FPL

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VIA HAND DELIVERY

M. Blanca S. Bayo, Director
Division of the Commission Clerk and Administrative Services
Florida Public Service Commission
Betty Easley Conference Center
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: 2006 – 2015 Ten Year Site Plan

Dear Ms. Bayo,

In accordance with Chapter 186 (Section 186.801 – Ten Year Plans) of the Florida Statues, enclosed for filing are twenty-five (25) copies of Florida Power & Light Company's 2006 – 2015 Ten Year Power Plant Site Plan.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Sabrina Spradley
Regulatory Affairs Analyst
(305) 552-4416

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Ten Year Power Plant Site Plan
2006 - 2015

FPL®

FPL

Ten Year Power Plant Site Plan

2006-2015

Submitted To:

Florida Public
Service Commission

Miami, Florida
April, 2006

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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) integrated resource planning (IRP) analyses that were carried out in 2005 and that were on-going in the first quarter of 2006. The forecasted information presented in this plan addresses the 2006–2015 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 IRP process and outlines FPL's projected resource additions, especially new power plants, as determined in FPL's IRP work in 2005 and early 2006.

Chapter IV – Environmental and Land Use Information

This chapter discusses 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 that is to be included in a Site Plan filing.

FPL
List of Abbreviations

Reference	*Abbreviation*	*Definition*
Unit Type	BIT	Bituminous Coal
	CC	Combined Cycle
	CT	Combustion Turbine
	GT	Gas Turbine
	IC	Internal Combustion
	NP	Nuclear Power
	NPGU	Next Planned Generating Unit
	SCPC	Supercritical Pulverized Coal
	ST	Steam Unit
Fuel Type	UR	Uranium
	BIT	Bituminous Coal
	FO2	#1, #2 or Kerosene Oil (Distillate)
	FO6	#4,#5,#6 Oil (Heavy)
	LNG	Liquified Natural Gas
	NG	Natural Gas
	No	None
	Pet	Petroleum Coke
Fuel Transportation	No	None
	PL	Pipeline
	RR	Railroad
	TK	Truck
	WA	Water
Unit/Site Status	OT	Other
	P	Planned Unit
	RP	Proposed for repowering
	T	Regulatory approval received but not under construction
	U	Under construction, less than or equal to 50% Complete
	V	Under construction, more than 50% Complete
Other	P.U.	Per Unit

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Executive Summary

Florida Power & Light Company's (FPL) 2006 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 2006-2015 time period.

In response to strong population growth, FPL's total generation capability is required to increase significantly during the 2006-2015 time period as shown in Table ES.1. The table reflects FPL's planned changes to existing generation units (due to unit overhauls, etc.), scheduled changes in the delivered amounts of purchased power, and the planned additions of new generating units. Although not explicitly shown in this table, FPL's demand side management (DSM) resources are included. These resources incorporate the approved DSM Goals (that are assumed to be implemented on schedule) and additional DSM (identified in late 2005/early 2006) scheduled to be implemented in 2006 through 2008.

During the summer of 2005, FPL experienced a season with a significant number of peak demand events, several of which exceeded the forecasted peak demand for the year. Further investigation and review identified that population growth above that forecasted was the primary driver for this increased peak demand. In November of 2005, FPL issued an updated forecast incorporating these changes. The updated load forecast resulted in earlier and greater resource needs, with the first year of resource need moving forward to 2006 from 2009 (as had been identified in the 2005 Site Plan). In response to this emergent need, FPL is implementing additional cost-effective DSM and securing new near-term firm power purchases. It is expected that the combination of these new power purchases and additional DSM will effectively meet the incremental capacity need in 2006 and 2007, and will significantly reduce FPL's 2008 resource needs. FPL's remaining 2008 resource needs will be met by either additional near-term purchases, capacity increases to FPL's existing units, by the construction of one unsited new combustion turbine (CT) or some combination of all of these alternatives.

In 2007, FPL will be adding a new (1,144 Summer MW) combined cycle (CC) unit at its existing Turkey Point plant site. This unit was selected as the best option after comparison to other FPL construction alternatives and outside proposals received in response to an RFP that FPL issued in August 2003. This capacity addition was approved by the Florida Public Service Commission (FPSC) on June 18, 2004. FPL's application for certification under the Florida Electric Power Plant Siting Act was approved by the Governor and Siting Board on February 7, 2005.

FPL currently projects to meet its 2009 and 2010 capacity needs with the addition of two highly efficient 1,219 Summer MW CC units identified as West County Energy Center Units #1 and #2 (West County Units #1 and # 2). The first of these units is scheduled to come in service in June 2009 and the second is scheduled to come in service in June 2010. These units were selected after comparing them to bids received in response to an RFP issued by FPL in September 2005 that requested bids for firm capacity in the 2009-2011 time frame. The addition of these units, which is needed to maintain system reliability, was shown to be more than $750 million (CPVRR) more cost-effective than other alternatives received in response to the RFP. The units will effectively address the pressing need for generation located in southeast Florida to meet regional growth. As a result of their location, these units help to reduce transmission losses for the entire system. Additionally, using state of the art technology, these units will significantly increase the overall generation efficiency of the system which will result in using less fuel to produce each megawatt hour of electricity. FPL recently has filed a petition for a Determination of Need for these two units. A decision from the FPSC is expected before the end of 2006.

The addition of West County Units #1 and #2 will meet FPL's 2009 and 2010 capacity needs; however as a result of the updated load forecast, a resource need for 2011 will remain. FPL will seek to address this 2011 need with additional cost-effective DSM, power purchases, capacity increases to FPL's existing units, construction of new CTs or a combination of these resources. For purpose of this planning document, FPL projects the construction of two unsited CTs.

FPL plans to meet the need in years 2012 and 2013 with two new supercritical pulverized coal (SCPC) units. These units are scheduled to be in service by June 2012 and June 2013, respectively. A site for these two co-located, advanced coal units has not yet been selected; however, FPL is investigating suitable locations that will be identified in an addendum to this Site Plan, expected by June 1, 2006. These planned increases in electric generation capability will allow FPL to continue to maintain system reliability and integrity at a reasonable cost, and to increase fuel diversity.[1]

FPL is currently examining a variety of options to meet the remaining portion of the 2014 and 2015 need including: additional DSM, new/extended purchases and capacity enhancements to existing FPL units. Also under consideration is the construction of CT's or smaller CC units that could be designed to facilitate a conversion to coal gasification operation. For purposes of this planning document, FPL projects the construction of one additional unsited CT in 2014, one additional unsited CT in 2015, and one unsited 2x1 CC in 2015; any of which could be converted to coal gasification when the technology is shown to meet reliability and cost-effectiveness standards. The amount of capacity needed and the technologies that would ultimately be chosen to meet the need for these years will be based on FPL's ongoing review of technology, environmental requirements, regulation and economic factors and will not be restricted to a single technology.

FPL's ongoing planning efforts remain influenced by two recurrent issues. Those two issues are: 1) maintaining an appropriate balance between load and generating capacity located in Southeast Florida; and 2) maintaining and enhancing fuel diversity in the FPL system. The addition of West County Units #1 and #2 will help maintain a balance of generation located within reasonable proximity to the increasing load in the Southeast area, as well as contribute to the overall system reliability. The significant weather events of 2004 and 2005 have underscored the

[1] 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.

value of a balanced fuel supply as it impacts both fuel supply reliability and system fuel costs. FPL continues to actively pursue advanced technology coal generation as the most certain

alternative to measurably increase fuel diversity within the Site Plan planning horizon. FPL also has begun the steps to investigate the next generation of nuclear generation facilities. FPL is involved in several industry consortiums and has held extensive discussions with the leaders in the design, construction and operation segments of the nuclear industry to obtain an updated view of the issues surrounding adding nuclear generation in Florida. Many uncertainties remain at this early stage. However, while the feasible horizon for new nuclear generation is beyond the planning horizon of this Site Plan, FPL is actively pursuing the possibility of new nuclear generation.

Table ES.1: Projected Capacity Changes and Reserve Margins for FPL [1]

Projected Capacity Changes and Reserve Margins for FPL [1]

		Net Capacity Changes (MW)		FPL Reserve Margin (%)	
		Winter[2]	Summer[3]	Winter	Summer
2006	Changes to Existing QF Purchases [4]	(132)	(136)	25.9%	**19.5%**[8]
	Changes to existing Units	205	142		
	Changes to Non-QF Purchases [5]	147	440		
2007	Turkey Point Unit #5 [6]	—	1,144	24.2%	21.3%
	Changes to existing Units	70	77		
	Changes to Non-QF Purchases [5]	73	(412)		
2008	Changes to existing Units	4	12	26.6%	**19.3%**[8]
	Turkey Point Unit #5 [6]	1,181	—		
	Unsited Combustion Turbine [6]	—	160		
	Changes to Non-QF Purchases [5]	(252)	—		
2009	Changes to Existing QF Purchases [4]	—	(51)	23.6%	21.4%
	Changes to Non-QF Purchases [5]	(326)	(105)		
	West County Unit #1 [6]	—	1,219		
	Unsited Combustion Turbine [6]	181	—		
2010	West County Unit #1 [6]	1,335	—	25.0%	20.9%
	Changes to Existing QF Purchases [4]	(51)	(47)		
	West County Unit #2 [6]	—	1,219		
	Changes to Non-QF Purchases [5]	(461)	(683)		
2011	West County Unit #2 [6]	1,335	—	28.5%	**19.7%**[8]
	Unsited 2x0 Simple Cycle CT [6]	—	320		
	Changes to Existing QF Purchases [4]	(92)	(45)		
	Changes to Non-QF Purchases [5]	(1)	—		
2012	Supercritical Pulverized Coal Unit # 1 [6][7]	—	850	27.9%	20.3%
	Unsited 2x0 Simple Cycle CT [6]	362	—		
	Changes to Non-QF Purchases [5]	—	(158)		
2013	Supercritical Pulverized Coal Unit # 1 [6][7]	855	—	28.6%	21.3%
	Supercritical Pulverized Coal Unit # 2 [6][7]	—	850		
	Changes to Non-QF Purchases [5]	(180)	—		
2014	Supercritical Pulverized Coal Unit # 2 [6][7]	855		29.9%	**19.7%**[8][9]
	Unsited 1x 0 Simple Cycle CT [6]	—	160		
2015	Unsited 1x 0 Simple Cycle CT [6]	181	—	27.3%	**19.7%**[8][9]
	Unsited 1x 0 Simple Cycle CT [6]	—	160		
	Unsited 2x1 Combined Cycle [6]	—	553		
	TOTALS =	**5,289**	**5,669**		

(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) These are firm capacity and energy contracts with Cogen & Small Power Producers. See Table I.B.1 for more details.
(5) These are firm capacity purchases from Non-QF facilities. See Tables I.D.1 and Table I.D.2 for more details.
(6) All new unit additions 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.
(7) FPL is currently in the process of selecting a site(s) for these advanced technology coal units. FPL expects to announce the selected site(s) by June 2006.
(8) FPL reserve margin values are shown to include what is committed or firmly planned. FPL will continue to pursue the most cost effective alternatives available to meet the then forecasted need with a 20% reserve margin, such as DSM resources that may be added in intervening years or additional purchases.
(9) FPL will continue to pursue development of technologies, such as SCPC or IGCC to meet the needs in these later years.

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CHAPTER I

Description of Existing Resources

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I. Description of Existing Resources

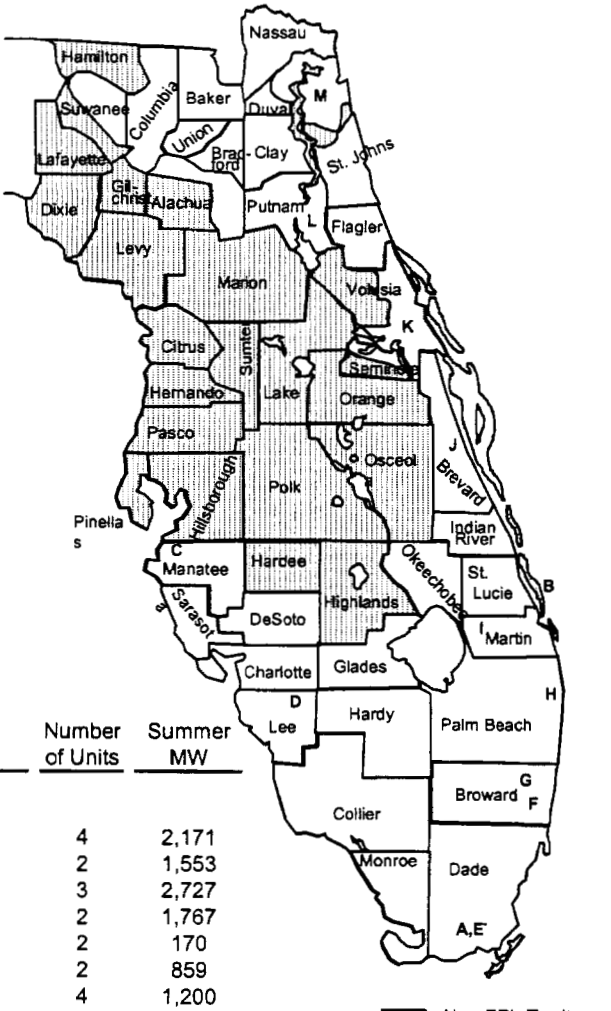
FPL's service area contains approximately 27,650 square miles and has a population of approximately 8.5 million people. FPL served an average of 4,318,739 customer accounts in thirty-five counties during 2005. These customers were served from a variety of resources including: FPL-owned fossil and nuclear 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, FL. The current generating facilities consist of four nuclear steam units, three coal units, eleven combined cycle units, seventeen fossil steam units, forty eight combustion gas turbines, one simple cycle combustion turbine, and five diesel units. The location of these units is shown on Figure I.A.1 and in Table I.A.1.

FPL's bulk transmission system is comprised of 6,470 circuit miles of transmission lines. Integration of the generation, transmission, and distribution system is achieved through FPL's 542 substations in Florida.

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.



Location/ Map Key	Plant Name	Number of Units	Summer MW
A	Turkey Point	4	2,171
B	St. Lucie *	2	1,553
C	Manatee	3	2,727
D	Fort Myers	2	1,767
E	Cutler	2	170
F	Lauderdale	2	859
G	Port Everglades	4	1,200
H	Riviera	2	556
I	Martin	5	3,649
J	Cape Canaveral	2	798
K	Sanford	3	2,042
L	Putnam	2	494
M	SJRPP **	2	232
	Scherer ***	1	639
	Gas Turbines	48	1,908
	Internal Combustion Turbines	5	12
	FPL Generation =	**89**	**20,777**

* Represents FPL's ownership share: St. Lucie nuclear: 100% unit 1, 85% unit 2; SJRPP coal: 20% of two units

** SJRPP = St. John's River Power Park

*** The Scherer unit is located in Georgia and is not shown on this map

Figure I.A.1: Capacity Resources by Location (as of December 31, 2005)

Table I.A.1: Capacity Resource by Unit Type (as of December 31, 2005)

Unit Type/ Plant Name	Location	Number of Units	Fuel	Summer MW
Combined-Cycle				
Lauderdale	Dania, FL	2	Gas/Oil	859
Martin	Indiantown,FL	2	Gas	899
Martin	Indiantown,FL	1	Gas/Oil	1,107
Sanford	Lake Monroe, FL	2	Gas	1,904
Putnam	Palatka, FL	2	Gas/Oil	494
Fort Myers	Fort Myers, FL	1	Gas	1,441
Manatee	Parrish,FL	1	Gas	1,107
Total Combined Cycle		**11**		**7,811**
Combustion Turbines				
Fort Myers *	Fort Myers, FL	1	Gas/Oil	326
Total Combustion Turbines		**1**		**326**
Nuclear				
Turkey Point	Florida City, FL	2	Nuclear	1,386
St. Lucie **	Hutchinson Island, FL	2	Nuclear	1,553
Total Nuclear		**4**		**2,939**
Coal Steam				
SJRPP **	Jacksonville, FL	2	Coal	232
Scherer	Monroe County, Ga	1	Coal	639
Total Coal Steam		**3**		**871**
Oil/Gas Steam				
Cape Canaveral	Cocoa, FL	2	Oil/Gas	798
Cutler	Miami, FL	2	Gas	170
Manatee	Parrish, FL	2	Oil/Gas	1,620
Martin	Indiantown,FL	2	Oil/Gas	1,643
Port Everglades	Port Everglades, FL	4	Oil/Gas	1,200
Riviera	Riviera Beach, FL	2	Oil/Gas	556
Sanford	Lake Monroe, FL	1	Oil/Gas	138
Turkey Point	Florida City, FL	2	Oil/Gas	785
Total Oil/Gas Steam		**17**		**6,910**
Gas Turbines(GT)/Diesels(IC)				
Lauderdale (GT)	Dania, FL	24	Gas/Oil	840
Port Everglades (GT)	Port Everglades, FL	12	Gas/Oil	420
Fort Myers (GT)	Fort Myers, FL	12	Oil	648
Turkey Point (IC)	Florida City, FL	5	Oil	12
Total Gas Turbines/Diesels		**53**		**1,920**
Total Units:		**89**		
Total Net Generating Capability:				**20,777**

Each unit consists of two combustion turbines totaling approximately 300 MW.
Represents FPL's ownership share: St. Lucie nuclear: 100% unit 1, 85% unit 2; SJRPP coal: 20% of two units

