	18.8	18.3
(3) Coal	%	6.4	5.7	6.9	6.5	6.3	6.1	6.0	5.8	5.7	5.6	5.5	5.4
(4) Residual (FO6) -Total	%	26.2	18.0	17.2	18.5	14.2	12.3	10.6	7.9	5.5	4.0	4.2	3.4
(5) Steam	%	26.2	18.0	17.2	18.5	14.2	12.3	10.6	7.9	5.5	4.0	4.2	3.4
(6) Distillate (FO2) -Total	%	0.2	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(7) CC	%	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(8) CT	%	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(9) Steam	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(10) Natural Gas -Total	%	24.9	33.1	35.5	36.1	41.7	46.3	48.9	52.3	56.3	59.3	59.9	61.6
(11) Steam	%	7.7	7.2	3.0	3.3	2.6	2.3	2.1	1.6	1.2	1.0	0.9	0.9
(12) CC	%	15.1	24.9	32.3	32.5	39.0	43.9	46.8	50.6	55.1	58.3	59.0	60.7
(13) CT	%	2.1	1.0	0.3	0.3	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0
(14) Other <sup>3/</sup>	%	10.1	8.8	7.1	7.5	7.0	5.9	5.8	5.5	5.3	4.6	4.1	3.9
		100	100	100	100	100	100	100	100	100	100	100	100

1/ Source: A Schedules.

2/ The projected figures are based on estimated energy purchases from SJRPP and the Southern Companies.

3/ Represents a forecast of energy expected to be purchased from Qualifying Facilities, Independent Power Producers, etc.

**Schedule 7.1  
Forecast of Capacity, Demand, and Scheduled  
Maintenance At Time Of Summer Peak**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Year	Total Installed Capacity	Firm Capacity Import	Firm Capacity Export	Firm QF	Total Capacity Available 2/	Total Peak 3/	DSM 4/	Firm Summer Peak Demand	Reserve Margin Before Maintenance 5/	Reserve Margin Before Maintenance 5/ % of Peak	Scheduled Maintenance	Reserve Margin After Maintenance 6/	Reserve Margin After Maintenance 6/ % of Peak
	MW	MW	MW	MW	MW	MW	MW	MW	MW	% of Peak	MW	MW	% of Peak
2003	18,864	2,263	0	877	22,004	19,773	1,430	18,343	3,661	20.0	0	3,661	20.0
2004	19,147	2,520	0	877	22,544	20,297	1,510	18,787	3,757	20.0	0	3,757	20.0
2005	21,037	1,784	0	867	23,688	20,799	1,589	19,210	4,478	23.3	0	4,478	23.3
2006	21,037	1,784	0	734	23,555	21,331	1,667	19,664	3,891	19.8	0	3,891	19.8
2007	22,144	1,310	0	734	24,188	21,851	1,744	20,107	4,081	20.3	0	4,081	20.3
2008	23,251	1,310	0	734	25,295	22,289	1,821	20,468	4,827	23.6	0	4,827	23.6
2009	23,251	1,310	0	683	25,244	22,784	1,896	20,888	4,356	20.9	0	4,356	20.9
2010	24,358	1,310	0	640	26,308	23,294	1,922	21,372	4,936	23.1	0	4,936	23.1
2011	24,358	1,310	0	595	26,263	23,783	1,922	21,861	4,402	20.1	0	4,402	20.1
2012	25,465	1,310	0	595	27,370	24,279	1,922	22,357	5,013	22.4	0	5,013	22.4

1/ Capacity additions and changes projected to be in-service by June 1st are considered to be available to meet Summer peak loads which are forecasted to occur during August of the year indicated. All values are Summer net MW.

2/ Total Capacity Available=Col.(2) + Col.(3) - Col.(4) + Col.(5).

3/ These forecasted values reflect the Most Likely forecast without DSM.

4/ The MW shown represent cumulative load management capability plus incremental conservation. They are not included in total additional resources but reduce the peak load upon which Reserve Margin calculations are based.

5/ Margin (%) Before Maintenance = Col.(10) / Col.(9)

6/ Margin (%) After Maintenance =Col.(13) / Col.(9)

**Schedule 7.2  
Forecast of Capacity , Demand, and Scheduled  
Maintenance At Time of Winter Peak**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Year	Total Installed 1/ Capability MW	Firm Capacity Import MW	Firm Capacity Export MW	Firm QF MW	Total Capacity Available 2/ MW	Total Peak 3/ Demand MW	DSM 4/ MW	Firm Winter Peak Demand MW	Reserve Margin Before Maintenance 5/ MW	% of Peak	Scheduled Maintenance MW	Reserve Margin After Maintenance 6/ MW	% of Peak
	2002/03	18,780	2,475	0	877	22,132	20,190	1,497	18,693	3,439	18.4	0	3,439
2003/04	20,254	2,319	0	877	23,450	20,081	1,561	18,520	4,930	26.6	0	4,930	26.6
2004/05	19,891	2,313	0	867	23,071	20,583	1,615	18,968	4,103	21.6	0	4,103	21.6
2005/06	22,290	1,793	0	734	24,817	21,100	1,671	19,429	5,388	27.7	0	5,388	27.7
2006/07	22,290	1,793	0	734	24,817	21,605	1,723	19,882	4,935	24.8	0	4,935	24.8
2007/08	23,499	1,319	0	734	25,552	22,046	1,776	20,270	5,282	26.1	0	5,282	26.1
2008/09	24,708	1,319	0	734	26,761	22,539	1,828	20,711	6,050	29.2	0	6,050	29.2
2009/10	24,708	1,319	0	683	26,710	23,026	1,873	21,153	5,557	26.3	0	5,557	26.3
2010/11	25,917	1,319	0	595	27,831	23,522	1,873	21,649	6,182	28.6	0	6,182	28.6
2011/12	25,917	1,319	0	595	27,831	24,024	1,873	22,151	5,680	25.6	0	5,680	25.6

1/ Capacity additions and changes projected to be in-service by January 1st are considered to be available to meet Winter peak loads which are forecast to occur during January of the "second" year indicated. All values are Winter net MW.

2/ Total Capacity Available = Col.(2) + Col.(3) - Col.(4) + Col.(5).

3/ These forecasted values reflect the Most Likely forecast without DSM.

4/ The MW shown represent cumulative load management capability plus incremental conservation. They are not included in total additional resources but reduce the peak load upon which Reserve Margin calculations are based.

5/ Margin (%) Before Maintenance = Col.(10) / Col.(9)

6/ Margin (%) After Maintenance = Col.(13) / Col.(9)

**Schedule B**  
**Planned And Prospective Generating Facility Additions And Changes**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		
Plant Name	Unit No.	Location	Unit Type	Fuel		Fuel Transport		Const. Start Mo./Yr.	Comm. In-Service Mo./Yr.	Expected Retirement Mo./Yr.	Gen. Max. Nameplate KW	Net Capability		Status		
				Pri.	Alt.	Pri.	Alt.					Winter MW	Summer MW			
<b>ADDITIONS/ CHANGES</b>																
<b>2003</b>																
Fort Myers GT's		Lee County 35/43S/25E	CT	FO2	No	WA	No	Nov-02	Jan-03	Unknown	744,000	16	--	OT		
Fort Myers	2	Lee County 35/43S/25E	CC	NG	No	PL	No	Nov-02	Jan-03	Unknown	402,000	6	--	OT		
Sanford	5	Volusia County 16/19S/30E	CC	FO6	No	WA	No	Nov-02	Jan-03	Unknown	436,100	6	--	OT		
Martin	3	Martin County 29/29S/38E	CC	NG	No	PL	No	Nov-02	Jan-03	Unknown	612,000	1	(16)	OT		
Martin	4	Martin County 29/29S/38E	CC	NG	No	PL	No	Nov-02	Jan-03	Unknown	612,000	1	(16)	OT		
Martin	8	Martin County 29/29S/38E	CT	NG	FO2	PL	PL	Nov-02	Jan-03	Unknown	362,000	1	--	OT		
Fort Myers Combustion Turbines	13	Lee County 35/43S/25E	CT	NG	FO2	PL	PL	Apr-01	Apr-03	Unknown	190,000	--	149	OT		
Fort Myers Combustion Turbines	14	Lee County 35/43S/25E	CT	NG	FO2	PL	PL	May-01	May-03	Unknown	190,000	--	149	OT		
Sanford Repowering: Second Phase	4	Volusia County 16/19S/30E	CC	NG	No	PL	No	Aug-02	Jun-03	Unknown	106,600	--	857	RP		
												<b>2003 Changes/Additions Total:</b>		<b>31</b>	<b>1,223</b>	
<b>2004</b>																
Fort Myers Combustion Turbines	13	Lee County 35/43S/25E	CT	NG	FO2	PL	PL	Apr-01	Apr-03	Unknown	190,000	183	--	V		
Fort Myers Combustion Turbines	14	Lee County 35/43S/25E	CT	NG	FO2	PL	PL	May-01	May-03	Unknown	190,000	183	--	V		
Sanford Repowering: Second Phase	4	Volusia County 16/19S/30E	CC	NG	No	PL	No	Aug-02	Jun-03	Unknown	106,600	1,036	--	RP		
Turkey Point	1	Dade County 27/57S/40E	ST	FO6	NG	WA	PL	Feb-04	Apr-04	Unknown	402,500	--	3	OT		
Lauderdale	4	Broward County 30/50S/42E	CC	NG	FO2	PL	PL	Nov-03	Jan-04	Unknown	521,250	2	2	OT		
Port Everglades	4	City of Hollywood 23/50S/42E	ST	FO6	NG	WA	PL	Nov-03	Jan-04	Unknown	402,050	26	23	OT		
Riviera	3	City of Riviera Beach 33/42S/43E	ST	FO6	NG	WA	PL	Nov-03	Jan-04	Unknown	310,420	1	1	OT		
Martin	1	Martin County 29/29S/38E	ST	NG	FO6	PL	PL	Nov-03	Jan-04	Unknown	863,000	17	17	OT		
Martin	2	Martin County 29/29S/38E	ST	NG	FO6	PL	PL	Nov-03	Jan-04	Unknown	863,000	15	26	OT		
Martin	3	Martin County 29/29S/38E	CC	NG	No	PL	No	Apr-04	Jun-04	Unknown	612,000	--	26	OT		
Martin	4	Martin County 29/29S/38E	CC	NG	No	PL	No	Apr-04	Jun-04	Unknown	612,000	--	26	OT		
Martin	8	Martin County 29/29S/38E	CT	NG	FO2	PL	PL	Apr-04	Jun-04	Unknown	362,000	--	26	OT		
Sanford	4	Volusia County 16/19S/30E	CC	NG	No	PL	No	Apr-04	Jun-04	Unknown	436,100	--	(4)	OT		
Sanford	5	Volusia County 16/19S/30E	CC	NG	No	PL	No	Nov-03	Jan-04	Unknown	436,100	11	43	OT		
Fort Myers	2	Lee County 35/43S/25E	CC	NG	No	WA	No	Apr-04	Jun-04	Unknown	402,000	--	46	OT		
Fort Myers CT	3	Lee County 35/43S/25E	CT	NG	FO2	PL	PL	Apr-04	Jun-04	Unknown	190,000	--	26	OT		
Manatee	1	Manatee County 18/33S/20E	ST	FO6	No	WA	No	Apr-04	Jun-04	Unknown	863,300	--	5	OT		
Manatee	2	Manatee County 18/33S/20E	ST	FO6	No	WA	No	Apr-04	Jun-04	Unknown	863,300	--	5	OT		
Fort Myers GT's		Lee County 35/43S/25E	CT	FO2	No	WA	No	Apr-04	Jun-04	Unknown	744,000	--	12	OT		
												<b>2004 Changes/Additions Total:</b>		<b>1,474</b>	<b>283</b>	
<b>2005</b>																
Manatee Combined Cycle	3	Manatee County 18/33S/20E	CC	NG	FO2	PL	PL	Jun-03	Jun-05	Unknown	470,000	--	1,107	T		
Martin Combined Cycle	8	Martin County 29/29S/38E	CC	NG	No	PL	No	Jun-03	Jun-05	Unknown	470,000	--	1,107	T		
Martin Combustion Turbine Conv.	8A	Martin County 29/29S/38E	CT	NG	FO2	PL	PL	Jun-99	Jun-01	12/1/04	190,000	(182)	(182)	OT		
Martin Combustion Turbine Conv.	8B	Martin County 29/29S/38E	CT	NG	FO2	PL	PL	Jun-99	Jun-01	12/1/04	190,000	(182)	(182)	OT		
												<b>2005 Changes/Additions Total:</b>		<b>(363)</b>	<b>1,890</b>	

Note 1: The Winter Total MW value consists of all generation additions and changes achieved by January. The Summer Total MW value consists of all generation additions and changes achieved by June. All other MW will be picked up in the following year.

Note 2: Capacity additions/changes shown for 2003 reflect changes/additions from values shown in Schedule 1.

Note 3: The values shown for the Sanford repowering project reflect the schedule for the repowering of Sanford Unit # 4 that was used in FPL's 2002 resource planning work.

Schedule 8  
Planned And Prospective Generating Facility Additions And Changes

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Plant Name	Unit No.	Location	Unit Type	Fuel		Fuel Transport		Const. Start Mo./Yr.	Comm. In-Service Mo./Yr.	Expected Retirement Mo./Yr.	Gen. Max. Nameplate KW	Net Capability		Status
				Pri.	Alt.	Pri.	Alt.					Winter MW	Summer MW	
<b><u>ADDITIONS/ CHANGES</u></b>														
<b><u>2006</u></b>														
Manatee Combined Cycle	3	Manatee County 18/33S/20E	CC	NG	FO2	PL	PL	Jun-03	Jun-05	Unknown	470,000	1,201	--	T
Martin Combined Cycle	8	Martin County 29/29S/38E	CC	NG	FO2	PL	PL	Jun-03	Jun-05	Unknown	190,000	1,198	--	T
<b>2006 Changes/Additions Total:</b>												2,399	0	
<b><u>2007</u></b>														
Unsitd Combined Cycle Unit	1	Unknown	CC	NG	FO2	PL	PL	Jan-05	Jun-07	Unknown	470,000	--	1,107	P
<b>2007 Changes/Additions Total:</b>												0	1,107	
<b><u>2008</u></b>														
Unsitd Combined Cycle Unit	1		CC	NG	FO2	PL	PL	Jan-05	Jun-07	Unknown	470,000	1,209	--	P
Unsitd Combined Cycle Unit	2	Unknown	CC	NG	FO2	PL	PL	Jan-06	Jun-08	Unknown	470,000	--	1,107	P
<b>2008 Changes/Additions Total:</b>												1,209	1,107	
<b><u>2009</u></b>														
Unsitd Combined Cycle Unit	2	Unknown	CC	NG	FO2	PL	PL	Jan-06	Jun-08	Unknown	470,000	1,209	--	P
<b>2009 Changes/Additions Total:</b>												1,209	0	
<b><u>2010</u></b>														
Unsitd Combined Cycle Unit	3	Unknown	CC	NG	FO2	PL	PL	Jan-08	Jun-10	Unknown	470,000	--	1,107	P
<b>2010 Changes/Additions Total:</b>												0	1,107	
<b><u>2011</u></b>														
Unsitd Combined Cycle Unit	3	Unknown	CC	NG	FO2	PL	PL	Jan-08	Jun-10	Unknown	470,000	1,209	--	P
<b>2011 Changes/Additions Total:</b>												1,209	0	
<b><u>2012</u></b>														
Unsitd Combined Cycle Unit	4	Unknown	CC	NG	FO2	PL	PL	Jan-10	Jun-12	Unknown	470,000	--	1,107	P
<b>2012 Changes/Additions Total:</b>												0	1,107	

Note 1: The Winter Total MW value consists of all generation additions and changes achieved by January. The Summer Total MW value consists of all generation additions and changes achieved by August. All other MW will be picked up in the following year. This is done for reserve margin calculation.

**Schedule 9**  
**Status Report and Specifications of Proposed Generating Facilities**

- (1) **Plant Name and Unit Number:** Sanford Unit 4 Repowering
- (2) **Capacity**  
a. Summer 567 MW Incremental (957 MW Total After Repowering)  
b. Winter 652 MW Incremental (1036 MW Total After Repowering)
- (3) **Technology Type:** Combined Cycle
- (4) **Anticipated Construction Timing**  
a. Field construction start-date: 2000  
b. Commercial In-service date: 2003
- (5) **Fuel**  
a. Primary Fuel Natural Gas  
b. Alternate Fuel None
- (6) **Air Pollution and Control Strategy:** Natural Gas, Dry Low NO<sub>x</sub> Combustors
- (7) **Cooling Method:** Cooling Pond
- (8) **Total Site Area:** 1,718 Acres
- (9) **Construction Status:** V (Under Construction > 50% Complete)
- (10) **Certification Status:** V (Under Construction > 50% Complete)
- (11) **Status with Federal Agencies:** V (Under Construction > 50% Complete)
- (12) **Projected Unit Performance Data:**  
Planned Outage Factor (POF): 3%  
Forced Outage Factor (FOF): 1%  
Equivalent Availability Factor (EAF): 96%  
Resulting Capacity Factor (%): Approx. 96% (First Year)  
Average Net Operating Heat Rate (ANOHR): 6,918 Btu/kWh (Base Operation)
- (13) **Projected Unit Financial Data \*,\*\*,\*\*\***  
Book Life (Years): 25 years  
Total Installed Cost (In-Service Year \$/kW): 656  
Direct Construction Cost (\$/kW):  
AFUDC Amount (\$/kW):  
Escalation (\$/kW):  
Fixed O&M (\$/kW -Yr.): (2001 \$kW-Yr.) 14.41  
Variable O&M (\$/MWH): (2001 \$/MWH) 0.374  
K Factor: 1.4637

- \* \$/kW values are based on incremental Summer capacity.
- \*\* Note that cost values shown do not reflect the FPL system benefits which result from efficiency improvements to the existing steam capacity at the site.
- \*\*\* Fixed O&M includes capital replacement.

NOTE: Total installed cost already includes escalation and AFUDC.

**Schedule 9**  
**Status Report and Specifications of Proposed Generating Facilities**

- (1) **Plant Name and Unit Number:** Fort Myers Combustion Turbines No. 13 and No. 14 \*
- (2) **Capacity**  
a. Summer 149 MW each for a total of 298 MW  
b. Winter 183 MW each for a total of 366 MW
- (3) **Technology Type:** Combustion Turbine
- (4) **Anticipated Construction Timing**  
a. Field construction start-date: 2001  
b. Commercial In-service date: 2003
- (5) **Fuel**  
a. Primary Fuel Natural Gas  
b. Alternate Fuel Distillate
- (6) **Air Pollution and Control Strategy:** Natural Gas, Dry Low NOx Combustors,  
0.05% S. Distillate, & Water Injection on Distillate
- (7) **Cooling Method:** Air Coolers
- (8) **Total Site Area:** 460 Acres
- (9) **Construction Status:** V (Under Construction > 50% Complete)
- (10) **Certification Status:** V (Under Construction > 50% Complete)
- (11) **Status with Federal Agencies:** V (Under Construction > 50% Complete)
- (12) **Projected Unit Performance Data:**  
Planned Outage Factor (POF): 1%  
Forced Outage Factor (FOF): 1%  
Equivalent Availability Factor (EAF): 98%  
Resulting Capacity Factor (%): Approx. 25% (First Year)  
Average Net Operating Heat Rate (ANOHR): 10,430 Btu/kWh (Base Operation)
- (13) **Projected Unit Financial Data \*\*,\*\*\***  
Book Life (Years): 25 years  
Total Installed Cost (In-Service Year \$/kW): 414 per Combustion Turbine  
Direct Construction Cost (\$/kW):  
AFUDC Amount (\$/kW):  
Escalation (\$/kW):  
Fixed O&M (\$/kW -Yr.): (2001 \$/kW-Yr.) 0.69  
Variable O&M (\$/MWH): (2001 \$/MWH) 0.87  
K Factor: 1.5394

\* Values shown are per unit values for the two units being added.

\*\* \$/kW values are based on Summer capacity.

\*\*\* Fixed O&M includes capital replacement.

NOTE: Total installed cost already includes escalation and AFUDC.

**Schedule 9**  
**Status Report and Specifications of Proposed Generating Facilities**

- (1) **Plant Name and Unit Number:** Martin Combustion Turbine Conversion to Combined Cycle
- (2) **Capacity**  
a. Summer 783 MW Incremental (1107 MW Total)  
b. Winter 834 MW Incremental (1198 MW Total)
- (3) **Technology Type:** Combined Cycle
- (4) **Anticipated Construction Timing**  
a. Field construction start-date: 2003  
b. Commercial in-service date: 2005
- (5) **Fuel**  
a. Primary Fuel Natural Gas  
b. Alternate Fuel Distillate
- (6) **Air Pollution and Control Strategy:** Natural Gas, Dry Low NO<sub>x</sub> Combustors, SCR, 0.05% S. Distillate, & Water Injection on Distillate
- (7) **Cooling Method:** Cooling Pond/Tower
- (8) **Total Site Area:** 11,300 Acres
- (9) **Construction Status:** P (Planned)
- (10) **Certification Status:** T (Regulatory Approval Received But Not Under Construction)
- (11) **Status with Federal Agencies:** T (Regulatory Approval Received But Not Under Construction)
- (12) **Projected Unit Performance Data \***  
Planned Outage Factor (POF): 2%  
Forced Outage Factor (FOF): 1%  
Equivalent Availability Factor (EAF): 97%  
Resulting Capacity Factor (%): Approx. 80% (First Year Base Operation)  
Average Net Operating Heat Rate (ANOHR): 6,850 Btu/kWh (Base Operation)  
Base Operation 75F 100%
- (13) **Projected Unit Financial Data \*\*,\*\*\***  
Book Life (Years): 25 years  
Total Installed Cost (In-Service Year \$/kW): 586  
Direct Construction Cost (\$/kW):  
AFUDC Amount (\$/kW):  
Escalation (\$/kW):  
Fixed O&M (\$/kW -Yr.): (2001 \$kW-Yr.) 9.07  
Variable O&M (\$/MWH): (2001 \$/MWH) 0.037  
K Factor: 1.5397

\* Values represent an operational combined cycle unit after the conversion is completed.

\*\* \$/kW values are based on Summer incremental capacity.

\*\*\* Fixed O&M cost includes capital replacement.

NOTE: Total installed cost already includes escalation and AFUDC.

**Schedule 9**  
**Status Report and Specifications of Proposed Generating Facilities**

- (1) **Plant Name and Unit Number:** Manatee Combined Cycle
- (2) **Capacity**  
a. Summer 1,107 MW  
b. Winter 1,201 MW
- (3) **Technology Type:** Combined Cycle
- (4) **Anticipated Construction Timing**  
a. Field construction start-date: 2003  
b. Commercial In-service date: 2005
- (5) **Fuel**  
a. Primary Fuel Natural Gas  
b. Alternate Fuel None
- (6) **Air Pollution and Control Strategy:** Natural Gas, Dry Low NO<sub>x</sub> Combustors, SCR
- (7) **Cooling Method:** Cooling Pond
- (8) **Total Site Area:** 9,500 Acres
- (9) **Construction Status:** P (Planned)
- (10) **Certification Status:** T (Regulatory Approval Received But Not Under Construction)
- (11) **Status with Federal Agencies:** T (Regulatory Approval Received But Not Under Construction)
- (12) **Projected Unit Performance Data:**  
Planned Outage Factor (POF): 2%  
Forced Outage Factor (FOF): 1%  
Equivalent Availability Factor (EAF): 97%  
Resulting Capacity Factor (%): Approx. 71% (First Year Base Operation)  
Average Net Operating Heat Rate (ANOHR): 6,850 Btu/kWh (Base Operation)  
Base Operation 75F 100%
- (13) **Projected Unit Financial Data \*,\*\***  
Book Life (Years): 25 years  
Total Installed Cost (In-Service Year \$/kW): 499  
Direct Construction Cost (\$/kW):  
AFUDC Amount (\$/kW):  
Escalation (\$/kW):  
Fixed O&M (\$/kW -Yr.): (2001 \$/kW-Yr.) 12.96  
Variable O&M (\$/MWH): (2001 \$/MWH) 0.037  
K Factor: 1.5397

\* \$/kW values are based on Summer capacity.

\*\* Fixed O&M cost includes capital replacement.

NOTE: Total installed cost already includes escalation and AFUDC.

**Schedule 9**  
**Status Report and Specifications of Proposed Generating Facilities**

- (1) **Plant Name and Unit Number:** Unsited Combined Cycle Unit # 1
- (2) **Capacity**  
a. Summer 1,107 MW  
b. Winter 1,209 MW
- (3) **Technology Type:** Combined Cycle
- (4) **Anticipated Construction Timing**  
a. Field construction start-date: 2005  
b. Commercial in-service date: 2007
- (5) **Fuel**  
a. Primary Fuel Natural Gas  
b. Alternate Fuel Distillate
- (6) **Air Pollution and Control Strategy:** Natural Gas, Dry Low No<sub>x</sub> Combustors, SCR  
0.05% S. Distillate, & Water Injection on Distillate
- (7) **Cooling Method:** Unknown
- (8) **Total Site Area:** Unknown Acres
- (9) **Construction Status:** P (Planned)
- (10) **Certification Status:** P (Planned)
- (11) **Status with Federal Agencies:** P (Planned)
- (12) **Projected Unit Performance Data:**  
Planned Outage Factor (POF): 2%  
Forced Outage Factor (FOF): 1%  
Equivalent Availability Factor (EAF): 97%  
Resulting Capacity Factor (%): Approx. 70% (First Year Base Operation)  
Average Net Operating Heat Rate (ANOHR): 6,850 Btu/kWh (Base Operation)  
Base Operation 75F 100%
- (13) **Projected Unit Financial Data \*,\*\***  
Book Life (Years): 25 years  
Total Installed Cost (In-Service Year \$/kW): 571  
Direct Construction Cost (\$/kW):  
AFUDC Amount (\$/kW):  
Escalation (\$/kW):  
Fixed O&M (\$/kW -Yr.): (2003 \$kW-Yr.) 15.29  
Variable O&M (\$/MWH): (2003 \$/MWH) 0.41  
K Factor: 1.5397

\* \$/kW values are based on Summer capacity.  
\*\* Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes gas expansion, transmission interconnection and integration, escalation, and AFUDC.

**Schedule 9**  
**Status Report and Specifications of Proposed Generating Facilities**

- (1) **Plant Name and Unit Number:** Unsited Combined Cycle # 2
- (2) **Capacity**  
a. Summer 1,107 MW  
b. Winter 1,209 MW
- (3) **Technology Type:** Combined Cycle
- (4) **Anticipated Construction Timing**  
a. Field construction start-date: 2006  
b. Commercial In-service date: 2008
- (5) **Fuel**  
a. Primary Fuel Natural Gas  
b. Alternate Fuel Distillate
- (6) **Air Pollution and Control Strategy:** Natural Gas, Dry Low No<sub>x</sub> Combustors, SCR  
0.05% S. Distillate, & Water Injection on Distillate
- (7) **Cooling Method:** Unknown
- (8) **Total Site Area:** Unknown Acres
- (9) **Construction Status:** P (Planned)
- (10) **Certification Status:** P (Planned)
- (11) **Status with Federal Agencies:** P (Planned)
- (12) **Projected Unit Performance Data:**  
Planned Outage Factor (POF): 2%  
Forced Outage Factor (FOF): 1%  
Equivalent Availability Factor (EAF): 97%  
Resulting Capacity Factor (%): Approx. 70% (First Year Base Operation)  
Average Net Operating Heat Rate (ANOHR): 6,850 Btu/kWh (Base Operation)  
Base Operation 75F 100%
- (13) **Projected Unit Financial Data \*,\*\***  
Book Life (Years): 25 years  
Total Installed Cost (In-Service Year \$/kW): 581  
Direct Construction Cost (\$/kW):  
AFUDC Amount (\$/kW):  
Escalation (\$/kW):  
Fixed O&M (\$/kW -Yr.): (2003 \$kW-Yr.) 15.29  
Variable O&M (\$/MWH): (2003 \$/MWH) 0.41  
K Factor: 1.5397

\* \$/kW values are based on Summer capacity.

\*\* Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes gas expansion, transmission interconnection and integration, escalation, and AFUDC.