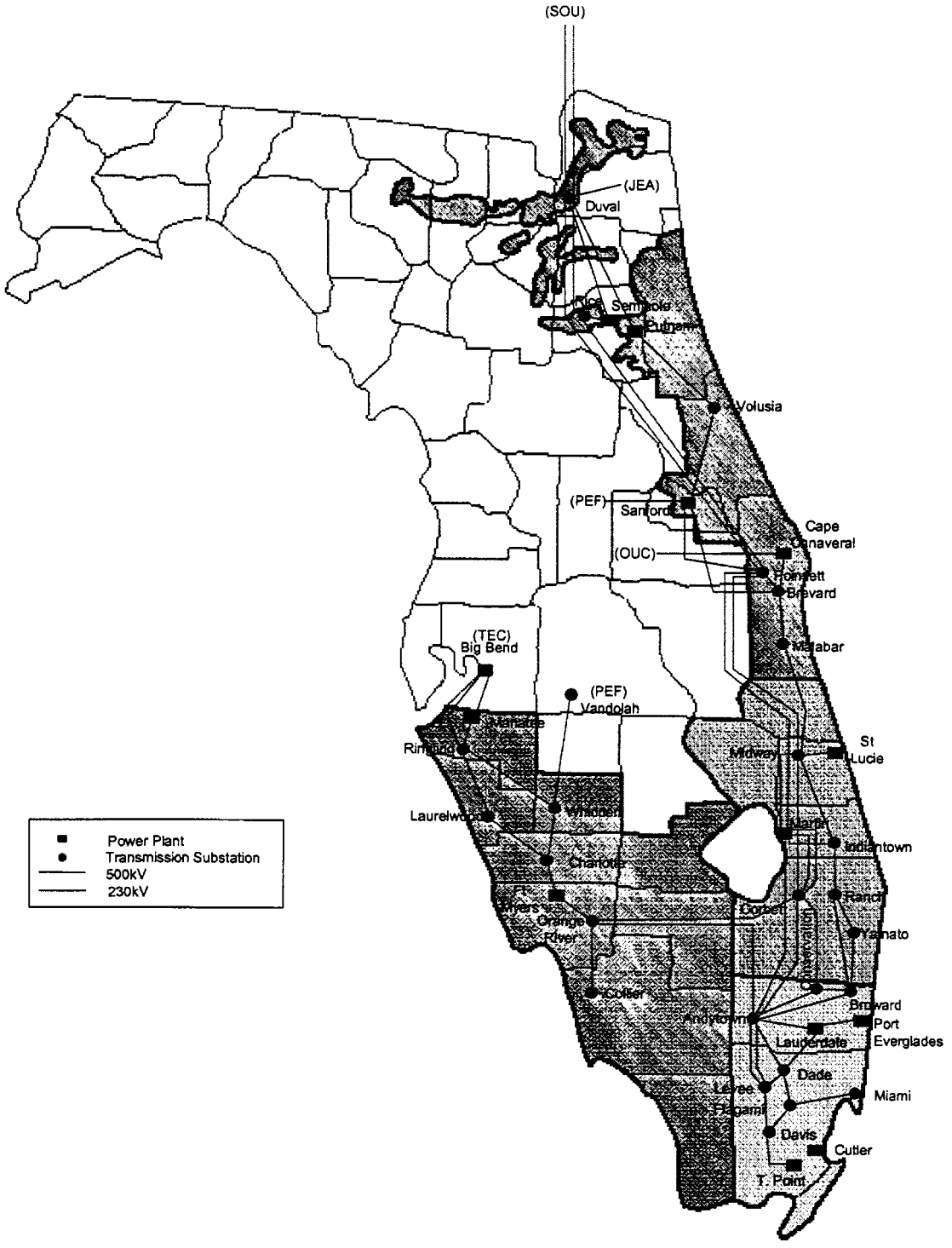


Figure I.A.2: FPL Substation and Transmission System Configuration

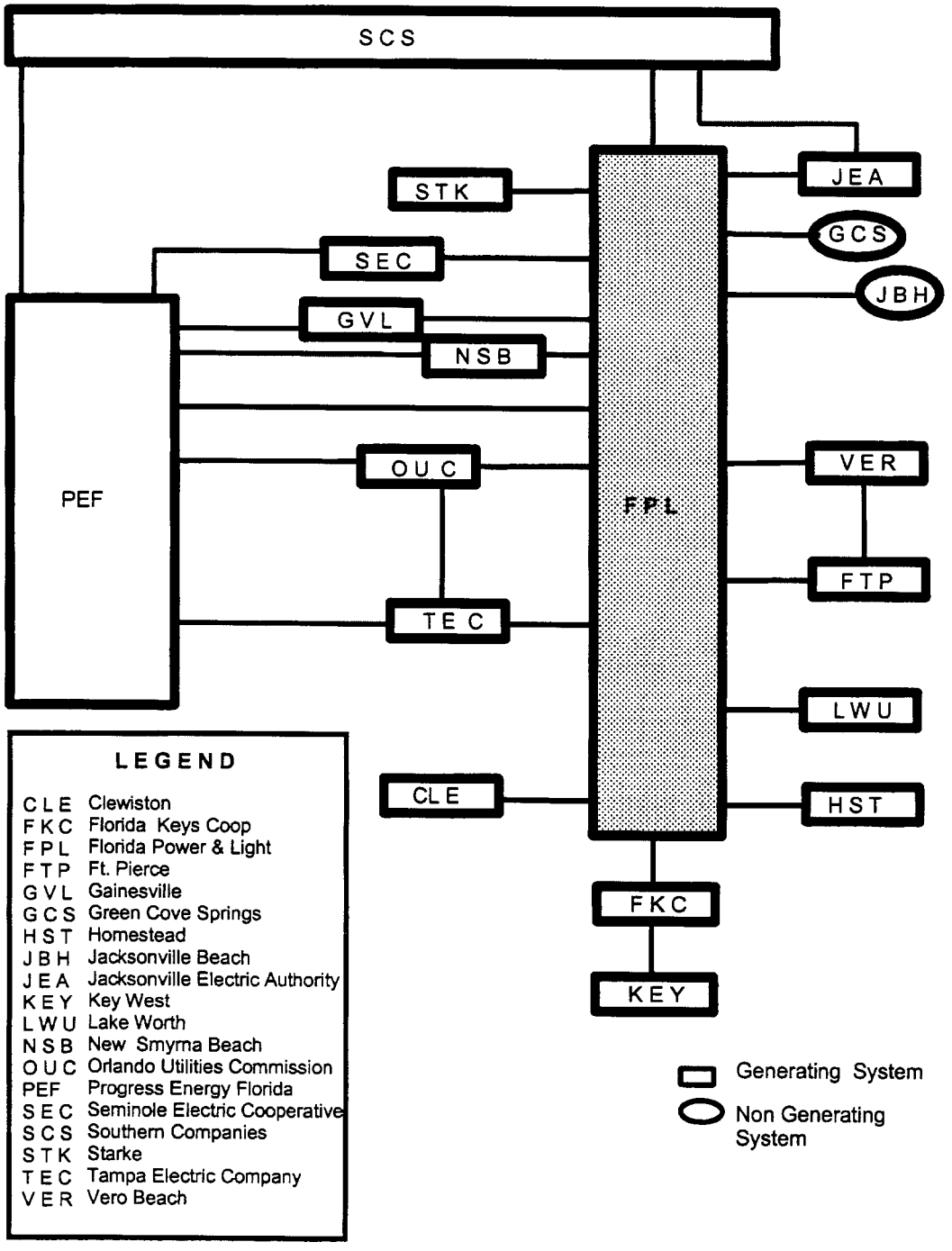


Figure I.A.3: FPL Interconnection Diagram

I.B Firm Capacity Power Purchases

Purchases From Qualifying Facilities (QF):

Firm capacity power purchases are an important part of FPL's resource mix. FPL currently has contracts with five cogeneration/small power production facilities to purchase firm capacity and energy.

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.

Purchases from Utilities:

Purchased power remains an important part of FPL's resource mix. FPL has a Unit Power Sales (UPS) contract to purchase 931 MW, with a minimum of 381 MW, of coal-fired generation from the Southern Company (Southern) through May, 2010. In January 2005, the Commission approved a new firm purchase contract with Southern that will result in FPL receiving 930 MW from June 2010 through the end of 2015. This capacity will be supplied by Southern from a mix of gas-fired and coal-fired units.

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) Units No. 1 and No. 2. (FPL also has ownership interest in these units. The ownership amount is reflected in FPL's installed capacity shown on Figure I.A.1, in Table I.A.1, and on Schedule 1.)

Other Purchases:

FPL has other firm capacity purchase contracts through 2009 with a variety of Non-QF suppliers. These purchases are generally near-term in nature. Table I.B.1 presents the Summer and Table I.B.2 represents the Winter MW resulting from all firm purchased power contracts discussed above through the year 2015.

Table I.B.1: FPL's Firm Purchased Power Summer MW

I. Purchases from QF's:

(Cogeneration/ Small Power Production Facilities)	Start Date	End Date	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1. Broward South	04/01/91	08/01/09	50.6	50.6	50.6	0	0	0	0	0	0	0
Broward South	01/01/93	12/31/26	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Broward South	01/01/95	12/31/26	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Broward South	01/01/97	12/31/26	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
2. Broward North	04/01/92	12/31/10	45.0	45.0	45.0	45.0	45.0	0	0	0	0	0
Broward North	01/01/93	12/31/26	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Broward North	01/01/95	12/31/26	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Broward North	01/01/97	12/31/26	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
3. Cedar Bay Generating Co.	01/25/94	12/31/24	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
4. Indiantown Cogen., LP	12/22/95	12/01/25	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
5. Palm Beach SWA	04/01/92	03/31/10	47.5	47.5	47.5	47.5	0	0	0	0	0	0
QF Purchases Sub Total =			**738**	**738**	**738**	**687**	**640**	**595**	**595**	**595**	**595**	**595**

II. Purchases from Utilities:

	Start Date	End Date	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1. UPS from Southern Co.	07/20/88	05/31/10	931	931	931	931	0	0	0	0	0	0
2. UPS Replacement	06/01/10	12/31/15	0	0	0	0	930	930	930	930	930	930
3. SJRPP	04/02/82	10/31/15	381	381	381	381	381	381	381	381	381	381
Utility Purchases Sub Total =			**1312**	**1312**	**1312**	**1312**	**1311**	**1311**	**1311**	**1311**	**1311**	**1311**

III. Other Purchases:

	Start Date	End Date	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1. Oleander/Constellation 1	06/01/02	05/31/05	0	0	0	0	0	0	0	0	0	0
2. Progress Energy Ventures/Desoto	06/01/02	05/31/05	0	0	0	0	0	0	0	0	0	0
3. Reliant/Pasco/Shady Hills	02/28/02	02/28/07	474	0	0	0	0	0	0	0	0	0
4. Reliant/Indian River	01/01/06	12/31/09	130	354	576	250	0	0	0	0	0	0
4a. Reliant/Indian River (Addl. Trans.)	05/01/06	12/31/09	346	222	0	326	0	0	0	0	0	0
5. Progress Energy Ventures/Desoto (Put option)	06/01/05	05/31/07	140	0	0	0	0	0	0	0	0	0
6. Oleander/Southern Co (Put option)	06/01/05	05/31/07	156	0	0	0	0	0	0	0	0	0
6a. Oleander (Extension)	06/01/07	05/31/12	0	158	158	158	158	158	0	0	0	0
7. Williams	03/01/06	12/31/09	56	106	106	106	0	0	0	0	0	0
8. Progress Energy Ventures	04/01/06	03/31/09	55	105	105	0	0	0	0	0	0	0
Other Purchases Sub Total =			**1357**	**945**	**945**	**840**	**158**	**158**	**0**	**0**	**0**	**0**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Summer Purchases Total MW =	**3407**	**2995**	**2995**	**2839**	**2109**	**2064**	**1906**	**1906**	**1906**	**1906**

Table I.B.2: FPL's Firm Purchased Power Winter MW

I. Purchases from QF's:

(Cogeneration/ Small Power Production Facilities)	Start Date	End Date	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1. Broward South	04/01/91	08/01/09	50.6	50.6	50.6	50.6	0	0	0	0	0	0
Broward South	01/01/93	12/31/26	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Broward South	01/01/95	12/31/26	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Broward South	01/01/97	12/31/26	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
2. Broward North	04/01/92	12/31/10	45.0	45.0	45.0	45.0	45.0	0	0	0	0	0
Broward North	01/01/93	12/31/26	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Broward North	01/01/95	12/31/26	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Broward North	01/01/97	12/31/26	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
3. Cedar Bay Generating Co.	01/25/94	12/31/24	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
4. Indiantown Cogen., LP	12/22/95	12/01/25	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
5. Palm Beach SWA	04/01/92	03/31/10	47.5	47.5	47.5	47.5	47.5	0	0	0	0	0
QF SubTotal =			**738**	**738**	**738**	**738**	**687**	**595**	**595**	**595**	**595**	**595**

II. Purchases from Utilities:

	Start Date	End Date	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1. UPS from Southern Co.	07/20/88	05/31/10	931	931	931	931	931	0	0	0	0	0
2. UPS Replacement	06/01/10	12/31/15	0	0	0	0	0	930	930	930	930	930
3. SJRPP	04/02/82	10/31/15	390	390	390	390	390	390	390	390	390	390
Utility Purchases Sub Total =			**1321**	**1321**	**1321**	**1321**	**1321**	**1320**	**1320**	**1320**	**1320**	**1320**

III. Other Purchases:

	Start Date	End Date	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1. Oleander/Constellation 1	06/01/02	05/31/05	0	0	0	0	0	0	0	0	0	0
2. Progress Energy Ventures/Desoto	06/01/02	05/31/05	0	0	0	0	0	0	0	0	0	0
3. Reliant/Pasco/Shady Hills	02/28/02	02/28/07	474	474	0	0	0	0	0	0	0	0
4. Reliant/Indian River	01/01/06	12/31/09	130	354	576	250	0	0	0	0	0	0
4a. Reliant/Indian River (Addl. Trans.)	05/01/06	12/31/09	0	0	0	0	0	0	0	0	0	0
5. Progress Energy Ventures/Desoto (Put option)	06/01/05	05/31/07	362	0	0	0	0	0	0	0	0	0
6. Oleander/Southern Co (Put option)	06/01/05	05/31/07	180	180	0	0	0	0	0	0	0	0
6a. Oleander (Extension)	06/01/07	05/31/12	0	0	180	180	180	180	180	0	0	0
7. Williams	03/01/06	12/31/09	0	106	106	106	0	0	0	0	0	0
8. Progress Energy Ventures	04/01/06	03/31/09	0	105	105	105	0	0	0	0	0	0
Other Purchases Sub Total =			**1146**	**1219**	**967**	**641**	**180**	**180**	**180**	**0**	**0**	**0**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Winter Purchases Total MW =	**3205**	**3278**	**3026**	**2700**	**2188**	**2095**	**2095**	**1915**	**1915**	**1915**

I.C Non-Firm (As Available) Energy Purchases

FPL purchases non-firm (as-available) energy from several cogeneration and small power production facilities. Table I.C.1 shows the amount of energy purchased in 2005 from these facilities.

Table I.C.1: As Available Energy Purchases From Non-Utility Generators in 2005

Project	*County*	*Fuel*	*In-Service Date*	*Energy (MWH) Delivered to FPL in 2005*
US Sugar-Bryant	Palm Beach	Bagassee	2/80	3,351
Tropicana	Manatee	Natural Gas	2/90	11,327
Okeelanta	Palm Beach	Bagassee/Wood	11/95	275,971
Tomoka Farms	Volusia	Landfill Gas	7/98	17,745
Georgia Pacific	Putnam	Paper By-Product	2/94	7,340
Elliot	Palm Beach	Natural Gas	7/05	120

I.D. 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 2005 have resulted in a cumulative Summer peak reduction of approximately 3,519 MW at the generator and an estimated cumulative energy saving of 33,981 GWH at the generator.

FPL's new DSM Goals for the 2005-2014 timeframe were approved by the Florida Public Service Commission (Commission) on August 9, 2004. FPL's DSM Plan (with which FPL will meet the approved DSM Goals) was approved by the Commission on February 9, 2005 except for the BuildSmart and Residential Conservation Services programs. These two programs received Commission approval on January 10, 2006.

Due to the changes in FPL's resource needs resulting from FPL's updated (November 2005) load forecast previously mentioned in the Executive Summary, FPL is currently planning a number of modifications to its existing DSM programs that will result in additional DSM MW reduction capability above what was projected in the approved DSM

Plan. FPL will seek approval of these program modifications during the second quarter of 2006. To-date, FPL has developed a projection for additional cost-effective DSM that can be implemented in 2006 through 2008. The schedule for new generation additions presented in this document are based on the implementation of these additional DSM MW through 2008. FPL will continue to analyze the potential for additional cost–effective DSM for 2009–on in its ongoing resource planning work in 2006.

Schedule 1

Existing Generating Facilities
As of December 31, 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						Fuel Transport		Alt. Fuel	Commercial	Expected	Gen.Max.	Net Capability 1/	
Plant Name	Unit No.	Location	Unit Type	Fuel Pri.	Fuel Alt.	Pri.	Alt.	Days Use	In-Service Month/Year	Retirement Month/Year	Nameplate KW	Winter MW	Summer MW
Cape Canaveral		Brevard County 19/24S/36F									804,100	806	798
	1		ST	FO6	NG	WA	PL	Unknown	Apr-65	Unknown	402,050	403	399
	2		ST	FO6	NG	WA	PL	Unknown	May-69	Unknown	402,050	403	399
Cutler		Miami Dade County 27/55S/40E									236,500	176	170
	5		ST	NG	No	PL	No	Unknown	Nov-54	Unknown	75,000	67	65
	6		ST	NG	No	PL	No	Unknown	Jul-55	Unknown	161,500	109	105
Fort Myers		Lee County 35/43S/25E									2,822,390	2,759	2,415
	2		CC	NG	No	PL	No	Unknown	Jun-02	Unknown	1,701,890	1,610	1,441
	3A & B		CT	NG	FO2	PL	PL	Unknown	Jun-01	Unknown	376,380	380	326
	1-12		GT	FO2	No	PL	No	Unknown	May-74	Unknown	744,120	769	648
Lauderdale		Broward County 30/50S/42E									1,873,968	1,947	1,699
	4		CC	NG	FO2	PL	PL	Unknown	May-93	Unknown	526,250	465	430
	5		CC	NG	FO2	PL	PL	Unknown	Jun-93	Unknown	526,250	464	429
	1-12		GT	NG	FO2	PL	PL	Unknown	Aug-70	Unknown	410,734	509	420
	13-24		GT	NG	FO2	PL	PL	Unknown	Aug-72	Unknown	410,734	509	420
Manatee		Manatee County 18/33S/20E									2,951,110	2,831	2,727
	1		ST	FO6	NG	WA	PL	Unknown	Oct-76	Unknown	863,300	817	810
	2		ST	FO6	NG	WA	PL	Unknown	Dec-77	Unknown	863,300	817	810
	3		CC	NG	No	PL	No	Unknown	Jun-05	Unknown	1,224,510	1,197	1,107

1/ These ratings are peak capability.

Schedule 1

Existing Generating Facilities
As of December 31, 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						Fuel Transport		Alt. Fuel	Commercial	Expected	Gen.Max.	Net Capability 1/	
Plant Name	Unit No.	Location	Unit Type	Fuel Pri.	Alt.	Pri.	Alt.	Days Use	In-Service Month/Year	Retirement Month/Year	Nameplate KW	Winter MW	Summer MW
Martin		Martin County 29/29S/38E									4,317,510	3,799	3,649
	1		ST	FO6	NG	PL	PL	Unknown	Dec-80	Unknown	934,500	830	828
	2		ST	FO6	NG	PL	PL	Unknown	Jun-81	Unknown	934,500	829	815
	3		CC	NG	No	PL	No	Unknown	Feb-94	Unknown	612,000	471	449
	4		CC	NG	No	PL	No	Unknown	Apr-94	Unknown	612,000	472	450
	8		CC	NG	FO2	PL	PL	Unknown	Jun-01	Unknown	1,224,510	1,197	1,107
Port Everglades		City of Hollywood 23/50S/42E									1,710,384	1,721	1,620
	1		ST	FO6	NG	WA	PL	Unknown	Jun-60	Unknown	247,775	220	219
	2		ST	FO6	NG	WA	PL	Unknown	Apr-61	Unknown	247,775	220	219
	3		ST	FO6	NG	WA	PL	Unknown	Jul-64	Unknown	402,050	382	377
	4		ST	FO6	NG	WA	PL	Unknown	Apr-65	Unknown	402,050	390	385
	1-12		GT	NG	FO2	PL	PL	Unknown	Aug-71	Unknown	410,734	509	420
Putnam		Putnam County 16/10S/27E									580,008	568	494
	1		CC	NG	FO2	PL	WA	Unknown	Apr-78	Unknown	290,004	282	245
	2		CC	NG	FO2	PL	WA	Unknown	Aug-77	Unknown	290,004	286	249
Riviera		City of Riviera Beach 33/42S/43E									620,840	560	556
	3		ST	FO6	NG	WA	PL	Unknown	Jun-62	Unknown	310,420	274	272
	4		ST	FO6	NG	WA	PL	Unknown	Mar-63	Unknown	310,420	286	284
Sanford		Volusia County 16/19S/30E									2,534,050	2,232	2,042
	3		ST	FO6	NG	WA	PL	Unknown	May-59	Unknown	156,250	142	138
	4		CC	NG	No	PL	No	Unknown	Oct-03	Unknown	1,188,900	1,045	952
	5		CC	NG	No	PL	No	Unknown	Jun-02	Unknown	1,188,900	1,045	952

1/ These ratings are peak capability.

Schedule 1

Existing Generating Facilities
As of December 31, 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						Fuel Transport		Alt. Fuel	Commercial	Expected	Gen.Max.	Net Capability 1/	
Plant Name	Unit No.	Location	Unit Type	Fuel Pri.	Alt.	Pri.	Alt.	Days Use	In-Service Month/Year	Retirement Month/Year	Nameplate KW	Winter MW	Summer MW
Scherer 2/		Monroe, GA									680,368	642	639
	4		BIT	BIT	No	RR	No	Unknown	Jul-89	Unknown	680,368	642	639
St. Johns River Power Park 3/		Duval County 12/15/28E (RPC4)									271,836	242	232
	1		BIT	BIT	Pet	RR	WA	Unknown	Mar-87	Unknown	135,918	130	127
	2		BIT	BIT	Pet	RR	WA	Unknown	May-88	Unknown	135,918	112	105
St. Lucie		St. Lucie County 16/36S/41E									1,573,775	1,579	1,553
	1		NP	UR	No	TK	No	Unknown	May-76	Unknown	850,000	853	839
	2	4/	NP	UR	No	TK	No	Unknown	Jun-83	Unknown	723,775	726	714
Turkey Point		Miami Dade County 27/57S/40E									2,336,138	2,237	2,183
	1		ST	FO6	NG	WA	PL	Unknown	Apr-67	Unknown	402,050	388	385
	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	759,900	717	693
	1-5		IC	FO2	No	TK	No	Unknown	Dec-67	Unknown	12,138	12	12
										Total System as of December 31, 2005 =		**22,099**	**20,777**

1/ These ratings are peak capability.
2/ These ratings represent Florida Power & Light Company's share of Scherer Unit No. 4, adjusted for transmission losses.
3/ The net capability ratings represent Florida Power & Light Company's share of St. Johns River Park Unit No. 1 and No. 2, excluding Jacksonville Electric Authority (JEA) share of 80%.
4/ Total capability is 853/839 MW. Capabilities shown represnet FPL's share of the unit and exclude the Orlando Utilities Commission (OUC) and Florida Municipal Power Agency (FMPA) combined portion of approximately 15%.

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CHAPTER II

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 the National Oceanic and Atmospheric Administration (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. 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 always 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 space heaters. A composite temperature hourly profile 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, composite temperature and hourly profile of temperature are used for the Summer and Winter peak models.

II.A. Long-Term Sales Forecasts

Long-term forecasts of electricity sales were developed for each revenue class for the forecasting period of 2005-2024 and are adjusted to match the Net Energy for Load (NEL) forecast. The results of these sales forecasts for the years 2006-2015 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 software package MetrixND. The methodologies used to develop energy sales forecasts for each jurisdictional revenue class and Net Energy for Load forecast are outlined below.

1. Residential Sales

Residential electric usage per customer is estimated by using a regression model which contains the real residential price of electricity, real Florida personal income, 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. To capture economic conditions, the model includes Florida's real personal income. The degree of economic prosperity can, and does, affect residential electricity sales. The impact of weather is captured by the Heating Degree-Days and, two weighted variables for cooling degree days accounting for cooling degree days from the previous month are also included as an explanatory variable. The degree of economic prosperity can, and does, affect residential electricity sales. Residential energy sales are forecast by multiplying the residential use per customer forecast by the number of residential customers forecasted. The long-term annual model is similar except that Florida real per capita in included as an economic

explanatory variable rather than Florida total personal income. Also the annual model includes annual cooling degree days.

2. Commercial Sales

The commercial sales forecast is also developed using a regression model. Commercial sales are a function of the following variables: Florida's real personal income, commercial real price of electricity, two variables for Cooling Degree-Days weighted for previous month and current month, and an autoregressive term. The long-term model is similar, except annual cooling degree days is used as explanatory weather variable as opposed to weighted monthly cooling degree days. In addition the long term model does not include an autoregressive term. Florida's real personal income 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.

3. Industrial Sales

The industrial sales forecast is also developed using a regression model. Industrial sales are a function of lagged industrial sales, the real price of electricity, Cooling Degree-Days, a dummy variable for outliers, and an autoregressive term. The price of electricity is also included as an explanatory variable in the model because it has an impact on customer usage. The Cooling Degree-Day term is included to capture the weather-sensitive load in the industrial class. The Long term model consists of real price of electricity and Florida's manufacturing employment.

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. Sales for Resale

Sales for 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.

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 the Florida Municipal Power Agency (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 Progress Energy. Line losses are billed to Miami-Dade under a wholesale contract. FMPA has contracted for delivery of 75 MW from FPL through October, 2007.

7. 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 real price of electricity, Heating and Cooling Degree-Days, Florida Non-Agricultural Employment, and an autoregressive term. The monthly model is similar, except the economic variables utilized are Florida's real personal income and a dummy variable for February. The first year of the forecast is developed from a daily model which consists of similar explanatory variables as monthly model except includes variables for weekends and holiday. The forecasts thereafter for the following four years are obtained from the short-term monthly model. 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 forecasts previously discussed are then adjusted to match the NEL from the annual NEL model.

The forecasted NEL values for 2006 – 2015 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 growing 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 2006–2015 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 variables included in the model are the price of electricity, Florida real personal income, average temperature and a heat buildup weather variable consisting of the sum of the cooling degree hours during the peak day and three prior days. The model below is based on Summer peak load per customer. The Summer peak load per customer value is multiplied by total customers to derive FPL's system Summer peak.

System Winter Peak

Like the system Summer peak model, this model is also an econometric model. The model consists of two weather-related variables: the square of the minimum temperature on the peak day, heating degree hours for the prior day as well as for the morning of the winter peak day. In addition, Florida real personal income is a variable used in the model. The model below is based on Winter peak load per customer. The Winter peak load per customer value is multiplied by total customers to derive FPL's system Winter peak.

Monthly Peak Forecasts

Monthly peaks for the 2005-2024 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 peaks (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 2005-2024 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)
			Rural & Residential			Commercial		
Year	Population*	Members per Household	GWH**	Average*** No. of Customers	Average KWH Consumption Per Customer	GWH**	Average*** No. of Customers	Average KWH Consumption Per Customer
1996	6,948,951	2.20	41,302	3,152,625	13,101	31,211	380,860	81,949
1997	7,105,592	2.21	41,849	3,209,298	13,040	32,942	388,906	84,703
1998	7,249,627	2.22	45,482	3,266,011	13,926	34,618	396,749	87,255
1999	7,412,744	2.22	44,187	3,332,422	13,260	35,524	404,942	87,725
2000	7,603,964	2.23	46,320	3,414,002	13,568	37,001	415,295	89,096
2001	7,754,846	2.22	47,588	3,490,541	13,633	37,960	426,573	88,989
2002	7,898,628	2.21	50,865	3,566,167	14,263	40,029	435,313	91,955
2003	8,079,316	2.21	53,485	3,652,663	14,643	41,425	444,650	93,163
2004	8,247,442	2.20	52,502	3,744,915	14,020	42,064	458,053	91,832
2005	8,469,602	2.21	54,348	3,828,374	14,196	43,468	469,973	92,490
2006	8,638,053	2.21	56,541	3,910,167	14,460	44,236	481,993	91,777
2007	8,808,004	2.21	57,995	3,985,164	14,553	46,430	492,462	94,281
2008	8,975,540	2.21	60,255	4,060,181	14,840	49,095	502,802	97,643
2009	9,138,039	2.21	62,322	4,133,181	15,079	51,195	512,943	99,806
2010	9,298,715	2.21	64,299	4,205,546	15,289	53,188	522,916	101,714
2011	9,456,660	2.21	65,762	4,275,556	15,381	54,552	531,830	102,574
2012	9,609,275	2.21	67,240	4,343,167	15,482	55,995	540,464	103,605
2013	9,758,884	2.21	68,811	4,409,366	15,606	57,536	548,937	104,813
2014	9,907,794	2.21	70,206	4,475,348	15,687	59,194	557,395	106,197
2015	10,056,605	2.21	71,546	4,541,033	15,756	60,887	565,826	107,607

* Population represents only the area served by FPL.

** Actual energy sales include the impacts of existing conservation. Forecasted energy sales do not include the impact of incremental conservation.

*** 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)
	Industrial			Railroads	Street &	Other Sales to	Total**** Sales to
		Average*** No. of	Average KWH Consumption	& Railways	Highway Lighting	Public Authorities	Ultimate Consumers
Year	GWH **	Customers	Per Customer	GWH	GWH **	GWH	GWH **
1996	3,792	14,783	256,511	83	368	577	77,334
1997	3,894	14,761	263,803	85	383	702	79,855
1998	3,951	15,126	261,206	81	373	625	85,130
1999	3,948	16,040	246,135	79	473	465	84,676
2000	3,768	16,410	229,616	81	408	381	87,960
2001	4,091	15,445	264,875	86	419	67	90,212
2002	4,057	15,533	261,186	89	420	63	95,523
2003	4,004	17,029	235,128	93	425	64	99,496
2004	3,964	18,512	214,139	93	413	58	99,095
2005	3,913	20,392	191,873	95	424	49	102,296
2006	3,926	21,315	184,173	96	468	50	105,316
2007	3,904	20,574	189,743	96	485	50	108,959
2008	3,922	19,936	196,711	96	501	50	113,918
2009	3,936	19,421	202,680	96	517	50	118,116
2010	3,945	19,042	207,186	96	534	50	122,111
2011	3,916	18,987	206,259	96	545	50	124,920
2012	3,891	18,842	206,509	96	555	50	127,827
2013	3,862	18,825	205,142	96	566	50	130,920
2014	3,821	18,859	202,607	96	577	50	133,942
2015	3,772	18,936	199,176	96	587	50	136,938

** Actual energy sales include existing conservation. Forecasted energy sales do not include the impact of incremental conservation.

*** 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)
Year	Sales for Resale GWH	Utility Use & Losses GWH	Net***** Energy For Load GWH **	Average *** No. of Other Customers	Total Average***,****** Number of Customers
1996	1,353	6,306	84,993	2,480	3,550,748
1997	1,228	5,771	86,853	2,520	3,615,485
1998	1,326	6,206	92,662	2,584	3,680,470
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	1,511	7,386	108,393	2,879	4,117,221
2004	1,531	7,464	108,091	3,029	4,224,509
2005	1,506	7,498	111,301	3,156	4,321,895
2006	1,545	8,104	114,965	3,263	4,416,737
2007	1,522	8,339	118,820	3,368	4,501,569
2008	1,066	8,736	123,720	3,472	4,586,391
2009	1,082	9,013	128,211	3,576	4,669,120
2010	1,098	9,310	132,519	3,679	4,751,183
2011	1,098	9,522	135,540	3,750	4,830,124
2012	1,098	9,742	138,666	3,819	4,906,292
2013	1,098	9,976	141,993	3,887	4,981,014
2014	1,098	10,204	145,244	3,955	5,055,556
2015	1,098	10,430	148,466	4,022	5,129,818

** Actual energy sales include existing conservation. Forecasted energy sales do not include the impact of incremental conservation and agrees to Col. (2) on Schedule 3.3.

*** Average No.of Customers is the annual average of the twelve month values.

***** GWH Col. (19) = Col. (16) + Col. (17) + Col. (18). Actual NEL include the impacts of existing conservation and agrees to Col. (8) on schedule 3.3.

****** 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
1996	16,064	364	15,700	0	525	339	422	297	15,117
1997	16,613	380	16,233	0	582	440	435	343	15,596
1998	17,897	426	17,471	0	628	526	458	385	16,811
1999	17,615	169	17,446	0	673	592	452	420	16,490
2000	17,808	161	17,647	0	719	645	467	451	16,622
2001	18,754	169	18,585	0	737	697	488	481	17,529
2002	19,219	261	18,958	0	770	755	489	517	17,960
2003	19,668	253	19,415	0	781	799	577	554	18,310
2004	20,545	258	20,287	0	783	847	588	578	19,174
2005	22,361	263	22,098	0	790	895	600	611	19,465
2006	21,916	268	21,648	0	799	87	619	49	20,361
2007	22,543	271	22,272	0	926	128	688	79	20,722
2008	23,179	201	22,978	0	962	172	724	105	21,216
2009	23,782	206	23,576	0	984	218	744	122	21,714
2010	24,375	211	24,164	0	1001	267	756	133	22,218
2011	24,915	211	24,704	0	1,020	318	767	144	22,665
2012	25,474	211	25,263	0	1,040	371	779	154	23,130
2013	26,079	211	25,868	0	1,062	425	791	164	23,637
2014	26,642	211	26,431	0	1,086	481	803	174	24,098
2015	27,263	211	27,052	0	1,095	500	807	178	24,684

Historical Values (1996 - 2005):

Col. (2) - Col. (4) are actual values for historical summer peaks. As such, they incorporate the effects of conservation (Col. 7 & Col. 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.

Col. (5) - Col. (9) for 1996 through 2005 represent actual DSM capabilities starting from January 1988 and are annual (12-month) values. Note that the values for FPL's former Interruptible Rate are incorporated into Col. (8), which also includes Business On Call (BOC) and Commercial /Industrial Demand Reduction (CDR). Col.(5) - Col.(9) for year 2004 are "estimated actuals" and are August values.

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 (2006 - 2015):

Col. (2) - Col.(4) represent FPL's forecasted peak w/o incremental conservation or cumulative load control. The effects of conservation implemented prior to 2004 are incorporated into the load forecast.

Col. (5) - Col. (9) represent all incremental conservation and cumulative load control. These values are projected August values and the conservation values are based on projections with a 1/2004 starting point for use with the 2004 load forecast.

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
1996/97	16,490	626	15,864	0	578	311	417	139	15,495
1997/98	13,060	239	12,821	0	641	369	426	151	11,993
1998/99	16,802	149	16,653	0	692	404	446	164	15,664
1999/00	17,057	142	16,915	0	741	434	438	176	15,878
2000/01	18,199	150	18,049	0	791	459	448	183	16,960
2001/02	17,597	145	17,452	0	811	500	457	196	16,329
2002/03	20,190	246	19,944	0	847	546	453	206	18,890
2003/04	14,752	211	14,541	0	857	570	532	230	13,363
2004/05	18,108	225	17,883	0	862	583	542	233	16,704
2005/06	19,683	225	19,458	0	870	600	550	240	17,424
2006/07	22,294	228	22,066	0	964	58	605	20	20,647
2007/08	22,753	231	22,522	0	1,001	85	631	28	21,007
2008/09	23,245	161	23,084	0	1,042	113	656	38	21,395
2009/10	23,714	166	23,548	0	1,062	139	663	42	21,807
2010/11	24,155	171	23,984	0	1,084	167	669	47	22,188
2011/12	24,597	171	24,426	0	1,107	194	676	52	22,568
2012/13	25,061	171	24,890	0	1,133	222	683	57	22,967
2013/14	25,561	171	25,390	0	1,160	249	690	62	23,400
2014/15	26,244	171	26,073	0	1,189	275	696	67	24,017

Historical Values (1996/97 - 2005/06):

Col. (2) - Col. (4) are actual values for historical winter peaks. As such, they incorporate the effects of conservation (Col. 7 & Col. 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.

Col. (5) - Col.(9) for 1996/97 through 2005/06 represent actual DSM capabilities starting from January 1988 and are annual (12-month) values. Note that the values for FPL's former Interruptible Rate are incorporated into Col. (8), which also includes Business On Call (BOC) and Commercial/Industrial Demand Reduction (CDR).Col.(5) - Col.(9) for year 2004/05 are "estimated actuals" and are January values.

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 (2006/07- 2014/15):

Col. (2) - Col.(4) represent FPL's forecasted peak w/o incremental conservation or cumulative load control. The effects of conservation implemented prior to 2004 are incorporated into the load forecast.

Col. (5) - Col.(9) represent all incremental conservation and cumulative load control. These values are projected January values and the conservation values are based on projections with a 1/2004 starting point for use with the 2004 load forecast.

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(%)
1996	87,007	971	1,043	85,654	1,353	6,306	84,993	60.2%
1997	89,243	1,213	1,177	88,015	1,228	5,771	86,853	59.7%
1998	95,318	1,374	1,282	93,992	1,326	6,206	92,662	59.1%
1999	94,365	1,542	1,365	93,412	953	5,829	91,458	59.3%
2000	99,097	1,674	1,434	98,127	970	7,059	95,989	61.4%
2001	101,739	1,789	1,545	100,768	970	7,222	98,404	59.9%
2002	107,755	1,917	1,639	106,522	1,233	7,443	104,199	61.9%
2003	112,160	2,008	1,759	110,648	1,511	7,386	108,393	62.9%
2004	112,031	2,106	1,834	110,500	1,531	7,464	108,091	59.9%
2005	115,440	2,205	1,934	113,933	1,506	7,498	111,301	58.9%
2006	114,965	148	84	113,420	1,545	8,104	114,733	59.9%
2007	118,820	234	153	117,298	1,522	8,339	118,433	60.2%
2008	123,720	325	192	122,654	1,066	8,736	123,203	60.8%
2009	128,211	423	217	127,129	1,082	9,013	127,571	61.5%
2010	132,519	526	228	131,421	1,098	9,310	131,765	62.1%
2011	135,540	632	238	134,443	1,098	9,522	134,670	62.1%
2012	138,666	742	249	137,569	1,098	9,742	137,675	62.0%
2013	141,993	856	260	140,896	1,098	9,976	140,877	62.2%
2014	145,244	972	272	144,146	1,098	10,204	144,000	62.2%
2015	148,466	1,021	278	147,368	1,098	10,430	147,167	62.2%

Historical Values (1996 - 2005):

Col. (2) represents derived "Total Net Energy For Load w/o DSM". The values are calculated using the formula: Col. (2) = Col. (3) + Col. (4) + Col. (8).

Col.(3) & Col.(4) for 1996 through 2005 are DSM values starting in January 1988 and are annual (12-month) values.Col. (3) and Col. (4) for 2004 are "estimated actuals" and are also annual (12-month) values. The values represent the total GWH reductions actually experienced each year .

Col. (5) & Col. (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 using the formula: Col. (9) = ((Col. (8)*1000) / ((Col.(2) * 8760)

Projected Values (2006 - 2015):

Col. (2) represents Net Energy for Load w/o DSM values. The values are extracted from Schedule 2.3, Col. (19).

Col. (3) & Col. (4) are forecasted values of the reduction on sales from incremental conservation and are mid-year (6-month) values. The effects of conservation implemented prior to 2004 are incorporated into the load forecast.

Col. (5) & Col. (6) are a breakdown of Net Energy For Load in Col (2) , into Retail and Wholesale.

Col. (8) NEL projected values shown here do include the impact of conservation in Col. (3) and Col. (4). Therefore, these NEL values do not match those shown on schedule 2.3 because those values do not account for incremental conservation.

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)
Adjustments are made for leap years.

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)
	2005 ACTUAL		2006* FORECAST		2007* FORECAST	
Month	Total Peak Demand MW	NEL GWH	Total Peak Demand MW	NEL GWH	Total Peak Demand MW	NEL GWH
JAN	18,108	8,062,406	21,792	8,499,714	22,294	8,729,836
FEB	14,738	7,029,844	17,964	7,723,932	18,378	8,113,972
MAR	16,747	8,247,459	16,949	8,609,537	17,340	8,778,122
APR	16,534	8,274,067	18,245	8,997,943	18,767	9,143,792
MAY	19,303	9,246,124	20,240	9,548,023	20,820	10,064,433
JUN	20,388	10,390,767	21,064	10,713,354	21,668	11,055,940
JUL	21,611	11,519,030	21,468	10,887,249	22,083	11,512,493
AUG	22,361	11,869,036	21,916	11,303,053	22,543	11,677,199
SEP	20,731	11,334,797	21,273	11,072,657	21,882	11,367,714
OCT	20,176	9,268,267	19,793	9,772,296	20,360	10,202,113
NOV	16,346	8,283,616	18,471	9,106,983	18,852	9,162,628
DEC	15,068	7,775,355	18,857	8,730,477	19,245	9,011,423
TOTALS		111,300,768		114,965,218		118,819,664

* Forecasted Peaks & NEL do not include the impacts of cumulative load management and incremental conservation and are consistent with values shown in Col. (19) of Schedule 2.3 and Col (2) of Schedule 3.3.

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CHAPTER III

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 2005 and early 2006 resource 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.

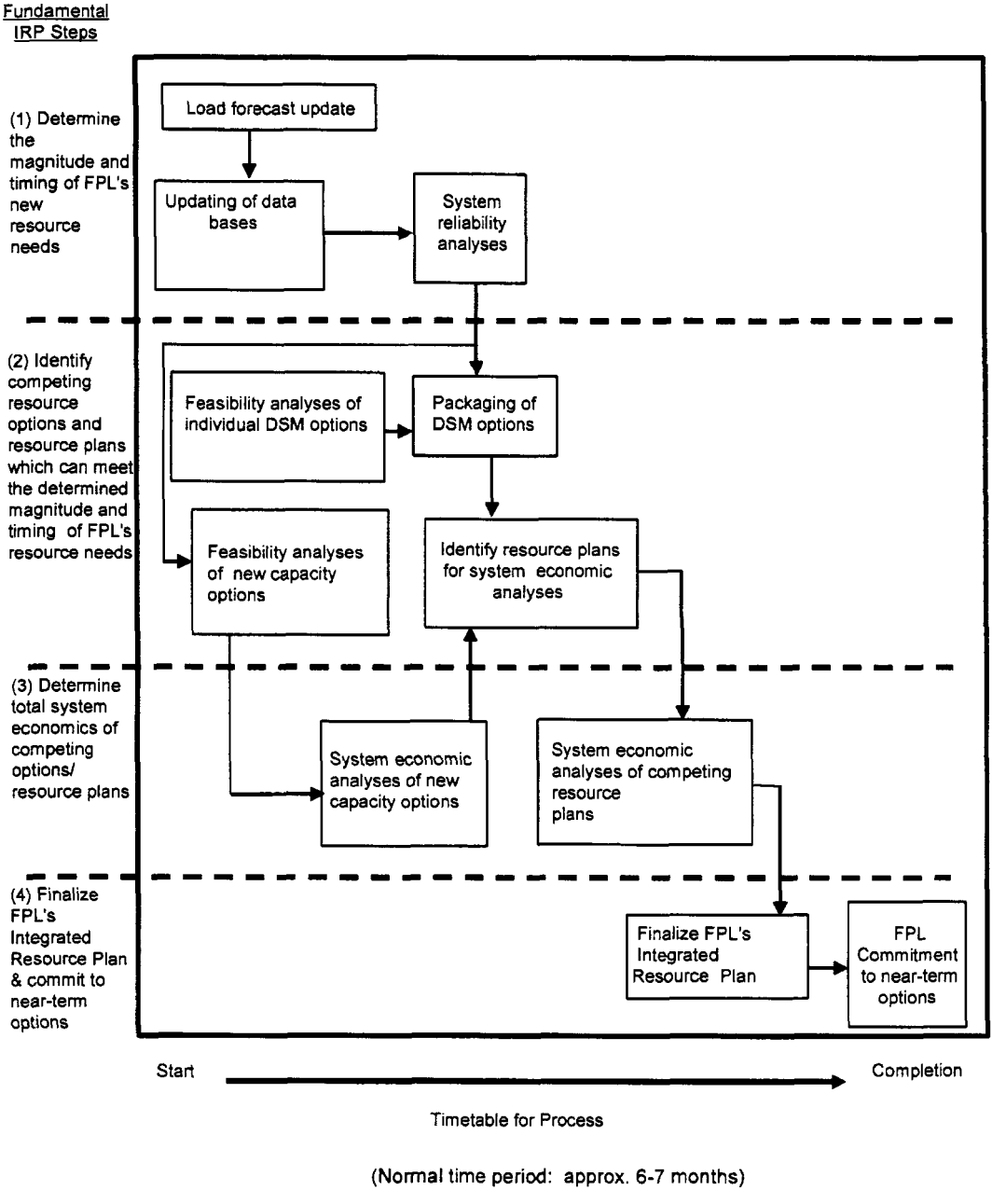

Figure III.A.1: Overview of FPL's IRP Process

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 the amount of capacity or megawatts (MW) of load reduction, new capacity additions, or a combination of both load reduction and new capacity additions that 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 resource adequacy or reliability assessment for the utility system.