**Schedule 9**  
**Status Report and Specifications of Proposed Generating Facilities**

- (1) **Plant Name and Unit Number:** Unsited Combined Cycle # 3
- (2) **Capacity**  
a. Summer 1,107 MW  
b. Winter 1,209 MW
- (3) **Technology Type:** Combined Cycle
- (4) **Anticipated Construction Timing**  
a. Field construction start-date: 2008  
b. Commercial In-service date: 2010
- (5) **Fuel**  
a. Primary Fuel Natural Gas  
b. Alternate Fuel Distillate
- (6) **Air Pollution and Control Strategy:** Natural Gas, Dry Low No<sub>x</sub> Combustors, SCR  
0.05% S. Distillate, & Water Injection on Distillate
- (7) **Cooling Method:** Unknown
- (8) **Total Site Area:** Unknown Acres
- (9) **Construction Status:** P (Planned)
- (10) **Certification Status:** P (Planned)
- (11) **Status with Federal Agencies:** P (Planned)
- (12) **Projected Unit Performance Data:**  
Planned Outage Factor (POF): 2%  
Forced Outage Factor (FOF): 1%  
Equivalent Availability Factor (EAF): 97%  
Resulting Capacity Factor (%): Approx. 70% (First Year Base Operation)  
Average Net Operating Heat Rate (ANOHR): 6,850 Btu/kWh (Base Operation)  
Base Operation 75F 100%
- (13) **Projected Unit Financial Data \*,\*\***  
Book Life (Years): 25 years  
Total Installed Cost (In-Service Year \$/kW): 601  
Direct Construction Cost (\$/kW):  
AFUDC Amount (\$/kW):  
Escalation (\$/kW):  
Fixed O&M (\$/kW -Yr.): (2003 \$/kW-Yr.) 15.29  
Variable O&M (\$/MWH): (2003 \$/MWH) 0.41  
K Factor: 1.5397

\* \$/kW values are based on Summer capacity.

\*\* Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes gas expansion, transmission interconnection and integration, escalation, and AFUDC.

**Schedule 9**  
**Status Report and Specifications of Proposed Generating Facilities**

- (1) **Plant Name and Unit Number:** Unsited Combined Cycle # 4
- (2) **Capacity**  
a. Summer 1,107 MW  
b. Winter 1,209 MW
- (3) **Technology Type:** Combined Cycle
- (4) **Anticipated Construction Timing**  
a. Field construction start-date: 2010  
b. Commercial In-service date: 2012
- (5) **Fuel**  
a. Primary Fuel Natural Gas  
b. Alternate Fuel Distillate
- (6) **Air Pollution and Control Strategy:** Natural Gas, Dry Low No<sub>x</sub> Combustors, SCR  
0.05% S. Distillate, & Water Injection on Distillate
- (7) **Cooling Method:** Unknown
- (8) **Total Site Area:** Unknown Acres
- (9) **Construction Status:** P (Planned)
- (10) **Certification Status:** P (Planned)
- (11) **Status with Federal Agencies:** P (Planned)
- (12) **Projected Unit Performance Data:**  
Planned Outage Factor (POF): 2%  
Forced Outage Factor (FOF): 1%  
Equivalent Availability Factor (EAF): 97%  
Resulting Capacity Factor (%): Approx. 65% (First Year Base Operation)  
Average Net Operating Heat Rate (ANOHR): 6,850 Btu/kWh (Base Operation)  
Base Operation 75F 100%
- (13) **Projected Unit Financial Data \*,\*\***  
Book Life (Years): 25 years  
Total Installed Cost (In-Service Year \$/kW): 621  
Direct Construction Cost (\$/kW):  
AFUDC Amount (\$/kW):  
Escalation (\$/kW):  
Fixed O&M (\$/kW -Yr.): (2003 \$kW-Yr.) 15.29  
Variable O&M (\$/MWH): (2003 \$/MWH) 0.41  
K Factor: 1.5397

\* \$/kW values are based on Summer capacity.

\*\* Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes gas expansion, transmission interconnection and integration, escalation, and AFUDC.

**Schedule 10**  
**Status Report and Specifications of Proposed Transmission Lines**

**Sanford Unit # 4 Repowering**

The Sanford Unit # 4 transmission work has already been completed.

**Schedule 10**  
**Status Report and Specifications of Proposed Transmission Lines**

**Fort Myers – Two New CT's**

The Fort Myers transmission work is already completed.

**Schedule 10**  
**Status Report and Specifications of Proposed Transmission Lines**

**Manatee CC**

The new Manatee CC unit does not require any "new" transmission lines.

**Schedule 10**  
**Status Report and Specifications of Proposed Transmission Lines**

**Martin CC Conversion**

- |     |  |   |
|-----|--|---|
| (1) | Point of Origin and Termination:                     | Martin – Indiantown #2                    |
| (2) | Number of Lines:                                     | 1   |
| (3) | Right-of-way   | FPL Owned & New acquisitions              |
| (4) | Line Length:   | 12.9 miles                                |
| (5) | Voltage:   | 230 kV                                    |
| (6) | Anticipated Construction Timing:                     | Start date: 10/1/03<br>End date: 12/31/04 |
| (7) | Anticipated Capital Investment:<br>(Trans. and Sub.) | \$11,700,000                              |
| (8) | Substations:   | Martin 230kV and Indiantown               |
| (9) | Participation with Other Utilities:                  | None                                      |
- 

- |     |  |   |
|-----|--|---|
| (1) | Point of Origin and Termination:                     | Indiantown – Bridge                       |
| (2) | Number of Lines:                                     | 1   |
| (3) | Right-of-way   | FPL Owned                                 |
| (4) | Line Length:   | 10.0 miles                                |
| (5) | Voltage:   | 230 kV                                    |
| (6) | Anticipated Construction Timing:                     | Start date: 10/1/03<br>End date: 12/31/04 |
| (7) | Anticipated Capital Investment:<br>(Trans. and Sub.) | \$8,900,000                               |
| (8) | Substations:   | Indiantown and Bridge                     |
| (9) | Participation with Other Utilities:                  | None                                      |
-

## CHAPTER IV

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### Environmental and Land Use Information

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## **IV. Environmental and Land Use Information**

### **IV.A Protection of the Environment**

FPL operates in a sensitive, temperate/sub-tropical environment containing a number of distinct ecosystems with many endangered plant and animal species. Population growth in our service area is continuing, which heightens competition for air, land, and water resources that are necessary to meet the increased demand for generation, transmission, and distribution of electricity. At the same time, residents and tourists want unspoiled natural amenities, and the general public has an expectation that large corporations such as FPL will conduct their business in an environmentally responsible manner.

FPL has been recognized for many years as one of the leaders among utilities for our commitment to the environment. Our environmental leadership has been heralded by many outside organizations. For example, FPL was recently ranked first out of 28 major electric utilities surveyed in an environmental assessment conducted by Innovest, an independent advisory group. FPL was also awarded Edison Electric Institute's National Land Management Award for our stewardship of 25,000 acres surrounding our Turkey Point Plant. In addition, FPL won the Council for Sustainable Florida's award for our sea turtle conservation and education programs at our St. Lucie Plant. In 2001, FPL was awarded the 2001 Waste Reduction and Pollution Prevention Award from the Solid Waste Association of North America. We also received the 2001 Program Champion Award from the Environmental Protection Agency's Wastewise Program. The Florida Department of Environmental Protection named FPL a "Partner for Ecosystem Protection" for our emission-reducing "repowering" projects at our Fort Myers and Sanford Plants. In addition, FPL has been recognized by numerous federal and state agencies for our innovative endangered species programs which include such species as manatees, crocodiles, and sea turtles.

### **IV.B FPL's Environmental Statement**

To reaffirm its commitment to conduct business in an environmentally responsible manner, FPL developed an Environmental Statement in 1992 to clearly define the Company's position. This statement reflects how FPL incorporates environmental values into all aspects of the Company's activities and serves as a framework for

new environmental initiatives throughout the Company. The FPL environmental statement further establishes a long-term direction of environmental initiatives throughout the Company. FPL's Environmental Statement is:

It is the Company's intent to continue to conduct its business in an environmentally responsible manner. Accordingly, Florida Power & Light Company will:

- Comply with the spirit and intent, as well as the letter of, environmental laws, regulations, and standards.
- Incorporate environmental protection and stewardship as an integral part of the design, construction, operation, and maintenance of our facilities.
- Encourage the wise use of energy to minimize the impact on the environment.
- Communicate effectively on environmental issues.
- Conduct periodic self-evaluations, report performance, and take appropriate actions.

#### **IV.C Environmental Management**

In order to implement the Environmental Statement, FPL established an environmental management system to direct and control the fulfillment of the organization's environmental responsibilities. A key component of the system is an Environmental Assurance Program that is discussed below. Other components include: executive management support and commitment, written environmental policies and procedures, delineation of organizational responsibilities and individual accountabilities, allocation of appropriate resources for environmental compliance management (which includes reporting and corrective action when non-compliance occurs), environmental incident/emergency response, environmental risk assessment/management, environmental regulatory development and tracking, and environmental management information systems.

#### **IV.D Environmental Assurance Program**

FPL's Environmental Assurance Program consists of activities which are designed to evaluate environmental performance, verify compliance with Company policy as

well as with legal and regulatory requirements, and communicate results to corporate management. The principal mechanism for pursuing environmental assurance is the environmental audit. An environmental audit may be defined as a management tool comprising a systematic, documented, periodic, and objective evaluation of the performance of the organization and of the specific management systems and equipment designed to protect the environment. The environmental audit's primary objectives are to: facilitate management control of environmental practices and assess compliance with existing environmental regulatory requirements and Company policies.

#### IV.E Environmental Communication and Facilitation

FPL is involved in many efforts to enhance environmental protection through the facilitation of environmental awareness and in public education. Some of FPL's 2002 environmental outreach activities are noted in Table IV.E.1.

Activity	# of Participants
Visitors to Energy Encounter	19,000
Visitors to Manatee Park	150,000
Number of "visits" to FPL's Environmental Website	80,000
Number of pieces of Environmental literature distributed	>100,000

Table IV.E.1

*(All numbers are approximations.)*

#### IV.F Preferred and Potential Sites

Based upon its projection of future resource needs, FPL has identified preferred and potential sites for future generation additions. These preferred and potential sites are discussed in separate sections below.

##### IV.F.1 Preferred Sites

FPL identifies four preferred sites in this Site Plan: the existing Fort Myers plant site, the existing Sanford plant site, the existing Martin plant site, and the existing Manatee plant site. These four sites are the locations for capacity additions that FPL is committed to make during the 2003-2005 period.

The four preferred sites are discussed below.

### **Preferred Site # 1: Fort Myers Plant, Lee County**

The site is located on the 460-acre Fort Myers property. A repowering project has recently been completed at this facility. Six combustion turbines (CT's) were added that, along with heat recovery steam generating (HRSG) units and the existing steam turbines, comprise the main portion of the repowered facility. These units were completed and began commercial operation on natural gas in May 2002. Approximately 929 MW of incremental Summer capacity and 1,073 MW of incremental Winter capacity was added through the repowering. An existing bank of 12 simple cycle combustion turbine peaking units is also located at the site.

Two additional peaking simple cycle combustion turbines are under construction and are expected to begin commercial service in mid-2003. These peaking combustion turbines have dual fuel capability and are able to operate on either natural gas or distillate oil. These combustion turbines will add an additional 298 MW of Summer capability and 366 MW of Winter capability to the site.

The output capability of the existing bank of 12 CT's and the repowered unit at the site will be unaffected by the addition of the two new CT's.

The site has direct access to a four-lane highway, State Road (SR) 80, and barge access is available. The nearest town is Tice which is approximately 8 miles west of the site. The Fort Myers site has been listed as a potential or preferred site in previous FPL Site Plans.

#### **a and b. U.S. Geological Survey (USGS) Map and Proposed Facilities Layout Map**

A USGS map of the Fort Myers plant site, plus a map of the general layout of the proposed generating facilities at the site, is found at the end of this chapter.

#### **c. Map of Site and Adjacent Areas**

An overview map of the site and adjacent areas is also found at the end of this chapter. It is pertinent to note that several designations on the current South Florida Water Management District Florida Land Use, Cover, and Forms

Classification System (FLUCCS) appear to be in error or to require some clarification. For example, the freshwater marsh identified toward the western boundary of the site is actually FPL's 50-acre evaporation/percolation pond. Similarly, while there are scattered mangroves along the shore, the "Central Mangrove" area shown is not mangrove but is the FPL switchyard for that site. The "Improved Pasture" shown towards the east of the site is currently the location of a tree nursery.

d. **Existing Land Uses of Site and Adjacent Areas**

The land on the site is primarily dedicated to industrial use with surrounding grassy and landscaped areas. There is the previously mentioned 50-acre evaporation/percolation pond on the site. Much of the site has been recently used for direct construction activities.

FPL has recently donated an 18-acre island, located north of the plant in the Caloosahatchee River, to the United States Fish & Wildlife Service (USFWS) for the purpose of wildlife conservation. This island has been owned by FPL since the 1950's, but has never been developed. The USFWS has incorporated the island into the Caloosahatchee National Wildlife Refuge.

Lee County operates Manatee Park, (approximately 5 acres) with a manatee viewing area on FPL property to the east side of the discharge canal where it adjoins the Orange River south of SR 80. This manatee viewing area provides public viewing and education about the species.

The adjacent land uses are light commercial and retail to the east of the property and some residential areas located toward the west. Mixed scrub with some hardwoods and wetlands, plus agriculture land, can be found to the east and further to the south. The Caloosahatchee National Wildlife Refuge is located across the Caloosahatchee River, northwest of the power plant.

e. **General Environmental Features On and In the Site Vicinity**

1. **Natural Environment**

The site is adjacent to the south bank of the Caloosahatchee River near the confluence of the Orange River and the Caloosahatchee. Much of the site is no longer in its original natural condition. However, a scattering of mangroves can be found along the river shoreline. Some mixed scrub with some hardwoods and wetlands can be found to the east and further to the south. Other than the occasional congregation of manatees noted below, FPL is not aware of any significant environmental features on the site or in the vicinity.

2. **Listed Species**

The construction and operation of the new CT's at the site is not expected to affect any rare, endangered, or threatened species. The only known listed species associated with the site are the West Indian Manatees (*Trichechus manatees*: Federal - and State - listed as endangered) which are attracted to the warmed waters in the vicinity of the site discharge and can be found congregating in the area during cool weather.

The Florida Natural Areas Inventory (FNAI) reports the presence of the Eastern Indigo Snake (*Drymarchons corais couperi*: Federal - and State - listed as Threatened) and Tricolored Heron (*Egretta tricolor*: State - listed as a Species of Special Concern) within a two-mile radius of the site.

3. **Natural Resources of Regional Significance Status**

No Natural Resource of Regional Significance is identified on the plant site in the Southwest Florida Regional Strategic Policy Plan.

4. **Other Significant Features**

FPL is not aware of any other significant features of the site.

f. **Design Features and Mitigation Options**

The design option currently being pursued for the Fort Myers site is the addition of two stand-alone CT's. This new generation equipment will be installed on the existing facility property and will make effective use of existing transmission facilities and infrastructure although some substation and transmission line upgrades were required.

Mitigation options that have been incorporated include the use of combustion technology that is inherently low in air pollutant emissions.

g. **Local Government Future Land Use Designations**

The Local Government Future Land Use Plan designates the major portion of the site as Public Facilities and a small area as Resource Protection. Since there are no significant environmental resources on the site, and the "Resource Protection" designated area appears to be the location of a current tree nursery, FPL believes that this designation is in error.

h. **Site Selection Criteria and Process**

The Fort Myers plant has been selected as a preferred site due to consideration of various factors including system load and economics. Environmental issues were not a deciding factor since none of the existing preferred and potential sites exhibit significant environmental sensitivity or other environmental issues. All of these sites are considered ideally suitable for future expansion.

i. **Water Resources**

The available surface water source is the Caloosahatchee River and the available groundwater source is the sandstone aquifer.

j. **Geological Features of Site and Adjacent Areas**

The geology underlying the Fort Myers Plant consists of Quaternary Holocene and Pleistocene undifferentiated materials. The upper part of these

undifferentiated materials consists of fine-to-medium grained quartz sand with varying percentages of shell and clay. Hardpan frequently occurs at the base of the quartz sands. The lower section consists of shell beds with interbedded limestone. Underlying the undifferentiated materials are the Pliocene Tamiami formations, the Miocene Hawthorn formation, Oligocene Suwanee Limestone, the Eocene Crystal River and Williston formations, the Avon Park Limestone, and the Lake City Limestone.

Several stratigraphic units can be differentiated based upon shallow borings drilled on the plant property. Sand with some heterogeneous fill material related to past site construction activity covers most of the surface. It is underlain by layers of clayey sand and clay to a depth of approximately 23 feet. These units mantle a thicker clay unit with numerous shell fragments that occurs from 15 feet to about 55 feet below the surface. A silty sand with a trace of clay was encountered at 55 feet near the termination depth of one deep boring on the site.

The water table at the site occurs at levels from just under the surface to about 5 feet below grade. Locally, the surficial aquifer and surface water will generally flow toward the Caloosahatchee River. However, at the site, the intake and discharge canal will affect groundwater near the power block area. A drainage canal that borders the plant property on the west will affect groundwater flow along the western portion of the waste treatment area.

**k. Projected Water Quantities For Various Uses**

Facility water uses may include irrigation, potable use, etc. The total volume of these uses is estimated to be about 65 gallons per minute (gpm).

**l. Water Supply Source By Type**

For industrial processing, FPL anticipates that groundwater will be available. The new CT's will be air-cooled.

**m. Water Conservation Strategies Under Consideration**

A plan to treat and recycle equipment wash water, boiler blowdown, and equipment area runoff for use as service water would reduce ground water consumption.

**n. Water Discharges and Pollution Control**

Heated water discharge for the plant site as a whole will be dissipated using both the existing once-through cooling water system and a multi-cell-helper-cooling tower which will be used during the warmer months. Storm water runoff will be collected and used to recharge the surficial aquifer via a storm water management system. Design elements will be included to capture suspended sediments. Various facility permits mandate various sampling and testing activities which will provide an indication of any pollutant discharges. The facility employs a Best Management Practices (BMP) plan and Spill Prevention, Control, and Countermeasures (SPCC) plan to control the inadvertent release of pollutants.

**o. Fuel Delivery, Storage, Waste Disposal, and Pollution Control**

The combustion turbine-based repowering project, plus the addition of the two new CT's, required a natural gas pipeline to be installed. Florida Gas Transmission completed the permitting process and installed and operates the pipeline that serves the Fort Myers Plant. Virtually no solid waste is associated with natural gas firing.

**p. Air Emissions and Control Systems**

The natural gas-fired facilities at the plant site generally have air pollutant emissions that are substantially lower than emissions from the former oil-fired boilers. While several technologies are available for nitrogen oxide (NO<sub>x</sub>) emissions control, FPL is using a dry-low-NO<sub>x</sub> combustion turbine design. In these devices, combustion is staged in order to reduce the formation of combustion-derived oxides of nitrogen. FPL has committed to NO<sub>x</sub> emission limits for this facility that will be among the lowest in the state. Sulfur dioxide and particulate emissions are intrinsically low due to the lack of sulfur and

solids in natural gas fuel. Carbon monoxide and volatile organic compound emissions can each be controlled via the use of efficient combustion rather than through the use of add-on control devices. CT facilities have been permitted at several locations throughout the state of Florida including near Class I areas. Dry-low-NO<sub>x</sub> combustor systems have been repeatedly demonstrated to be the Best Available Control Technology (BACT) for the control of NO<sub>x</sub> emissions for this technology pursuant to the requirements of the Clean Air Act.

q. **Noise Emissions and Control Systems**

Lee County has a noise ordinance that limits noise at receiving property lines of residential, public space, agricultural, or institutional to 66 decibels in the daytime and 55 decibels at night. FPL will undertake studies to assure that noise level associated with the new CT's comply with the Lee County noise standard.

r. **Status of Applications**

FPL acquired all permits needed to commence construction. Modifications to operating permits were requested in 2002 and will continue to be pursued as necessary through 2003.

**Preferred Site # 2: Sanford Plant, Volusia County**

The site is located on the 1,718-acre FPL Sanford property just west of Lake Monroe on the north bank of St. Johns River in Volusia County. Current facilities on the site include one steam electric generating unit with a nominal rating of 138 MW and a recently repowered natural gas-fired unit with a nominal rating of 910 MW. One other existing unit, Unit # 4, has been shut down and is in the process of being repowered using combined cycle technology. The site is within the city limits of Debary, and the community of Debary is located approximately 2 miles to the northwest. The town of Deland is approximately 4 miles west of the site. The site has direct access to a four-lane highway, State Road (SR) 17-92, and barge access is available. The Sanford site has been listed as a potential or preferred site in previous FPL Site Plans.

As mentioned above, FPL is in the process of adding new capacity at the Sanford site by replacing one existing oil-and gas-fired unit (i.e., existing Unit # 4) with advanced natural gas fired combustion turbines (CT's) and heat recovery steam generators (HRSG's). This type of steam generation replacement is commonly called repowering.

This repowering will enable FPL to produce significantly more electrical output with nearly the same environmental impact. The repowering of Unit # 4 will produce approximately 567 additional MW during Summer conditions, and approximately 652 additional MW of generation during Winter conditions, beyond the current capabilities of this unit. The existing 138 MW Unit # 3 and the recently repowered Unit # 5 will be unaffected by the repowering of Unit # 4.

a. and b. **U.S. Geological Survey (USGS) Map and Proposed Facilities  
Layout Map**

A USGS map of the Sanford plant site, plus a map of the general layout of the proposed generating facilities at the site, are found at the end of this chapter.

c. **Map of Site and Adjacent Areas**

An overview map of the site and adjacent areas is also found at the end of this chapter.

d. **Existing Land Uses of Site and Adjacent Areas**

A large part of the property is covered by the 1,100-acre closed cycle cooling pond that occupies almost the entire northern portion of the site. The remainder of the site is primarily rangeland and the power plant facilities.

The surrounding land use is largely crop land and pasture. To the east of the plant there is a small residential area and some commercial/industrial land use. There are some residential areas mixed in with the agricultural areas located between the site and the St. Johns River to the west. To the south is the St. Johns River. Residential homes and commercial/industrial businesses are located along the south side of the river.

e. General Environmental Features On and In the Site Vicinity

1. Natural Environment

Small, scattered wooded areas can be found on the site. There are two small areas of wetland marsh on the site and a few acres of wetland forest along the riverbank. There are some wooded areas on the site, primarily upland coniferous forest. Forested and non-forested wetlands can be found to the west, adjacent to the river. River and wetland areas towards the northwest are designated as part of the Wekiwa River Aquatic Preserve and Wekiwa River State Preserve.

2. Listed Species

One inactive bald eagle (*Haliaeetus leucocephalus*: Federal - and State - listed as Threatened) nest has been found on the site. Bald eagles have also nested in the Lake Monroe area. There are a number of other eagles nests in the vicinity of the site, primarily the St. Johns River. The Florida Natural Areas Inventory (FNAI) reports several Scrub Jay populations (*Aphelocoma coerulescens*: Federal - and State - listed as Threatened) located in scrub vegetation to the northwest of the site. West Indian Manatees (*Trichechus manatus*: Federal - and State - listed as Endangered) have also been found in this area.

3. Natural Resources of Regional Significance Status

The Wekiwa River Aquatic Preserve extends along the St. John's River in the vicinity of the plant.

4. Other Significant Features

FPL is not aware of any other significant features of the site.

f. **Design Features and Mitigation Options**

The design option for the Sanford Site is the repowering of one existing oil - and gas - fired boiler with natural gas fired combustion turbines (CT's) and heat recovery steam generators (HRSG's). Steam produced in the new HRSG's is directed to the existing steam turbine. Natural gas - fired facilities represent one of the cleanest, most efficient technologies currently available for capacity additions to FPL's system.

g. **Local Governmental Future Land Use Designations**

The site is designated as "Industrial Utilities" in the Local Government land use plan. The city is currently updating its Land Use Plan. It is expected that the name, but not the expected use designation, may change. Land use designation of the surrounding area is primarily Agricultural. There is an area of "Public Institution" around Lake Monroe to the southeast and a small area of "Mixed Use" to the west along Barwick Road.

h. **Site Selection Criteria and Process**

The Sanford plant has been selected as a preferred site due to consideration of various factors including system load and economics. Environmental issues were not a deciding factor since none of the existing preferred and potential sites exhibit significant environmental sensitivity or other environmental issues. All are considered permissible.

i. **Water Resources**

For surface water supply, the available water resource is the St. John's River and/or the on-site cooling pond, which is periodically refilled from the St. John's River. For ground water supply, the available resources are the shallow aquifer or the Floridan Aquifer.

j. **Geological Features of Site and Adjacent Areas**

The near-surface geology of Volusia County within the St. John's River Valley, like that of most of north central Florida, is represented by late Tertiary and Quaternary geological units. Soils in the vicinity of the plant include

unconsolidated Pleistocene to Recent sands, with intervening beds of shells and clay. These deposits form the reservoir for the surficial aquifer in the county. One of the two major structural features in the area is the Peninsula Arch that forms the backbone of the Florida Platform. The arch trends south-southeast and extends from southeast Georgia through Florida into the Great Bahamas. The geological material can be divided into an upper sequence of unconsolidated or poorly consolidated clastic sediments and a lower sequence of limestone rocks. These lower formations are part of the principle hydrologic unit referred to as the Floridan Aquifer. This aquifer, the top of which generally occurs through the region at or below 100 feet, is the major source of potable groundwater in Volusia County. Two faults, one trending north-to-south, the other trending east-to-west, intersect a number of miles north of the site. Downward displacement of the fault is hypothesized as being approximately 60 to 100 feet. The upper clastic region ranges in age from Miocene to Recent and is mostly sand but also contains discontinuous and interfingering lenses and beds of clay and silt.

k. **Projected Water Quantities for Various Uses**

FPL has estimated that 150 gallons per minute (gpm) is required for industrial processing purposes (boiler makeup, service water, etc.). Note that Unit # 4 currently takes its cooling water directly from an on-site FPL cooling pond and will continue to do so after repowering is completed. The cooling water needs for both of the repowered facilities (i.e., Unit # 4 and Unit # 5) will represent an increase over previous cooling water needs due primarily to the increased heat loading to the cooling pond that results from operating the larger repowered units more than they have been operated in the past and corresponding evaporative losses. Therefore, greater quantities of water will be used. Existing Unit # 3 will continue to use water from the St. John's River in a once-through cooling mode.

FPL evaluated alternative sources of water to meet the expected needs of the site. The existing off-site wells and the existing once - through cooling water system and cooling pond will continue to be used after the repowering project is completed, albeit the use of groundwater will decrease significantly from past usage.

I. **Water Supply Sources by Type**

The available surface water supply source is the St. John's River. The Floridan Aquifer is an available groundwater source for service water and boiler water.

m. **Water Conservation Strategies Under Consideration**

In 2000 FPL obtained a revised Consumptive Use permit from the St. John's Water Management District. This permit reduced the quantity of water that FPL has historically been permitted to withdraw from the ground in favor of additional use of surface water.

n. **Water Discharges and Pollution Control**

Heated water discharges will be dissipated using the existing once - through cooling water system of the existing cooling pond for repowered Unit # 4. Non-point source discharges are collected and reused. Treating and recycling equipment wash water, boiler blow-down, and equipment area runoff helps to minimize industrial discharges. Storm water runoff is collected and used to recharge the surficial aquifer via a stormwater management system. Design elements have been included to capture suspended sediments. Various facility permits mandate sampling and testing activities which provide indications of any pollutant discharges. The facility employs a Best Management Practices (BMP) plan and Spill Prevention, Control, and Countermeasure (SPCC) plan to control the inadvertent release of pollutants.

o. **Fuel Delivery, Storage, Waste Disposal, and Pollution Control**

The repowered facilities at the Sanford site required a larger natural gas pipeline to be installed. FPL contracted with Florida Gas Transmission Company (FGT) to permit, install, and operate this facility which is now fully operational. Virtually no waste is associated with natural gas firing.

p. **Air Emissions and Control Systems**

A natural gas-fired facility generally has air pollutant emissions that are substantially lower than emissions from the prior oil-fired boilers. While several technologies are available for nitrogen oxide (NO<sub>x</sub>) emissions control, the chosen technology for the Sanford site is a dry low NO<sub>x</sub> combustion turbine design type. In these types of devices, combustion is staged in order to reduce the formation of combustion-derived oxides of nitrogen. Sulfur dioxide and particulate emissions are intrinsically low due to the lack of sulfur and solids in natural gas fuel. Carbon monoxide and volatile organic compound emissions can each be controlled via the use of efficient combustion rather than through the use of add-on control devices. CC and CT facilities have been permitted at several locations throughout the state of Florida. Dry-low-NO<sub>x</sub> combustor systems have been repeatedly demonstrated to be the Best Available Control Technology (BACT) for the control of NO<sub>x</sub> emissions for this technology pursuant to the requirements of the Clean Air Act.

q. **Noise Emissions and Control Systems**

Noise emissions from the project are not significantly different from current levels at the plant prior to repowering. FPL installed appropriate sound attenuation devices including insulation on high energy piping systems in order to ensure that sound levels do not exceed allowable levels. Similar natural gas-fired facilities (the Lauderdale plant in Broward County, the Fort Myers plant in Lee County, and the Martin plant in Martin County) have been constructed and operated without exceeding allowable noise levels.

r. **Status of Applications**

FPL acquired all permits needed to commence construction. Modifications to operating permits were requested in 2002 and will continue to be pursued as necessary through 2003.