Step 1 typically 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 that 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. FPL also includes key assumptions regarding three specific resource areas: (1) near-term construction capacity additions, (2) short-term, firm capacity purchase additions, and (3) short-term and long-term DSM implementation.

The first of these assumptions is based on FPL's ongoing engineering and construction activities to add near-term capacity. These construction activities involve a new CC unit at FPL's Turkey Point site scheduled to come in-service by mid-2007. FPL selected this capacity option after conducting an RFP during 2003. The addition was approved by the FPSC in June of 2004 and the Governor and Siting Board approved certification of the plant location, construction, and operation of the new CC unit in February, 2005.

The second of these assumptions involves short-term, firm capacity purchase additions. These firm capacity purchases are from a combination of utility and independent power producers. Several new near-term firm capacity purchases are now projected in this year's Site Plan. Details, including the annual total capacity values for these purchases are presented in Tables I.B.1 and I.B.2. These purchased capacity amounts were incorporated in FPL's recent resource planning work.

The third of these assumptions involves DSM. Since 1994, FPL's resource planning work has assumed that the DSM MW called for in FPL's approved DSM Goals is achieved per plan in its analyses. This was again the case in FPL's most recent planning work, as its new DSM Goals that address the years 2005 through 2014, and that were approved by the FPSC in August 2004, are assumed to be achieved per plan.

FPL realized significant load growth in 2005. When this growth was reviewed it was determined that population growth beyond that forecast was responsible for the change. As a result, the load forecast was updated in November 2005. At that time, the amount and timing of cost-effective DSM was reviewed resulting in the identification of an additional 309 MW of Summer demand reduction capability. This additional DSM capability can be implemented with additional program signups through 2008, plus modifications to existing programs. These additional MW of DSM were also accounted for prior to making projections of new construction additions that are discussed in this document.

These key assumptions, plus the other updated information, are then applied in 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 20% (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.

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 the adequacy of a generating system's capacity resources compared to its native load during peak periods. However, deterministic methods do not take into account probabilistic-related elements such as the impact of individual unit failures. For example: 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. Probabilistic methods also recognize the value of being part of an interconnected system with access to multiple capacity sources.

For this reason, probabilistic methodologies have been used to provide an additional perspective on the generation resource adequacy 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 computer software models such as the Tie Line Assistance and Generation Reliability (TIGER) program currently used by FPL.

The 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. Following the significantly higher loads experienced during the summer of 2005, FPL's peak load forecast was revised upwards in November 2005 as discussed in Chapter II. Consequently, FPL's projected capacity needs have both accelerated and increased in magnitude. Information regarding the timing and magnitude of these resource needs 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 That 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 conducted 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.

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 to determine FPL's most cost-effective self build alternative.

In 2005, FPL issued a Request for Proposals (RFP) seeking proposals for firm capacity additions in 2009–2011. FPL received five such proposals in response to this solicitation (one proposal was subsequently withdrawn by its bidder). These options were also analyzed in FPL's resource planning work as alternatives to FPL's most cost-effective self build alternative.

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. In its 2005 resource planning work, FPL performed much of this work of combining resource options into resource plans using the EGEAS (Electric Generation Expansion Analysis System) computer model from the Electric Power Research Institute (EPRI). The EGEAS model was also used to perform much of the basic economic analyses of the resource plans. For various analyses, including the analyses of proposals received in response to FPL's RFP, FPL also applied the P-MArea production cost model to develop a more detailed perspective of the production costs for the various resource plans developed in the EGEAS model. The P-MArea model is the model used by FPL to develop the Fuel Cost Budget and to conduct other production cost-related analyses including the detailed economic analysis of RFP proposals.

In 2005, FPL also utilized several other models in its resource planning work. For DSM analyses, FPL used its DSM cost-effectiveness model; an FPL spreadsheet model utilizing the FPSC's approved methodology for analyzing the cost-effectiveness of individual DSM measures/programs, and its non-linear programming model for analyzing the potential for lowering system peak loads through additional load management capacity.

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 much of FPL's most recent planning work in which the DSM contribution was assumed as a given and the only competing options were new generating units and purchase options, 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 cumulative present value system revenue requirement basis that includes the system capital and operating costs of the new capacity options and existing FPL units.

Step 4: Finalizing FPL's Current Resource Plan

The results of the previous three fundamental steps were used to develop the future generation plan. This plan is presented in the following section.

III.B Incremental Resource Additions

FPL's projected incremental generation capacity additions/changes for 2006 through 2015 are depicted in Table III.B.1 (the planned DSM additions are shown separately in Tables III.D.1 and III.D.2). These capacity additions/changes 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, implementation of additional cost-effective DSM, and by projected construction of new generating units.

As shown in Table III.B.1, the capacity additions are largely made up of committed new construction, new purchases, and proposed self-build alternatives. (The additional DSM MW are not presented in this table but have been accounted for prior to making these new capacity option projections.) The new construction contribution includes the addition of a new CC unit in 2007 at FPL's Turkey Point site and the planned addition of new CC units in 2009 and 2010 at the West County Energy Center site. FPL is also projecting additional firm capacity power purchase contributions for the 2006 through 2009 time period. These purchases, combined with the Turkey Point and West County Energy Center construction projects (plus the additional cost-effective DSM MW), address FPL's

resource needs for 2006 through 2010 with the exception of 2008. The 2008 need is partially addressed by these resource additions.

FPL anticipates addressing its remaining 2008 need with additional purchases/leases, enhancements to its existing units, and/or the construction of one CT. For purposes of this planning document, FPL projects the construction of one unsited CT.

FPL's resource need for 2011 will be addressed with additional cost-effective DSM, power purchases, capacity increases to FPL's existing units, or by construction of new CTs. For purposes of this planning document, FPL projects the construction of two unsited CT's.

FPL projects the construction of two new advanced technology coal units; one each in 2012 and 2013. These two units will use supercritical pulverized combustion technology in concert with an advanced emissions control suite to meet FPL's resource needs for 2012 and 2013 and greatly enhance FPL's fuel diversity. The amount of capacity needed and the technologies that would ultimately be chosen to meet the need for these years will be based on FPL's ongoing review of technology, environmental requirements, regulation and economic factors and will not be restricted to a single technology.

For addressing its 2014 and 2015 resource needs in this planning document, FPL projects the construction of one unsited CT in 2014, one unsited CT in 2015, and one unsited 2x1 CC any of which could be converted to coal gasification once the technology is able to meet reliability and cost-effectiveness standards.

Table III.B.1: Projected Capacity Changes for FPL [1]

Projected Capacity Changes and Reserve Margins for FPL [1]

		Net Capacity Changes (MW)	
		Winter [2]	***Summer*** [3] [8]
2006	Changes to Existing QF Purchases [4]	(132)	(136)
	Changes to existing Units	205	142
	Changes to Non-QF Purchases [5]	147	440
2007	Turkey Point Combined Cycle #5 [6]	---	1,144
	Changes to existing Units	70	77
	Changes to Non-QF Purchases [5]	73	(412)
2008	Changes to existing Units	4	12
	Turkey Point Unit #5 [6]	1,181	---
	Unsited Combustion Turbine [6]	---	160
	Changes to Non-QF Purchases [5]	(252)	---
2009	Changes to Existing QF Purchases [4]	---	(51)
	Changes to Non-QF Purchases [5]	(326)	(105)
	West County Unit #1 [6]	---	1,219
	Unsited Combustion Turbine [6]	181	---
2010	West County Unit #1 [6]	1,335	---
	Changes to Existing QF Purchases [4]	(51)	(47)
	West County Unit #2 [6]	---	1,219
	Changes to Non-QF Purchases [5]	(461)	(683)
2011	West County Unit #2 [6]	1,335	---
	Unsited 2x0 Simple Cycle CT [6]	---	320
	Changes to Existing QF Purchases [4]	(92)	(45)
	Changes to Non-QF Purchases [5]	(1)	---
2012	Supercritical Pulverized Coal Unit # 1 [6] [7]	---	850
	Unsited 2x0 Simple Cycle CT [6]	362	---
	Changes to Non-QF Purchases [5]	---	(158)
2013	Supercritical Pulverized Coal Unit # 1 [6] [7]	855	---
	Supercritical Pulverized Coal Unit # 2 [6] [7]	---	850
	Changes to Non-QF Purchases [5]	(180)	---
2014	Supercritical Pulverized Coal Unit # 2 [6] [7]	855	
	Unsited 1x 0 Simple Cycle CT [6] [9]	---	160
2015	Unsited 1x 0 Simple Cycle CT [6] [9]	181	---
	Unsited 1x 0 Simple Cycle CT [6] [9]	---	160
	Unsited 2x1 Combined Cycle [6] [9]	---	553
	TOTALS =	**5,289**	**5,669**

(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) These are firm capacity and energy contracts with Cogen & Small Power Producers. See Table I.B.1 for more details.
(5) These are firm capacity purchases from Non-QF facilities. See Tables I.D.1 and Table I.D.2 for more details.
(6) All new unit additions 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.
(7) FPL is currently in the process of selecting a site(s) for these advanced technology coal units. FPL expects to announce the selected site(s) by June 2006.
(8) FPL reserve margin values are shown to include what is committed or firmly planned. FPL will continue to pursue the most cost effective alternatives available to meet the then forecasted need with a 20% reserve margin, such as DSM resources that may be added in intervening years or additional purchases.
(9) FPL will continue to pursue development of technologies, such as SCPC or IGCC to meet the needs in these later years.

III.C Issues Impacting FPL's Recent Planning Work

FPL's 2005 and early 2006 planning efforts have continued to address two issues that were identified in previous Site Plans as being items of on-going importance. Those two issues are: (1) the need to address the imbalance between regional load and generating capacity located in southeast Florida, and (2) the desire to maintain and enhance a balanced fuel supply in the FPL system.

1. Southeast Imbalance

There currently is an imbalance between regionally installed generation and peak load in southeast Florida. A significant amount of energy required in the southeast Florida region during peak periods is provided through the transmission system from plants located outside the region. Based on the forecast for continued load growth in this region, the imbalance between generation and load is projected to increase unless additional generation capacity is periodically located within this region.

FPL's prior planning work concluded that either additional installed capacity in this region or transmission capacity capable of delivering additional electricity from outside the region would be required to address this imbalance. Delivering additional electricity from outside the region incurs both increased transmission-related costs (system integration equipment, losses, and impact to operating costs) and the costs of additional capacity that would be built outside of the region. The evaluation conducted as part of FPL's Request for Proposals (RFP) process determines the most cost-effective means to meet FPL's needs by considering all cost components of FPL's next planned generating unit (NPGU) and alternative options, including transmission-related costs. The locations of the NPGU, and the locations of proposed units included in the alternative option combinations, contribute to the transmission-related costs determined in the evaluation. The results of the RFP evaluations confirm that because of the existing imbalance, generating units located in the southeast Florida region contribute significantly lower transmission-related costs than do those located outside the region.

Partly because of the lower transmission-related costs resulting from their location, Turkey Point Unit #5 and West County Units #1 and #2 were evaluated as the most cost-effective options to meet FPL's 2007 and 2009-2010 capacity needs, respectively. Adding Turkey Point Unit #5 will significantly reduce the imbalance between generation and load in southeast Florida. However, assuming no other resources are added, the

imbalance is projected to re-develop within several years because of the continued load growth of approximately 250-300 MW per year in this region. Therefore, the southeast Florida imbalance is a recurring factor in the calculation of transmission-related costs which are an integral part of the evaluation of new capacity additions. This was again the case in FPL's 2005 RFP, which resulted in the identification of West County Units #1 and #2 as the most cost effective alternatives to meet the need of a growing system. The RFP analysis showed that the West County units offered significantly lower transmission related costs in comparison to other proposals evaluated. Based on the current load forecast and system resources the combined effect of the Turkey Point Unit #5 and the West County Units #1 and #2 unit additions (assuming an affirmative Determination of Need is granted for West County Units #1 and #2) would substantially mitigate the imbalance issue until near the end of the ten year planning horizon addressed in this Site Plan.

2. Balanced Fuel Supply.

FPL also has taken positive steps in 2005 to address the issue of fuel diversity in the FPL system on a number of fronts. Once a resource need is established, and after accounting for all reasonably available, cost-effective DSM alternatives, FPL recognizes that there are many resource options that can contribute to fuel diversity. The following discusses the key activities FPL has undertaken to develop resources that are not reliant on oil or natural gas as the primary fuels.

In March 2005, FPL presented its analysis of the benefits and risks of adding advanced technology coal generation to the FPL System. The *Report on Clean Coal Generation* (Coal Study) was presented to the FPSC summarizing FPL's findings. Based on the assumptions at the time these findings showed that, while there are uncertainties surrounding the costs of coal-fueled generation, significant cost and fuel reliability benefits may be obtained by adding advanced technology coal generation. During 2005, FPL and its customers were subjected to a volatile natural gas and oil commodity market. The long-term future price expectation for these fuels has risen, increasing the value offered by advanced technology coal generation above that documented in the Coal Study. Understandably, FPL maintains its pursuit of two new supercritical pulverized coal units with advanced emission control technology, one each in 2012 and 2013.

In September 2005, FPL issued a two-part RFP. Part I solicited proposals to address FPL's 2009-2011 capacity needs and this solicitation was open to all fuel-types and

technologies. These proposals were received on November 9, 2005. Only natural gas-fired generation or utility system-based capacity was offered in response to Part I of the RFP. Part II of the RFP identified that FPL plans to request proposals in 2006 limited to fuel diverse generation alternatives for its 2012-2014 capacity needs. FPL held a meeting in December 2005 with interested parties to identify issues of concern and encourage market interest in the process. As part of its development efforts in 2005, FPL attempted but was unsuccessful in its petition for a zoning variance in St. Lucie County to accommodate a selected site for an advanced technology coal plant. Because of the significant economic and reliability benefits offered by advanced technology coal generation, FPL continues to actively pursue other sites for advanced technology coal plant and will make every effort to bring two units into service in 2012 and 2013, respectively.

During early 2005, FPL completed an RFP for Liquified Natural Gas (LNG) supply by concluding that no proposal offered economic benefits that warranted entering into a long-term supply arrangement necessary to support such a facility. FPL's view remains that LNG can be an effective means to add fuel supply diversity to FPL, and the company will continue to investigate the feasibility of such projects in the coming years.

FPL has maintained an interest in pursuing Integrated Gasification Combined Cycle (IGCC) technology. In the past year, FPL has worked with the industry's leading IGCC developers to explore creative means that might bring this technology to FPL's customers. This effort is focused on resolving reliability and cost uncertainty and demonstrating that addition of the technology will benefit our customers. FPL's planned capacity for 2014 and 2015 in this Site Plan are such that they could support an IGCC technology alternative, should these areas of uncertainty be resolved by 2008.

During 2005 and early 2006, 9 major US utilities have announced an intent to pursue new nuclear generation facilities. FPL has begun the process to review the prospect for new nuclear generation and the advisability of initiating significant financial commitments in the face of schedule, cost and regulator uncertainties. FPL believes that being an active participant in this process is necessary in order to preserve new nuclear generation as a viable alternative in maintaining a balanced fuel supply. Therefore, FPL will be taking the necessary steps in the near future to preserve new nuclear generation as an option for enhancing fuel diversity in the FPL system.

FPL also has been involved in activities in 2005 to investigate adding or maintaining renewable resources as a part of its generation supply. These activities include discussions with existing facilities aimed at maintaining or extending current agreements. Additionally, FPL is actively investigating a site for a demonstration wind generation project on the East coast of Florida. The project is estimated to be in the 10 MW range and may be on-line as early as 2007. FPL maintains its interest in new and developing technologies, such as solar photovoltaic and ocean current turbine technology. FPL supports pilot projects in solar photovoltaic technology throughout its system helping to provide platforms to refine the technology and reduce its cost. The common outlook for renewable technologies is that they may become more cost-effective over the next ten years and may be feasible additions to provide some diversity to the system fuel supply. FPL shares, with others, the objective of fostering the development and operation of additional cost-effective renewable sources of generation. Based upon available information, however, FPL does not believe that renewable resources are likely to contribute more than a modest amount to satisfying the annual electric load growth in FPL's territory.

In the future, FPL will continue to identify and evaluate alternatives that may maintain or enhance fuel diversity in its capacity resource mix including purchasing power from coal-fired facilities when such power becomes available. FPL also plans to maintain the ability to utilize fuel oil at those existing units that have that capability, although price factors currently limit the expected use of these facilities.

III.D Demand Side Management (DSM)

1. Currently Approved Programs and Goals:

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 and reflective roofs 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.

Residential Low Income Weatherization: This program 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.

Business Energy Evaluation: This program encourages energy efficiency in both new and existing commercial/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 program mentioned above in 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 roof/ceiling insulation and reflective roof coatings 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.

FPL's approved DSM Goals for summer MW reduction from these programs are presented in Table III.D.1.

Year	Goal Cumulative Summer MW
2005	74
2006	142
2007	212
2008	287
2009	366
2010	448
2011	532
2012	619
2013	708
2014	802

Table III.D.1: FPL's Summer MW Reduction Goals for DSM (At the Meter)

Table III.D.1 reflects FPL's DSM Goals for 2005–2014 as approved by the Florida Public Service Commission in June, 2004. These annual cumulative values assume a 1/1/05 starting point.

2. Research and Development

FPL 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.

Conservation 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 such as condenser coil cleaner and coating, ultraviolet lights for evaporator coils, Energy Recovery Ventilators (ERV), fuel cell demonstrations, CO_2 ventilation control, two-speed air handlers, and duct plenum repair. Many of the technologies examined have resulted in enhancements to existing programs or the development of new programs such as

Residential New Construction, Commercial/Industrial Building Envelope, and Business On Call.

Green Power Pricing Research Project

Under this project, FPL is examining the feasibility of purchasing tradable renewable energy credits generated from new renewable resources including solar-powered technologies, biomass energy, landfill methane, wind energy, low impact hydroelectric energy, and/or other renewable sources. Residential customers who participate are charged higher premiums for purchasing the tradable renewable energy credits associated with electric energy generated by these sources.

Development of the Green Pricing program was completed and filed with the FPSC in August 2003. As part of this process, a supply contract was put into place that allows FPL to match supply with demand for green energy. Tradable renewable energy credits are used to supply the renewable benefits required of this project. The FPSC approved the program on December 2, 2003 with program implementation the first quarter of 2004. As of year-end 2005, FPL had over 23,000 project participants.

On Call Incentive Reduction Pilot

In March 2003, FPL received FPSC approval to perform a pilot for its On Call Program. Under the pilot FPL is offering to new participants a residential load control service similar to the On Call Program at a reduced incentive level. The offering of this pilot is allowing 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 FPL system reliability.

Business Green Energy Research Project

As mentioned above, FPL currently has a R&D project addressing residential customer acceptance of green energy. In an attempt to determine business customer acceptance of green pricing rates, FPL is investigating if it is feasible to design and implement a Green Energy Program that addresses these customer segments.

3. Additional DSM Contributions

FPL's updated load forecast previously discussed in Chapter II, and the corresponding acceleration and growth in FPL's projected resource needs previously discussed in this chapter, will enable FPL to cost-effectively implement additional DSM above what is

projected in FPL's approved DSM Plan. FPL will petition the FPSC starting in the second quarter of 2006 for approval of modifications to a number of its existing DSM programs that will enable FPL to achieve additional cost-effective DSM MW. The projected additional peak load reduction impacts of these DSM program modifications, which includes both new program measures and increased program signups, is presented in Table III.D.2

Year	Additional Summer MW @ Generator
2006	39
2007	229
2008	289
2009	309

Table III.D.2: FPL's Additional Summer MW of DSM

FPL's analyses of these additional DSM contributions has focused to-date on addressing FPL's near-term (2006–2008) capacity needs. Program implementation that occurs between the summer of 2008 and the end of 2008 are shown as a "carryover" impact to the summer of 2009. On-going analyses will continue to examine the potential for additional cost-effective DSM contributions for subsequent years 2009-on.

III.E 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 certain of FPL's proposed future additions of 230 kV and 500 kV bulk transmission lines including those corresponding to proposed generating facilities and those that must be certified under the Transmission Line Siting Act.

(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	Collier [1]	Orange River #3	54	Dec-06	230	759
FPL	St. Johns	Pringle	26	Dec-08	230	759
FPL	Manatee	BobWhite	30	Dec-11	230	1190
FPL	Eve	Sweatt	25	Jun-12	230	759

(1) Final order certifying the corridor was issued on July 19 of 2004.

Table III.E.1: List of Proposed Power Lines

In addition, there will be transmission facilities needed to connect several of FPL's committed and projected capacity additions to the system transmission grid. These transmission facilities for the committed capacity additions at FPL's existing Turkey Point plant and for the projected capacity additions at the West County Energy Center site areas are described below.

Since the projected capacity additions for 2008, and for 2011 through 2015, are as-yet unsited, or their transmission facility needs can only be determined after sites for earlier units are determined, no transmission facilities information is provided for these units. This information will be provided in the 2006 Site Plan Addendum for the 2012 and 2013 advanced technology coal projects when sites have been selected.

III.E.1 Transmission Facilities for Turkey Point Unit #5

The work required to connect the new capacity addition at Turkey Point in 2007 with the FPL grid is projected to be as follows:

I. Substation:

1. Build new collector yard containing two collector busses with 5 breakers to connect the four CT's and one steam turbine.
2. Construct two string busses to connect the collector busses and main switchyard.
3. Add five main step-up transformers (4-225MVA, 1-560 MVA), one for each CT and one for the steam turbine.
4. Add a new two breaker bay to connect the collector bus at the Turkey Point switchyard.
5. Add a second two breaker bay at the Turkey Point switchyard to connect the other collector bus.
6. Add relays and other protective equipment.
7. Expand site and relay vault for two new line terminals at Turkey Point switchyard.

II. Transmission:

1. Upgrade the Turkey Point-Galloway Tap 230kV transmission line section to 1418 Amps.
2. Upgrade the Turkey Point–McGregor-Florida City 230kV transmission line section to 1403 Amps.
3. Upgrade the Turkey Point-Miller 230kV transmission line section to 1356 Amps.
4. Upgrade the Miller-Killian 230kV transmission line section to 1315 Amps.

III.E.2 Transmission Facilities for West County Unit #1

The work required to connect West County Energy Center Unit #1 projected to be added in 2009 with the FPL grid is projected to be as follows:

I. Substation:

1. Build new collector yard containing two collector busses with 5 breakers to connect the four CT's and one steam turbine.
2. Construct two string busses to connect the collector busses and main switchyard to Corbett 230 kV Substation.
3. Add five main step-up transformers (4-225 MVA, 1-560 MVA), one for each CT and one for the steam turbine.
4. Add a new Bay #4 with 3 breakers at the Corbett 230 kV main switchyard. Connect one string buss from the collector yard and relocate the Alva 230 kV terminal from Bay #3 to new Bay #4.
5. Connect second collector string buss to Bay #3.
6. Add relays and other protective equipment.

II. Transmission:

1. No upgrades expected to be necessary at this time.

III.E.3 Transmission Facilities for West County Unit #2

The work required to connect West County Energy Center Unit #2 projected to be added in 2010 with the FPL grid is projected to be as follows:

I. Substation:

1. Build new collector yard containing two collector busses with 4 breakers to connect the three CT's, and one ST.
2. Construct two string busses to connect the collector busses and main switchyard to Corbett 500kV Substation.
3. Add four main step-up transformers (3-370 MVA, 1- 580 MVA) one for each CT, and one for the ST.
4. At Corbett Sub, install one breaker and relocate Martin #2 500 kV line from Bay 2S to Bay 2N. Install one West County 500 kv string bus into Bay 2S.
5. At Corbett Sub, install one breaker and second West County 500 kV string bus into Bay 1S.
6. Add relays and other protective equipment.

II. Transmission:

1. No upgrades expected to be necessary at this time.

III.F. 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 FSEC'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. (The system was removed in 1990 to make room for substation expansion after the testing of this PV installation was completed.)

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 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 began the effort in 1998 and received approximately $89,000 in contributions (that significantly exceeded the goal of $70,000). FPL purchased the PV modules and installed them at FPL's Martin Plant site.

FPL initiated two new renewable efforts in 2000. FPL's first new initiative in 2000 was the Green Energy Project. The objectives of this Project were to: determine customer interest in an on–going renewable energy program, determine their price responsiveness and views on the different renewable technologies, and identify potential renewable energy supply sources that would meet the forecasted customer demand for this type of product. FPL both conducted customer research and issued a Request for Proposals (RFP) in 2001 to solicit proposals to potentially supply energy only (MWH) from new renewable sources. This Project formed the basis for FPL's existing Green Power Pricing Research Project, and then led to FPL's Business Green Energy Research Project, that are discussed in Section III.D.2.

The second effort initiated in 2000 was FPL's Photovoltaic Research, Development, and Education Project. This demonstration project's objectives were 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. This project was completed in 2003.

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,I.B.2, and Table I.C.1).

Additionally, FPL is actively investigating a site for a demonstration wind generation project on the East Coast of Florida. The project is estimated to be in the 10 MW range and may be on-line as early as 2007. FPL also maintains an interest in other developing renewable technologies such as ocean current turbine technology.

III.G 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 with significant reliance on oil–fired generation. 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 SJRPP.

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. This planning document shows a slowing of that trend as FPL's plans have realized the benefits of efficient gas-fired generation but also recognize that adding natural gas-fired additions exclusively would, in the long term, create an unbalanced generation portfolio. FPL projects the addition of a new gas-fired unit in 2007 at Turkey Point and new gas-fired units at West County in 2009 and 2010. These units will provide highly efficient generation that will benefit the entire FPL system by reducing transmission related costs, mitigate the load to generation imbalance in the southeast portion of the system and dramatically improve the overall system generation efficiency. FPL plans to compliment these additions with two advanced technology coal units in 2012 and 2013, respectively. The addition of coal-fueled generation will provide fuel supply diversity and assist in stabilizing fuel cost volatility through diversification.

FPL's future resource planning work will remain focused on identifying and evaluating alternatives that would maintain or enhance FPL's long-term fuel diversity. These fuel diversity-enhancing alternatives may include: the purchase of power from new coal-based facilities, obtaining access to diversified sources of natural gas such as LNG, and preserving FPL's ability to utilize fuel oil at its existing units. The evaluation of the feasibility and cost-effectiveness of these, and other possible alternatives, will be an ongoing part of future planning cycles.

FPL's current use of various fuels to supply energy to customers, plus a projection of this "fuel mix" through 2015 based on the resource plan presented in this document, is presented in Schedules 5, 6.1, and 6.2 later in this chapter.

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 crude oil and 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 slowly decline as new and improved drilling technology and seismic information and resulting new finds will only reduce the projected rate of decline in the overall domestic resource base. The rate of decline in domestic natural gas production is projected to be offset by the anticipated increase in U.S. imports from Canada during the next decade, with the development of the MacKenzie Delta region, and the continued increase in re-gasified Liquefied Natural Gas (LNG) imports over the planning horizon. Further enhancement in domestic supply is assumed with the development and delivery of the proven natural gas reserves on the North Slope of Alaska sometime in the next decade.

As demand for natural gas in Florida grows, it is anticipated that the Gulfstream pipeline will fill existing capacity, and along with the Florida Gas Transmission (FGT) pipeline system, expand beyond current capacity to meet the growing requirements of the State of Florida. When coupled with the new Cypress Pipeline from the Elba Island, Georgia LNG Re-gasification Terminal to FGT and the potential for a additional re-gasified LNG Terminal, there is expected to be sufficient natural gas supply for FPL's customers and the State of Florida's continued needs.

FPL's coal price forecast assumes an ample supply of domestic coal, and the availability of imported coal, to meet a gradual but steady increase in U.S. demand in the electric generation sector over the planning horizon. The coal price forecast for FPL's existing coal plants at SJRPP and Plant Scherer assume the continuation of the existing mine-mouth and transportation contracts until 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 add coke production facilities 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 gradual, but steady growth in the demand for petroleum coke in the U.S. electric utility industry.

In order to support the proposed coal requirements in the 2012 and 2013 time period, FPL is currently exploring the opportunities for a competitive coal and petroleum coke delivery system. This effort includes the opportunity for competing rail service from Central Appalachia to Florida, a waterborne receiving facility on both the east and west coasts of Florida, and competing rail service from these potential ports to the solid fuel site. A highly competitive coal and petroleum coke delivery network is essential to ensure both the lowest cost and most reliable fuel supply to FPL's customers.

Schedule 5
Fuel Requirements [1/]

Fuel Requirements	Units	Actual 2/ 2004	2005	Forecasted 2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
(1) Nuclear	Trillion BTU	252	235	264	254	269	265	264	268	265	264	268	265
(2) Coal	1,000 TON	3,319	3,098	3,563	3,751	4,086	4,044	3,757	4,041	5,194	7,665	8,528	8,770
(3) Residual (FO6)- Total	1,000 BBL	31,250	30,217	22,292	21,358	18,188	9,484	5,841	6,188	4,957	4,037	4,022	3,480
(4) Steam	1,000 BBL	31,250	30,217	22,292	21,358	18,188	9,484	5,841	6,188	4,957	4,037	4,022	3,480
(5) Distillate (FO2)- Total	1,000 BBL	406	344	37	20	53	10	15	13	0	6	0	0
(6) Steam	1,000 BBL	86	0	0	0	0	0	0	0	0	0	0	0
(7) CC	1,000 BBL	321	194	35	12	43	0	0	0	0	0	0	0
(8) CT	1,000 BBL	0	150	2	8	10	10	15	13	0	6	0	0
(9) Natural Gas -Total	1,000 MCF	311,057	345,851	390,582	417,682	452,403	537,775	602,318	626,362	625,398	610,206	608,704	636,225
(10) Steam	1,000 MCF	51,792	44,167	28,713	28,922	26,501	66,298	79,330	71,405	58,759	68,380	56,227	53,792
(11) CC	1,000 MCF	252,692	296,076	361,019	387,877	424,440	470,259	521,024	547,784	555,975	526,485	533,778	556,639
(12) CT	1,000 MCF	6,573	5,608	850	882	1,462	1,217	1,965	7,173	10,664	15,341	18,699	25,795

1/ Reflects fuel requirements for FPL only.
2/ Source: A Schedules.

Schedule 6.1
Energy Sources

	Energy Sources	Units	Actual 1/ 2004	Actual 1/ 2005	Forecasted 2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
(1)	Annual Energy Interchange 2/	GWH	10,258	10,221	10,938	11,103	11,286	11,268	9,844	8,556	8,545	8,539	8,400	8,085
(2)	Nuclear	GWH	23,013	21,406	24,025	23,198	24,537	24,111	24,042	24,467	24,192	24,043	24,467	24,121
(3)	Coal	GWH	6,315	5,765	6,710	7,052	7,627	7,610	7,117	7,603	11,208	18,167	20,743	21,174
(4)	Residual(FO6) -Total	GWH	19,709	19,069	14,628	14,016	11,907	6,340	3,921	4,153	3,333	2,717	2,703	2,341
(5)	Steam	GWH	19,709	19,069	14,628	14,016	11,907	6,340	3,921	4,153	3,333	2,717	2,703	2,341
(6)	Distillate(FO2) -Total	GWH	200	186	26	13	38	4	6	5	0	2	0	0
(7)	Steam	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(8)	CC	GWH	57	123	25	9	33	0	0	0	0	0	0	0
(9)	CT	GWH	143	63	1	4	5	4	6	5	0	2	0	0
(10)	Natural Gas -Total	GWH	40,970	47,114	52,913	57,082	61,810	72,458	81,700	85,553	85,784	82,889	83,160	86,847
(11)	Steam	GWH	4,918	4,253	2,784	2,803	2,563	6,510	7,793	7,024	5,778	6,726	5,524	5,284
(12)	CC	GWH	35,490	42,422	50,052	54,202	59,112	65,836	73,735	77,854	78,984	74,696	75,843	79,085
(13)	CT	GWH	562	439	77	77	135	111	172	676	1,023	1,466	1,793	2,478
(14)	Other 3/	GWH	7,625	7,541	5,494	5,968	5,998	5,781	5,136	4,334	4,613	4,520	4,528	4,599
	Net Energy For Load 4/	GWH	108,091	111,301	114,733	118,433	123,203	127,571	131,765	134,670	137,675	140,877	144,000	147,167

1/ Source: A Schedules
2/ The projected figures are based on estimated energy purchases from SJRPP and the Southern Companies.
3/ Represents a forecst of energy expected to be purchased from Qualifying Facilities, Independent Power Producers, net of Economy and other Power Sales.
4/ Net Energy For Load is also shown in Column 8 on Schedule 3.3.

Schedule 6.2
Energy Sources % by Fuel Type

	Energy Source	Units	Actual 1/ 2004	Actual 1/ 2005	Forecasted 2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
(1)	Annual Energy Interchange 2/	%	9.5	9.2	9.5	9.4	9.2	8.8	7.5	6.4	6.2	6.1	5.8	5.5
(2)	Nuclear	%	21.3	19.2	20.9	19.6	19.9	18.9	18.2	18.2	17.6	17.1	17.0	16.4
(3)	Coal	%	5.8	5.2	5.8	6.0	6.2	6.0	5.4	5.6	8.1	12.9	14.4	14.4
(4)	Residual (FO6) -Total	%	18.2	17.1	12.7	11.8	9.7	5.0	3.0	3.1	2.4	1.9	1.9	1.6
(5)	Steam	%	18.2	17.1	12.7	11.8	9.7	5.0	3.0	3.1	2.4	1.9	1.9	1.6
(6)	Distillate (FO2) -Total	%	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(7)	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
(8)	CC	%	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(9)	CT	%	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(10)	Natural Gas -Total	%	37.9	42.3	46.1	48.2	50.2	56.8	62.0	63.5	62.3	58.8	57.7	59.0
(11)	Steam	%	4.5	3.8	2.4	2.4	2.1	5.1	5.9	5.2	4.2	4.8	3.8	3.6
(12)	CC	%	32.8	38.1	43.6	45.8	48.0	51.6	56.0	57.8	57.4	53.0	52.7	53.7
(13)	CT	%	0.5	0.4	0.1	0.1	0.1	0.1	0.1	0.5	0.7	1.0	1.2	1.7
(14)	Other 3/	%	7.1	6.8	4.8	5.0	4.9	4.5	3.9	3.2	3.4	3.2	3.1	3.1
			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 1/ Capacity 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 Summer Peak Demand MW	Reserve Margin Before Maintenance 5/ MW	% of Peak	Scheduled Maintenance MW	Reserve Margin After Maintenance 6/ MW	% of Peak
2006	20,919	2,669	0	738	24,326	21,916	1,555	20,361	3,965	19.5	0	3,965	19.5
2007	22,139	2,257	0	738	25,134	22,543	1,821	20,722	4,412	21.3	0	4,412	21.3
2008	22,311	2,257	0	738	25,306	23,179	1,963	21,216	4,090	19.3	0	4,090	19.3
2009	23,530	2,152	0	687	26,369	23,782	2,068	21,714	4,655	21.4	0	4,655	21.4
2010	24,749	1,469	0	640	26,858	24,375	2,158	22,217	4,641	20.9	0	4,641	20.9
2011	25,069	1,469	0	595	27,133	24,915	2,250	22,665	4,468	19.7	0	4,468	19.7
2012	25,919	1,311	0	595	27,825	25,474	2,344	23,130	4,695	20.3	0	4,695	20.3
2013	26,769	1,311	0	595	28,675	26,079	2,442	23,637	5,038	21.3	0	5,038	21.3
2014	26,929	1,311	0	595	28,835	26,642	2,544	24,098	4,737	19.7	0	4,737	19.7
2015	27,642	1,311	0	595	29,548	27,263	2,579	24,684	4,864	19.7	0	4,864	19.7

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. The value shown for FPL's unit capability for the Summer of 2006 is an updated projection from the value used in FPL's 2005 analyses.

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 DSM MW shown represent cumulative load management capability plus incremental conservation from 1/2005-on for use with the 2005 load forecast. 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
2005/06	22,304	2,467	0	738	25,509	21,792	1,535	20,257	5,252	25.9	0	5,252	25.9
2006/07	22,373	2,540	0	738	25,651	22,294	1,647	20,647	5,004	24.2	0	5,004	24.2
2007/08	23,558	2,288	0	738	26,584	22,753	1,746	21,007	5,577	26.5	0	5,577	26.5
2008/09	23,739	1,962	0	738	26,439	23,245	1,850	21,395	5,044	23.6	0	5,044	23.6
2009/10	25,074	1,501	0	687	27,262	23,714	1,907	21,807	5,455	25.0	0	5,455	25.0
2010/11	26,409	1,500	0	595	28,504	24,155	1,967	22,188	6,316	28.5	0	6,316	28.5
2011/12	26,771	1,500	0	595	28,866	24,597	2,029	22,568	6,298	27.9	0	6,298	27.9
2012/13	27,626	1,320	0	595	29,541	25,061	2,094	22,967	6,574	28.6	0	6,574	28.6
2013/14	28,481	1,320	0	595	30,396	25,561	2,161	23,400	6,996	29.9	0	6,996	29.9
2014/15	28,662	1,320	0	595	30,577	26,244	2,227	24,017	6,560	27.3	0	6,560	27.3

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 DSM MW shown represent cumulative load management capability plus incremental conservation from 1/2005-on for use with the 2005 load forecast. 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 8
Planned And Prospective Generating Facility Additions And Changes

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
				Fuel		Fuel Transport		Const.	Comm.	Expected	Gen. Max.	Net Capability		
Plant Name	Unit No.	Location	Unit Type	Pri.	Alt.	Pri.	Alt.	Start Mo./Yr.	In-Service Mo./Yr.	Retirement Mo./Yr.	Nameplate KW	Winter MW	Summer MW	Status
ADDITIONS/ CHANGES														
2006														
Cape Canaveral	1	Brevard County	ST	FO6	NG	WA	PL	Unknown	Jun-06	Unknown	402,050	(5)	(5)	OT
Cape Canaveral	2	Brevard County	ST	FO6	NG	WA	PL	Unknown	Jun-06	Unknown	402,050	7	8	OT
Cutler	5	Miami Dade County	ST	NG	No	PL	No	Unknown	Jun-06	Unknown	74,500	3	3	OT
Cutler	6	Miami Dade County	ST	NG	No	PL	No	Unknown	Jun-06	Unknown	161,500	33	33	OT
Ft. Myers	2	Lee County	CC	NG	No	PL	No	Unknown	Jun-06	Unknown	1,775,390	8	—	OT
Ft. Myers	3A & B	Lee County	CT	NG	FO2	PL	PL	Unknown	Jun-06	Unknown	375,700	4	—	OT
Ft. Myers	1-12	Lee County	GT	FO2	No	PL	No	Unknown	Jun-06	Unknown	744,120	16	—	OT
Manatee	1	Manatee County	ST	FO6	NG	WA	PL	Unknown	Jun-06	Unknown	863,300	(6)	(6)	OT
Manatee	2	Manatee County	ST	FO6	NG	WA	PL	Unknown	Jun-06	Unknown	863,300	(7)	(7)	OT
Martin	1	Martin County	ST	FO6	NG	PL	PL	Unknown	Jun-06	Unknown	934,500	6	6	OT
Martin	3	Martin County	CC	NG	No	PL	No	Unknown	Jun-06	Unknown	612,000	24	22	OT
Martin	4	Martin County	CC	NG	No	PL	No	Unknown	Jun-06	Unknown	612,000	24	22	OT
Pt Everglades	1	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Jun-06	Unknown	247,775	—	(7)	OT
Pt Everglades	3	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Jun-06	Unknown	402,050	8	8	OT
Pt Everglades	4	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Jun-06	Unknown	402,050	12	12	OT
Putnam	1	Putnam County	CC	NG	FO2	PL	WA	Unknown	Jun-06	Unknown	290,004	4	4	OT
Riviera	3	City of Riviera Beach	ST	FO6	NG	WA	PL	Unknown	Jun-06	Unknown	310,420	14	14	OT
Sanford	4	Volusia County	CC	NG	No	PL	No	Unknown	Jun-06	Unknown	1,188,900	10	—	OT
Sanford	5	Volusia County	CC	NG	No	PL	No	Unknown	Jun-06	Unknown	1,188,900	10	—	OT
SJRPP	2	Duval County	BIT	BIT	Pet Coke	RR	WA	Unknown	Jun-06	Unknown	135,918	16	22	OT
Turkey Point	1	Miami Dade County	ST	FO6	NG	WA	PL	Unknown	Jun-06	Unknown	402,050	22	13	OT
									2006 Changes/Additions Total:			**205**	**142**	
2007														
Pt Everglades	3	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Jun-07	Unknown	402,050	8	8	OT
Manatee	1	Manatee County	ST	FO6	NG	WA	PL	Unknown	Jun-07	Unknown	863,300	15	15	OT
Manatee	2	Manatee County	ST	FO6	NG	WA	PL	Unknown	Jun-07	Unknown	863,300	16	16	OT
Martin	2	Martin County	ST	FO6	NG	PL	PL	Unknown	Jun-07	Unknown	934,500	7	19	OT
Scherer	4	Monroe, GA	BIT	BIT	No	RR	No	Unknown	Jun-07	Unknown	680,368	24	19	OT
Turkey Point CC	5	Miami Dade County	CC	NG	FO2	PL	PL	Jan-05	Jun-07	Unknown	1,223,000	—	1,144	U
									2007 Changes/Additions Total:			**70**	**1,221**	
2008														
Cape Canaveral	1	Brevard County	ST	FO6	NG	WA	PL	Unknown	Jun-08	Unknown	402,050	3	4	OT
Pt Everglades	1	City of Hollywood	ST	FO6	NG	WA	PL	Unknown	Jun-08	Unknown	247,775	1	8	OT
Unsited 1x0 Simple Cycle CT		Unknown	CT	NG	FO2	PL	PL	Jan-07	Jun-08	Unknown	Unknown	—	160	P
Turkey Point CC	5	Miami Dade County	CC	NG	FO2	PL	PL	Jan-05	Jun-07	Unknown	1,223,000	1,181	—	U
									2008 Changes/Additions Total:			**1,188**	**172**	
2009														
Unsited 1x0 Simple Cycle CT		Unknown	CT	NG	FO2	PL	PL	Jan-07	Jun-08	Unknown	Unknown	181	—	P
West County Combined Cycle	1	Palm Beach County	CC	NG	FO2	PL	PL	Jan-07	Jun-09	Unknown	Unknown	—	1,219	P
									2009 Changes/Additions Total:			**181**	**1,219**	

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: Changes shown include different ratings than shown in Schedule 1 due solely to ambient temperature consisten with those in FPL 's peak load forecast to maintain consistency in Reserve Margin calculation.