### **Preferred Site # 3: Manatee Plant, Manatee County**

The site is located in unincorporated north central Manatee County approximately 2.5 miles south of the Hillsborough-Manatee County line. It is 5 miles east of Parrish, Florida and is approximately 5 miles east of U.S. Highway 301 and 9.5 miles east of Interstate 75 (I-75). State Road (SR) 62 is about 0.5 miles south of the site. Saffold Road marks the eastern boundary of the site.

FPL's Manatee Plant occupies a portion of the approximately 9,500 acre Manatee Site which is owned wholly by FPL. The site includes a 4,000-acre cooling pond including the dike area. The existing approximately 1,620 MW (Summer) of generating capacity is made up of two steam units (Units # 1 and # 2) which have been in service since 1976 (Unit # 1) and 1977 (Unit # 2). These units burn both fuel oil (residual) with a maximum sulfur content of 1 percent and natural gas. Natural gas may be fired singly or in combination with fuel oil. A recent agreement between FPL and Gulfstream Natural Gas Systems (Gulfstream) will provide two natural gas sources for these units.

Pending final approval by the Governor and Cabinet, additional generating capacity will be added to the site in 2005 to meet projected FPL system capacity needs. Four new combustion turbines (CT's), four new heat recovery steam generators (HRSG's), and a new steam turbine generator are scheduled for in - service operation beginning in June, 2005. The four new CT's, HRSG's and steam turbine will ultimately be operating in combined cycle (CC) configuration. This new CC unit will add 1,107 MW (Summer) and 1,201 MW (Winter) capability to the site. This new CC Unit will be designated as "Manatee Unit # 3".

Unit # 3 will be located west of the existing generating Units # 1 and # 2. The location of the new combined cycle Unit # 3 at the Manatee Plant site and the selection of the highly efficient combined cycle technology (firing clean natural gas) will maximize the beneficial use of the site while minimizing environmental and land use impacts otherwise associated with the development of a new generating plant of this capacity. The Manatee site has been previously listed as a preferred or potential site in previous FPL Site Plans.

a. and b. **Map of the Manatee Plant Site and Land Use**

A map indicating the Manatee plant site showing the general layout of the facilities and a map indicating the land use of the site are found at the end of this chapter.

c. **Map of Site and Adjacent Areas**

An overview map of the site and adjacent areas is also found at the end of this chapter.

d. **Existing Land Uses of Site and Adjacent Areas**

A major portion of the site consists of a 4,000 acre cooling pond. Manatee Units # 1 and # 2 will not be affected by the addition of Unit # 3. The area for Unit # 3 is expected to comprise approximately 73 acres. The site and surrounding land uses are almost exclusively agriculture with the exception of the Willow Shores residential area located northwest of the Manatee Plant site. Individual homes are located in the larger of two out parcels within the Manatee Plant site along SR 62 at the northeast corner of the site. The vast majority of the Manatee Plant site has been redesignated from Agricultural/Rural to Major Public/Semi Public (1) (P/SP) land use category by the Manatee County Commission on November 19, 2002 with the approval of Ordinance 02-13. Electric generating plants are specifically allowed in the P/SP category in accordance with the Manatee County Local Government Comprehensive Plan and Land Development Regulation Act, Chapter 163, Part II, Florida Statutes (FS).

e. **General Environmental Features On and In the Site Vicinity**

1. **Natural Environment**

There are no incorporated areas within 5 miles of the Manatee Plant site. Unincorporated communities in the area include Willow, located about 2 miles north of the Manatee Plant; Parrish, located about 5 miles southwest of the plant; and, in Hillsborough County, Sundance, located 3 miles northwest of the plant; Sun City Center, located 7

miles north of the plant; and Wimauma, located 8 miles northeast of the plant.

The Manatee Plant site includes areas of improved pasture with forested land southeast of the project area. This forested area is comprised of flat woods and oak habitat. The western side of the Manatee Plant site is currently used for row crops (tomato farm). There are also wetlands to the southeast containing wet pine flat woods mixed with dry pine flat woods. There will not be any disturbance of existing wetlands associated with this project.

## **2. Listed Species**

Construction and operation of the new Unit # 3 at the site is not expected to affect any rare, endangered, or threatened species. The majority of the site is cleared, grassed, and periodically mowed. The project area has been significantly altered by the construction and operation of the existing plant facilities, and, as a result, wildlife utilization of this area is expected to be minimal. Common wading birds utilizing the plant site outside of the project area include the great blue heron, little blue heron, great egret, snowy egret, and the white ibis. Typical mammals found in the habitats surrounding the project area are common bobcat, raccoon, deer, feral hog, opossum, armadillo, skunk and gray squirrel. Avian species observed in the vicinity of the project include bald eagles, a variety of songbirds, red-shouldered hawks, and marsh hawks.

## **3. Natural Resources of Regional Significance Status**

There are no county, State or Federally designated areas located within one mile of the plant site. The construction and operation of Manatee Unit # 3 is not expected to have any adverse impacts on parks, recreation areas, or environmentally sensitive lands that are associated with the Little Manatee River within a 5-mile radius of the project site. These lands include: Little Manatee River State Recreation Area, Little Manatee River State Canoe Trail, Florida Gulf Coast Railroad Museum, Cockroach Bay Aquatic Preserve, Critical

Manatee Habitat, South Hillsborough Wildlife Corridor, Hillsborough County ELAPP Parcels, and SOR-Little Manatee River.

**4. Other Significant Features**

FPL is not aware of any other significant features of the site.

**f. Design Features and Mitigation Options**

The design option, Manatee Unit # 3, is the addition of four new combustion turbines and HRSG's and one new steam turbine generator in combined cycle mode in a 4x1 configuration. Manatee Unit # 3 is scheduled to begin operation in mid – 2005. Natural gas, delivered via pipeline, will be the sole fuel for this unit.

Mitigation options being planned for Manatee Unit # 3 include the capture and reuse of plant process water and rainwater. In addition, other mitigating options include the use of combustion technology that is very efficient and low in air pollutant emissions, combined with pollution control technology (dry-low NO<sub>x</sub> burners and selected catalytic reduction equipment).

**g. Local Government Future Land Use Designations**

As mentioned above, the Local Government Future Land Use Plan is consistent with the existing Designated uses of the Manatee Plant Site as major portions of the site are designated as Major Public/Semi Public (1) – P/PS/. Electric generating plants are specifically allowed in this land use category.

**h. Site Selection Criteria and Process**

The Manatee site has been selected as a preferred site due to consideration of various factors including system load and economics. Also, the at – the – time projected availability of a natural gas pipeline that will be available to Unit # 3 (as well as Units # 1 and # 2) in the near future was also a major factor in the selection of the Manatee site for the new 4x1 CC unit. Environmental issues were not a deciding factor since none of the existing preferred and potential

sites exhibit significant environmental sensitivity or other environmental issues. All of these sites are considered permissible.

i. **Water Resources**

The available surface water source is the Little Manatee River which supplies makeup water for the 4,000-acre cooling pond. Plant process and service water requirements are currently supplied by the cooling pond. There are three wells in the Floridan Aquifer that are reserved for standby purposes.

j. **Geological Features of Site and Adjacent Areas**

Manatee County has three physiographic provinces: the Gulf Coast Lowlands, the DeSoto Plains, and the Polk Upland. The Manatee Plant is situated on the boundary of the DeSoto Plains and the Gulf Coast Lowland provinces. The geology underlying the Manatee Plant consists of unconsolidated sediments comprised of sand, clay silt, marl shell, limestone, and phosphorite (terrace deposits) from the Pleistocene age to recent. Undifferentiated deposits comprised of sand and clay are generally described to be less than 25 feet thick. Underlying the differentiated materials are the Miocene Hawthorn Formation, the Tampa Member, the Suwanee Limestone of the Oligocene age, the Ocala Limestone of the Eocene Age, the Avon Park Formation, the Oldsmar Formation of the Eocene age, and the Cedar Key Formation of the Paleocene age.

The major hydrogeologic units that exist in the vicinity of the site include, in descending order: the surficial aquifer system, the intermediate aquifer system, and the Upper Floridan aquifer. The surficial aquifer system is generally unconfined in Manatee County and consists of Quaternary deposits of predominately marine and nonmarine quartz sand, clayey sand, shell, shelly marl, phosphorite, and occasional stringers marl and limestone. In the vicinity of the site the surficial sediments are approximately 25 feet thick.

k. **Projected Water Quantities for Various Uses**

The estimated additional quantity of water for industrial processing is estimated to be 150 gpm (gallons per minute) plant process and service water.

FPL operates on-site water treatment systems for each of these uses. Water quantities for other uses such as irrigation and potable water are estimated to be approximately 5 gpm.

**I. Water Supply Sources by Type**

Manatee Unit # 3 will utilize the existing on-site cooling pond as its source of cooling water. The cooling pond operates as a "closed cycle" system; any makeup water is provided from the Little Manatee River to replace net evaporation and seepage losses from the pond. These makeup needs are within the existing agreement between FPL and the Southwest Florida Water Management District (SWFWMD). There are three wells currently on reserve (stand-by) that are in the Floridan Aquifer. FPL is currently evaluating alternative water sources for use at the Manatee Plant site.

**m. Water Conservation Strategies Under Consideration**

Available water including non-contact storm water, treated industrial wastewater, treated sanitary wastewater, and recovered service water are captured and returned to the cooling pond. Storm water from the equipment areas is also treated and returned to the cooling pond.

**n. Water Discharges and Pollution Control**

The Manatee Plant utilizes a Best Management Practices (BMP) plan, Spill Prevention, Control, and Countermeasure (SPCC) plan to assist in the control of inadvertent release of pollutants. Storm water runoff will be collected and routed to detention ponds. Construction activities will be managed so that equipment maintenance and fueling are performed in designated areas so that, in the event of a spill or release of any contaminant, impacts to any surface water or the cooling pond are minimized.

**o. Fuel Delivery, Storage, Waste Disposal, and Pollution Control**

The site is already serviced by fuel delivery services and facilities for residual, low sulfur (1 percent) fuel oil and, most recently, natural gas as an alternate fuel for existing Units # 1 and # 2. The Unit # 3 addition will be solely fueled by

natural gas that could be supplied by either Gulfstream or FGT as previously discussed.

**p. Air Emissions and Control Systems**

The addition of natural gas as a permitted fuel for existing Units # 1 and # 2 is expected to lower overall emissions during periods when natural gas, instead of fuel oil, is used. In addition, a NO<sub>x</sub> reduction technology, reburn, has been approved for installation on Units # 1 and # 2 within the next several years.

The use of clean fuels and combustion controls will minimize air emissions from Unit # 3 and ensure compliance with applicable emission limiting standards. Using clean fuels minimizes emissions of sulfur dioxide (SO<sub>2</sub>), particulate matter, and other fuel-bound contaminants. Combustion controls similarly minimize the formation of carbon monoxide and volatile organic compounds. NO<sub>x</sub> emissions will be controlled using dry-low NO<sub>x</sub> combustion technology and selective catalytic reduction (SCR). These design alternatives constitute the Best Available Control Technology for air emissions, and minimize such emissions while balancing economic, environmental, and energy impacts. Manatee Unit # 3 will incorporate features that will make it one of the most efficient and cleanest power plants in the State of Florida.

**q. Noise Emissions and Control Systems**

Noise emissions from the project are not anticipated to be significantly different from the current levels at the existing plant. Similar natural gas-fired facilities in Broward and Martin Counties have been constructed and operated without exceeding allowable noise levels.

**r. Status of Applications**

FPL filed the Site Certification Application (SCA) for the Manatee Plant Unit # 3 with the Florida Department of Environmental Protection (FDEP) on February 20, 2002 and received a positive recommendation from the Administrative Law Judge (ALJ) for the project on February 19, 2003.

#### **Preferred Site # 4: Martin Plant, Martin County**

The Martin site is located approximately 40 miles northwest of West Palm Beach, 5 miles east of Lake Okeechobee, and 7 miles northwest of Indiantown in Martin County, Florida. The site is bounded on the west by the Florida East Coast Railway (FEC) and the adjacent South Florida Water Management District (SFWMD) L-65 Canal, on the south by the St. Lucie Canal (C-44 or Okeechobee Waterway), and on the northeast by SR 710 and the adjacent CSX Railroad. The Martin site was identified in 1987 as a preferred location for development of coal gasification/combined cycle electric generation facilities and subsequent FPL Site Plans have continued to identify this site as a preferred site.

The existing 2,850 MW (Summer) of generating capacity at FPL's Martin site occupies a portion of the approximately 11,300 acres that are wholly owned by FPL. The generating capacity is made up of two steam units (Units # 1 and # 2), plus two combined cycle units (Units # 3 and # 4), and two combustion turbine units (Units # 8a and # 8b). The site includes a 6,800-acre cooling pond (6,500 acres of water surface and 300 acres of dike area) and approximately 300 acres for the existing power plant units and related facilities.

Additional generating capacity was added to the site in 2001 in the form of two combustion turbines (CT's) that operate in simple cycle mode using natural gas. Pending final project approval by the Governor and Cabinet, these two CT's will be converted into a four-on-one (4X1) combined cycle (CC) unit with the addition of two new CTs, four new Heat Recovery Steam Generators (HRSGs), and a new steam turbine generator. The resulting CC unit will be known as Martin Unit # 8. It is estimated to be in service in mid-2005 adding approximately 800 MW of capacity.

#### **a. and b. U.S. Geological Survey (USGS) Map and Proposed Facilities**

##### **Layout**

A USGS map of the Martin plant site, plus a map of the general layout of the proposed generating facilities at the site, are found at the end of this chapter.

c. **Map of Site and Adjacent Areas**

An overview map of the site and adjacent areas is also found at the end of this chapter.

d. **Existing Land Uses of Site and Adjacent Areas**

A major portion of the site consists of a 6,800-acre cooling pond. The existing power plant facilities are located on approximately 300 acres. To the east of the power plant there is an area of mixed pine flat wood with a scattering of small wetlands. To the north of the cooling pond there is a 1,200-acre area which has been set aside as a mitigation area. There is a peninsula of wetland forest on the West Side of the reservoir, that is named the Barley Barber Swamp. The Barley Barber Swap encompasses 400 acres and is preserved as a natural area. There is also a 10-kilowatt (kW) photovoltaic energy facility at the south end of this site.

e. **General Environment Features On and In the Site Vicinity**

1. **Natural Environment**

As noted above, the Barley Barber Swamp is located on the site. There is also a 1,200-acre mitigation area in the northern area of the site where wetlands and uplands have been restored. Along the south and west sides of the cooling pond is an area where the vegetation has been maintained in its natural state in order to serve as a wildlife corridor. There are pine flat woods and small-scattered wetlands to the east of the plant.

2. **Listed Species**

Construction and operation of a new unit at the site is not expected to affect any rare, endangered, or threatened species. There are two active Bald Eagle (*Haliaeetus leucocephalus*: Federal - and State - listed as Threatened) nests that have been on the site for many years. The Florida Natural Areas Inventory (FNAI) database notes a record of Eastern Indigo Snakes (*Drymachon coralais coupert*, which

are Federal - and State - listed as threatened) in the Barley Barber Swamp. A number of other Bald Eagle nests and sightings of Eastern Indigo Snakes are reported by the FNAI database within a two-mile radius of the site. Infrequent sightings of Florida Panther have been made in the vicinity of the site area.

**3. Natural Resources of Regional Significance Status**

The Treasure Coast Regional Planning Council lists the "FPL Preserve", including the Barley Barber Swamp, as a Significant Regional Facility. Natural communities such as uplands and wetlands are also generically listed as Resources of Regional Significance.

**4. Other Significant Features**

FPL is not aware of any other significant features of the site.

**f. Design Features and Mitigation Options**

The design option is to add two new CT's and four new HRSG's and a new steam turbine that, together with the two existing CT's, will comprise Martin Unit # 8. This unit is scheduled to be in-service in mid-2005. Natural gas delivered via pipeline is the primary fuel type for this unit (with light oil serving as a backup fuel). Natural gas-fired facilities are among the cleanest, most efficient technologies currently available.

Mitigation options being considered include the capture and reuse of plant process water and rainwater, plus the use of cooling towers. The facility already encompasses several preserved areas where wildlife is abundant.

**g. Local Government Future Land Use Designations**

Local government future land use designation for the site is "Public Utilities". Designations for the surrounding area are primarily "Agricultural". There are also limited areas of "Agricultural Ranchette", "Industrial", and a small "Commercial" area designation. To the southeast of the property, fronting on the St. Lucie Canal, is an area designated for "Public Conservation".

**h. Site Selection Criteria Process**

The Martin plant has been selected as a preferred site due to consideration of various factors including system load and economics. Environmental issues were not a deciding factor since none of the existing preferred and potential sites exhibit significant environmental sensitivity or other environmental issues. All of these sites are considered permissible.

**i. Water Resources**

Surface water resources currently used at the Martin facility include the cooling pond which takes its water from the St. Lucie canal. The available ground water resource is the surficial aquifer system which is used as a source of potable water and for service water for Units # 1 and # 2. Both of these sources are available for use with the site expansion.

**j. Geological Features of Site and Adjacent Areas**

FPL's Martin site is underlain by approximately 13,000 feet of sedimentary rock strata. The basement complex in this area consists of Paleozoic igneous and metamorphic rocks about which little is known due to their great depth.

Overlying the basement complex to the ground surface are sedimentary rocks and deposits that are primarily marine in origin. Below a depth of about 400 feet these rocks are predominantly limestone and dolomite. Above 400 feet the deposits are largely composed of sand, silt, or clay. The deepest formation in Martin County on which significant published data are available is the Eocene Age Avon Park. Limited information is available from wells penetrating the underlying Lake City formation. The published information on the sediments comprising the formations below the Avon Park Limestone in western Martin County is based on projections from deep wells in Okeechobee, St. Lucie, and Palm Beach Counties.

**k. Projected Water Quantities for Various Uses**

The estimated additional quantity of water required for industrial processing is 130 gallons per minute (gpm) for uses such as boiler water and service water.

FPL operates on-site water treatment systems for each of these uses. Cooling water for new Unit # 8 will be supplied by the addition of cooling towers. The two existing CT's that will be converted into combined cycle operation are currently air-cooled. Makeup water for the pond is taken from the St. Lucie canal. The current makeup water quantity to the cooling pond (approximately 4,800 gpm) is expected to be adequate for the proposed expansion. Water quantities needed for other uses such as irrigation and potable water are estimated to be approximately 5 gpm.

**i. Water Supply Sources by Type**

Martin Unit # 8 will utilize the existing on-site cooling pond as the source of cooling water for the cooling towers and as a heat sink for the dissipation of cooling water heat. The cooling pond operates as a "closed cycle" system in which heated water from the generating unit loses its heat as it is circulated within the pond and back around to the plant intake. Water is also collected in a seepage ditch surrounding the cooling pond and is then pumped back into the cooling pond. Makeup water to the pond is withdrawn from the St. Lucie canal as needed to replace net evaporation and seepage losses from the pond. Such needs will comply with the existing agreement between FPL and the South Florida Water Management District (SFWMD) regarding allocation of cooling water to the pond and with SFWMD's regulations for consumptive water use.

The existing water treatment system at the plant, which provides treated water for use in the Unit # 1 and # 2 boilers, as well as for the HRSG's associated with Units # 3 and # 4, will be used to provide treated water for Unit # 8.

**m. Water Conservation Strategies Under Consideration**

Impacts on the surficial aquifer will be reduced by changing the source of plant process water to the Floridan Aquifer upon completion of Unit # 8. In addition, the entire plant site captures and reuses process water whenever feasible and manages stormwater in such a manner so as to recharge the surficial aquifer.

n. **Water Discharges and Pollution Control**

Heated water discharges will be dissipated in the cooling pond. Non-point source discharges are not an issue since there are none at this facility. Industrial discharges will be minimized by treating and recycling equipment wash water, boiler blowdown water, and equipment area runoff. Storm water runoff is collected and used to recharge the surficial aquifer via a storm water management system. Design elements have been included to capture suspended sediments. Facility permits mandate various sampling and testing activities that provide indications of any pollutant discharges. The facility employs a Best Management Practices (BMP) plan and Spill Prevention, Control, and Countermeasure (SPCC) plan to control the inadvertent release of pollutants.

o. **Fuel Delivery, Storage, Waste Disposal, and Pollution Control**

The site is already serviced by multiple fuel delivery facilities. However, the addition of new Unit # 8 will require an enlargement of the existing natural gas pipelines, the installation of a new pipeline, or the addition of another pipeline compressor station. There are currently two natural gas supply lines into the facility, as well as an oil pipeline, which serve the existing steam boilers and combined cycle generating units. Distillate fuel oil is also received by truck and stored in above ground storage tanks. The existing natural gas line also serves CT Units # 8a and # 8b.

p. **Air Emissions and Control Systems**

FPL's plan for Unit # 8 is subject to "New Source Review" under Federal and State Prevention of Significant Deterioration (PSD) regulations. This review requires these units to meet New Source Performance Standards (NSPS) and that Best Available Control Technology (BACT) be selected to control emissions of those pollutants emitted in excess of applicable PSD significant emission rates. The primary purpose of BACT analysis is to minimize the allowable increases in air pollutants taking into account energy, environmental, and economic impacts. This process provides for the potential for future economic growth without significantly degrading air quality.

q. Noise Emissions and Control Systems

A field survey and impact assessment of noise expected to be caused by unit construction at the site indicated that construction noise would be below current noise levels for the residents nearest the site. Noise from the operation of the new unit will also be within allowable levels.

r. Status of Applications

A Site Certification Application (SCA) was filed in December, 1989, for the construction and operation of the Martin Coal Gasification/Combined Cycle project under the Florida Electrical Power Plant Siting Act.

On June 15, 1990, the Public Service Commission issued a Determination of Need Order for proposed Martin Units # 3 and # 4. This determination of need applied to the additional 832 MW of combined cycle generation. The Siting Board issued a Land Use Order on June 27, 1990. The Certification Hearing was held on November 5-7, 1990. On February 12, 1991, the Governor and Cabinet, serving as the Siting Board, approved the construction and operation of natural gas-fired combined cycle Units # 3 and # 4 and determined that the Martin Site has capacity to accommodate additional combined cycle units fueled by natural gas or fuel oil.

Since the initial certification in 1991, the certification was modified five times through 1999 to provide authorization for items such as CT testing, increasing the cooling pond elevation, incorporating changes from other permits, and incorporating a custom fuel monitoring program. For the addition of the two simple cycle CT's mentioned above, FPL obtained a sixth modification to the existing site certification in August 2000.

In order to convert these two CT's from simple cycle to (4X1) CC configuration (Unit # 8), a seventh modification to the Site Certification is required. FPL filed the SCA on February 1, 2002 with the Florida Department of Environmental Protection (FDEP). A positive recommendation from the Administrative Law Judge for the project was received in early March of 2003. The certification process is expected to be completed with Governor and Cabinet's final review near the end of May 2003.

#### **IV.F.2 Potential Sites**

Five (5) sites are currently identified as potential sites for future generation additions to meet FPL's 2007 – on capacity needs.<sup>2</sup> These sites have been identified as “potential sites” due to considerations of location to FPL load centers, space, infrastructure, and/or accessibility to fuel and transmission facilities. These sites are suitable for different capacity levels and technologies.

Each of these potential sites offers advantages and disadvantages relative to engineering considerations and/or costs associated with the construction and operation of feasible technologies. In addition, each potential site has different characteristics that could require further definition and attention. For purposes of estimating water usage amounts, it is assumed that a natural gas-fired CC unit would be the technology of choice for any capacity additions at the sites.

Permits are presently considered to be obtainable for all of these sites, assuming measures can be taken to mitigate any particular site-specific environmental concerns that may arise. No significant environmental constraints are currently known for any of these five sites. The potential sites briefly discussed below are presented in alphabetical order. At this time FPL considers each site to be equally viable.

##### **Potential Site # 1: Cape Canaveral Plant, Brevard County**

This site is located on the FPL Cape Canaveral Plant property in unincorporated Brevard County. The city of Port St. Johns is located less than a mile away. The site has direct access to a four-lane highway (US 1). A rail line is located near the plant. The existing facility consists of two 400 MW (approximate) steam boiler type generating units.

##### **a. U.S. Geological Survey (USGS) Map**

A USGS map of the Cape Canaveral property site is found at the end of this chapter.

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<sup>2</sup> As has been described in previous FPL Plant Site Plans, FPL also considers a number of other sites as possible sites for future generation additions. These include the remainder of FPL's existing generation sites.

**b. and c. Land Uses and Environmental Features**

This site is located on the Indian River. The land is primarily dedicated to industrial use with surrounding grassy areas and a few acres of remnant pine forest. The land adjacent to the site is dedicated to light commercial and residential use. There are no significant environmental features on the site.

**d. and e. Water Quantities and Supply Sources**

FPL projects that an increase of up to 260 gallons per minute (gpm) would be required for industrial processing use (boiler makeup, service water, etc.) It is expected that industrial cooling water needs could be met using the current 550,000 gpm once-through cooling water quantity. For industrial processing, FPL would use existing on-site wells or local gray water.

**Potential Site # 2: Midway Substation Property, St. Lucie County**

The site is located on the 122-acre Midway Substation property. Current facilities on the site include an electric substation. The site has direct access to a two-lane highway, State Road (SR) 712 and a nearby entrance to I-95. The City of Port St. Lucie is immediately east and west of the Midway site. The City of Ft. Pierce is approximately 9 miles northeast of the site.

**a. U.S. Geological Survey (USGS) Map**

A USGS map of the Midway site area is provided at the end of this chapter.

**b. and c. Land Uses and Environmental Features**

The land on the site is currently dedicated to industrial and agricultural use. Much of the site is currently not being used. Developed portions of the adjacent properties are primarily agricultural (orange groves and cattle grazing). Undeveloped portions include mixed scrub with some hardwoods and wetlands.

**d. and e. Water Quantities and Supply Sources**

No surface water source is available at this site. The water source would either be groundwater from the shallow aquifer or a local source of gray water. It is estimated that 150 gallons per minute (gpm) will be needed for industrial processing water for uses such as inlet air cooling, No<sub>x</sub> control during light oil firing and for service water. Other facility water uses may include irrigation, potable use, etc. The total volume of these uses is estimated to be about 5 gpm.

Also, as part of the Everglades Restoration Project, a 500-acre retention pond (Ten Mile Creek Project) is scheduled to be completed near the proposed Midway site in mid-2004. It is possible that some water from this storage facility could be utilized for cooling to supplement ground water usage.

**Potential Site # 3: Port Everglades Plant, Broward County**

This site is located on the 94-acre FPL Port Everglades plant site in Port Everglades, Broward County. The site has convenient access to State Road (SR) 84 and Interstate 595. A rail line is located near the plant. The existing plant consists of four steam boiler generating units: two 200 MW (approximate) and two 400 MW (approximate) sized units. The four steam boilers are capable of firing residual fuel oil, natural gas, or a combination of both. The site also is home to twelve simple cycle gas turbine (GT) peaking units of 30 MW (approximate) each. The GT's are part of the Gas Turbine Power Park that is made up of 24 GT's at the Lauderdale Plant site and the twelve GT's at the Port Everglades site. The GT's are capable of firing either natural gas or liquid fuel.

**a. U.S. Geological Survey (USGS) Map**

A map of the Port Everglades plant site is found at the end of this chapter.

**b. and c. Land Uses and Environmental Features**

The land on this site is primarily industrial. The adjacent land uses are port facilities and associated industrial activities, oil storage, cruise ships, and light commercial.

**d. and e. Water Resources and Supply Sources**

FPL estimates that up to 130 gallons per minute (gpm) of industrial processing water would be required for uses such as boiler makeup, fogger usage, and service water. FPL expects to use the existing municipal water supply for industrial process and makeup water. Cooling water would be drawn from the intercoastal waterway and cooling towers would be constructed.

**Potential Site # 4: Riviera Plant, Palm Beach County**

This site is located on the FPL Riviera Plant property in Riviera Beach, Palm Beach County. The site has direct access to a four-lane highway, US 1, and barge access is available. A rail line is located near the plant. The facility currently houses two operational 300 MW (approximate) steam boiler generating units and one retired 50 MW generating unit.