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)
				Fuel		Fuel Transport						Net Capability		
Plant Name	Unit No.	Location	Unit Type	Pri.	Alt.	Pri.	Alt.	Const. Start Mo./Yr.	Comm. In-Service Mo./Yr.	Expected Retirement Mo./Yr.	Gen. Max. Nameplate KW	Winter MW	Summer MW	Status
ADDITIONS/ CHANGES														
2010														
West County Combined Cycle	1	Palm Beach County	CC	NG	FO2	PL	PL	Jan-07	Jun-09	Unknown	Unknown	1,335	—	P
West County Combined Cycle	2	Palm Beach County	CC	NG	FO2	PL	PL	Jan-08	Jun-10	Unknown	Unknown	—	1,219	P
									2010 Changes/Additions Total:			**1,335**	**1,219**	
2011														
West County Combined Cycle	2	Palm Beach County	CC	NG	FO2	PL	PL	Jan-08	Jun-10	Unknown	Unknown	1,335	—	P
Unsited 2x0 Simple Cycle CT		Unknown	CT	NG	FO2	PL	PL	Jan-10	Jun-11	Unknown	Unknown	—	320	P
									2011 Changes/Additions Total:			**1,335**	**320**	
2012														
Unsited 2x0 Simple Cycle CT		Unknown	CT	NG	FO2	PL	PL	Jan-10	Jun-11	Unknown	Unknown	362	—	P
Supercritical Pulverized Coal	1	TBA *	BIT	BIT	No	RR	No	Jan-08	Jun-12	Unknown	Unknown	—	850	P
									2012 Changes/Additions Total:			**362**	**850**	
2013														
Supercritical Pulverized Coal	1	TBA *	BIT	BIT	No	RR	No	Jan-08	Jun-12	Unknown	Unknown	855	—	P
Supercritical Pulverized Coal	2	TBA *	BIT	BIT	No	RR	No	Jan-08	Jun-13	Unknown	Unknown	—	850	P
									2013 Changes/Additions Total:			**855**	**850**	
2014														
Supercritical Pulverized Coal	2	TBA *	BIT	BIT	No	RR	No	Jan-08	Jun-13	Unknown	Unknown	855	—	P
Unsited 1x0 Simple Cycle CT		Unknown	CT	NG	FO2	PL	PL	Jan-13	Jun-14	Unknown	Unknown	—	160	P
									2014 Changes/Additions Total:			**855**	**160**	
2015														
Unsited 1x0 Simple Cycle CT		Unknown	CT	NG	FO2	PL	PL	Jan-13	Jun-14	Unknown	Unknown	181	—	P
Unsited 1x0 Simple Cycle CT		Unknown	CT	NG	FO2	PL	PL	Jan-14	Jun-15	Unknown	Unknown	—	160	P
Unsited 2x1 Combined Cycle		Unknown	CC	NG	FO2	PL	PL	Jan-13	Jun-15	Unknown	Unknown	—	553	P
									2015 Changes/Additions Total:			**181**	**713**	

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: Changes shown include different ratings than shown in Schedule 1 due solely to ambient temperature consisten with those in FPL 's peak load forecast to maintain consistency in Reserve Margin calculation.

* FPL is currently in the process of selecting a site(s) for these advanced technology coal units. FPL expects to announce the selected site(s) by June 2006.

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Turkey Point Combined Cycle Unit # 5

(2) **Capacity**
a. Summer 1,144 MW
b. Winter 1,181 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_x Combustors, SCR 0.0015% S. Distillate, & Water Injection on Distillate

(7) **Cooling Method:** Cooling Tower

(8) **Total Site Area:** 11,000 Acres

(9) **Construction Status:** U Under Construction, less than or equal to 50% complete

(10) **Certification Status:** Certified

(11) **Status with Federal Agencies:** Certified

(12) **Projected Unit Performance Data:**

Planned Outage Factor (POF):	2%	
Forced Outage Factor (FOF):	1%	
Equivalent Availability Factor (EAF):	97%	(Base & Duct Firing Operation)
Resulting Capacity Factor (%):	Approx. 97%	(First Base OperationYear)
Average Net Operating Heat Rate (ANOHR): Base Operation 75F,100%	6,835 Btu/kWh	(Base Operation)

(13) **Projected Unit Financial Data *,****

Book Life (Years):	25 years
Total Installed Cost (2007 $/kW):	507
Direct Construction Cost ($/kW):	
AFUDC Amount ($/kW):	
Escalation ($/kW):	
Fixed O&M ($/kW -Yr.): (2007 $kW-Yr)	10.06
Variable O&M ($/MWH): (2007 $/MWH)	0.13
K Factor:	1.5699

* $/kW values are based on Summer capacity.
** Fixed O&M cost includes capital replacement, but not firm gas transportation costs.

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 Simple Cycle Combustion Turbine

(2) **Capacity**
a. Summer 160 MW
b. Winter 181 MW

(3) **Technology Type:** Combustion Turbine

(4) **Anticipated Construction Timing**
a. Field construction start-date: 2007
b. Commercial In-service date: 2008

(5) **Fuel**
a. Primary Fuel Natural Gas
b. Alternate Fuel Distillate

(6) **Air Pollution and Control Strategy:** Dry Low No_x Burners, Natural Gas 0.0015% S. Distillate and Water Injection on Distillate

(7) **Cooling Method:** Air Coolers

(8) **Total Site Area:** 392 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):	2.0%
Forced Outage Factor (FOF):	1.0%
Equivalent Availability Factor (EAF):	97%
Resulting Capacity Factor (%):	Approx. 10% (First Year Operation)
Average Net Operating Heat Rate (ANOHR):	10,400 Btu/kWh
Base Operation 75F,100%	

(13) **Projected Unit Financial Data *,****

Book Life (Years):	25 years
Total Installed Cost (2008 $/kW):	522
Direct Construction Cost ($/kW):	
AFUDC Amount ($/kW):	
Escalation ($/kW):	
Fixed O&M ($/kW -Yr.): (2008 $kW-Yr)	8.72
Variable O&M ($/MWH): (2008 $/MWH)	0.81
K Factor:	1.8084

* $/kW values are based on Summer capacity.
** Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes escalation and AFUDC only.
Transmission interconnection and transmission integration costs are not included.

Schedule 9

Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** West County Energy Center Combined Cycle Unit # 1

(2) **Capacity**
- a. Summer 1,219 MW
- b. Winter 1,335 MW

(3) **Technology Type:** Combined Cycle

(4) **Anticipated Construction Timing**
- a. Field construction start-date: 2007
- b. Commercial In-service date: 2009

(5) **Fuel**
- a. Primary Fuel: Natural Gas
- b. Alternate Fuel: Distillate

(6) **Air Pollution and Control Strategy:** Natural Gas, Dry Low No_x Combustors, SCR 0.0015% S. Distillate, & Water Injection on Distillate

(7) **Cooling Method:** Cooling Tower

(8) **Total Site Area:** 220 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):	2.1%	
Forced Outage Factor (FOF):	1.1%	
Equivalent Availability Factor (EAF):	96.8%	(Base & Duct Firing Operation)
Resulting Capacity Factor (%):	Approx. 97%	(First Year Base Operation)
Average Net Operating Heat Rate (ANOHR): Base Operation 75F,100%	6,582 Btu/kWh	(Base Operation)

(13) **Projected Unit Financial Data *,****

Book Life (Years):	25	years
Total Installed Cost (2009 $/kW):	565	
Direct Construction Cost ($/kW):		
AFUDC Amount ($/kW):		
Escalation ($/kW):		
Fixed O&M ($/kW -Yr.): (2009 $kW-Yr)	11.65	
Variable O&M ($/MWH): (2009 $/MWH)	0.138	
K Factor:	1.5834	

* $/kW values are based on Summer capacity.

** Fixed O&M cost includes capital replacement, but not firm gas transportation costs.

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:** West County Energy Center Combined Cycle Unit # 2

(2) **Capacity ***
a. Summer 1,219 MW
b. Winter 1,335 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_x Combustors, SCR 0.0015% S. Distillate, & Water Injection on Distillate

(7) **Cooling Method:** Cooling Tower

(8) **Total Site Area:** 220 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):	2.1%	
Forced Outage Factor (FOF):	1.1%	
Equivalent Availability Factor (EAF):	96.8%	(Base & Duct Firing Operation)
Resulting Capacity Factor (%):	Approx. 94%	(First Year Base Operation)
Average Net Operating Heat Rate (ANOHR): Base Operation 75F,100%	6,582 Btu/kWh	(Base Operation)

(13) **Projected Unit Financial Data **,*****

Book Life (Years):	25 years	
Total Installed Cost (2010 $/kW):	519	
Direct Construction Cost ($/kW):		
AFUDC Amount ($/kW):		
Escalation ($/kW):		
Fixed O&M ($/kW -Yr.):	(2010 $kW-Yr)	10.11
Variable O&M ($/MWH):	(2010 $/MWH)	0.138
K Factor:		1.5873

* $/kW values are based on Summer capacity.
** Fixed O&M cost includes capital replacement, but not firm gas transportation costs.

NOTE: Total installed cost includes gas expansion, transmission interconnection and integration, escalation, and AFUDC.
(Note: Costs shown are based on the constuction of Unit 1 first.)

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Unsited 2x0 Simple Cycle Combustion Turbine

(2) **Capacity**
a. Summer 320 MW
b. Winter 362 MW

(3) **Technology Type:** Combustion Turbine

(4) **Anticipated Construction Timing**
a. Field construction start-date: 2010
b. Commercial In-service date: 2011

(5) **Fuel**
a. Primary Fuel Natural Gas
b. Alternate Fuel Distillate

(6) **Air Pollution and Control Strategy:** Dry Low No_x Burners, Natural Gas 0.0015% S. Distillate and Water Injection on Distillate

(7) **Cooling Method:** Air Coolers

(8) **Total Site Area:** Uknown 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):	2.0%
Forced Outage Factor (FOF):	1.0%
Equivalent Availability Factor (EAF):	97%
Resulting Capacity Factor (%):	Approx. 10% (First Year Operation)
Average Net Operating Heat Rate (ANOHR):	10,400 Btu/kWh
Base Operation 75F,100%	

(13) **Projected Unit Financial Data *,****

Book Life (Years):	25 years
Total Installed Cost (2011 $/kW):	562
Direct Construction Cost ($/kW):	
AFUDC Amount ($/kW):	
Escalation ($/kW):	
Fixed O&M ($/kW -Yr.): (2011 $kW-Yr)	9.35
Variable O&M ($/MWH): (2011 $/MWH)	0.97
K Factor:	1.6397

* $/kW values are based on Summer capacity.
** Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes escalation and AFUDC only.
Gas expansion,transmission interconnection, transmission integration costs are not included.

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Supercritical Pulverized Coal Unit # 1

(2) **Capacity**
a. Summer 850 MW
b. Winter 855 MW

(3) **Technology Type:** Supercritical Steam Generator

(4) **Anticipated Construction Timing**
a. Field construction start-date: 2008
b. Commercial In-service date: 2012

(5) **Fuel**
a. Primary Fuel Coal
b. Alternate Fuel N/A

(6) **Air Pollution and Control Strategy:** Low No_x Burners, Over-fired Air, SCR, Baghouse Wet Flue Gas Desulfurization, Wet Electric Static Precipatator

(7) **Cooling Method:** Cooling Tower

(8) **Total Site Area:** 3,000 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):	4.0%
Forced Outage Factor (FOF):	4.0%
Equivalent Availability Factor (EAF):	92%
Resulting Capacity Factor (%):	Approx. 90% (First Year Operation)
Average Net Operating Heat Rate (ANOHR): Base Operation 75F,100%	8,600 Btu/kWh

(13) **Projected Unit Financial Data *,****

Book Life (Years):	40 years
Total Installed Cost (2012 $/kW):	2,355
Direct Construction Cost ($/kW):	
AFUDC Amount ($/kW):	
Escalation ($/kW):	
Fixed O&M ($/kW -Yr.): (2012 $kW-Yr)	38.07
Variable O&M ($/MWH): (2012$/MWH)	1.384
K Factor:	1.6616

* $/kW values are based on Summer capacity.
** Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes escalation and AFUDC only.
Transmission interconnection and transmission integration costs are not included.

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Supercritical Pulverized Coal Unit # 2

(2) **Capacity**
a. Summer 850 MW
b. Winter 855 MW

(3) **Technology Type:** Supercritical Steam Generator

(4) **Anticipated Construction Timing**
a. Field construction start-date: 2008
b. Commercial In-service date: 2013

(5) **Fuel**
a. Primary Fuel Coal
b. Alternate Fuel N/A

(6) **Air Pollution and Control Strategy:** Low No_x Burners, Over-fired Air, SCR, Baghouse Wet Flue Gas Desulfurization, Wet Electric Static Precipatator

(7) **Cooling Method:** Cooling Tower

(8) **Total Site Area:** 3,000 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):	4.0%
Forced Outage Factor (FOF):	4.0%
Equivalent Availability Factor (EAF):	92%
Resulting Capacity Factor (%):	Approx. 90% (First Year Operation)
Average Net Operating Heat Rate (ANOHR):	8,600 Btu/kWh
Base Operation 75F,100%	

(13) **Projected Unit Financial Data *,****

Book Life (Years):	40 years
Total Installed Cost (2013 $/kW):	1,732
Direct Construction Cost ($/kW):	
AFUDC Amount ($/kW):	
Escalation ($/kW):	
Fixed O&M ($/kW -Yr.): (2013 $kW-Yr)	28.60
Variable O&M ($/MWH): (2013 $/MWH)	1.43
K Factor:	1.6616

* $/kW values are based on Summer capacity.
** Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes escalation and AFUDC only.
Transmission interconnection and transmission integration costs are not included.

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Unsited 1x0 Simple Cycle Combustion Turbine

(2) **Capacity**
a. Summer 160 MW
b. Winter 181 MW

(3) **Technology Type:** Combustion Turbine

(4) **Anticipated Construction Timing**
a. Field construction start-date: 2013
b. Commercial In-service date: 2014

(5) **Fuel**
a. Primary Fuel Natural Gas
b. Alternate Fuel Distillate

(6) **Air Pollution and Control Strategy:** Dry Low No_x Burners, Natural Gas 0.0015% S. Distillate and Water Injection on Distillate

(7) **Cooling Method:** Air Coolers

(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):	2.0%
Forced Outage Factor (FOF):	1.0%
Equivalent Availability Factor (EAF):	97%
Resulting Capacity Factor (%):	Approx. 15% (First Year Operation)
Average Net Operating Heat Rate (ANOHR):	10,400 Btu/kWh
Base Operation 75F,100%	

(13) **Projected Unit Financial Data *,****

Book Life (Years):	25 years
Total Installed Cost (2014 $/kW):	689
Direct Construction Cost ($/kW):	
AFUDC Amount ($/kW):	
Escalation ($/kW):	
Fixed O&M ($/kW -Yr.): (2014 $kW-Yr)	10.11
Variable O&M ($/MWH): (2014 $/MWH)	1.05
K Factor:	1.7323

* $/kW values are based on Summer capacity.
** Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes escalation and AFUDC only.
Gas expansion,transmission interconnection, transmission integration costs are not included.

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Unsited 1x0 Simple Cycle Combustion Turbine

(2) **Capacity**
a. Summer 160 MW
b. Winter 181 MW

(3) **Technology Type:** Combustion Turbine

(4) **Anticipated Construction Timing**
a. Field construction start-date: 2014
b. Commercial In-service date: 2015

(5) **Fuel**
a. Primary Fuel Natural Gas
b. Alternate Fuel Distillate

(6) **Air Pollution and Control Strategy:** Dry Low No_x Burners, Natural Gas 0.0015% S. Distillate and Water Injection on Distillate

(7) **Cooling Method:** Air Coolers

(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):	2.0%
Forced Outage Factor (FOF):	1.0%
Equivalent Availability Factor (EAF):	97%
Resulting Capacity Factor (%):	Approx. 15% (First Year Operation)
Average Net Operating Heat Rate (ANOHR): Base Operation 75F,100%	10,400 Btu/kWh

(13) **Projected Unit Financial Data *,****

Book Life (Years):	25 years
Total Installed Cost (2015 $/kW):	710
Direct Construction Cost ($/kW):	
AFUDC Amount ($/kW):	
Escalation ($/kW):	
Fixed O&M ($/kW -Yr.): (2015 $kW-Yr)	10.37
Variable O&M ($/MWH): (2015 $/MWH)	1.10
K Factor:	1.7252

* $/kW values are based on Summer capacity.
** Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes escalation and AFUDC only.
Gas expansion,transmission interconnection, transmission integration costs are not included.

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Unsited 2x1Combined Cycle

(2) **Capacity**
a. Summer 553 MW
b. Winter 610 MW

(3) **Technology Type:** Combined Cycle

(4) **Anticipated Construction Timing**
a. Field construction start-date: 2013
b. Commercial In-service date: 2015

(5) **Fuel**
a. Primary Fuel Natural Gas
b. Alternate Fuel Distillate

(6) **Air Pollution and Control Strategy:** Dry Low No_x Burners, SCR, Natural Gas, 0.0015% S. Distillate and Water Injection on Distillate

(7) **Cooling Method:** Cooling Tower

(8) **Total Site Area:** 11,300 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):	2.0%
Forced Outage Factor (FOF):	1.0%
Equivalent Availability Factor (EAF):	97%
Resulting Capacity Factor (%):	Approx. 70% (First Year Operation)
Average Net Operating Heat Rate (ANOHR):	6,835 Btu/kWh
Base Operation 75F,100%	

(13) **Projected Unit Financial Data *,****

Book Life (Years):	25 years
Total Installed Cost (2015 $/kW):	1,218
Direct Construction Cost ($/kW):	
AFUDC Amount ($/kW):	
Escalation ($/kW):	
Fixed O&M ($/kW -Yr.): (2015 $kW-Yr)	11.71
Variable O&M ($/MWH): (2015 $/MWH)	0.17
K Factor:	1.5900

* $/kW values are based on Summer capacity.
** Fixed O&M cost includes capital replacement.

NOTE: Total installed cost includes escalation and AFUDC only.
Gas expansion,transmission interconnection, transmission integration costs are not included.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

Turkey Point Combined Cycle Unit #5

The new Turkey Point CC unit that is scheduled to come in-service in 2007 does not require any "new" transmission lines.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

Unsited Combustion Turbine in 2008

No projection of a new transmission line(s) can be made until a site is selected for this unit.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

West County Energy Center Unit #1

The proposed new West County Energy Center Unit #1 that is projected to come in-service in 2009 does not require any "new" transmission lines.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

West County Energy Center Unit #2

The proposed new West County Energy Center Unit #2 that is projected to come in-service in 2010 does not require any "new" transmission lines.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

Two Unsited Combustion Turbine Units in 2011

No projection of a new transmission line(s) can be made until a site is selected for these units.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

Supercritical Pulverized Coal Unit #1 in 2012

No projection of a new transmission line(s) can be made until a site is selected for this unit.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

Supercritical Pulverized Coal Unit #2 in 2013

No projection of a new transmission line(s) can be made until a site is selected for this unit.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

Unsited Combustion Turbine in 2014

No projection of a new transmission line(s) can be made until a site is selected for this unit.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

Unsited Combustion Turbine in 2015

No projection of a new transmission line(s) can be made until a site is selected for this unit.

Schedule 10
Status Report and Specifications of Proposed Transmission Lines

Unsited Combined Cycle Unit in 2015

No projection of a new transmission line(s) can be made until a site is selected for this unit.

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CHAPTER IV

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. In 2004 FPL Group earned a first place ranking among U.S. power companies and second globally in a report from the World Wildlife Fund for voluntary commitments to limit CO_2 emissions. This commitment was made to support initiatives to better manage utility impacts on climate change through use of greenhouse gas emission reductions and improvements in energy efficiency. The report stated that this was "primarily due to the company's leadership in developing wind energy and their commitment to dramatically improve their efficiency". As a further demonstration of FPL's efforts in sustainability the EPA and the Department of Energy awarded FPL for its Sunshine Energy Program which allows customers to choose environmentally friendly electricity produced from biomass, wind and solar sources. FPL was also recently awarded its fourth number one rating of major electric utilities surveyed in an environmental assessment conducted by Innovest, an independent advisory group. In recognition of its success in executing a strategy to become a clean energy provider harnessing primarily clean and renewable fuels while also boosting shareholder value, FPL Group, Inc. was named in June 2003 as the winner of the Edison Award, the electric power industry's highest honor by the Edison Electric Institute.

FPL was awarded Edison Electric Institute's National Land Management Award for our stewardship of 25,000 acres surrounding our Turkey Point Plant. 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. FPL 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. Finally, 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 2005 environmental outreach activities are noted in Table IV.E.1.

Table IV.E.1: 2005 FPL Environmental Outreach Activities

Activity	# of Participants
Visitors to Energy Encounter	20,000
Visitors to Manatee Park	150,000
Number of "visits" to FPL's Environmental Website	839,000
Number of pieces of Environmental literature distributed	>120,000

(All numbers are approximations.)

IV.F Preferred and Potential Sites

Based upon its projection of future resource needs, FPL has identified two preferred and eight potential sites for future generation additions. Preferred sites are those locations where FPL has conducted significant reviews and taken action to site generation. Potential sites are those sites that have attributes that support the siting of generation and are under consideration as a location for future generation. Some of these sites are currently in use as existing generation sites and some are not. The identification of a "Potential" site does not indicate that FPL has made a definitive decision to pursue generation (or generation expansion in the case of an existing generation site) at that location, nor does this designation indicate that the size or technology of generator has been determined. These preferred and potential sites are discussed in separate sections below.

IV.F.1 Preferred Sites

FPL identifies two preferred sites in this Site Plan: the existing Turkey Point plant site, and the West County Energy Center adjacent to the existing Corbett FPL substation. The Turkey Point site is the location for a capacity addition that FPL is committed to make in mid - 2007. The West County Energy Center site is the projected location for capacity additions FPL is proposing to make in 2009 and 2010.

The capacity addition at the Turkey Point site has been approved by the FPSC. FPL has petitioned the FPSC for approval of the West County Energy Center additions. A decision is expected by the FPSC later this year.

The two preferred sites are discussed below.

Preferred Site # 1: Turkey Point Plant, Miami-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. Public 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 two nuclear units and two conventional boiler, fossil units, the cooling canals, an FPL-maintained natural wildlife area, and wetlands that have been set aside as the Everglades Mitigation Bank (EMB).

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. Units #3 and #4 are nuclear generating units with approximate generating capacity of 700 MW each. Unit #3 was completed in 1972 and Unit #4 in 1973. 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.

The Site for the new Turkey Point Unit #5, a "4-on-1" combined cycle electrical generating unit, is within the existing FPL Turkey Point facility property, located on Biscayne Bay in Miami-Dade County, Florida. The Site is adjacent to the existing fossil Units #1 and #2, and includes the existing parking lot and storage areas immediately northwest of Units #1 and #2 as well as mangrove wetlands north of the facility.

a. and b. U.S. Geological Survey (USGS) Map and Proposed Facilities Layout

A USGS map of the Turkey Point 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 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 approximately four feet deep. The remaining developed area of the site is where the two fossil steam generating units and 5 diesel generators are located. South of and adjacent to the fossil plant are the two nuclear generating units. Further to the south,

wetlands have been set aside as part of the Everglades Mitigation Bank (EMB) in an effort to restore these areas to historical plant communities and hydrological function.

e. General Environment Features On and In the Site Vicinity

1. Natural Environment

The majority of the Site was undeveloped dwarf red mangrove swamp, tidally inundated with waters from Biscayne Bay. Along with the dominant red mangroves, buttonwood is a common canopy component, along with occasional white mangrove. Only a few individual black mangroves were observed within the Site. Biscayne Bay is a shallow, subtropical bay supporting seagrasses, sponges, coral reefs, and a variety of marine life.

2. Listed Species

The construction and operation of Unit #5 is not expected to adversely affect any rare, endangered, or threatened species. Listed species known to occur in the nearby Biscayne National Park that could potentially utilize the Site include the peregrine falcon (Falco peregrinus), wood stork (Mycteria americana), American crocodile (Crocodylus acutus), mangrove rivulus (Rivulus marmoratus), roseate spoonbill (Ajaja ajaja), limpkin (Aramus guarauna), little blue heron (Egretta caerulea), snowy egret (Egretta thula), American oystercatcher (Haematopus palliates), least tern (Sterna antillarum), brown pelican (Pelicanus occidentalis), the white ibis (Eudocimus albus), and bald eagle (Haliaeetus leucocephalus). No bald eagle nests are known to exist in the vicinity of the Site. The federally listed, endangered American Crocodile thrives at the Turkey Point site, primarily in and around the southern end of the cooling canals which lie south of the proposed project area. The entire site is considered crocodile habitat due to the mobility of the species and use of the site for foraging, traversing and basking. FPL manages a program for the conservation and enhancement of the American crocodile. A project-specific crocodile management plan has been developed for construction of Unit #5.

3. Natural Resources of Regional Significance Status

Significant features in the vicinity on the Site include Biscayne National Park, the Miami-Dade County Homestead Bayfront Park, and the Everglades National Park. The portion of Biscayne Bay adjacent to the Site is included within the Biscayne National Park, comprised of several miles of shoreline north of the Turkey Point facility extending offshore approximately 12 nautical miles. Biscayne National Park contains 180,000 acres, approximately 95% of which is open water interspersed with over 40 keys. The Biscayne National Park headquarters is located approximately 2 miles north of the Turkey Point plant, adjacent to the Miami-Dade County Homestead Bayfront Park, which contains a marina and day use recreational facilities.

4. Other Significant Features

FPL is not aware of any other significant features of the site.

f. Design Features and Mitigation Options

Additional generating capacity is being added to the site for operation beginning in 2007 to meet projected FPL system capacity needs. The new generating unit will consist of four new CT's and four new HRSG's and a new steam turbine that will comprise Turkey Point Unit #5. Natural gas delivered via the existing pipeline is the primary fuel type for this unit (with ultra low sulfur light oil serving as a backup fuel). Natural gas-fired facilities are among the cleanest, most efficient technologies currently available.

Mitigation for unavoidable wetland impacts related to construction of Unit #5 includes: on-site hydrologic improvements to enhance existing wetlands, restoration and preservation of areas overgrown with exotic plant species, creation of an on-site lagoon, transfer of some mangrove dominated lands to South Florida Water Management District and Biscayne National Park, and also the purchase of mitigation credits from the EMB, which is in the same drainage basin. The capture and reuse of plant process water and rainwater, plus the use of a cooling tower will minimize thermal discharges to the cooling canals. The facility already encompasses several preserved areas where wildlife is abundant.

g. **Local Government future Land Use Designations**

Local government future land use plan designates most of the site as IU-3 "Industrial, Unlimited Manufacturing District." There are also areas designated GU – "Interim District." Designations for the surrounding area are primarily GU – "Interim District."

h. **Site Selection Criteria Process**

For the past several years, a number of FPL's existing power plant sites have been considered as potentially suitable sites for new or repowered generation. The Turkey Point plant has been selected as a preferred site due to consideration of various factors including system load, an imbalance in the South Florida region between load and generating capacity, and economics. Environmental issues are an important factor at this site. However, the other deciding factors outweigh them. FPL will minimize environmental impacts and mitigate where impacts are unavoidable.

i. **Water Resources**

Unique to Turkey Point Plant is the self-contained cooling canal system that supplies water to condense steam used by the plant's turbine generators. The canal system consists of 36 interconnected canals each five miles long, 200 feet wide and approximately four feet deep. The system performs the same function as a giant radiator. The water is circulated through the 153-mile maze of canals in a two-day journey, ending at the plant's intake pumps. During the slow journey down the canals, the water cools as much as 15 degrees

j. **Geological Features of Site and Adjacent Areas**

FPL's Turkey Point site is underlain by approximately 13,000 feet of sedimentary rock strata. The strata that extends to approximately 500 feet forms the Biscayne aquifer. 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 of marine 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 Tamiami formation is named for deposits

composed principally of white cream-colored calcareous sandstone, sandy limestone, and beds and pockets of quartz sand. In the Turkey Point area, the Key Largo limestone is present.

The Floridan Aquifer, located approximately 1,100 feet below the land surface, is a confined aquifer. The Floridan Aquifer system is composed entirely of carbonate rocks, except for minor evaporates. The water in the carbonate rock aquifer is more highly mineralized.

k. Projected Water Quantities for Various

The additional quantity of water for industrial processing is estimated to be 150 gallons per minute (gpm) for plant process and service water. Water for this type of use would be supplied by an existing county water system. The current plant water treatment system, which provides treated water for use in Units #1 and #2 boilers, would be expanded. Cooling water for new Unit #5 will be processed through a cooling tower. FPL will use approximately 14 million gallons per day (mgd) of water from the Floridan Aquifer as the source of makeup water used by the cooling tower.

l. Water Supply Sources and Type

This additional capacity at the site will utilize the cooling tower for the dissipation of heat from the cooling water. The existing water treatment system at the plant, which provides treated water for use in the Unit #1 and #2 boilers will be expanded to provide treated water for new Unit. The Floridan Aquifer will supply the makeup cooling water.

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. FPL anticipates this site will be designed and classified as a wastewater zero discharge site following the completion of the expansion project.

n. **Water Discharges and Pollution Control**

Heated water discharges are dissipated using the existing once through cooling water system and the cooling canal system. Unit #5 cooling water will be processed through a cooling tower which will dissipate the heat prior to discharge to the cooling canal system. 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 various sampling and testing activities, which provide indication 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. There is currently a pipeline that supplies natural gas to the facility. The facility also has oil capabilities through on-site storage tanks and accessibility to barge deliveries. The additional capacity will utilize the existing pipeline with the addition of compression system(s). An above ground storage tank for the ultra-low sulfur light oil backup fuel will be added. The backup fuel for Unit #5 will be delivered to the site by truck.

p. **Air Emissions and Control Systems**

The use of clean fuels and combustion controls will minimize air emissions from this unit and ensure compliance with applicable emission limiting standards. Using clean fuels minimizes emissions of sulfur dioxide (SO_2), particulate matter and other fuel-bound contaminates. Combustion controls similarly minimize the formation of nitrogen oxides (NO_x), and the combustor design will limit the formation of carbon monoxide and volatile organic compounds. When firing natural gas, NO_x emissions will be controlled using dry-low NO_x combustion technology and selective catalytic reduction (SCR). Water injection and SCR will be used to reduce NO_x emissions during operations when using the ultra-low sulfur light oil as backup fuel. These

design alternatives constitute the Best Available Control Technology for air emissions, and minimize such emissions while balancing economic, environmental, and energy impacts. Taken together, the design of Turkey Point Unit #5 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**

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. 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 Turkey Point Plant Unit #5 with the Florida Department of Environmental Protection (FDEP) on November 14, 2003, and received Site Certification by the Governor and Cabinet in February 2005. The U.S. Army Corps of Engineers issued a federal Dredge and Fill permit in February 2005. FDEP issued the Prevention of Significant Deterioration (PSD) air permit in February 2005. FPL acquired all permits and authorizations needed, and commenced construction in spring 2005 with an anticipated, in-service date of mid 2007.

Preferred Site # 2: West County Energy Center, Palm Beach County

FPL has identified the property adjacent to the existing Corbett Substation property in unincorporated western Palm Beach County as a preferred site for the addition of new generating capacity. The preferred site was selected for the addition of a new greenfield combined cycle natural gas power plant project with ultra-low sulfur oil as a backup fuel. The existing site is an area accessible to both natural gas and electrical transmission through existing structures or through additional lateral connections. The proposed facility would use clean burning natural gas as the primary fuel and state-of-the-art combustion controls.

a. and b. U.S. Geological Survey (USGS) Map and Proposed Facilities Layout

A USGS map of the West County Energy Center 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

The land on the site is currently inactive but was previously dedicated to industrial and agricultural use. The site has been excavated, back-filled, and totally re-graded to an elevation approximately 10 ft. above surrounding land surface. No structures are present on the site and vegetation is virtually non-existent.

e. General Environment Features On and In the Site Vicinity

1. Natural Environment

The plant site has been significantly altered by the construction and operation of a limestone mine where vegetation had been cleared and removed. The surrounding land use is predominantly sugar cane agriculture and limestone mining. FPL's existing Corbett substation is located north of the site. The Arthur R. Marshall Loxahatchee National Wildlife Refuge is located to the south of the proposed site.

2. Listed Species

Construction and operation of new units at the site is not expected to affect any rare, endangered, or threatened species. Wildlife utilization of the property is minimal as a result of the mining activities. Common wading birds can be observed on areas adjacent to and occasionally within the property. The property is adjacent to areas that have been identified as potential habitat for wood stork.

3. **Natural Resources of Regional Significance Status**

The construction and operation of a gas-fired combined cycle generating facility at the proposed location is not expected to have any adverse impacts on parks, recreation areas, or environmentally sensitive lands including the Arthur R. Marshall Loxahatchee National Wildlife Refuge which lies south of the proposed location. It is not anticipated that construction will result in wetland impacts under federal, state or local agency permitting criteria.

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 construct two new 1,200 MW (approximate) units each consisting of three new CT's and three new HRSG's and a new steam turbine. These units are scheduled to be in-service in mid-2009 and 2010. Natural gas delivered via pipeline is the primary fuel type for this unit with ultra-low sulfur light oil serving as a backup fuel. Natural gas-fired facilities are available nearby and are among the cleanest, most efficient technologies currently available.

g. Local Government Future Land Use Designations

Local government future land use designation for the project site is "Rural Residential" according to the Palm Beach County Future Land Use Map. Designations for the area under the Palm Beach County Unified Land Development Code classified the project site and surrounding area as Special Agricultural District. The site has been granted conditional use for electrical power facilities under a General Industrial zoning district.

h. **Site Selection Criteria Process**

The site 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 this site does not exhibit significant environmental sensitivity or other environmental issues. This site is considered permittable.

i. **Water Resources**

The existing adjacent surface water canals and available ground water resources are potential sources for potable and service water for the proposed units. Adjacent to the site, hydro storage water conservation areas may be created through development of the site as a limestone mine. Use of water from the upper and/or lower Floridan Aquifer is also considered a feasible alternative as potential backup sources of water for operation of the proposed units.

j. **Geological Features of Site and Adjacent Areas**

The 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, clay, and phosphate grains. The deepest formation in Palm Beach County on which significant published data are available is the Eocene Age Avon Park. Limited information is available from wells penetrating the underlying Oldsmar formation. The published information on the sediments comprising the formations below the Avon Park Limestone is based on projections from deep wells in Okeechobee, St. Lucie, and Palm Beach Counties.

k. **Projected Water Quantities for Various Uses**

The estimated quantity of water required for industrial processing for both units is approximately 450 gallons per minute (gpm) for uses such as process water and service water. Approximately 20 million gallons per day (mgd) in total of cooling

water for the two proposed units would be cycled through the addition of cooling towers. Water quantities needed for other uses such as potable water are estimated to be approximately 35,000 gallons per day (gpd).

l. **Water Supply Sources by Type**

The proposed units will use available surface or ground water as the source of cooling water for the cooling towers. The cooling towers will also act as a heat sink for the facility process water. Such needs for cooling and process water will comply with the existing South Florida Water Management District (SFWMD) regulations for consumptive water use.

m. **Water Conservation Strategies Under Consideration**

Impacts on the surficial aquifer would be minimized and used only for potable water. Water will be obtained from the Floridan Aquifer as a source of cooling water as a backup supply. In addition, the entire plant site will capture and reuse process water whenever feasible and manage stormwater in such a manner as to recharge the surficial aquifer.

n. **Water Discharges and Pollution Control**

Heated water discharges will be dissipated in the cooling towers. Blow down from the cooling towers will be injected into the boulder zone of the Floridan Aquifer. Non-point source discharges are not an issue since there will be 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 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. The facility will employ 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 not located near an existing natural gas transmission pipeline that is capable of providing a sufficient quantity of gas. Upgrades of existing pipelines and/or lateral connections to other pipelines will be necessary for supply of natural

gas. Ultra-low sulfur distillate fuel oil would be received by truck and stored in above-ground storage tanks to serve as backup fuel for the new units.

p. Air Emissions and Control Systems

The use of clean fuels and combustion controls will minimize air emissions from these units and ensure compliance with applicable emission limiting standards. Using clean fuels minimizes emissions of sulfur dioxide (SO_2), particulate matter and other fuel bound contaminates. Combustion controls similarly minimize the formation of nitrogen oxides (NO_x), and the combustor design will limit the formation of carbon monoxide and volatile organic compounds. When firing natural gas, NO_x emissions will be controlled using dry-low NO_x combustion technology and selective catalytic reduction (SCR). Water injection and SCR will be used to reduce NO_x emissions during operations when using ultra-low sulfur light oil as backup fuel. These design alternatives constitute the Best Available Control Technology for air emissions, and minimize such emissions while balancing economic, environmental, and energy impacts. Taken together, the design of the West County Energy Center units will incorporate features that will make them among the most efficient and cleanest power plants in the State of Florida.

q. Noise Emissions and Control Systems

Noise expected to be caused by unit construction at the site is expected to be below current noise levels for the residents nearest the site. Noise from the operation of the new unit will be within allowable levels.

r. Status of Applications

A Site Certification Application (SCA) for the construction and operation of the West County Energy Center project under the Florida Electrical Power Plant Siting Act was filed on April 14, 2005. A Prevention of Significant Deterioration (PSD) permit application and an Underground Injection Control permit application were also submitted to the Florida Department of Environmental Protection (FDEP) at the same time. FDEP issued a Class I Underground Injection Control Exploratory Well permit on January 11, 2006. A petition for approval of a Determination of Need for both West County Energy Center units was filed with the FPSC on March 13, 2006. A Draft PSD Air Permit was issued by FDEP on March 1, 2006.

IV.F.2 Potential Sites for Generating Options

Eight (8) sites are currently identified as "Potential Sites" for near-term future generation additions to meet FPL's capacity needs.[2] 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 offer a range of considerations relative to engineering and/or costs associated with the construction and operation of feasible technologies. In addition, each potential site has different characteristics that will require further definition and attention. For the purpose of estimating water requirements for each site, it was assumed that either one dual-fuel (natural gas and light oil) simple cycle combustion turbine or a natural gas-fired combined cycle unit would be constructed at the Potential Sites. A simple cycle CT would require approximately 50 gallons per minute (gpm) for both process and cooling water (assuming air cooling). A combined cycle unit would require approximately 150 gpm for service and process water and approximately 14 million gallons per day (mgd) for cooling water.

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 eight 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: Andytown Substation, Broward County

FPL has identified the Andytown Substation property in western unincorporated Broward County as a potential site for the addition of new generating capacity. Current facilities on-site include an electric substation. The existing site is an area accessible to both natural gas and electrical transmission through existing structures or through additional lateral connections.

[2] As has been described in previous FPL 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.

a. **U.S. Geological Survey (USGS) Map**

A USGS map of the site has been included at the end of this chapter.

b. and c. **Land Uses and Environmental Features**

The land uses for the potential site were designated as industrial or agricultural use. The site identification process included screening to determine potential wetland impacts and impacts to endangered or threatened species. Extensive low-quality wetlands are adjacent to the potential site. FPL would expect to mitigate any impacts from construction of a power plant at this site. Construction and operation of a new facility on this site is not expected to adversely affect any rare, endangered, or threatened species.

d. and e. **Water Quantities and Supply Sources**

Surface water sources are not available at the potential site. Groundwater from the shallow aquifer or a local source of gray water have been identified as potential water sources. The Floridan Aquifer has been identified as a potential cooling water source. We believe these sources would provide sufficient water for either simple cycle or combined cycle generation.

Potential Site # 2: 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 site is found at the end of this chapter.

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 would use existing on-site wells or local gray water, and the existing once-through cooling water system. We believe these sources would provide sufficient water for either simple cycle or combined cycle generation.