**a. U.S. Geological Survey**

A USGS map of the Riviera plant site is found at the end of this chapter.

**b. and c. Land Uses and Environmental Features**

The land on the site is primarily covered by the existing generation facilities with some open maintained grass areas. There is a small manatee viewing area on the site, which is operated seasonally by FPL. Adjacent land uses include port facilities and associated industrial activities, as well as light commercial and residential development. The site is located on the Intracoastal Waterway near the Lake Worth Inlet.

**d. and e. Water Quantities and Supply Sources**

Additional industrial processing water needs are estimated to be up to 40 gallons per minute (gpm). Industrial cooling water needs are estimated to be up to 54,000 gpm using the existing once-through cooling water system. The existing municipal water supply would be used for industrial processing water if

additional generating capacity is placed at Riviera. For once-through cooling water, FPL would continue to use Lake Worth as a source of water.

### **Potential Site # 5: Turkey Point Plant, Dade County**

The Turkey Point Plant site is located on the West Side of Biscayne Bay 25 miles south of Miami. The site is directly on the shoreline of Biscayne Bay and is geographically located approximately 9 miles east of Florida City on Palm Drive. Access to the plant site is limited due to the nuclear units located there. The land surrounding the site is owned by FPL and acts as a buffer zone. The site is comprised of the nuclear and fossil plants, the cooling canals, an FPL-maintained natural wildlife refuge, and wetlands that have been set aside as an Everglades Mitigation Bank.

Units # 1 and # 2 are fossil fuel generating plants with approximate generating capacity of 400 MW each. Unit 1 was completed in 1967 and Unit # 2 in 1968. Turkey Point also has five diesel peaking units that in total produce approximately 12 MW. These units are primarily used to provide emergency power, but occasionally run during the Summer to provide power during peak load demands.

a. **U.S. Geological Survey (USGS) Map**

A USGS map of the Turkey Point plant site, is found at the end of this chapter.

b. and c. **Land Uses of Site and Environmental Features**

A major portion of the site consists of a self-contained cooling canal system that supplies water to condense steam used by the existing units' turbine generators. The canal system consists of 36 interconnected canals each five miles long, 200 feet wide and four feet deep. The remaining developed area of the site is where the two fossil steam generating units and 5 diesel generators are located. Adjacent to the fossil plant are the two nuclear generating units. To the south, wetlands have been set aside as part of the Everglades

Mitigation Bank in an effort to restore these areas to historical plant communities and hydrological function.

**d. and e. Water Resources and Supply Sources**

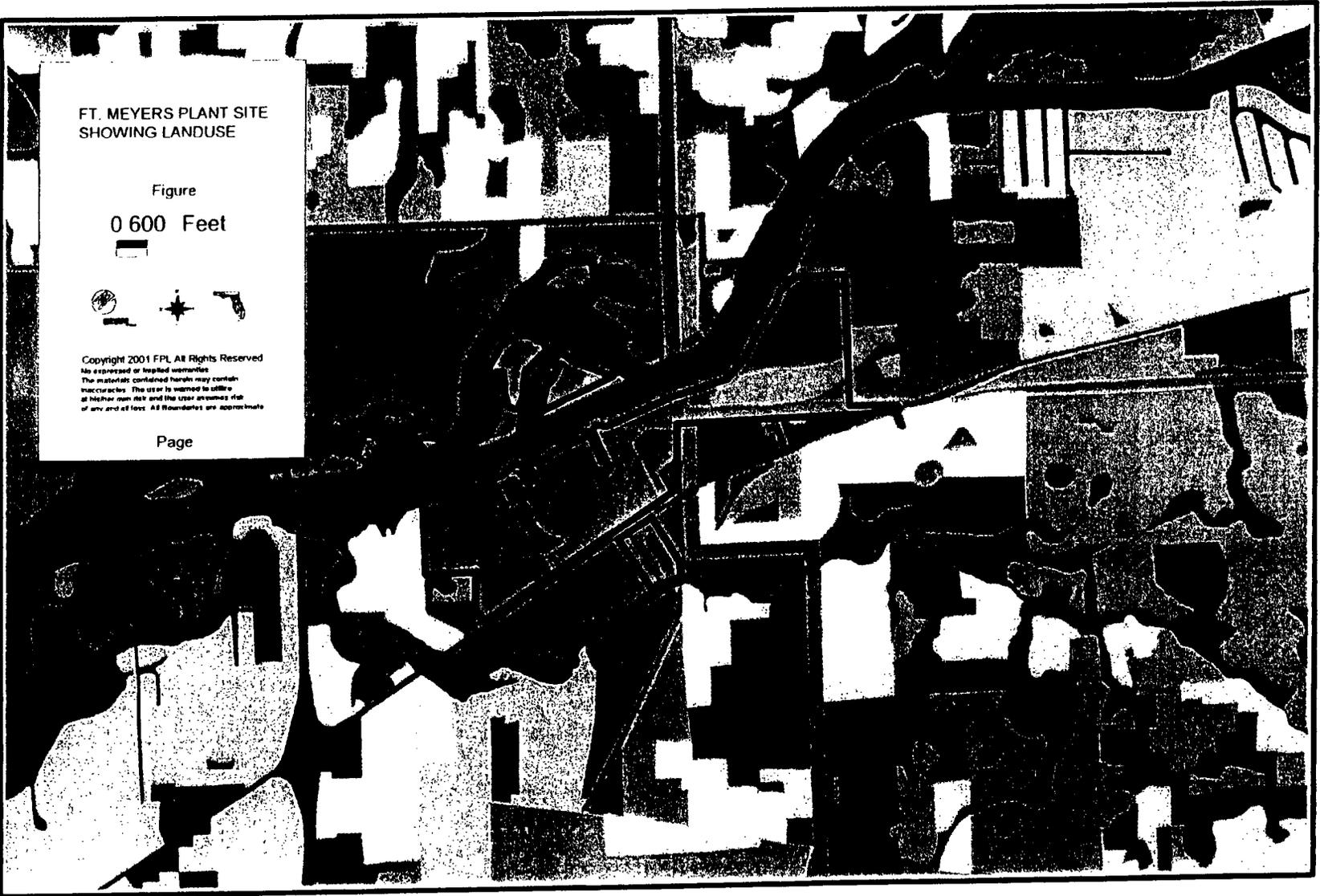
The additional quantity of water for industrial processing is estimated to be 150 gpm for plant process and service water. Water for this type of use would be supplied by a county water system. The current plant water treatment system, which provides treated water for use in Units # 1 and # 2 boilers, would likely be expanded.

Water for cooling would likely be supplied by the existing closed loop cooling canal system, although reclaimed water from a nearby publicly owned treatment works could possibly be utilized, if available. Cooling towers may also be used.

*Environmental and Land Use Information:  
Supplemental Information*

*Preferred Site: Fort Myers*

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# LEGEND FOR LANDUSE MAPS

 Plant Site Boundary

*Level 3 Landuse Categories 1995*

- |   |   |
|---|---|
|  Residential Low Density     |  Streams and Waterways                 |
|  Residential Medium Density  |  Lakes                                 |
|  Residential High Density    |  Reservoirs                            |
|  Commercial and Services     |  Bays and Estuaries                    |
|  Industrial                  |  Major Springs                         |
|  Extractive                 |  Slough Waters                        |
|  Institutional             |  Oceans Seas and Gulfs               |
|  Recreational              |  Wetland Hardwood Forests            |
|  Open Land                 |  Wetland Coniferous Forests          |
|  Cropland and Pastureland  |  Wetland Forested Mixed              |
|  Tree Crops                |  Vegetated Non-Forested Wetlands     |
|  Feeding Operations        |  Non-Vegetated                       |
|  Nurseries and Vineyards   |  Wetland Shrub                       |
|  Specialty Farms           |  Beaches Other Than Swimming Beaches |
|  Other Open Lands <Rural>  |  Sand Other Than Beaches             |
|  Herbaceous                |  Exposed Rock                        |
|  Shrub and Brushland       |  Disturbed Lands                     |
|  Mixed Rangeland           |  Riverine Sandbars                   |
|  Upland Coniferous Forests |  Transportation                      |
|  Upland Hardwood Forests   |  Communications                      |
|  Tree Plantations          |  Utilities                           |
|   |  Vegetation-Sea Grass                |



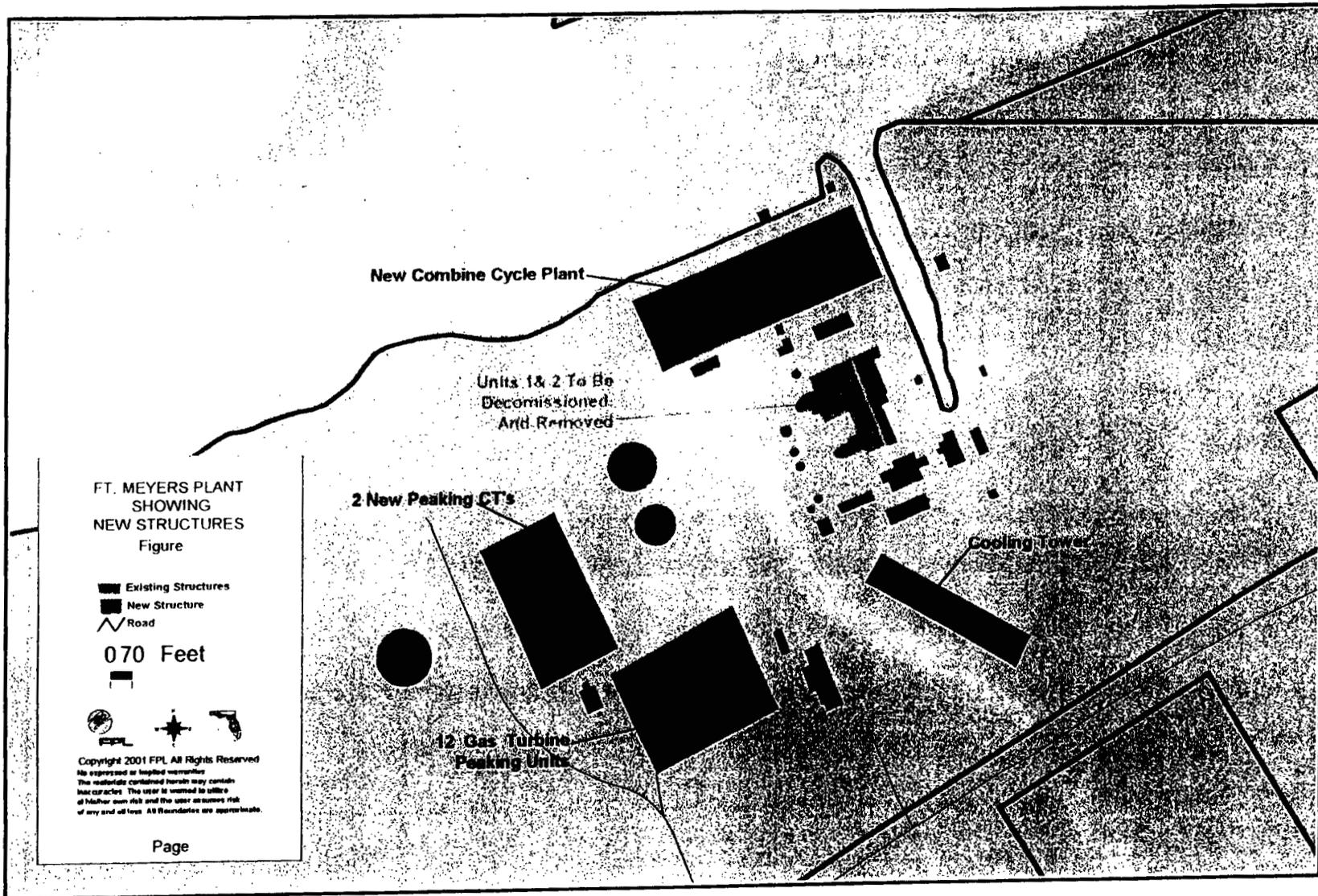
Figure



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Page



FT. MEYERS PLANT  
SHOWING  
NEW STRUCTURES  
Figure

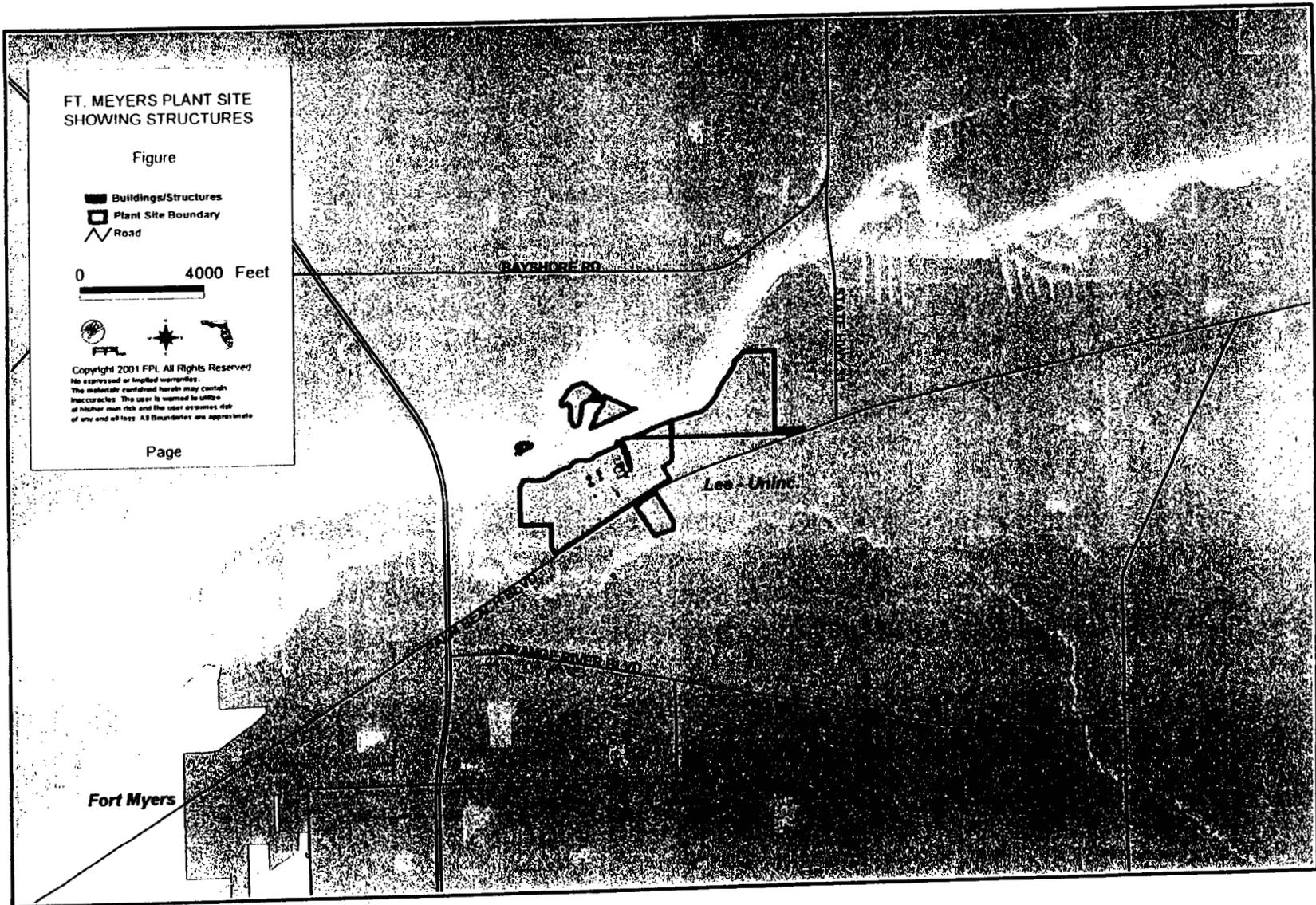
- Existing Structures
- New Structure
- Road

070 Feet



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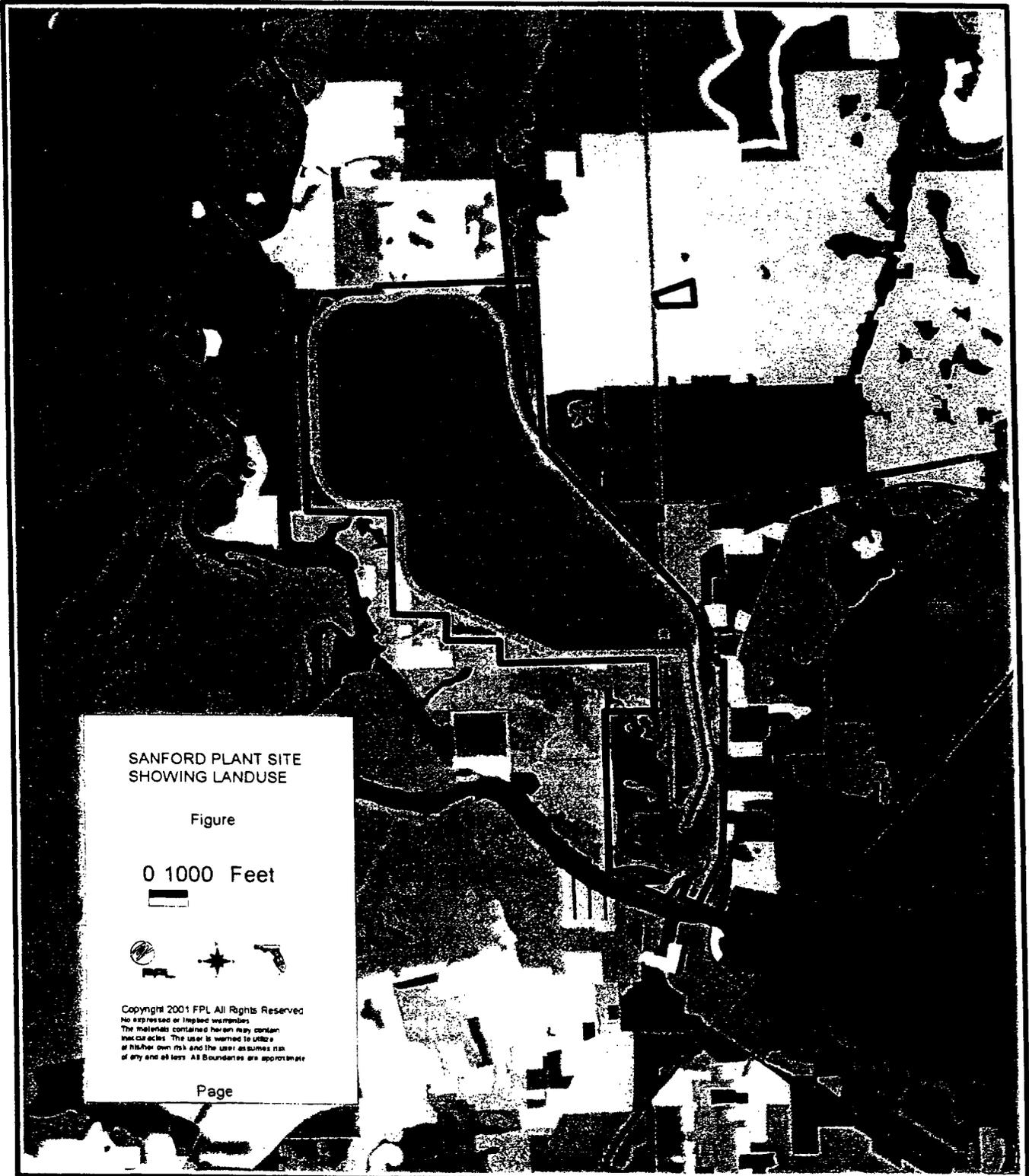
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*Environmental and Land Use Information:  
Supplemental Information*

*Preferred Site: Sanford*

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# LEGEND FOR LANDUSE MAPS

 Plant Site Boundary

## Level 3 Landuse Categories 1995

- |   |   |
|---|---|
|  Residential Low Density     |  Streams and Waterways                 |
|  Residential Medium Density  |  Lakes                                 |
|  Residential High Density    |  Reservoirs                            |
|  Commercial and Services     |  Bays and Estuaries                    |
|  Industrial                  |  Major Springs                         |
|  Extractive                  |  Slough Waters                         |
|  Institutional              |  Oceans Seas and Gulfs                |
|  Recreational              |  Wetland Hardwood Forests            |
|  Open Land                 |  Wetland Coniferous Forests          |
|  Cropland and Pastureland  |  Wetland Forested Mixed              |
|  Tree Crops                |  Vegetated Non-Forested Wetlands     |
|  Feeding Operations        |  Non-Vegetated Wetland Shrub         |
|  Nurseries and Vineyards   |  Beaches Other Than Swimming Beaches |
|  Specialty Farms           |  Sand Other Than Beaches             |
|  Other Open Lands <Rural>  |  Exposed Rock                        |
|  Herbaceous                |  Disturbed Lands                     |
|  Shrub and Brushland       |  Riverine Sandbars                   |
|  Mixed Rangeland           |  Transportation                      |
|  Upland Coniferous Forests |  Communications                      |
|  Upland Hardwood Forests   |  Utilities                           |
|  Tree Plantations          |  Vegetation-Sea Grass                |



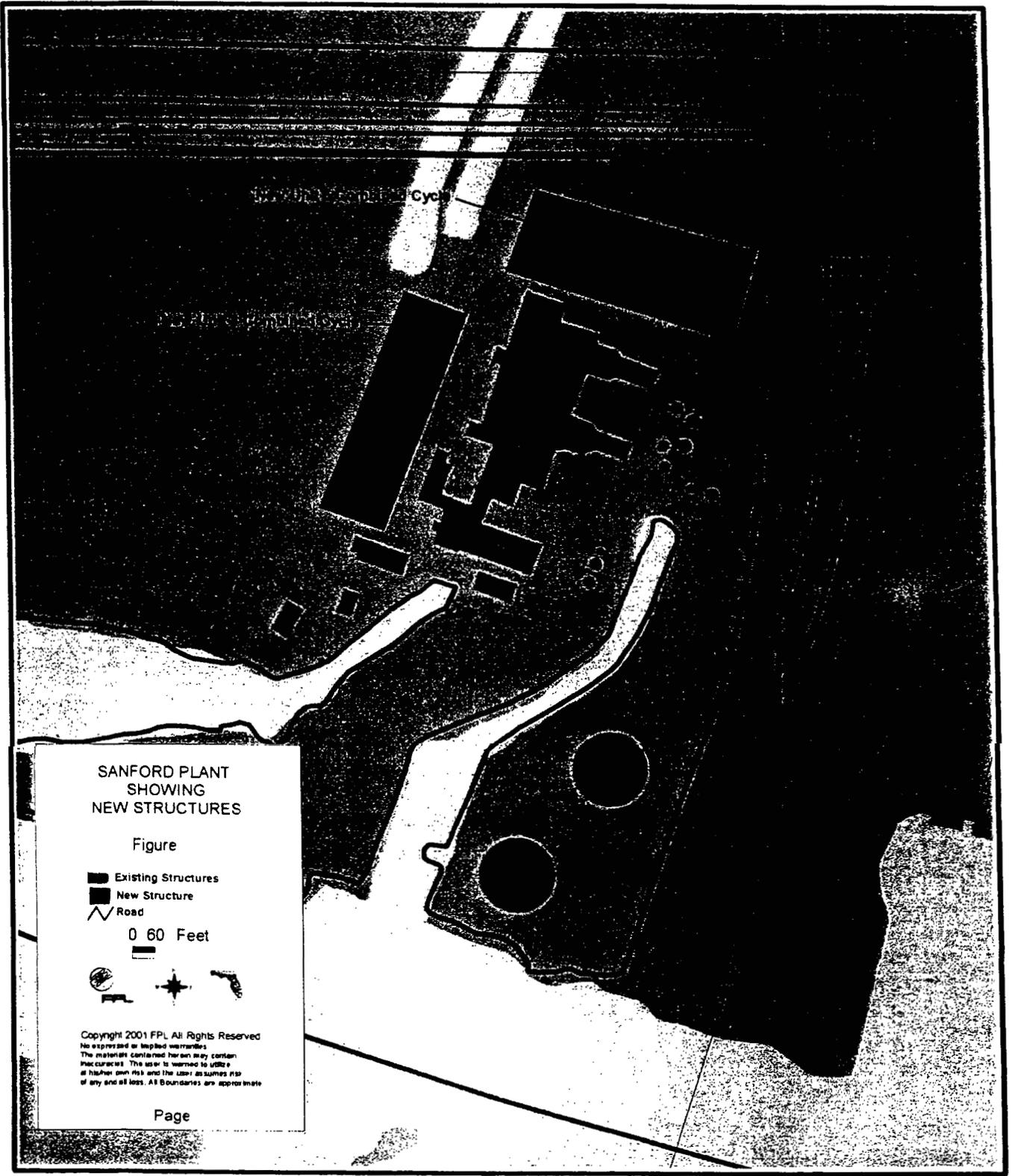
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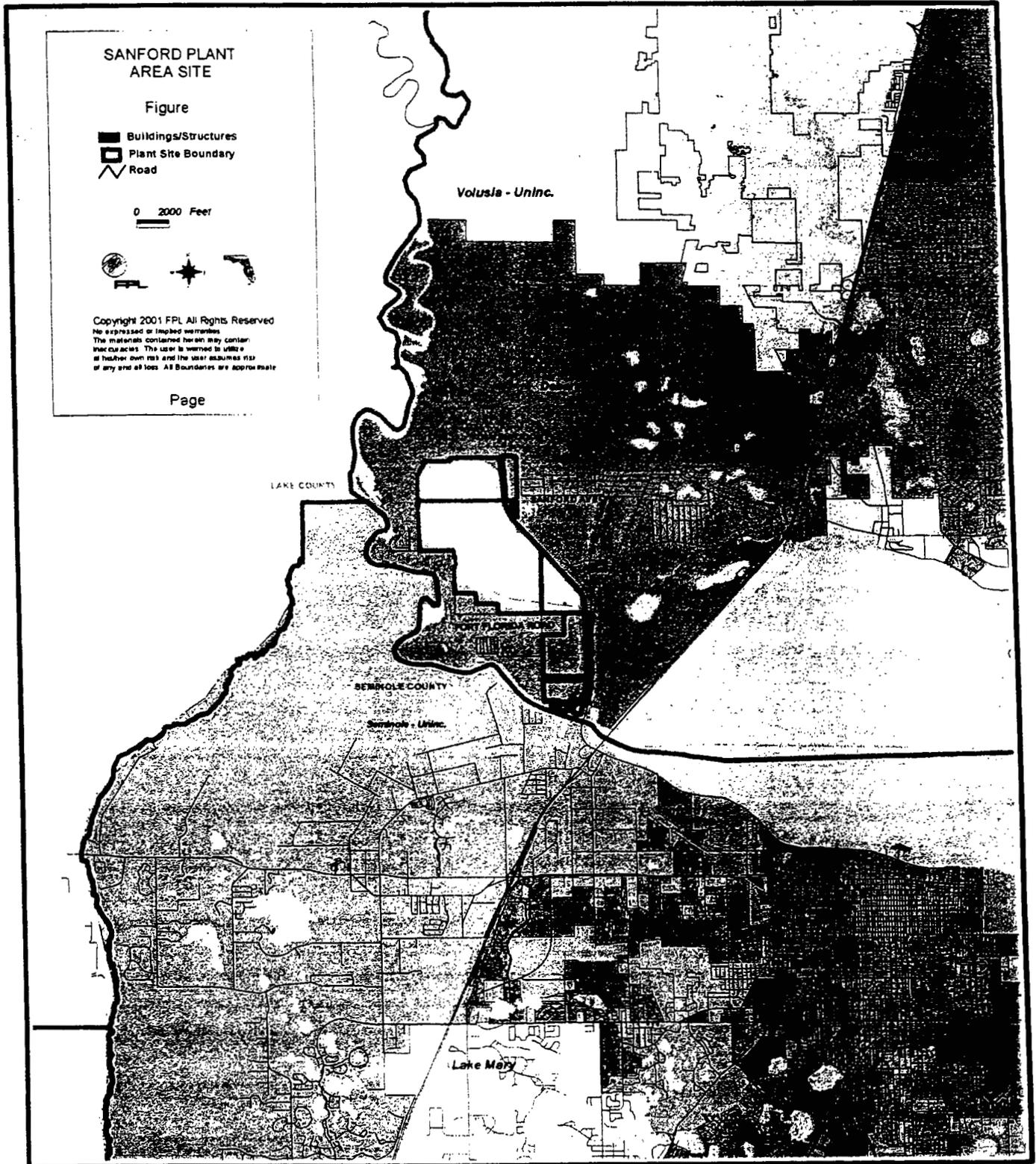
**SANFORD PLANT  
SHOWING  
NEW STRUCTURES**

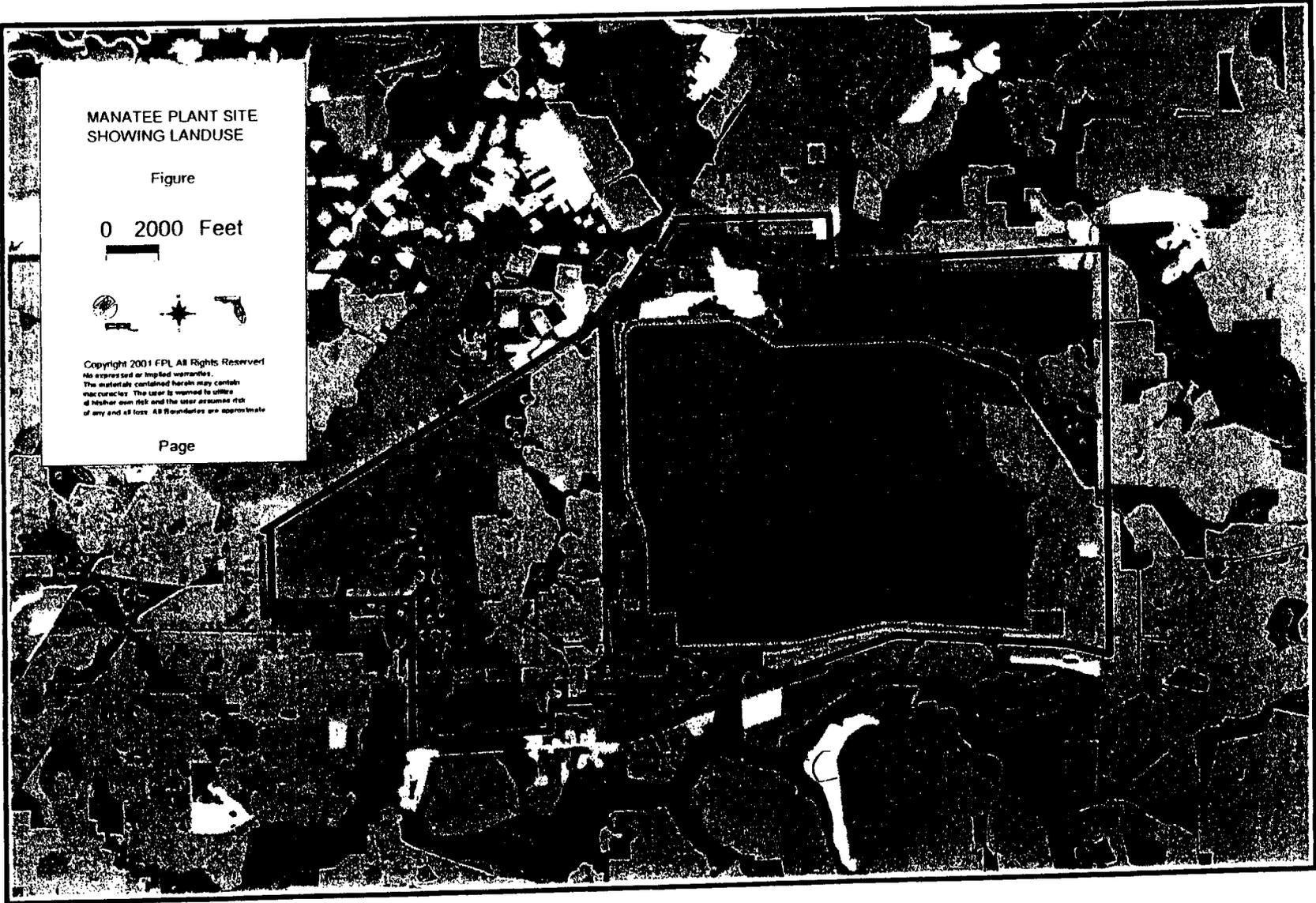
Figure

-  Existing Structures
-  New Structure
-  Road
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Page





# LEGEND FOR LANDUSE MAPS

 Plant Site Boundary

*Level 3 Landuse Categories 1995*

- |   |                            |   |                                     |
|---|----------------------------|---|-------------------------------------|
|    | Residential Low Density    |    | Streams and Waterways               |
|    | Residential Medium Density |    | Lakes                               |
|    | Residential High Density   |    | Reservoirs                          |
|    | Commercial and Services    |    | Bays and Estuaries                  |
|   | Industrial                 |    | Major Springs                       |
|  | Extractive                 |    | Slough Waters                       |
|  | Institutional              |   | Oceans Seas and Gulfs               |
|  | Recreational               |  | Wetland Hardwood Forests            |
|  | Open Land                  |  | Wetland Coniferous Forests          |
|  | Cropland and Pastureland   |  | Wetland Forested Mixed              |
|  | Tree Crops                 |  | Vegetated Non-Forested Wetlands     |
|  | Feeding Operations         |  | Non-Vegetated                       |
|  | Nurseries and Vineyards    |  | Wetland Shrub                       |
|  | Specialty Farms            |  | Beaches Other Than Swimming Beaches |
|  | Other Open Lands <Rural>   |  | Sand Other Than Beaches             |
|  | Herbaceous                 |  | Exposed Rock                        |
|  | Shrub and Brushland        |  | Disturbed Lands                     |
|  | Mixed Rangeland            |  | Riverine Sandbars                   |
|  | Upland Coniferous Forests  |  | Transportation                      |
|  | Upland Hardwood Forests    |  | Communications                      |
|  | Tree Plantations           |  | Utilities                           |
|   |                            |  | Vegetation-Sea Grass                |



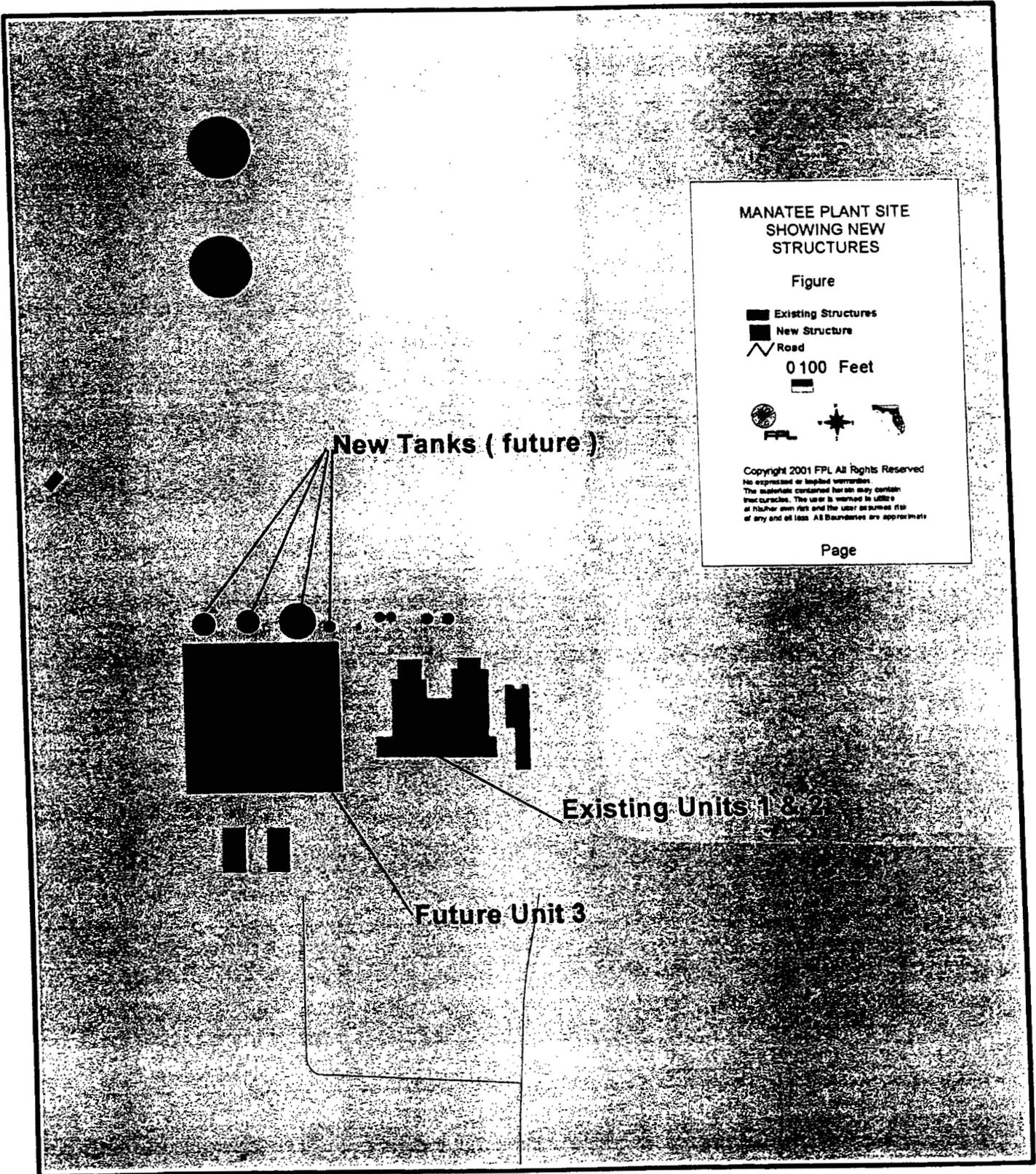
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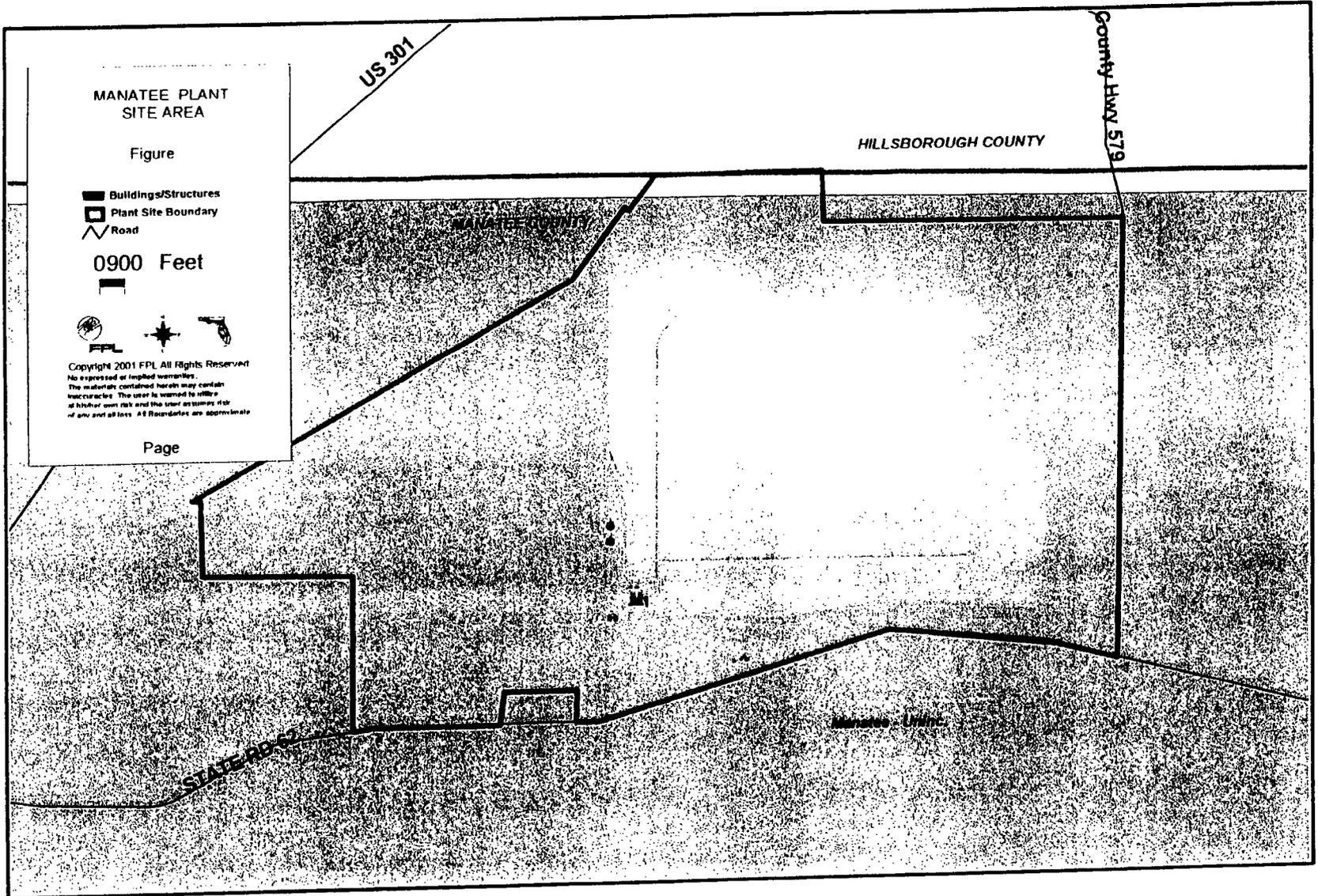


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Page

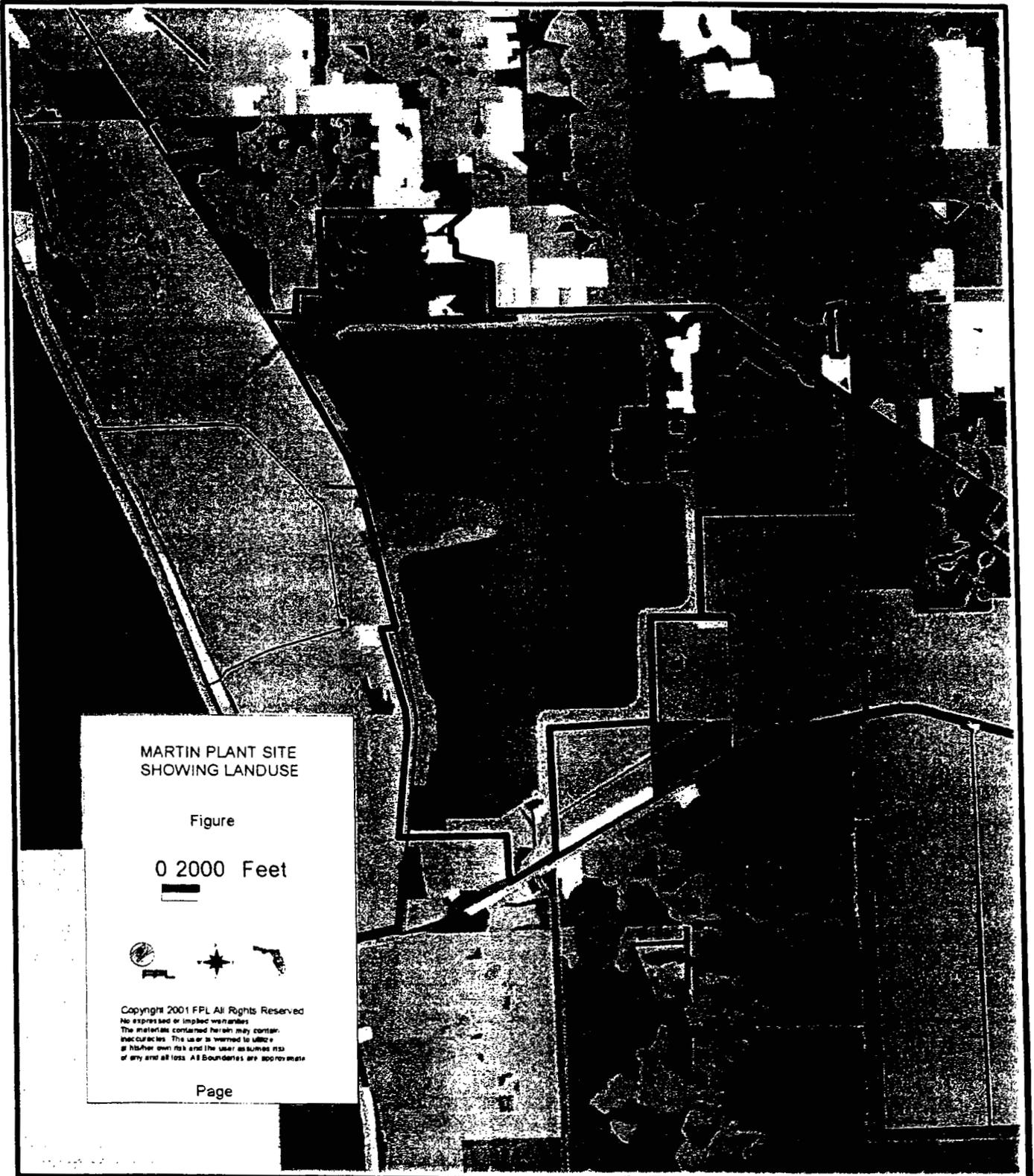




*Environmental and Land Use Information:  
Supplemental Information*

*Preferred Site: Martin*

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# LEGEND FOR LANDUSE MAPS

 Plant Site Boundary

## Level 3 Landuse Categories 1995

- |   |   |
|---|---|
|  Residential Low Density     |  Streams and Waterways                 |
|  Residential Medium Density  |  Lakes                                 |
|  Residential High Density    |  Reservoirs                            |
|  Commercial and Services     |  Bays and Estuaries                    |
|  Industrial                  |  Major Springs                         |
|  Extractive                 |  Slough Waters                        |
|  Institutional             |  Oceans Seas and Gulfs               |
|  Recreational              |  Wetland Hardwood Forests            |
|  Open Land                 |  Wetland Coniferous Forests          |
|  Cropland and Pastureland  |  Wetland Forested Mixed              |
|  Tree Crops                |  Vegetated Non-Forested Wetlands     |
|  Feeding Operations        |  Non-Vegetated                       |
|  Nurseries and Vineyards   |  Wetland Shrub                       |
|  Specialty Farms           |  Beaches Other Than Swimming Beaches |
|  Other Open Lands <Rural>  |  Sand Other Than Beaches             |
|  Herbaceous                |  Exposed Rock                        |
|  Shrub and Brushland       |  Disturbed Lands                     |
|  Mixed Rangeland           |  Riverine Sandbars                   |
|  Upland Coniferous Forests |  Transportation                      |
|  Upland Hardwood Forests   |  Communications                      |
|  Tree Plantations          |  Utilities                           |
|   |  Vegetation-Sea Grass                |



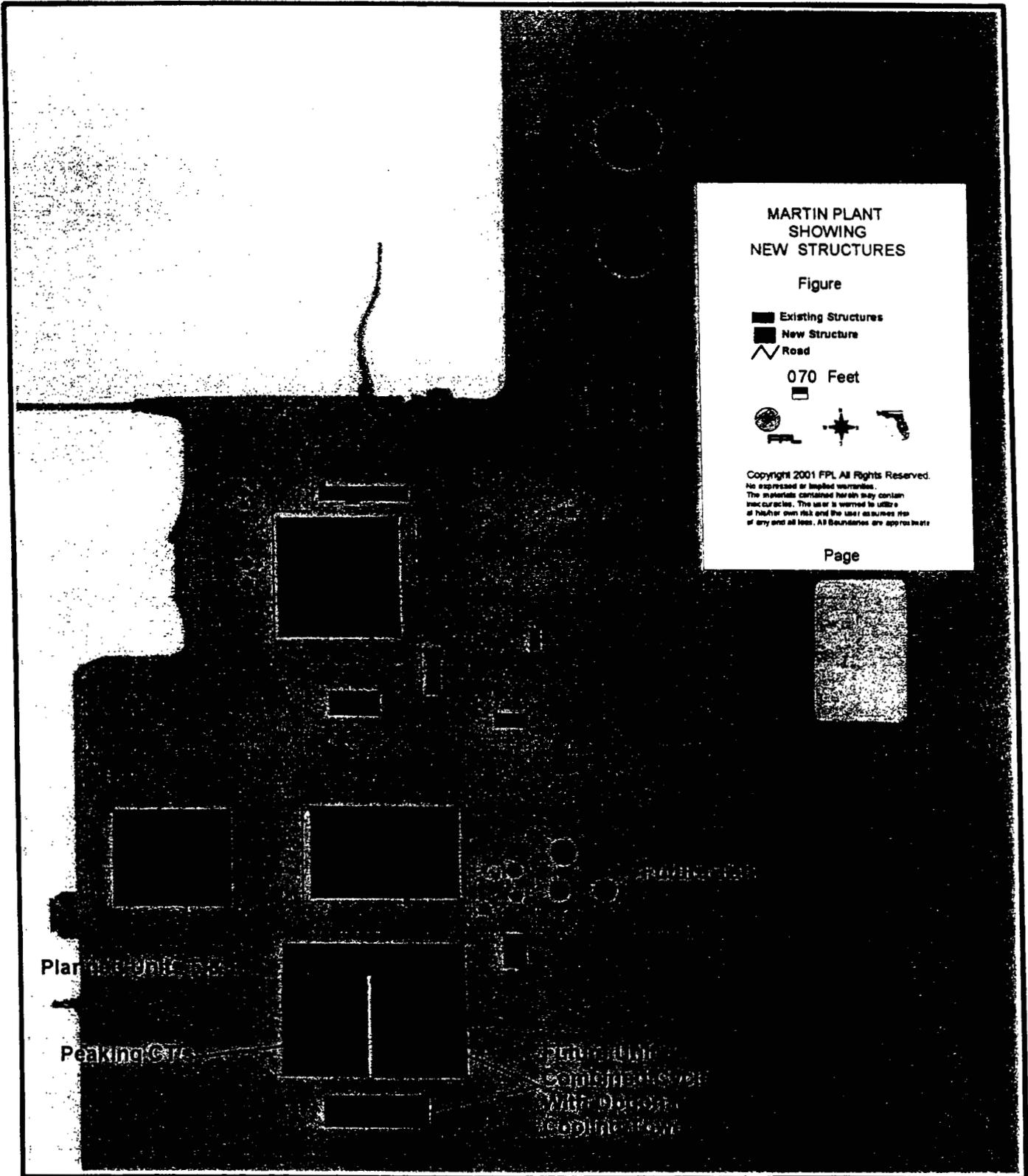
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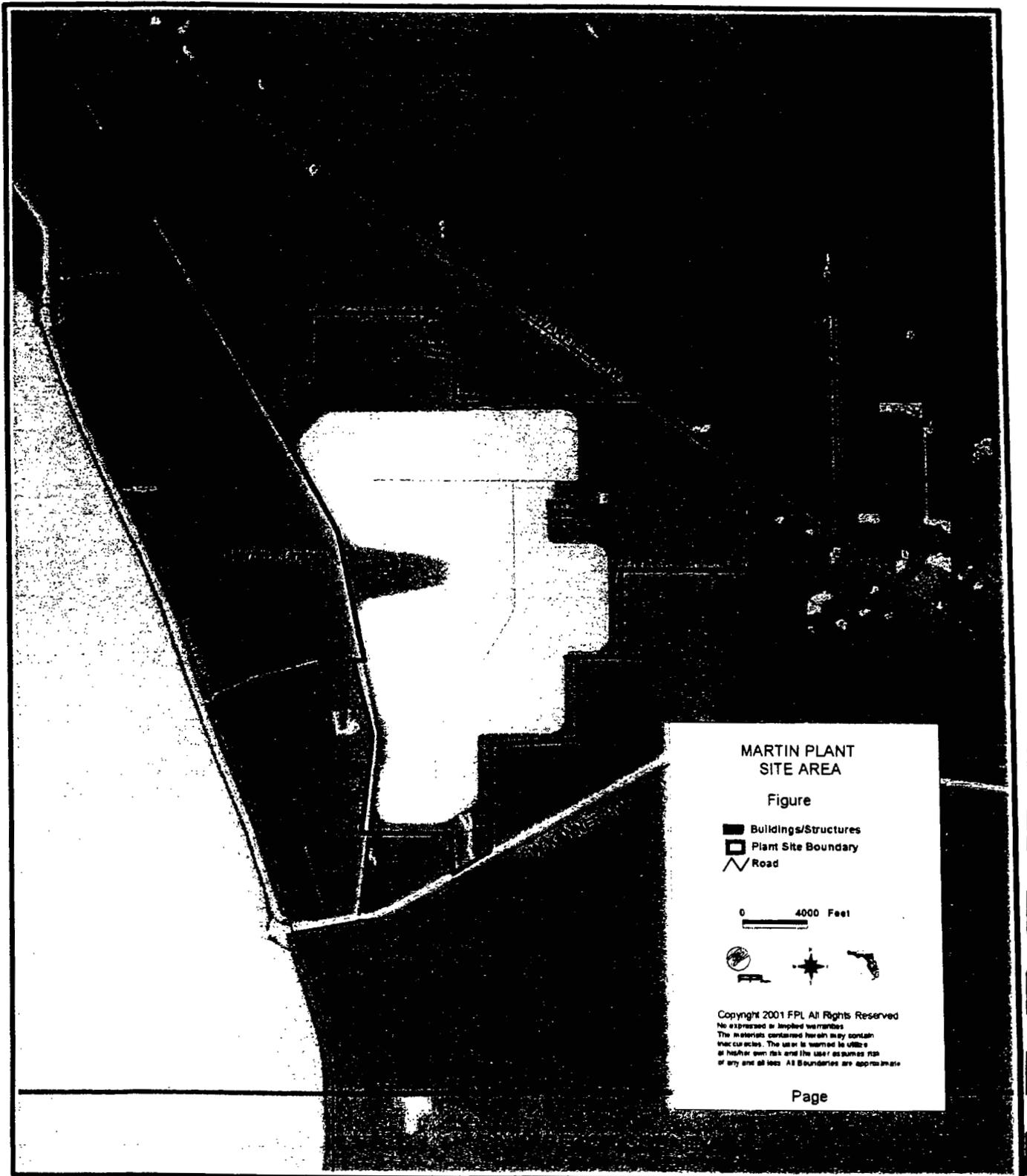


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Page





*Environmental and Land Use Information:  
Supplemental Information*

*Potential Site: Cape Canaveral*

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CANAVERAL PLANT SITE  
SHOWING STRUCTURES

Figure

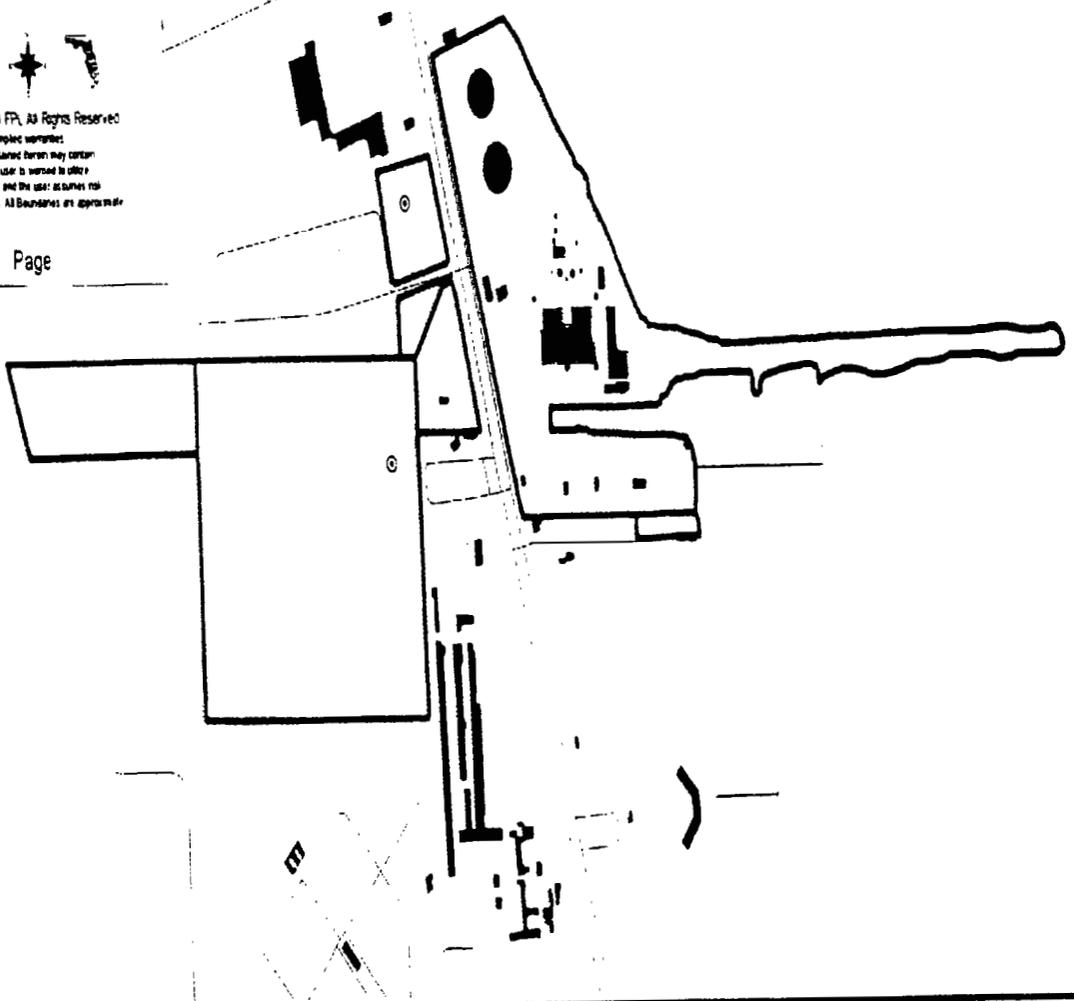
- Buildings/Structures
- Plant Site Boundary
- ∧ Road

0 500 Feet



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MIDWAY  
SITE AREA

Figure

- Buildings/Structures
- Plant Site Boundary
- ∨ Road

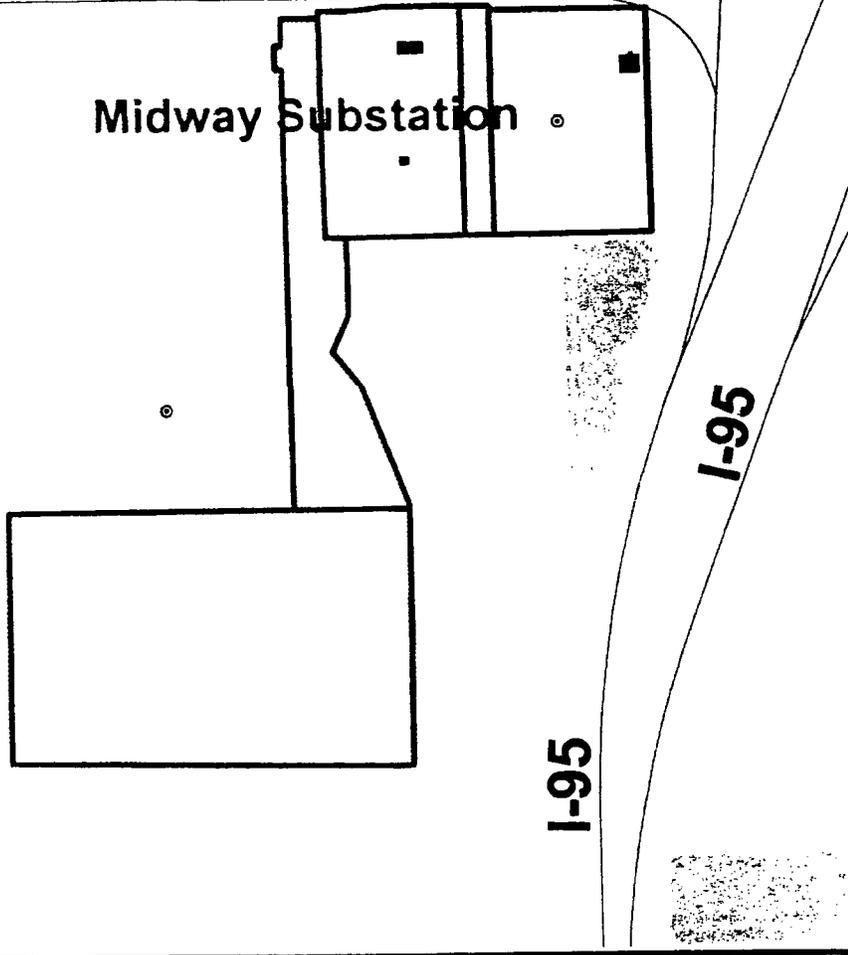
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Page

Midway Substation

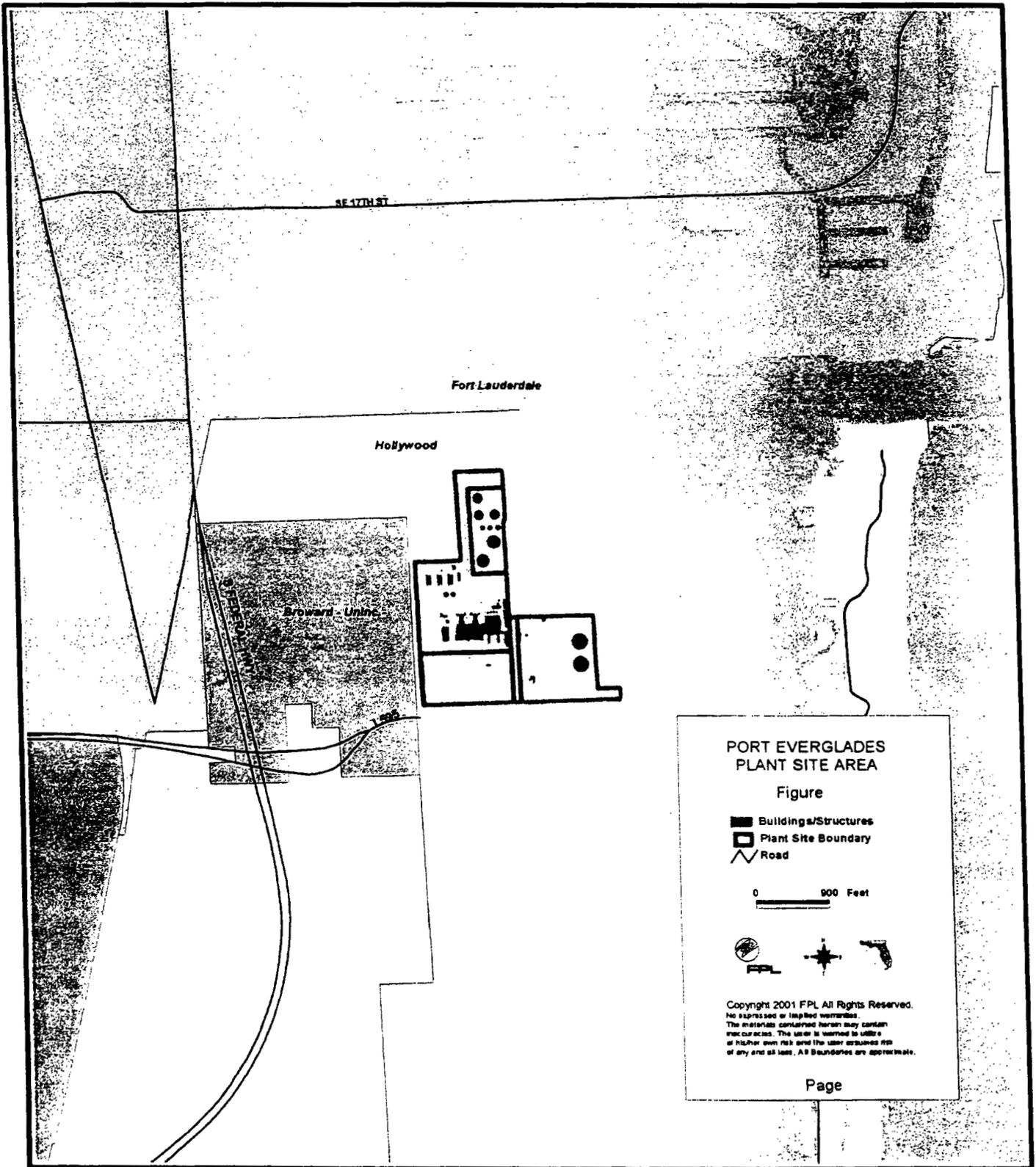


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*Environmental and Land Use Information:  
Supplemental Information*

*Potential Site: Port Everglades*

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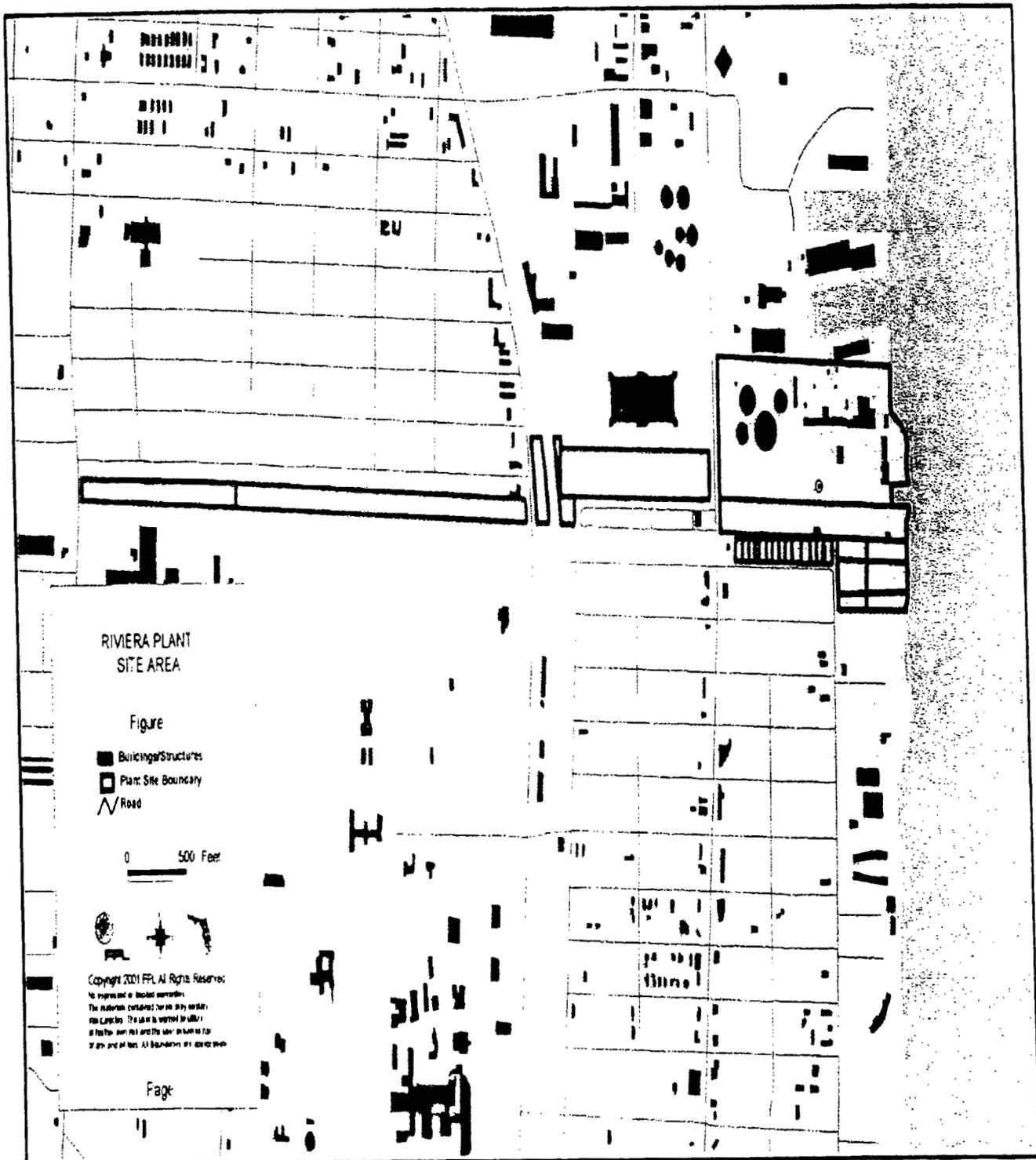


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*Environmental and Land Use Information:  
Supplemental Information*

*Potential Site: Riviera Plant*

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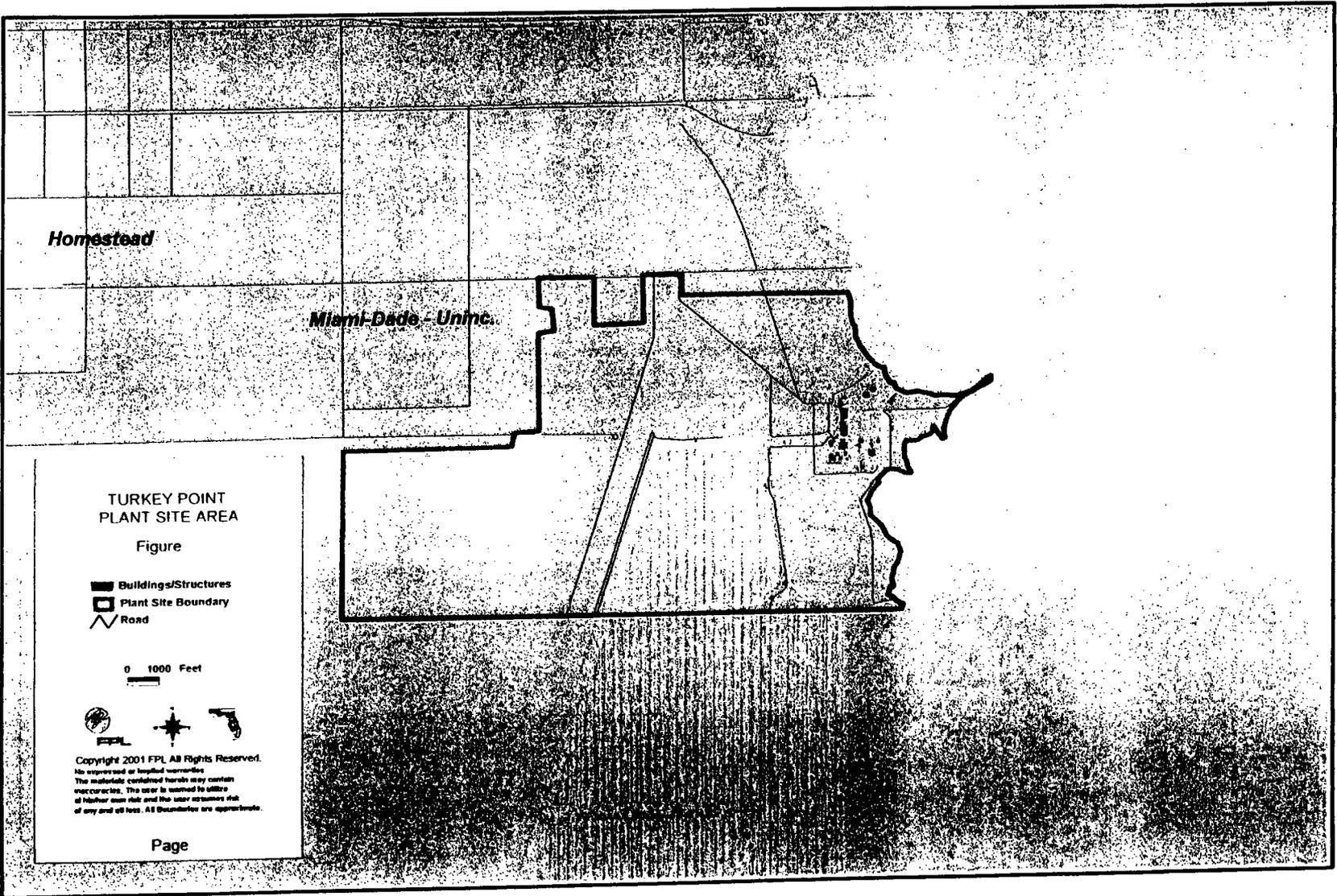


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*Environmental and Land Use Information:  
Supplemental Information*

*Potential Site: Turkey Point*

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TURKEY POINT  
PLANT SITE AREA

Figure

-  Buildings/Structures
-  Plant Site Boundary
-  Road

0 1000 Feet



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Page

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**CHAPTER V**

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**Other Planning Assumptions & Information**

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## Introduction

The Florida Public Service Commission (FPSC), in Docket No. 960111-EU, specified certain information that was to be included in an electric utility's Ten-Year Power Plant Site Plan filing. Among this specified information was a group of 12 items listed under a heading entitled "Other Planning Assumptions and Information". These 12 items basically concern specific aspects of a utility's resource planning work. The FPSC requested a discussion or a description of each of these items.

These 12 items are addressed individually below as separate "Discussion Items".

**Discussion Item # 1: Describe how any transmission constraints were modeled and explain the impacts on the plan. Discuss any plans for alleviating any transmission constraints.**

---

FPL's resource planning work considers two types of transmission constraints. External constraints deal with FPL's ties to its neighboring systems. Internal constraints deal with the flow of electricity within the FPL system.

The external constraints are important since they affect the development of assumptions for the amount of external assistance which is available and the amount and price of economy energy purchases. Therefore, these external constraints are incorporated both in the reliability analysis and economic analysis aspects of resource planning. The amount of external assistance which is assumed to be available is based on the projected transfer capability to FPL from outside its system as well as historical levels of available assistance. In its reliability analyses, FPL models this amount of external assistance as an additional generator within FPL's system which provides capacity in all but the peak load months. The assumed amount and price of economy energy are based on historical values and projections from production costing models.

Internal transmission constraints or limitations are addressed by identifying potential geographic locations for potential new units that may not adversely impact, or that may even alleviate, such constraints and limitations and in developing the costs for siting new units at different locations. Both site-and system-related transmission costs are developed for each different unit/unit location option or groups of options.

FPL's annual transmission planning work determines transmission additions needed to address constraints and to maintain/enhance system reliability. FPL's transmission plans are presented in Section III.E.

**Discussion Item # 2: Discuss the extent to which the overall economics of the plan were analyzed. Discuss how the plan is determined to be cost-effective. Discuss any changes in the generation expansion plan as a result of sensitivity tests to the base case load forecast.**

---

As discussed in Chapter III of this document, FPL typically performs economic analyses of competing resource plans using the EGEAS (Electric Generation Expansion Analysis System) computer model from the Electric Power Research Institute (EPRI) and Stone and Webster Management Consultants, Inc. The resource plan reflected in this document emerged as the resource plan with the least impact on FPL's levelized system average electric rates (i.e., a Rate Impact Measure or RIM approach) and on the present value of revenue requirements for the FPL system.<sup>3</sup>

No sensitivity case analyses based on different load forecasts were carried out during FPL's most recent planning work. This is due to the fact that the most economical options are combined cycle (CC) units. If higher – than – projected loads begin to appear, the combustion turbine components of any of the CC options could be placed in service early in simple cycle mode. FPL believed that this fact qualitatively enabled it to be able to address higher – than – projected loads.

---

<sup>3</sup> FPL's basic approach in its resource planning work is to base decisions on a lowest electric rate basis. However, when DSM levels are considered a "given" in the analysis, the lowest rate basis and the lowest system revenue requirements basis are identical. In such cases (as in FPL's current resource planning work), FPL evaluates options on the simpler – to – calculate (but equivalent) lowest system revenue requirements basis.

**Discussion Item # 3: Explain and discuss the assumptions used to derive the base case fuel forecast. Explain the extent to which the utility tested the sensitivity of the base case plan to high and low fuel price scenarios. If high and low fuel price sensitivities were performed, explain the changes made to the base case fuel price forecast to generate the sensitivities. If high and low fuel price scenarios were performed as part of the planning process, discuss the resulting changes, if any, in the generation expansion plan under the high and low fuel price scenario. If high and low fuel price sensitivities were not evaluated, describe how the base case plan is tested for sensitivity to varying fuel prices.**

---

The basic assumptions FPL used in deriving its base case or "Most Likely" fuel price forecast are discussed in Chapter III of this document.

In its most recent planning work, FPL did not test the sensitivity of its resource plan to a "Low Price" fuel forecast in conjunction with a "High Load" forecast. All of the options considered in the IRP analysis were gas-fired units, so any change in the fuel costs projections would have affected these options in essentially the same way. Consequently, FPL did not believe that a fuel price sensitivity case was needed.

**Discussion Item # 4: Describe how the sensitivity of the plan was tested with respect to holding the differential between oil/gas and coal constant over the planning horizon.**

---

For the same reason given in response to Discussion Item #3, FPL did not conduct a "constant fuel differential" sensitivity analysis in its most recent planning work.

**Discussion Item # 5: Describe how generating unit performance was modeled in the planning process.**

---

The performance of existing generating units on FPL's system was modeled using current projections for scheduled outages, unplanned outages, and capacity output ratings and heat rate information. Schedule 1 and Schedule 8 present the current and projected capacity output ratings of FPL's existing units. The values used for outages and heat rates are generally consistent with the values FPL has used in planning studies in recent years.

In regard to new unit performance, FPL utilized current projections for the capital costs, fixed and variable operating & maintenance costs, capital replacement costs, construction schedules, heat rates, and capacity ratings for all construction options which were considered in the resource planning work. A summary of this information for the new capacity options FPL projects to add over the planning horizon is presented on the Schedule 9 forms.

**Discussion Item # 6: Describe and discuss the financial assumptions used in the planning process. Discuss how the sensitivity of the plan was tested with respect to varying financial assumptions.**

---

The key financial assumptions used in FPL's most recent resource planning work were 45% debt and 55% equity FPL capital structure, projected debt cost of 7.4%, and an equity return of 11.7%. These assumptions resulted in a weighted average cost of capital of 9.8% and an after-tax discount rate of 8.5%. In its recent planning work, FPL did not test the sensitivity of its resource plan to varying financial assumptions. The reason for this is that FPL's planning work focused on FPL construction options only that were generally very similar in design and varied only by site. Consequently, varying financial assumptions would have resulted in little/no change in the analysis results.

**Discussion Item # 7: Describe in detail the electric utility's Integrated Resource Planning process. Discuss whether the optimization was based on revenue requirements, rates, or total resource cost.**

---

FPL's integrated resource planning (IRP) process is described in detail in Chapter III of this document.

The standard basis for comparing the economics of competing resource plans in FPL's basic IRP process is the impact of the plans on FPL's electricity rate levels with the intent of minimizing FPL's levelized system average rate (i.e., a Rate Impact Measure or RIM approach). However, in its most recent planning work FPL utilized a net present value of system revenue requirements as the basis for comparing options and plans. (As discussed in response to Discussion Item # 2, both the electricity rate basis and the system revenue requirement basis are identical when DSM levels are unchanged between competing plans. Such was the case in FPL's recent planning work.)

**Discussion Item # 8: Define and discuss the electric utility's generation and transmission reliability criteria.**

---

FPL uses two generation reliability criteria in its resource planning work. One of these is a minimum 15% Summer and Winter reserve margin for years up to mid – 2004 that changes to a minimum 20% Summer and Winter reserve margin for the mid – 2004 – on time period. The other reliability criterion is a maximum of 0.1 days per year loss-of-load-probability (LOLP). These reliability criteria are discussed in Chapter III of this document.

In regard to transmission reliability, FPL has adopted transmission planning criteria that are consistent with the planning criteria established by the Florida Reliability Coordinating Council (FRCC). The FRCC has adopted transmission planning criteria that are consistent with the planning criteria established by the North American Electric Reliability Council (NERC) in its *Planning Standards*. FPL has applied these planning criteria in a manner consistent with prudent utility practice. The *NERC Planning Standards* are available on the internet (<http://www.nerc.com/~filez/pss-psg.html>).

In addition, FPL has developed a Facility Connection Requirements (FCR) document as well as a Facility Rating Methodology document that are also available on the internet (<http://www.floasis.siemens-asp.com/oasis/fpl/info.htm>).

Thermal ratings for specific transmission lines or transformers are found in the load flow cases that are available on the internet (<http://www.floasis.siemens-asp.com/oasis/fpl/info.htm>).

The normal voltage criteria for FPL stations is given below:

<u>Voltage Level (kV)</u>	<u>Vmin (p.u.)</u>	<u>Vmax (p.u.)</u>
69, 115, 138, 500	0.95	1.05
230	0.95	1.06

There may have been isolated cases for which FPL may have determined it prudent to deviate from the general criteria stated above. The overall potential impact on customers, the probability of an outage actually occurring, as well as other factors may have influenced the decision in such cases.

**Discussion Item # 9: Discuss how the electric utility verifies the durability of energy savings for its DSM programs.**

---

The impact of FPL's DSM Programs on demand and energy consumption are revised periodically. Engineering models, calibrated with field-metered data, are updated when significant efficiency changes occur in the marketplace. Participation trends are tracked for all of the FPL programs in order to adjust impacts each year for changes in the mix of efficiency measures being installed by program participants.

Survey data is collected from non-participants in order to establish the baseline efficiency. Participant data is compared against non-participant data to establish the demand and energy saving benefits of the utility program versus what would be installed in the absence of the program. Finally, FPL is careful to claim only program savings for the average life of the installed efficiency measure. For these DSM measures which involve the utilization of load management, FPL conducts periodic tests of the load control equipment to ensure that it is functioning correctly.

**Discussion Item # 10: Discuss how strategic concerns are incorporated in the planning process.**

---

Among the strategic or non-price factors FPL typically considers when choosing between resource options are the following: (1) fuel diversity; (2) technology risk; and (3) environmental risk.

Fuel diversity relates to two concepts, the diversity of sources of fuel (e.g., coal vs. oil vs. natural gas), and the diversity of supply for a single fuel source (for example alternative pipeline suppliers for natural gas). All other factors being equal, supply options that increase diversity in fuel source and/or supply would be favored over those that do not.

Technology risk is an assessment of the relative maturity of competing technologies. For example, a prototype technology which has not achieved general commercial acceptance has a higher risk than a technology in wide use and, therefore, is less desirable.

Environmental risk is an assessment of the relative environmental acceptability of competing technologies. Technologies which might be regarded as more acceptable from an environmental perspective (e.g., natural gas-fired options) might be considered more favorably.

All of these factors play a part in FPL's planning and decisions, including its decisions to construct capacity or to purchase power.

**Discussion Item # 11: Describe the procurement process the electric utility intends to utilize to acquire the additional supply-side resources identified in the electric utility's ten-year site plan.**

---

As has been previously discussed, the near – term elements of FPL's capacity additions include the repowering of one of its Sanford plants, the addition of new combustion turbines (CT's) at Fort Myers, and a number of firm capacity, short-term purchases. The incremental capacity from the repowering project comes from the addition of new CT's and heat recovery steam generators (HRSG's). FPL acquired the repowering-related CT's, plus the other new CT's for Fort Myers, and the HRSG's through a bid process which combined cost and performance considerations. The firm capacity short-term purchases were acquired through negotiations.

The 2005 capacity addition decision was arrived at after evaluating 134 bids received in response to two capacity Request for Proposals (RFP) issued by FPL in mid-2001 and mid-2002. The decision to construct new combined cycle units at FPL's existing Martin and Manatee sites was subsequently approved by the Florida Public Service Commission in late 2002.

The later (2007 – on) capacity additions are likely to be subject to a capacity solicitation process similar to the Request for Proposal (RFP) process that led to the selection of Martin Unit # 8 and Manatee Unit # 3. Identification of these self – build options in FPL's Site Plan is not an indication that FPL has prejudged any capacity solicitation it may conduct. It is merely a recognition of what currently appears to be FPL's best, most cost-effective self – build options at this time. FPL reserves the right to refine its planning analyses and to identify other self – build options. Such refined analyses have the potential to yield a variety of self – build options, some of which might not require an RFP. If an RFP is issued for supply – side resources, FPL reserve the right to choose the best alternative for its customers, even if that option is not an FPL self – build option.

**Discussion Item # 12: Provide the transmission construction and upgrade plans for electric utility system lines that must be certified under the Transmission Line Siting Act (403.52 – 403.536, F. S.) during the planning horizon. Also, provide the rationale for any new or upgraded line.**

---

FPL's latest Transmission/Substation Expansion Plan for years 2002-2012 published in December, 2002 includes a new transmission line that is planned which would need to be certified under the Transmission Line Siting Act (403.52 – 403.536, F.S.). The new line will connect FPL's Orange River Substation to the Collier Substation. The construction of this line is necessary to serve existing and future customers in the Collier and Lee areas in a reliable and effective manner.

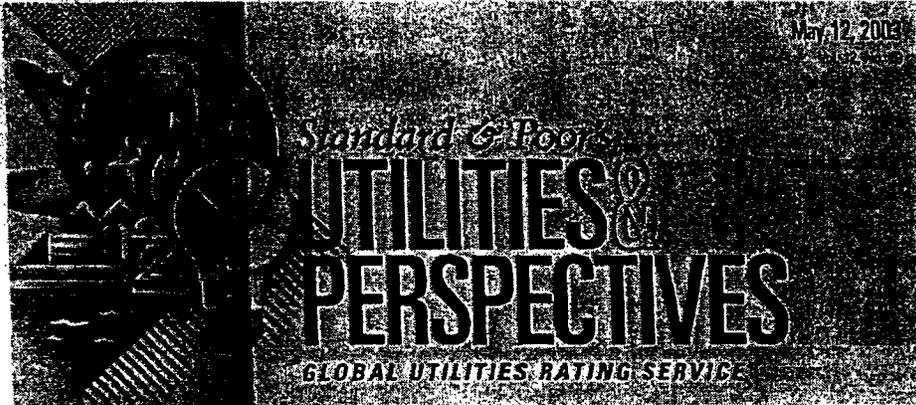
Additionally, contained in FPL's latest Transmission/Substation Expansion Plan for years 2002-2012 published in December, 2002 is a section entitled "Transmission System Long-Range Projects: 2008-2012. These projects are at this time only potential long-range transmission projects and are subject to change. The siting of future generation additions could have an impact on the necessity of such transmission projects. These proposed potential projects are not yet budgeted projects, are in the preliminary stages of consideration, and are based upon current assumptions that will be monitored and adjusted in future planning assessments. No determination has been made with regard to these potential long-range projects as to whether they will need to be certified under the Transmission Line Siting Act (403.52 – 403.536, F.S.).

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ATTACHMENT TWO

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May 12, 2003



**Last Week's Rating  
Reviews and Activity** ..... 10

**Did You Know?**

World Energy Consumption  
and Regional Carbon Dioxide  
Emissions in 2001 ..... 10

**Last Week's  
Financing Activity**

Duke Energy's \$700 Million  
Senior Notes Are Rated 'A-' ..... 11  
Wisconsin Electric Power's  
\$635 Million Debt Issue Is  
Rated 'A-' ..... 11  
North Carolina Eastern  
Municipal Power's Bonds  
Are Rated 'BBB' ..... 12  
Medco Energy's Proposed  
\$200 Million Notes Are  
Rated 'B+' ..... 12

**Utility Credit Rankings**

Electric/Gas/Water ..... 14  
Telecommunications ..... 17  
International ..... 18

**Key Contacts** ..... 19

**Feature Article**

**"Buy Versus Build": Debt Aspects of  
Purchased-Power Agreements** ..... 2

**Utility Spotlight**

**High Commodity Prices Bode Well For Stone  
Energy's Cash Flow** ..... 5

**Special Report**

**Survey of State Regulators Reveals Focus  
on U.S. Utilities' Financial Strength** ..... 6

**News Comments**

Laclede Group's and Unit's Ratings Are Lowered; Outlook Stable ..... 7  
Sierra Pacific Power's Water Facilities Bond Rating Is Raised to 'BB' ..... 7  
Empresa Electrica Guacolda Ratings Are Affirmed; Off Watch ..... 7  
Spanish Utilities Gas Natural, Iberdrola Ratings Are Affirmed; Off Watch ..... 8  
Enel's and Subs' Ratings Are Affirmed; Off Watch, Outlook Negative ..... 8  
Petrozuata Finance Ratings Is Affirmed; Off Watch ..... 9

**STANDARD  
& POOR'S**

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## "Buy Versus Build": Debt Aspects of Purchased-Power Agreements

Standard & Poor's Ratings Services views electric utility purchased-power agreements (PPAs) as debt-like in nature, and has historically capitalized these obligations on a sliding scale known as a "risk spectrum." Standard & Poor's applies a 0% to 100% "risk factor" to the net present value (NPV) of the PPA capacity payments, and designates this amount as the debt equivalent.

While determination of the appropriate risk factor takes several variables into consideration, including the economics of the power and regulatory treatment, the overwhelming factor in selecting a risk factor has been a distinction in the likelihood of payment by the buyer. Specifically, Standard & Poor's has divided the PPA universe into two broad categories: take-or-pay contracts (TOP, hell or high water) and take-and-pay contracts (TAP, performance based). To date, TAP contracts have been treated far more leniently (e.g., a lower risk factor is applied) than TOP contracts since failure of the seller to deliver energy, or perform, results in an attendant reduction in payment by the buyer. Thus, TAP contracts were deemed substantially less debt-like. In fact, the risk factor used for many TAP obligations has been as low as 5% or 10% as opposed to TOPs, which have been typically at least 50%.

Standard & Poor's originally published its purchased-power criteria in 1990, and updated it in 1993. Over the past decade, the industry underwent significant changes related to deregulation and acquired a history with regard to the performance and reliability of third-party generators. In general, independent generation has performed well; the likelihood of non-delivery—and thus release from the payment obligation—is low. As a result, Standard & Poor's believes that the distinction between TOPs and TAPs is minimal, the result being that the risk factor for TAPs will become more stringent. This article reiterates Standard & Poor's views on purchased power as a fixed obligation, how to quantify this risk, and the credit ramifications of purchasing power in light of updated observations.

### Why Capitalize PPAs?

Standard & Poor's evaluates the benefits and risks of purchased power by adjusting a purchasing utility's reported financial statements to allow for more meaningful comparisons with utilities that build generation. Utilities that build typically finance construction with a mix of debt and equity. A utility that leases a power plant has entered into a debt transaction for that facility; a capital lease appears on the utility's balance sheet as debt. A PPA is a similar fixed commitment. When a utility enters into a long-term PPA with a fixed-cost component, it takes on financial risk. Furthermore, utilities are typically not financially compensated for the risks

they assume in purchasing power, as purchased power is usually recovered dollar-for-dollar as an operating expense.

As electricity deregulation has progressed in some countries, states, and regions, the line has blurred between traditional utilities, vertically integrated utilities, and merchant energy companies, all of which are in the generation business. A common contract that has emerged is the tolling agreement, which gives an energy merchant company the right to purchase power from a specific power plant, less "Evaluating Debt Aspects of Power Tolling Agreements," published Aug. 26, 2002. The energy merchant, or tollor, is typically responsible for procuring and delivering gas to the plant when it wants the plant to generate power. The power plant operator must maintain plant availability and produce electricity at a contractual heat rate. Thus, tolling contracts exhibit characteristics of both PPAs and leases. However, tollors are typically unregulated entities competing in a competitive marketplace. Standard & Poor's has determined that a 70% risk factor should be applied to the NPV of the fixed tolling payments, reflecting its assessment of the risks borne by the tollor, which are:

- Fixed payments that cover debt financing of power plant (typically highly leveraged at about 70%).
- Commodity price of inputs.
- Energy sales (price and volume), and
- Counterparty risk.

### Determining the Risk Factor for PPAs

Alternatively, most entities entering into long-term PPAs, as an alternative to building and owning power plants, continue to be regulated utilities. Observations over time indicate the high likelihood of performance on TAP commitments and, thus, the high likelihood that utilities must make fixed payments. However, Standard & Poor's believes that vertically integrated, regulated utilities are afforded greater protection in the recovery of PPAs, compared with the recovery of fixed tolling charges by merchant generators. There are two reasons for this. First, tariffs are typically set by regulators to recover costs. Second, most vertically integrated utilities continue to have captive customers and an obligation to serve. At a minimum, purchased power, similar to capital costs and fuel costs, is included in tariffs as a cost of service.

As a generic guideline for utilities with PPAs included as an operating expense in base tariffs, Standard & Poor's believes that a 50% risk factor is appropriate for long-term commitments (e.g. terms greater than three years). This risk factor assumes adequate regulatory treatment, including recognition of the PPA in tariffs; otherwise a higher risk factor could be adopted to indicate greater risk of recovery. Standard & Poor's will apply a 50% risk factor to the capacity

Feature Article

component of both TAP and TOP PPAs. Where the capacity component is not broken out separately, we will assume that 60% of the payment is the capacity payment. Furthermore, Standard & Poor's will take counterparty risk into account when considering the risk factor. If a utility relies on any individual seller for a material portion of its energy needs, the risk of non-delivery will be assessed. To the extent that energy is not delivered, the utility will be exposed to replacing this power, potentially at market rates that could be higher than contracted rates and potentially not recoverable in tariffs.

Standard & Poor's continues to view the recovery of purchased-power costs via a fuel-adjustment clause, as opposed to base tariffs, as a material risk mitigant. A monthly or quarterly adjustment mechanism would ensure dollar-for-dollar recovery of fixed payments without having to receive approval from regulators for changes in fuel costs. This is superior to base tariff treatment, where variations in volume sales could result in under-recovery if demand is sluggish or contracting. For utilities in supportive regulatory jurisdictions with a precedent for timely and full cost recovery of fuel and purchased-power costs, a risk factor of as low as 30% could be used. In certain cases, Standard & Poor's may consider a lower risk factor of 10% to 20% for distribution utilities where recovery of certain costs, including stranded assets, has been legislated. Qualifying facilities that are blessed by overarching federal legislation may also fall into this category. This situation would be more typical of a utility that is transitioning from a vertically integrated to a disaggregated distribution company. Still, it is unlikely that

no portion of a PPA would be capitalized (zero risk factor) under any circumstances.

The previous scenarios address how purchased power is quantified for a vertically integrated utility with a bundled tariff. However, as the industry transitions to disaggregation and deregulation, various hybrid models have emerged. For example, a utility can have a deregulated merchant energy subsidiary, which buys power and off-sells it to the regulated utility. The utility in turn passes this power through to customers via a fuel-adjustment mechanism. For the merchant entity, a 70% risk factor would likely be applied to such a TAP or tolling scheme. But for the utility, a 30% risk factor would be used. What would be the appropriate treatment here? In part, the decision would be driven by the ratings methodology for the family of companies. Starting from a consolidated perspective, Standard & Poor's would use a 30% risk factor to calculate one debt equivalent on the consolidated balance sheet given that for the consolidated entity the risk of recovery would ultimately be through the utility's tariff. However, if the merchant energy company were deemed nonzero and its rating was more a reflection of its stand-alone creditworthiness, Standard & Poor's would impute a debt equivalent using a 70% risk factor to its balance sheet, as well as a 30% risk-adjusted debt equivalent to the utility. Indeed, this is how the purchases would be reflected for both companies if there were no ownership relationship. This example is perhaps overly simplistic because there will be many variations on this theme. However, Standard & Poor's will apply this logic as

Table 1

ABC Utility Co. Adjustment to Capital Structure

	Original capital structure		Adjusted capital structure	
	\$	%	\$	%
Debt	1,400	54	1,400	48
Adjustment to debt	—	—	327	11
Preferred stock	200	8	200	7
Common equity	1,000	38	1,000	34
Total capitalization	2,600	100	2,927	100

Table 2

ABC Utility Co. Adjustment to Pretax Interest Coverage

		Original pretax interest coverage		Adjusted pretax interest coverage	
Net income	120				
Income taxes	65	300		(300+33)	
Interest expense	115	115	= 2.5x	(115+33)	= 2.3x
Pretax available	300				

◀ Back to Table of Contents  
Next Page ▶

## Feature Article

a starting point, and modify the analysis case-by-case, commensurate with the risk to the various participants.

### Adjusting Financial Ratios

Standard & Poor's begins by taking the NPV of the annual capacity payments over the life of the contract. The rationale for not capitalizing the energy component, even though it is also a nondiscretionary fixed payment, is to equate the comparison between utilities that buy versus build—i.e., Standard & Poor's does not capitalize utility fuel contracts. In cases where the capacity and energy components of the fixed payment are not specified, half of the fixed payment is used as a proxy for the capacity payment. The discount rate is 10%. To determine the debt equivalent, the NPV is multiplied by the risk factor. The resulting amount is added to a utility's reported debt to calculate adjusted debt. Similarly, Standard & Poor's imputes an associated interest expense equivalent of 10%—10% of the debt equivalent is added to reported interest expense to calculate adjusted interest expense ratios. Key ratios affected include debt as a percentage of total capital, funds from operations (FFO) to debt, pretax interest coverage, and FFO interest coverage. Clearly, the higher the risk factor, the greater the effect on adjusted financial ratios. When analyzing forecasts, the NPV of the PPA will typically decrease as the maturity of the contract approaches.

### Utility Company Example

To illustrate some of the financial adjustments, consider the simple example of ABC Utility Co. buying power from XYZ Independent Power Co. Under the terms of the contract, annual payments made by ABC Utility start at \$80 million in 2003 and rise 5% per year through the contract's expiration in 2023. The NPV of these obligations over the life of the contract discounted at 10% is \$1.00 billion. In ABC's case, Standard & Poor's chose a 90% risk factor, which when multiplied by the obligation results in \$327 million. Table 1 illustrates the adjustment to ABC's capital structure, where the \$327 million debt equivalent is added as debt, causing ABC's total debt to capitalization to rise to 58% from 54% (48 plus 11). Table 2 shows that ABC's pretax interest cover-

age was 2.5x, without adjusting for off-balance-sheet obligations. To adjust for the XYZ capacity payments, the \$327 million debt adjustment is multiplied by a 10% interest rate to arrive at about \$33 million. When this amount is added to both the numerator and the denominator, adjusted pretax interest coverage falls to 2.3x.

### Credit Implications

The credit implications of the updated criteria are that Standard & Poor's now believes that historical risk factors applied to TAP contracts with favorable recovery mechanisms are insufficient to capture the financial risk of these fixed obligations. Indeed, in many cases where 5% and 10% risk factors were applied, the change in adjusted financial ratios (from unadjusted) was negligible and had no effect on ratings. Standard & Poor's views the high probability of energy delivery and attendant payment warrants recognition of a higher debt equivalent when capitalizing PPAs. Standard & Poor's will attempt to identify utilities that are more vulnerable to modifications in purchased-power adjustments. Utilities can offset these financial adjustments by recognizing purchased power as a debt equivalent, and incorporating more common equity in their capital structures. However, Standard & Poor's is aware that utilities have been reluctant to take this action because many regulators will not recognize the necessity for, and authorize a return on, this additional wedge of common equity. Alternatively, regulators could authorize higher returns on existing common equity or provide an incentive return mechanism for economic purchases. Notwithstanding unresponsive regulators, the burden will still fall on utilities to offset the financial risk associated with purchases by either qualitative or quantitative means. ■

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Page 4 May 12, 2003

Standard & Poor's Utilities & Perspectives

**RFP ADDENDUMS**

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September 4, 2003

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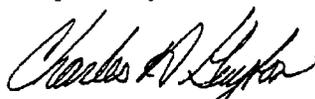
Re: Florida Power & Light Company's  
Addendum One to 2003 Capacity Request for Proposals

Dear Ms. Bayó:

Today, Florida Power & Light Company ("FPL") issued Addendum One (Guidance for Submission of Annual Cost Data) to its 2003 capacity Request for Proposals ("RFP") issued and filed on August 25, 2003. Since Addendum One is part of FPL's RFP, FPL is enclosing a copy for filing with the Commission.

If you or your Staff have any questions regarding this transmittal, please contact me at (850) 222-2300.

Respectfully,



Charles A. Guyton  
Attorney for Florida Power  
& Light Company

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## **Guidance for Submission of Annual Cost Data**

### ***Background***

FPL's 2003 RFP requires potential Proposers to provide annual values for Capacity Payments (that inherently may include a fixed O&M component), Variable O&M Payments, and Startup Payments. These annual values may reflect assumed escalation over the term of a proposed contract. Proposers may either submit fixed annual values or have components of their proposal prices be subject to escalation. In the former instance, the Proposer would be guaranteeing the actual prices for each year (i.e., those are the set annual prices that would be incorporated directly into a PPA if the Proposer were selected by FPL). In so doing, a Proposer would be choosing to assume the risk/benefit of costs deviating from the annual values provided. In the latter case, a Proposer may submit prices that are subject to future adjustment based on a formula that includes one or more of three approved indices (described below). For example, a Proposer might propose a Variable O&M charge that entails a 2007 starting value that escalates thereafter at some portion or all of the actual change in a specific index. In summary, Proposers can choose the level of risk they would assume by applying a formulaic approach (similar to FPL) or guaranteeing specific annual values.

The latter indexed approach was the process employed by FPL in developing the forecasted annual values for Variable O&M, Capital Replacement and Fixed O&M for its self-build options in the RFP. The numeric values shown in FPL's self-build options are not guaranteed, rather they reflect FPL's best estimate of what its formulaic cost estimate will yield. Over time, actual values would be substituted for these forecasted values.

The following describes how this can be accomplished by Proposers in response to FPL's 2003 RFP and the method employed by FPL in constructing its values.

### ***Process***

The following is provided to clarify requirements for data submitted in response to FPL's 2003 Request for Proposal (RFP) as pertains to proposal pricing components that may be either fixed or subject to escalation. The approach offers Proposers the opportunity to declare the annual values that will be used to evaluate their proposal and (if the proposal is subject to escalation) the method of applying three FPL authorized indices to develop the values to be evaluated.

A Proposer must submit payment values, not formulae, for all years for Capacity Payment and Variable O&M Payment as described in Florida Power & Light's 2003 RFP. Thus, even if a Proposer decides to base a price component on a formula/index, the Proposer must still calculate and populate the RFP Form #5 with specific annual values (so that the proposal evaluation team can verify its understanding of the Proposer's formula).

### Fixed Price Procedure

If the values on Form #5 represent fixed, guaranteed payment values, then simply completing the RFP forms as described in the RFP is sufficient. These firm, guaranteed annual payment values would be used in the evaluation and then included unchanged in the PPA should the proposal be selected.

### Formulaic/Indexing Procedure

If a Proposer chooses to develop payment values based on the use of FPL authorized indices, and desires this method to be the basis of the evaluation and a potential PPA with FPL, the Proposer must use the following approach.

Only the indices in Table 1 are authorized for use in submitting formulaic/indexed prices in response to the FPL 2003 RFP. The three authorized indices are:

- The Global Insight escalation index for Producer Price Index – All Commodities (PPI).
- The Global Insight escalation index for Compensation Per Hour – Non-Farm Business Sector (CPH).
- The Global Insight escalation index for Consumer Price Index – All Urban Consumers (CPI).

One of these escalation indices may be used by itself or in combination with any or all of the other indices.

The only price values that a Proposer may choose to index are those for Capacity Payments (and inherently any fixed O&M portion of those payments), Variable O&M Payments, and Startup Payments – all of which are to be provided on Form #5. The formula(e) applied by the Proposer to develop the payment values must be provided and fully described at the bottom of the relevant page(s) of Form # 5 or included on an attached page to the form if more room is needed. This formula, combined with future actual values for each index used in the formula, will be the basis for payments that the Proposer would receive if the proposal is selected.

A Proposer may also deem that some portion of a payment is not indexed, while another segment of the payment is. For example, a Proposer's Capacity Payment may entail one portion that is fixed (or that escalates at a set percentage) throughout the term of the contract while another portion (i.e., a fixed O&M component) may be subject to annual adjustment based on a formula that includes one or more of the authorized indices.

In addition to a thorough description of the formula/indexing process that is proposed, a Proposer must fill out the annual values for every year of the proposed transaction – based on the forecast of the authorized index values contained in Table 1. Note that the Proposer will not be bound by these specific annual values – only the formula/indexing

process behind them. However, the annual values are essential and will be used to confirm that the proposal evaluation team understands and correctly applies the Proposer's formula/indexing process.

**Example**

The following is an example of how a forecasted annual Capacity Payment (CP) value could be developed using a formulaic combination of two FPL authorized indices. Formula (1) represents the equally weighted combination of the CPI and PPI. Additionally, the PPI is discounted representing the Proposer's assumption that the PPI overstates future escalation by 5%. This allows the Proposer to adopt an assumption in its pricing proposal, be evaluated on that assumption, and have that same assumption reflected in the pricing provision of the PPA. The starting value for the Capacity Payment in 2007 ( $CP_{2007}$ ) is \$5/kW-mo. The proposed Capacity Payment for 2012 ( $CP_{2012}$ ) would be determined as follows:

$$(1) \quad CP_{2012} = CP_{2007} \times \left[ 0.5 \times \frac{CPI_{2012}}{CPI_{2007}} + 0.5 \times \frac{0.95 \times PPI_{2012}}{PPI_{2007}} \right]$$

$$(2) \quad CP_{2012} = 5 \times \left[ 0.5 \times \frac{229.96}{200.01} + 0.5 \times \frac{0.95 \times 148.42}{139.39} \right] = \$5.4032/\text{kW-mo}$$

Values for other years would be developed in the same manner, substituting the appropriate index value in the numerator for each index. The actual Capacity Payment to be made in the future under a PPA would apply the same formula with actual values of the CPI and PPI.

**FPL's Methodology**

- 1) FPL used the Producer Price Index (directly) to escalate an initial value for the Variable O&M and Capital Replacement values shown in Tables V-2 and V-5 of the RFP.
- 2) FPL used the CPH index (directly) to escalate initial Fixed O&M values shown in Tables V-2 and V-5 of the RFP.
- 3) FPL did not use Global Insight's Consumer Price Index, but this may be used by Proposers.

**Table 1. Global Insight Indices for use in response to FPL's 2003 RFP  
(The U.S. Economy The 25-Year Focus, Winter 2003; Global Insight)**

Dates	<u>Consumer</u> Price Index (All Urban Consumers)		<u>Producer Price</u> Index (All Commodities)		<u>Compensation Per</u> Hour (Nonfarm Business Sector)	
		% Change		% Change		% Change
1990	130.75	5.4%	116.28	3.6%	90.55	5.5%
1991	136.17	4.1%	116.53	0.2%	94.98	4.9%
1992	140.31	3.0%	117.20	0.6%	100.00	5.3%
1993	144.48	3.0%	118.92	1.5%	102.18	2.2%
1994	148.23	2.6%	120.45	1.3%	104.35	2.1%
1995	152.38	2.8%	124.75	3.6%	106.55	2.1%
1996	156.86	2.9%	127.67	2.3%	109.83	3.1%
1997	160.53	2.3%	127.59	-0.1%	113.08	3.0%
1998	163.01	1.5%	124.43	-2.5%	119.13	5.4%
1999	166.59	2.2%	125.48	0.8%	124.35	4.4%
2000	172.19	3.4%	132.75	5.8%	132.98	6.9%
2001	177.06	2.8%	134.20	1.1%	136.63	2.7%
2002	179.88	1.6%	131.10	-2.3%	140.58	2.9%
2003	183.60	2.1%	135.03	3.0%	146.61	4.3%
2004	187.05	1.9%	135.33	0.2%	152.65	4.1%
2005	190.94	2.1%	136.39	0.8%	159.13	4.2%
2006	195.16	2.2%	137.80	1.0%	165.40	3.9%
2007	200.01	2.5%	139.39	1.2%	172.02	4.0%
2008	205.45	2.7%	141.07	1.2%	179.44	4.3%
2009	211.27	2.8%	142.82	1.2%	187.42	4.5%
2010	217.32	2.9%	144.63	1.3%	195.76	4.4%
2011	223.60	2.9%	146.53	1.3%	204.53	4.5%
2012	229.96	2.8%	148.42	1.3%	213.83	4.5%
2013	236.56	2.9%	150.47	1.4%	223.53	4.5%
2014	243.45	2.9%	152.53	1.4%	233.98	4.7%
2015	250.45	2.9%	154.20	1.1%	244.49	4.5%
2016	257.63	2.9%	155.83	1.1%	255.15	4.4%
2017	265.45	3.0%	158.07	1.4%	266.21	4.3%
2018	273.98	3.2%	160.81	1.7%	278.10	4.5%
2019	283.10	3.3%	163.79	1.9%	290.62	4.5%
2020	292.75	3.4%	166.88	1.9%	303.92	4.6%
2021	302.78	3.4%	169.89	1.8%	317.70	4.5%
2022	313.22	3.4%	173.12	1.9%	331.23	4.3%
2023	324.06	3.5%	176.49	1.9%	345.64	4.4%
2024	335.30	3.5%	179.86	1.9%	360.81	4.4%
2025	347.05	3.5%	183.42	2.0%	377.17	4.5%
2026	359.40	3.6%	187.34	2.1%	394.34	4.6%
2027	372.19	3.6%	191.34	2.1%	412.30	4.6%
2028	385.43	3.6%	195.44	2.1%	431.08	4.6%
2029	399.14	3.6%	199.62	2.1%	450.71	4.6%
2030	413.34	3.6%	203.88	2.1%	471.23	4.6%
2031	428.05	3.6%	208.24	2.1%	492.69	4.6%

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September 12, 2003

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Re: Florida Power & Light Company's  
Addendum Two to 2003 Capacity Request for Proposals

Dear Ms. Bayó:

Today, Florida Power & Light Company ("FPL") issued Addendum Two (Promulgation of the RFP Evaluation Fuel Forecast, Change to Question Cut-Off Date and Clarification of Dual Fuel Capability Requirement) to its 2003 capacity Request for Proposals ("RFP") issued and filed on August 25, 2003. Since Addendum Two is part of FPL's RFP, FPL is enclosing a copy for filing with the Commission.

If you or your Staff have any questions regarding this transmittal, please contact me at (850) 222-2300.

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Respectfully,

Charles A. Guyton  
Attorney for Florida Power  
& Light Company

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## **Addendum Two**

### **Promulgation of the RFP Evaluation Fuel Forecast, Change to Question Cut-Off date and Clarification of Dual Fuel Capability Requirement**

This Addendum Two to FPL's 2003 Request for Proposals (RFP) is published for the benefit of potential participants to that RFP. The information contained therein provides additional information, changes and clarifications that have occurred since the publication date of August 25, 2003.

- 1) As identified in Section II.D of FPL's 2003 Request for Proposals (RFP), FPL is publishing its September 1, 2003 Fuel Price Forecast. This forecast will be used during FPL's economic evaluation of proposals received in response to the RFP. Please refer to Section A for more details regarding this forecast.
- 2) In response to a concern expressed by certain parties that there be sufficient time for questions following publication of the above described forecast, FPL is extending the cutoff date for questions to 14 days following the publication of the fuel forecast, or September 30<sup>th</sup>, whichever occurs last. **The cut-off date for questions will be revised to September 30<sup>th</sup>.**
- 3) Clarification of FPL's Dual Fuel Capability requirement (Section II.E.(11)) is provided in Section B. This discussion seeks to clarify what FPL will consider as satisfying that minimum requirement.

#### ***A. FPL's September 1, 2003 Fuel Price Forecast***

The fuel price forecast information that FPL will use in evaluating all generating alternatives associated with its 2003 RFP is presented in this file. This information is based on FPL's September 1, 2003 "Most Likely" fuel price forecast.

Tables A2.1 through A2.5 contain the forecast data. The following comments are intended to assist you in understanding how this fuel price forecast information will be used in the RFP economic evaluation. The forecasted fuel price information will be applied, as appropriate, to all capacity additions to be considered; including proposals received in response to the RFP, and FPL self-build options.

The fuel price information contained in Table A2.1 will be used to model existing and planned FPL gas units as well as new natural gas-fired capacity options. Tables A2.2, A2.3 and A2.4 contain fuel price information that will be used to model existing FPL units or new capacity options using coal, coke or fuel oil. Table A2.5 provides the unit cost of fuel used at FPL's nuclear facilities.

The footnotes describe the specific columns to be applied to FPL's self build options, existing assets and proposals by the type of transportation assumptions that are made for each category. Fuel price information for FPL's next planned generating unit (the Turkey Point CC unit) and the FPL alternate generating unit (the 4 CT's at Turkey Point) are presented on Table A2.1 in columns (1) and (2) for the CC unit and in column (3) for the 4 CT option. Note that this information replaces the fuel price information presented in the RFP in Table V - 1 and Table V - 4 (item # 9 for both).

Also, note that the same forecasted gas transportation and commodity prices will be used in the economic evaluation regardless of whether an option will be served by the Florida Gas Transmission (FGT) pipeline or by the Gulfstream pipeline. Therefore, whether a proposal lists "FGT" or "Gulfstream" in the "Guaranteed Fuel Transportation Price" column on RFP Form # 5, page 2 of 3, the same transportation and commodity prices will be used in the evaluation. However, a Proposer may still propose their own fuel commodity and/or transportation costs as long as they are guaranteed as required in the RFP.

***B. Clarification of Dual Fuel Capability Minimum Requirement***

Section III.E.(11) of FPL's 2003 RFP states, in relevant part:

All newly built gas-fired generation proposals must include the capability to operate on distillate fuel oil as a secondary fuel to satisfy reliability and continuity concerns. Specifically, the proposed price for newly built gas-fired generation unit(s) shall reflect the necessary equipment to enable a minimum of seventy-two (72) hours of continuous firing of the unit(s) on the secondary fuel at full capacity supplied from on-site storage.

FPL recognizes that there are certain physical arrangements wherein a proposed project would have the physical, logistical and contractual ability to rely upon two independent and redundant sources of natural gas. In such a case, the reliability and continuity concerns prompting FPL to require the dual fuel capability described above would be met. Therefore, FPL provides the following clarification to Section III.E (11) of FPL's 2003 RFP.

FPL will accept and evaluate proposals for newly built gas-fired generation that do not have distillate oil capability if the proposals satisfy the following:

1. The proposed site is located such that two independent and reliable sources of natural gas are available to provide the full fuel needs required by the facility (more specifically, the required volume, at the required pressure, to produce full capacity output). The total distance from the plant isolation valve (inside the plant boundary) to the cross-connection point must be less than 30 miles to be considered in compliance with this requirement.

2. The Proposer provides a description of the lateral pipeline and any mainline upgrades necessary to accommodate supporting this functionality. The costs of any incremental capital investment required on the lateral connection to the facility must be included in the proposal.
3. The affected pipelines (sources) must demonstrate their concurrence that this function could be reasonably accommodated based on the Proposer's plans by providing the Proposer with a letter signifying same, signed by an official of the company. Proposers must include these letters in their proposal.
4. The Proposer shall include an affirmation that the Proposer has or shall obtain firm transportation capability for both sources of supply, each sufficient to meet the proposed facility's full needs. The purpose of the affirmation is to demonstrate that if one source is unexpectedly interrupted, the facility can receive natural gas from the second source without delay.
5. The economic analysis of a proposal relying on two independent natural gas pipelines, in place of dual fuel capability with distillate oil inventory, will assume the cost of reserving firm gas transportation capability on both systems.
6. FPL will consider alternate commercial arrangements that would not require the cost of firm transportation on both pipelines if provided in a proposal. The alternate arrangement must however provide, in FPL's view, an immediately accessible, redundant and independent supply that is equivalent to that provided by dual fuel capability with distillate oil inventory. Unless FPL determines that the proposed alternate arrangement does, in fact, provide an equivalent level of redundant and independent supply, the economic analysis will be conducted as described in item 5 above.

**Table A2.1 FPL's "Most Likely" Fuel Forecast for New Gas-Fired Capacity Options and Existing FPL Units**  
(Nominal \$/MMBtu)

Year	Firm Transportation Gas <sup>(1)</sup>		Non-Firm <sup>(2)</sup>	Existing Firm <sup>(3)</sup>
	Variable (Dispatch)	Demand (Sunk)	Transportation	Transportation Gas
	Price	Price	Variable (Dispatch)	Variable (Dispatch)
2003	---	---	6.00	5.76
2004	---	---	5.52	5.27
2005	5.00	0.55	5.31	5.06
2006	4.96	0.55	5.26	5.00
2007	4.98	0.55	5.28	5.02
2008	4.99	0.55	5.30	5.04
2009	5.13	0.55	5.44	5.18
2010	5.27	0.55	5.58	5.32
2011	5.41	0.55	5.74	5.47
2012	5.57	0.55	5.90	5.63
2013	5.74	0.55	6.07	5.79
2014	5.91	0.55	6.25	5.97
2015	6.09	0.55	6.44	6.37
2016	6.28	0.55	6.64	6.69
2017	6.49	0.55	6.85	6.89
2018	6.71	0.55	7.08	7.11
2019	6.93	0.55	7.31	7.34
2020	7.16	0.55	7.55	7.58
2021	7.40	0.55	7.80	7.82
2022	7.65	0.55	8.06	8.27
2023	7.91	0.55	8.33	8.61
2024	8.18	0.55	8.61	8.88
2025	8.47	0.55	8.90	9.17
2026	8.76	0.55	9.21	9.47
2027	9.07	0.55	9.53	9.78
2028	9.39	0.55	9.86	10.11
2029	9.73	0.55	10.21	10.45
2030	10.07	0.55	10.56	10.79
2031	10.42	0.55	10.92	11.14

Notes:

- (1) Forecasted prices to be used in the 2003 RFP evaluation of: a) FPL next planned generating unit (4x1 CC unit at Turkey Point), b) tolling proposals and non-tolling firm for gas-fired baseload capacity proposals (i.e., such as CC Capacity) to be served by either Gulfstream and FGT received in response to FPL's RFP (unless Proposer-guaranteed gas prices are submitted as part of the proposal), c) RFP CC Biler units, and d) FPL's new CC units Martin #8 and Manatee #3 that come in-service in 2005.
- (2) Forecasted prices to be used for: a) FPL's alternate (4 CT's at Turkey Point) option, b) tolling/non-tolling non-firm gas-fired capacity peaking proposals (i.e., CT Capacity) received in response to FPL's RFP (unless Proposer-guaranteed gas prices are submitted as part of the proposal), c) RFP CT Biler units, and d) existing FPL CT's at Martin and Ft. Myers.
- (3) Forecasted prices will be used for modeling existing FPL dual fuel units and existing FPL CC units

**Table A2.2 FPL's "Most Likely" Fuel Forecast for New Coal- or Coke-Fired Capacity Options and Existing FPL Units <sup>(1), (2)</sup>**  
**(Nominal \$/MMBtu)**

<u>Year</u>	<u>Scherer Plant</u>	<u>Martin Plant: 1% Sulfur Coal</u>	<u>St.Johns River Power Park</u>	<u>Petroleum Coke <sup>(3)</sup></u>
2003	1.92	1.75	1.51	0.53
2004	1.57	1.76	1.63	0.53
2005	1.59	1.79	1.65	0.53
2006	1.62	1.82	1.67	0.54
2007	1.65	1.85	1.70	0.56
2008	1.68	1.88	1.68	0.59
2009	1.70	1.91	1.62	0.62
2010	1.73	1.94	1.65	0.65
2011	1.76	1.98	1.68	0.67
2012	1.79	2.01	1.71	0.70
2013	1.83	2.05	1.74	0.71
2014	1.86	2.09	1.78	0.73
2015	1.90	2.12	1.81	0.76
2016	1.94	2.17	1.85	0.77
2017	1.98	2.21	1.89	0.78
2018	2.02	2.26	1.93	0.79
2019	2.06	2.30	1.97	0.81
2020	2.11	2.35	2.01	0.82
2021	2.15	2.40	2.05	0.83
2022	2.20	2.45	2.10	0.84
2023	2.25	2.50	2.14	0.86
2024	2.30	2.56	2.19	0.87
2025	2.35	2.61	2.24	0.89
2026	2.40	2.67	2.29	0.90
2027	2.46	2.73	2.34	0.91
2028	2.51	2.79	2.40	0.93
2029	2.57	2.85	2.45	0.95
2030	2.63	2.91	2.51	0.96
2031	2.69	2.97	2.57	0.97

**Notes:**

- (1) Forecasted prices will be used for coal- and petroleum coke-based capacity proposals received in response to FPL's RFP by geographic location (unless Proposer-guaranteed coal/petroleum coke prices are submitted as part of the proposal.)
- (2) Forecasted prices will be also used for modeling existing FPL solid fuel-based units as indicated.
- (3) Petroleum Coke forecasted prices are as delivered FOB Florida Port; not to a specific location in Florida.

**Table A2.3 FPL's "Most Likely" Residual Oil Price Forecast for New Capacity Options and Existing FPL Units <sup>(1)</sup>**  
**(Nominal \$/MMBtu)**

<u>Year</u>	<u>Martin <sup>(2)</sup></u>	<u>Everglades</u>	<u>Manatee</u>	<u>Turkey Point</u>	<u>Canaveral</u>	<u>Sanford</u>	<u>Riviera</u>
2003	4.68	4.65	4.60	4.75	4.64	4.97	4.68
2004	4.14	4.11	4.07	4.22	4.10	4.44	4.14
2005	3.84	3.81	3.77	3.92	3.80	4.14	3.84
2006	3.75	3.72	3.67	3.83	3.71	4.05	3.75
2007	3.76	3.73	3.68	3.84	3.72	4.06	3.76
2008	3.87	3.83	3.79	3.94	3.82	4.17	3.87
2009	3.98	3.94	3.90	4.06	3.93	4.29	3.98
2010	4.09	4.06	4.01	4.17	4.05	4.41	4.09
2011	4.22	4.19	4.14	4.30	4.18	4.54	4.22
2012	4.36	4.33	4.28	4.44	4.32	4.69	4.36
2013	4.51	4.48	4.43	4.59	4.46	4.84	4.51
2014	4.67	4.63	4.58	4.75	4.62	5.00	4.67
2015	4.83	4.79	4.74	4.91	4.78	5.17	4.83
2016	5.00	4.97	4.92	5.09	4.96	5.34	5.00
2017	5.19	5.15	5.10	5.28	5.14	5.53	5.19
2018	5.38	5.35	5.29	5.47	5.33	5.74	5.38
2019	5.57	5.53	5.48	5.66	5.52	5.93	5.57
2020	5.78	5.74	5.69	5.88	5.73	6.15	5.78
2021	6.00	5.96	5.91	6.09	5.95	6.37	6.00
2022	6.23	6.19	6.13	6.33	6.18	6.61	6.23
2023	6.47	6.43	6.37	6.57	6.42	6.85	6.47
2024	6.72	6.68	6.62	6.82	6.66	7.11	6.72
2025	6.98	6.94	6.88	7.08	6.93	7.38	6.98
2026	7.26	7.22	7.15	7.36	7.20	7.67	7.26
2027	7.55	7.50	7.44	7.65	7.49	7.96	7.55
2028	7.85	7.80	7.74	7.96	7.79	8.27	7.85
2029	8.16	8.12	8.05	8.27	8.10	8.59	8.16
2030	8.51	8.46	8.40	8.62	8.45	8.95	8.51
2031	8.88	8.81	8.77	8.98	8.82	9.33	8.88

**Note:**

(1) Forecasted prices will be used for modeling existing FPL steam units as indicated or proposed units as applicable.

(2) Martin steam units require co-fire ratio of 70% residual oil and 30% natural gas.

**Table A2.4 FPL's "Most Likely" Distillate Oil Price Forecast New Capacity Options and Existing FPL Units <sup>(1)</sup>**  
**(Nominal \$/MMBtu)**

<u>Year</u>	<u>Gas Turbines at Everglades</u>	<u>Gas Turbines at Lauderdale</u>	<u>Gas Turbines &amp; New CT's at Ft. Myers</u>	<u>Combined Cycles at Putnam</u>	<u>Combined Cycles at Lauderdale</u>	<u>New CT's at Martin/Martin #8</u>
2003	6.36	6.36	6.91	6.40	6.36	6.77
2004	5.65	5.65	6.21	5.69	5.65	6.07
2005	5.39	5.39	5.95	5.43	5.39	5.81
2006	5.31	5.31	5.88	5.35	5.31	5.74
2007	5.33	5.33	5.90	5.37	5.33	5.76
2008	5.48	5.48	6.06	5.52	5.48	5.91
2009	5.63	5.63	6.22	5.67	5.63	6.07
2010	5.79	5.79	6.39	5.84	5.79	6.24
2011	5.98	5.98	6.58	6.02	5.98	6.43
2012	6.17	6.17	6.79	6.22	6.17	6.63
2013	6.38	6.38	7.00	6.42	6.38	6.85
2014	6.60	6.60	7.23	6.64	6.60	7.07
2015	6.83	6.83	7.47	6.87	6.83	7.31
2016	7.07	7.07	7.72	7.12	7.07	7.56
2017	7.33	7.33	7.99	7.38	7.33	7.82
2018	7.61	7.61	8.28	7.65	7.61	8.11
2019	7.89	7.89	8.57	7.94	7.89	8.40
2020	8.19	8.19	8.88	8.24	8.19	8.70
2021	8.49	8.49	9.20	8.54	8.49	9.02
2022	8.81	8.81	9.53	8.87	8.81	9.35
2023	9.15	9.15	9.88	9.20	9.15	9.70
2024	9.50	9.50	10.25	9.56	9.50	10.06
2025	9.87	9.87	10.63	9.92	9.87	10.44
2026	10.26	10.26	11.03	10.32	10.26	10.84
2027	10.67	10.67	11.45	10.72	10.67	11.26
2028	11.09	11.09	11.89	11.15	11.09	11.69
2029	11.53	11.53	12.35	11.59	11.53	12.14
2030	11.99	11.99	12.83	12.05	11.99	12.62
2031	12.47	12.47	13.33	12.53	12.47	13.12

Note:

(1) Forecasted prices will be used for modeling backup fuel at existing FPL units as indicated or proposed units as applicable.

**Table A2.5 FPL's "Most Likely" Nuclear Fuel Price Forecast**  
**(Nominal \$/MMBtu)**

<u>Year</u>	<u>Port St. Lucie Plant 1</u>	<u>Port St. Lucie Plant 2</u>	<u>Turkey Point Plant 3</u>	<u>Turkey Point Plant 4</u>
2003	0.36	0.37	0.39	0.36
2004	0.38	0.38	0.38	0.38
2005	0.38	0.41	0.40	0.40
2006	0.38	0.40	0.40	0.38
2007	0.37	0.39	0.37	0.37
2008	0.38	0.39	0.38	0.38
2009	0.39	0.40	0.39	0.39
2010	0.40	0.41	0.39	0.39
2011	0.41	0.41	0.40	0.40
2012	0.41	0.42	0.40	0.40
2013	0.42	0.43	0.41	0.41
2014	0.43	0.43	0.41	0.42
2015	0.43	0.44	0.42	0.42
2016	0.44	0.44	0.43	0.43
2017	0.45	0.45	0.43	0.44
2018	0.45	0.46	0.44	0.44
2019	0.46	0.46	0.45	0.45
2020	0.47	0.47	0.45	0.46
2021	0.47	0.48	0.46	0.46
2022	0.48	0.48	0.46	0.47
2023	0.49	0.49	0.47	0.47
2024	0.50	0.50	0.48	0.48
2025	0.50	0.50	0.48	0.48
2026	0.51	0.51	0.49	0.49
2027	0.51	0.52	0.50	0.50
2028	0.52	0.52	0.50	0.50
2029	0.53	0.53	0.51	0.51
2030	0.53	0.54	0.51	0.51
2031	0.54	0.54	0.52	0.52



030884

October 6, 2003

Ms. Blanca Bayo, Director  
Division of the Commission Clerk and Administrative Services  
Florida Public Service Commission  
2540 Shumard Oak Blvd.  
Tallahassee, Florida 32399-0850

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RFP Participants and Interested Parties

Subject: TRANSMITTAL OF ADDENDUM THREE TO FPL's 2003 RFP.

Dear Ms. Bayo and other Recipients:

Addendum Three to Florida Power & Light's (FPL) 2003 Request for Proposals (RFP) is published to change certain specified portions of the RFP, Section E of Addendum Two and the draft PPA (Appendix A to the RFP). FPL is posting the following RFP changes in response to suggestions raised at the September 30, 2003 Agenda Conference. Also, FPL is filing a copy with the Commission.

The following identifies the areas being revised; the affected sections of RFP documents are annotated in parentheses. A summary of all changes to the RFP is provided as Section F of Addendum Three.

- **Evaluation Fee (RFP Section III.B)**  
In response to suggestions offered at the Agenda Conference regarding evaluation fees, a provision has been added to accommodate variations to a proposal for a reduced fee. The terms "Proposal" and "Variation" are defined.
- **Financial Security Requirements (RFP Sections II.H.1)b), II.H.4 {Table}, and III.E.5).**  
In response to suggestions expressed at the Agenda Conference regarding the cumulative impact on potential Proposers of the minimum financial viability and security requirements, FPL has made several changes. First, the minimum financial viability requirement for new generation proposals has been lowered to BBB-/Baa3. Second, the posting requirements for Completion Security and the Form of Security requirements have been revised to mitigate the impact on potential Proposers. So, the revisions result in a larger potential field of Proposers, a graduated and less demanding posting of security and significantly lower amounts of liquid security required of creditworthy Proposers.

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October 6, 2003

- **Regulatory Modifications (RFP Section III.E.15), and draft PPA Section 17.7.1)**  
As suggested at the Agenda Conference, the language of the Bid Rule has been inserted into the Regulatory Modification provision.
- **Exceptions to the draft PPA (RFP Section III.F paragraphs 2 and 3)**  
In response to questions raised at the Agenda Conference, FPL modified language to eliminate any inference that failure to state exceptions constitutes contractual acceptance of terms and conditions. Further, Proposers are only required to state exceptions to terms and conditions they deem "material."
- **Dual Fuel Minimum Requirement (RFP Section III.E.11) and Addendum Two, Section B).**  
At the Agenda Conference the Commission may have been left with the mistaken impression that FPL was requiring two firm gas transportation contracts as one means to satisfy its dual fuel requirement. To clarify its original Dual Fuel Capability requirement and to avoid implying that Proposers might be limited to only one alternative, FPL has restated the Dual Fuel Capability requirement in its entirety. The restated requirement calls for the same continuity and operability requirements that FPL requires of its next planned generating unit.

Sincerely,



William G. Walker, III  
Vice President, Regulatory Affairs

Enclosure

cc:  
Chairman Lila A. Jaber  
Commissioner J. Terry Deason  
Commissioner Braulio L. Baez  
Commissioner Rudolph "Rudy" Bradley  
Commissioner Charles M. Davidson  
Office of the Public Counsel  
Florida Partnership for Affordable Competitive Energy

## **Addendum Three**

### **Changes to Request for Proposal**

This Addendum Three to FPL's 2003 Request for Proposals (RFP) is published to change certain specified portions of the RFP, Section B of Addendum Two and Section 17.7.1 of the draft PPA (Appendix A to the RFP). The provisions contained in this Addendum Three supersede those contained in the RFP. In addition, the provisions contained in Section E of this Addendum Three supersede Section B of Addendum Two. Except for Section B of Addendum Two, which has been superseded in its totality by Section E of Addendum Three, the provisions of all three Addenda remain in effect.

The following identifies the areas being revised in this Addendum Three; the affected sections of RFP documents are annotated in parentheses. A summary of all changes to the RFP is provided as Section F of this Addendum Three.

- Evaluation Fee (RFP Section III.B)
- Financial Security Requirements (RFP Sections II.H.1)b), II.H.4 {Table}, and III.E.5).
- Regulatory Modifications (RFP Section III.E.15), and draft PPA Section 17.7.1)
- Exceptions to the draft PPA (RFP Section III.F paragraphs 2 and 3)
- Dual Fuel Minimum Requirement (RFP Section III.E.11) and Addendum Two, Section B).

**NOTICE:** In that this information has been provided following the cutoff date for questions, a new cutoff date is established for questions pertaining to this Addendum Three. The last date to submit questions regarding this Addendum Three will be Friday, October 10, 2003.

#### ***A. Evaluation Fee (RFP Section III.B)***

The following supersedes the language of RFP Section III.B.

The RFP Evaluation Fee is a cost-based value reflecting the costs incurred for each proposal evaluated during previous RFP's. In order for a proposal to be evaluated, a non-refundable check of \$10,000 made out to "Florida Power & Light Company" must be submitted to the FPL RFP Contact Person at the same time and date (no later than 4:00 p.m. EDT on October 24, 2003) as the proposal. One proposal consists of a site, a technology, a fuel source, one base capacity level, one term (e.g., 10 years) and one price submittal. Each proposal must be accompanied by the \$10,000 RFP evaluation fee. If more than one proposal is submitted by a specific Proposer, then a separate, non-refundable \$10,000 fee must accompany each proposal. Proposals deemed ineligible or otherwise non-responsive after an initial review will not be evaluated further and 75% of the fee will be refunded.

A Proposer may also elect to submit variations of capacity, term and/or price related to a specific proposal (a single variation is defined as a change in any one, two or all three of

capacity, term and/or price) for an additional fee of \$5,000 per variation. There is no limitation to the number of variations submitted, as long as each variation is accompanied by a \$5,000 fee. Proposals and the related variations deemed ineligible or otherwise non-responsive after an initial review will not be evaluated further and 75% of the fees received will be refunded.

**B. Financial Security Considerations.**

**1. Completion Security (RFP Section II.H.1.b)**

Item II.H.1).b) is revised as follows.

- b) Completion Security must be posted in accordance with the following Milestone Schedule and remain in place up to and including the Capacity Delivery Date.

Event	Cumulative amount per MW
Commencement Date of PPA	\$119,000
Irrevocable Orders Placed (nlt February 1, 2005)	\$140,000
Firm Fuel Agreement Executed (nlt June 1, 2005)	\$148,000
Financing Closed (nlt October 1, 2005)	\$188,000

**2. Form of Security (RFP Section II.H.4)**

The table on page 16 of the RFP is revised as follows.

Unsecured Debt Rating	% of Tangible Net Worth
AAA+/Aaa1 to AA-/Aa3	20%
A+/A1 to A-/A3	15%
BBB+/Baa1 to BBB-/Baa3	10%
BB+/Ba1 and below or unrated	0%

**3. Financial Viability Minimum Requirement (RFP Section III.E.5)**

Item III.E.5)a) is revised as follows.

- a) For proposals supported by newly built generation (greenfield, brownfield, turnkey) Proposer or guarantor of Proposer must possess a senior unsecured debt rating of no less than "BBB-" from Standard & Poor's or "Baa3" from Moody's Investors Service with a "stable" outlook. In submitting a proposal, a Proposer agrees to provide Completion Security and Performance Security described in section II.H.

**C. *Regulatory Modifications (RFP Section III.E.15)***

Item III.E.15) of the RFP is revised as follows.

Section 15 of Rule 25-22.082, Florida Administrative Code provides: "If the Commission approves a purchase power agreement as a result of the RFP, the public utility shall be authorized to recover the prudently incurred costs of the agreement through the public utility's capacity, and fuel and purchased power cost recovery clauses absent evidence of fraud, mistake, or similar grounds sufficient to disturb the finality of the approval under governing law." Should FPL, at any time during the term of a contract entered into based on this RFP, fail to obtain or is denied the authorization of the FPSC, or the authorization of any other legislative, administrative, judicial or regulatory body which now has, or in the future may have, jurisdiction over FPL's rates and charges, to recover from its customers all of the payments required to be made to the seller under the terms of such a contract or any subsequent amendment hereto, FPL may, at its sole option, adjust the payments made under such contract to the amount(s) which FPL is authorized to recover from its customers. In the event that FPL so adjusts the payments to which the seller is entitled under such a contract, then, the seller may, at its sole option, terminate such a contract upon ninety (90) days notice to FPL. If such determination of disallowance is ultimately reversed and such payments previously disallowed are found to be recoverable, FPL shall pay all withheld payments. The seller acknowledges that any amounts initially received by FPL from its customers, but for which recovery is subsequently disallowed and charged back to FPL, may be offset or credited, against subsequent payments to be made by FPL to the seller under such a contract.

If, at any time, FPL receives notice that the FPSC or any other legislative, administrative, judicial or regulatory body seeks or will seek to prevent full recovery by FPL from its customers of all payments required to be made under the terms of such a contract or any subsequent amendments to such a contract, then FPL shall, within thirty (30) days of such action, give notice thereof to the seller. FPL shall use reasonable efforts to defend and uphold the validity of such a contract and its right to recover from its customers all payments required to be made by FPL hereunder, and will cooperate in any effort by the seller to intervene in any proceeding challenging, or to otherwise defend, the validity of such a contract and the right of FPL to recover from its customers all payments to be made by it hereunder.

Section 17.7.1 of the draft PPA is revised as follows.

Section 15 of Rule 25-22.082, Florida Administrative Code provides: "If the Commission approves a purchase power agreement as a result of the RFP, the public utility shall be authorized to recover the prudently incurred costs of the agreement through the public utility's capacity, and fuel and purchased power cost recovery clauses absent evidence of fraud, mistake, or similar grounds sufficient

to disturb the finality of the approval under governing law." Notwithstanding anything to the contrary in this Contract, if FPL, at any time during the term of this Contract, fails to obtain or is denied the authorization of the FPSC, or the authorization of any other legislative, administrative, judicial or regulatory body which now has, or in the future may have, jurisdiction over FPL's rates and charges, to recover from its customers all of the payments required to be made to Seller under the terms of this Contract or any subsequent amendment hereto, FPL may, at its sole option, adjust the payments made under the Contract to the amount(s) which FPL is authorized to recover from its customers. In the event that FPL so adjusts the payments to which Seller is entitled under this Contract, then, Seller may, at its sole option, terminate this Contract upon ninety (90) days notice to FPL. If such determination of disallowance is ultimately reversed and such payments previously disallowed are recovered, FPL shall pay all withheld payments. Seller acknowledges that any amounts initially received by FPL from its customers, but for which recovery is subsequently disallowed and charged back to FPL, may be offset or credited, against subsequent payments to be made by FPL to Seller under this Contract.

***D. Exceptions to the PPA (RFP Section III.F)***

Paragraphs 2 and 3 of RFP Section III.F are revised as follows.

Inclusion of this information with a proposal will be used to compare proposals to one another and will facilitate negotiations by allowing FPL to evaluate the specific core issues of the exceptions, rather than addressing generic or conceptual comments. A more detailed discussion of the non-price evaluation is provided in Appendix B, Step 5. FPL reserves the right to request from a Proposer whether or to what extent FPL's contemplated rejection of a particular exception would affect the pricing.

If a Proposer fails to state exceptions and pose alternative language to the material terms set forth in the RFP and draft PPA, FPL shall assume that a Proposer has no specific objection to such terms and conditions.

***E. Dual Fuel Minimum Requirement***

Section B of Addendum Two is superceded by this Section E of Addendum Three. Section III.E.11 of the RFP is revised as follows.

## 11) Dual Fuel Capability

### Standard Approach

Just as FPL's next planned generating unit has on-site distillate fuel oil capability, all newly built gas-fired generation proposals must include the capability to operate on distillate oil as a secondary fuel to satisfy system reliability and service continuity needs. FPL considers that for gas-fired generation proposals the fuel continuity and operability characteristics of on-site distillate fuel oil capability is an effective approach to meet system reliability and service continuity needs.

Proposals supported by newly built gas-fired generation unit(s), and the proposed prices for such proposals, shall reflect the necessary equipment to meet the following secondary fuel continuity and operability characteristics. The distillate oil inventory must be immediately accessible to the facility, sized to provide 72 hours of continuous operation at full capacity (as rated on distillate oil), and must be independent of the primary fuel supply. The facility must be able to start up on distillate fuel oil and operate at full capacity for a minimum of seventy-two (72) continuous hours. Additionally, the unit(s) must be able to make the transition from the natural gas to distillate fuel oil without disconnecting electrically from the grid. These are the same continuity and operability requirements that FPL requires of its own next planned generating unit.

Due to the sequence of the permitting process, FPL recognizes that Proposers are unable to ascertain the success of permitting the facility for full use of distillate oil capability. However, Proposers will be required to make commercially reasonable efforts to seek permits and authorizations necessary to support up to 500 hours of operation per year on distillate fuel oil.

### Alternate Approach

A proposal supported by newly built gas-fired generation may offer an alternate approach to meet system reliability and service continuity needs as effectively as the installation and use of a distillate fuel oil storage and operation system. FPL considers that the electric system reliability and service continuity provided by on-site distillate fuel oil capability is the standard to which alternate approaches will be compared. The Proposer must describe in detail how the alternate approach, applied to Proposer's facility, will provide the same or better level of electric system reliability and service continuity that would be provided by on-site fuel oil capability. FPL will determine whether the Proposer's alternate approach is in fact as effective in meeting FPL's system reliability and service continuity needs as the installation and use of an on-site distillate fuel oil storage and operation system.

If FPL determines that the proposed alternate approach is as effective as distillate fuel oil capability, the dual fuel capability minimum requirement will be deemed to have been met by the proposal.

If FPL determines that the proposed alternate approach is not as effective in meeting FPL's system reliability and service continuity needs as on-site distillate oil capability, FPL will offer the Proposer a one-time opportunity to modify the proposal to include on-site distillate fuel oil capability so that the proposal may meet this minimum requirement. As part of such a modification, the Proposer may, but is not required to, modify the proposal capacity price to include the capital cost upgrade necessary to add on-site distillate fuel oil capability. If a Proposer chooses not to provide the required dual fuel capability in a form acceptable to FPL, the proposal will be deemed to have not met this minimum requirement and will not be further evaluated.

**F. RFP Document Change Summary.**

The following lists all changes that have been made to the RFP, Addenda and draft PPA since publication on August 25, 2003. If you are missing any information please contact the RFP Contact Person, Steve Scroggs at 305-552-4199.

Date	Change	Affected Document	Affected Section	Published As
9/4/2003	Index Method	RFP	App. D - Forms	Addendum One
9/12/2003	Question Cutoff Date to 9/30/03	RFP	II.G	Addendum Two, Note
9/12/2003	Fuel Forecast	RFP	II.D	Addendum Two, Section A
9/12/2003	Expanded Dual Fuel Capability	RFP	III.E.11)	Addendum Two, Section B (superseded)
10/06/2003	Evaluation Fee	RFP	III.B	Addendum Three, Section A
10/06/2003	Financial Viability and Security	RFP	II.H.1)b) II.H.4) III.E.5)	Addendum Three Section B
10/06/2003	Regulatory Modifications	RFP Draft PPA	III.E.15) 17.7.1	Addendum Three Section C
10/06/2003	Exceptions	RFP	III.F	Addendum Three Section D
10/06/2003	Revise Dual Fuel Capability	RFP Addendum 2	III.E.11) Sec. B	Addendum Three Section E
10/06/2003	Question Cutoff Date to 10/10/03	RFP	II.G	Addendum Three Note