Potential Site # 3: Desoto County Greenfield Site

This site is a "Greenfield" undeveloped site located on a 13,500 acre property in unincorporated Desoto County. The site is adjacent to portions of the Peace River. There are no current facilities on the site. The City of Arcadia is located southwest of the Desoto site.

a. U.S. Geological Survey (USGS) Map

A USGS map of the site is found at the end of this chapter.

b. and c. Land Uses and Environmental Features

The land on the site is currently dedicated to agricultural use (sod farming, cattle grazing, and truck crops). Developed portions of the adjacent properties are primarily agricultural (sod farms, citrus groves and cattle grazing). Undeveloped portions include mixed scrub with some hardwoods and a few isolated wetlands.

d. and e. Water Quantities and Supply Sources

The primary sources for water would either be groundwater from the upper and lower Floridan Aquifer or if available and practicable, a local source of gray water. We believe these sources would provide sufficient water for either simple cycle or combined cycle generation.

Potential Site # 4: Fort Myers Plant Site, Lee County

This site is located on FPL's existing 460-acre Fort Myers property. The existing facilities on the site include one 1,440 MW (approximate) combined cycle unit, 12 gas turbines, each with an approximate capacity of 54 MW, and 2 combustion turbines, each with an approximate capacity of 160 MW.

a. U.S. Geological Survey (USGS) Map

A USGS map of the Fort Myers plant site is found at the end of this chapter.

b. and c. Land Uses and Environmental Features

The land on the site is currently dedicated to industrial use with surrounding grassy and landscaped areas. Much of the site has recently been used for direct construction activities. The adjacent land uses include light commercial and retail to the east of the property, and some residential areas located toward the west. Mixed scrub with some hardwoods can be found to the east and further south.

d. and e. Water Quantities and Supply Sources

The available water source is the Caloosahatchee River and the available groundwater source is the sandstone aquifer. We believe these sources would provide sufficient water for either simple cycle or combined cycle generation.

Potential Site # 5: Lauderdale Plant, Broward County

The Lauderdale site is located in Eastern Broward County approximately 5 miles inland from Dania Beach and less than 2 miles west of Ft. Lauderdale International Airport. The site is bounded on the south by Dania Cutoff Canal, the east by SW 30th Avenue, and the North by I-595.

The existing 1,680 MW of generating capacity at FPL's Lauderdale site occupies a portion of the approximately 210 acres that are wholly owned by FPL. The generating capacity is made up of two combined cycle units (Units #4 and #5). The site also is home to 24 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 GTs at the Port Everglades site. The GT's are capable of firing either natural gas or liquid fuel. The site is considered as suitable for the construction and operation of simple cycle peaking utilizing liquid or natural gas fuels.

a. U.S. Geological Survey (USGS) Map

A USGS map of the site is found at the end of this chapter.

b. and c. Land Uses and Environmental Features

The existing power plant facilities are located on approximately 130 acres. The existing site has been in use since the 1920's and is adjacent to a county resource recovery project. To the north of the power plant is an area of mixed uplands with a scattering of small wetlands.

d. and e. Water Quantities and Supply Sources

Existing groundwater or the municipal water supply could be used for industrial process and makeup water. We believe these sources would provide sufficient water for either simple cycle or combined cycle generation.

Potential Site # 6: 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 existing 3,700 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 three combined cycle units (Units #3, #4, and #8). 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.

a. **U.S. Geological Survey (USGS) Map**

A USGS map for the site is found at the end of this chapter.

b. **and c. Land Uses and Environmental Features**

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.

d. **and e. Water Quantities and Supply Sources**

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 and service water. Both of these sources are available for use with any potential site expansion. We believe these sources would provide sufficient water for either simple cycle or combined cycle generation.

Potential Site # 7: 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 GTs 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 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**

Cooling water could be drawn from the Intra-coastal Waterway. We believe this source would provide sufficient water for either simple cycle or combined cycle generation.

Potential Site # 8: 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 (USGS) Map**

A USGS map of the 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. Adjacent land uses include port facilities and associated industrial activities, as well as light commercial and residential development. The site is located on the Intra-coastal Waterway near the Lake Worth Inlet.

d. and e. Water Quantities and Supply Sources

The existing municipal water supply could be used for industrial processing water. Industrial cooling water needs could be met using the existing once-through cooling water system. For once-through cooling water, FPL would continue to use Lake Worth as a source of water. We believe these sources would provide sufficient water for either simple cycle or combined cycle generation.

IV.F.2 Potential Sites for Advanced Technology Coal-Fired Generating Options

As previously discussed, FPL is in the process of analyzing the feasibility of advanced technology coal-fired generating options. FPL believes that the earliest such an option could be permitted and constructed is 2012. FPL's plans to pursue advanced technology coal-fired generation was set forth in its 2005 Request for Proposals (RFP) document issued in September 2005. Part I of the RFP solicited proposals for 2009-2011 that led to FPL's plans to construct the two West County Energy Center units. Part II of the RFP describes FPL's plans to solicit only those proposals that will add to a balanced fuel supply in meeting FPL's 2012-2014 capacity needs. That solicitation is scheduled for later this year.

At the time this Site Plan is being prepared, FPL is analyzing potential sites for such options. Selection criteria for potential sites have been delineated in FPL's *Report on Clean Coal Generation* (March 2005). It is expected that this selection process will have progressed to a point that FPL will be able to share site specific information by June 1, 2006. An Addendum to the 2006 Site Plan will be developed that provides this information when it is available.

Environmental and Land Use Information:

Supplemental Information

Preferred Site: Turkey Point

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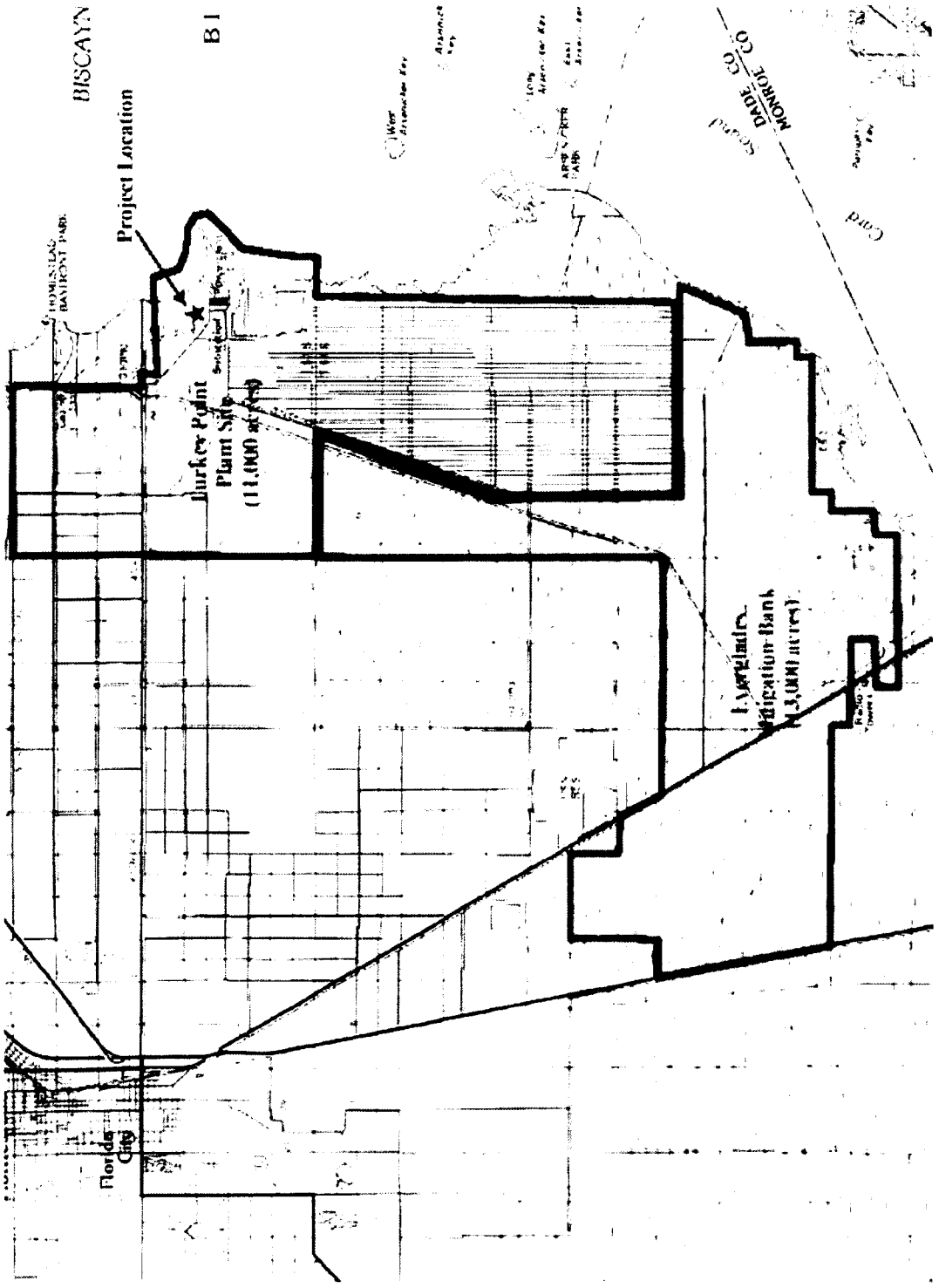
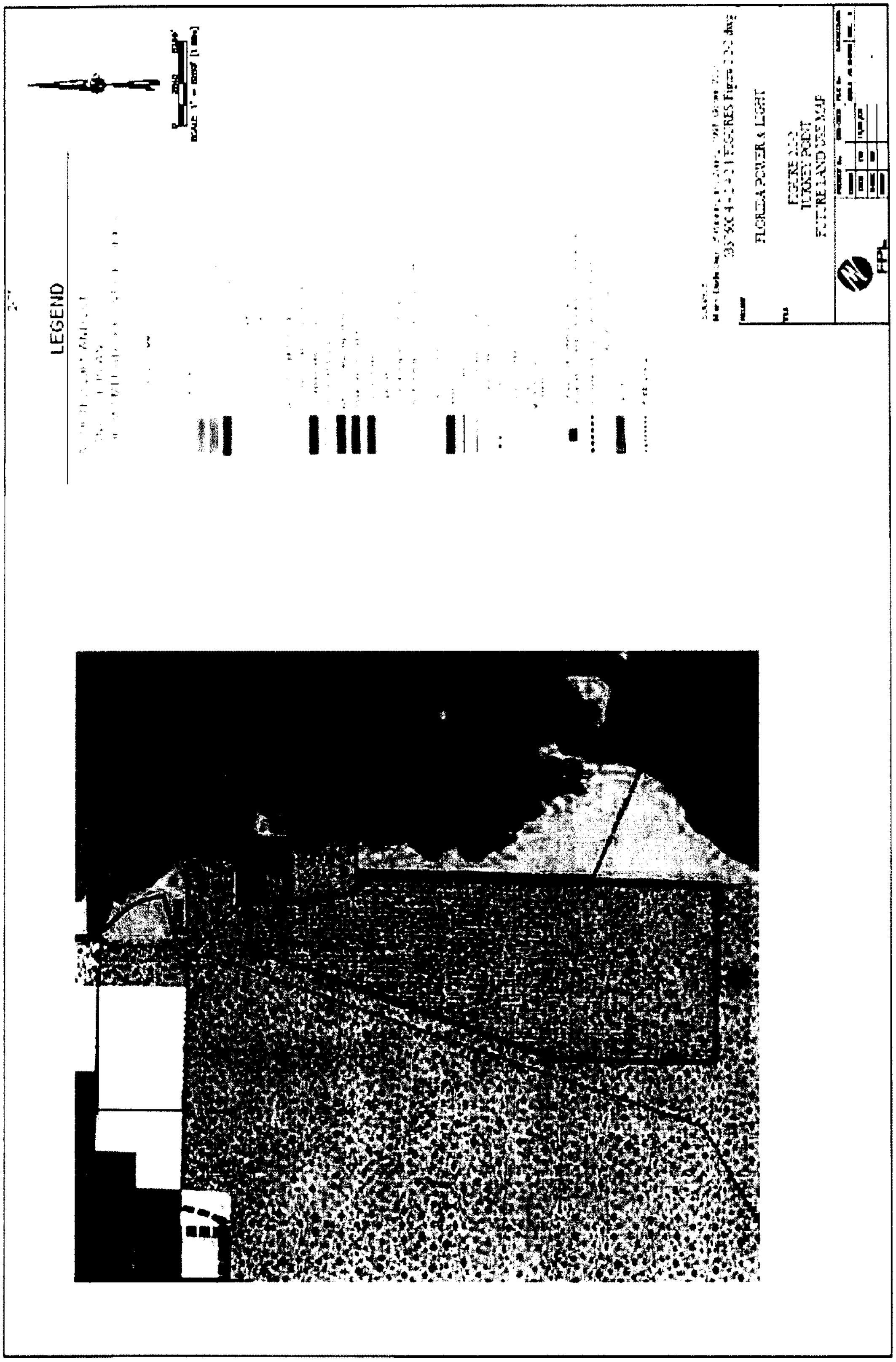
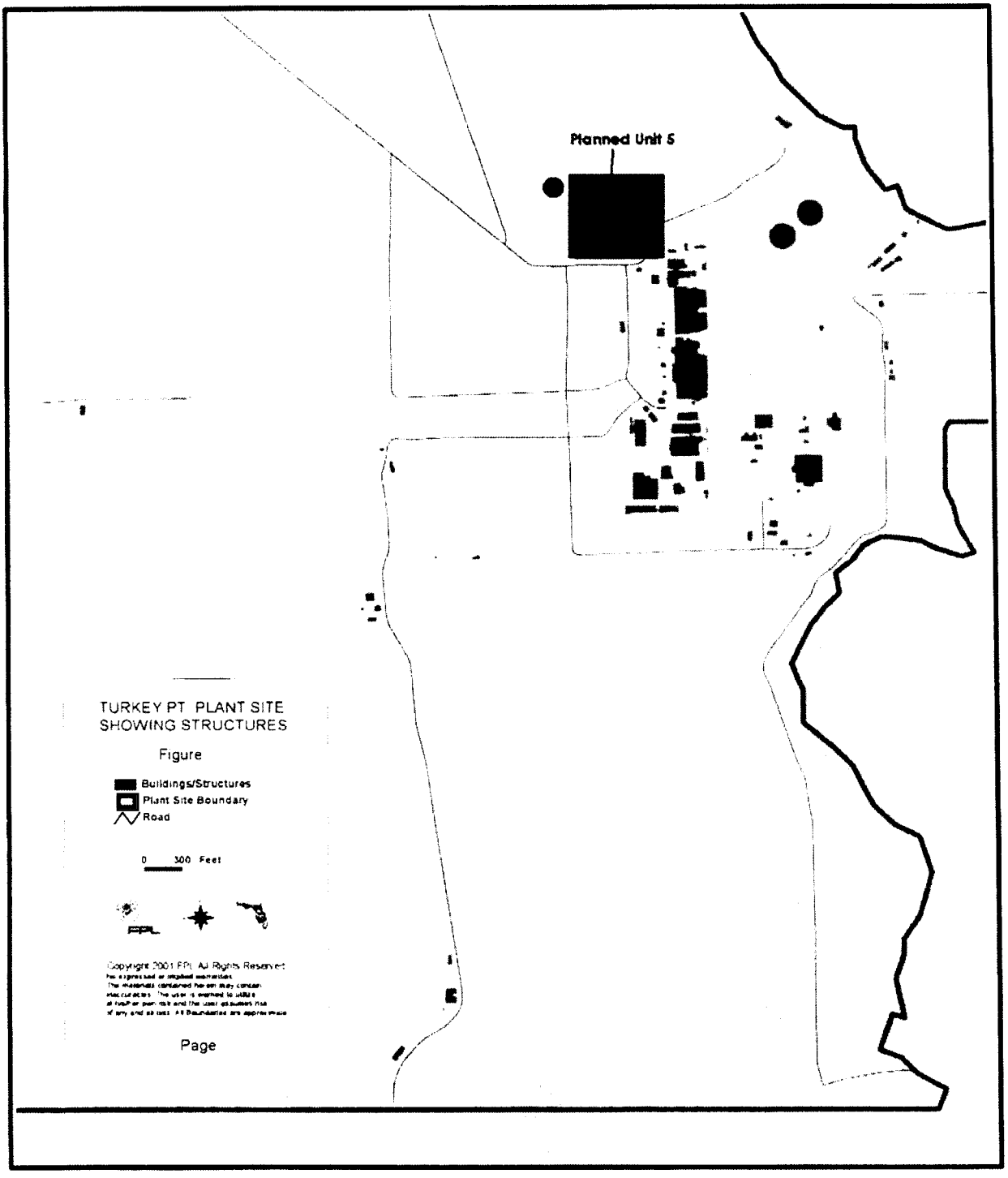

BISCAYN
B I
Project Location
Florida City


LEGEND
FLORIDA POWER & LIGHT


Planned Unit 5
TURKEY PT PLANT SITE
SHOWING STRUCTURES
Figure
Buildings/Structures
Plant Site Boundary
Road
0 300 Feet
Page

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Environmental and Land Use Information:

Supplemental Information

Preferred Site: West County Energy Center

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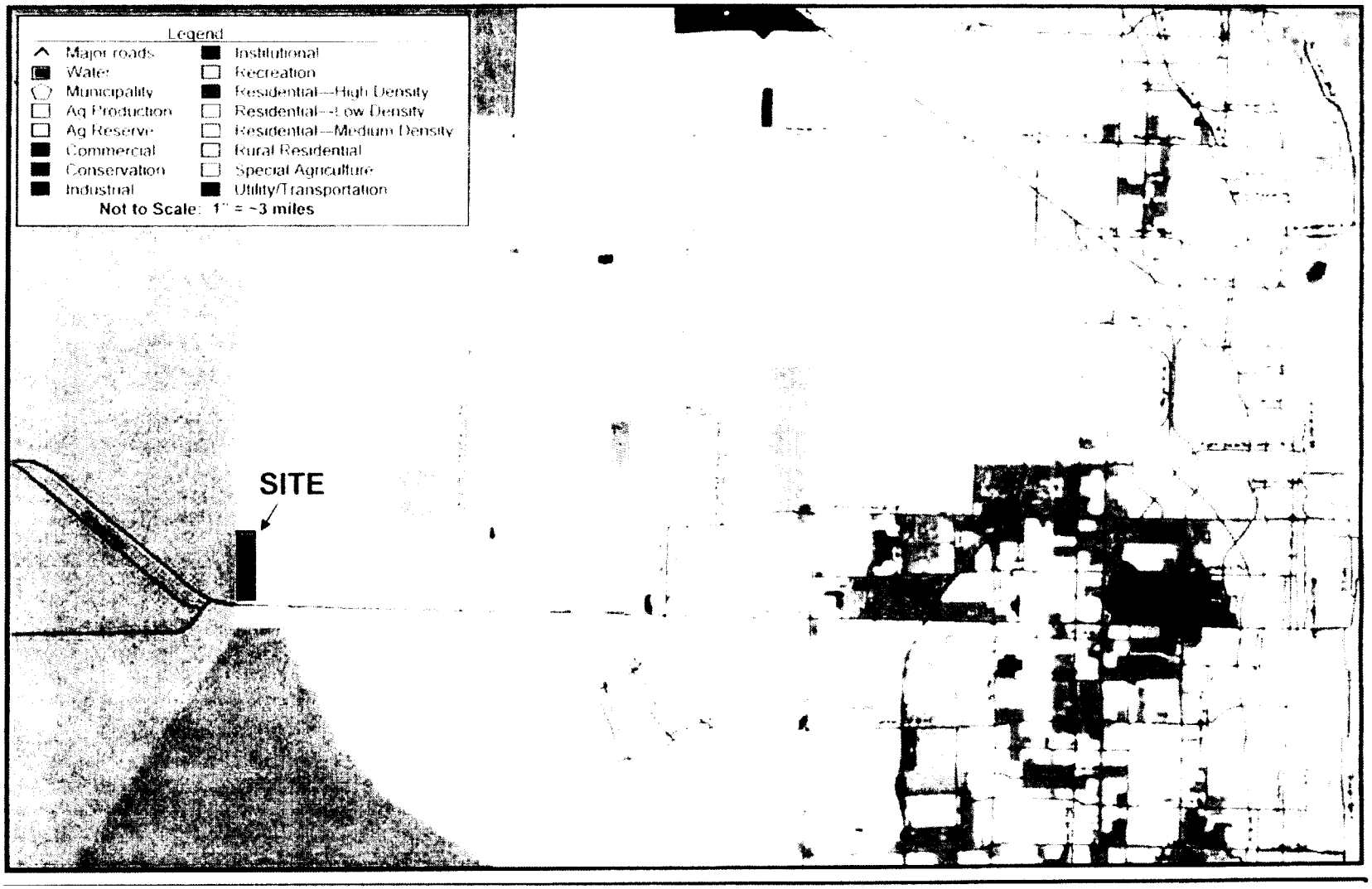
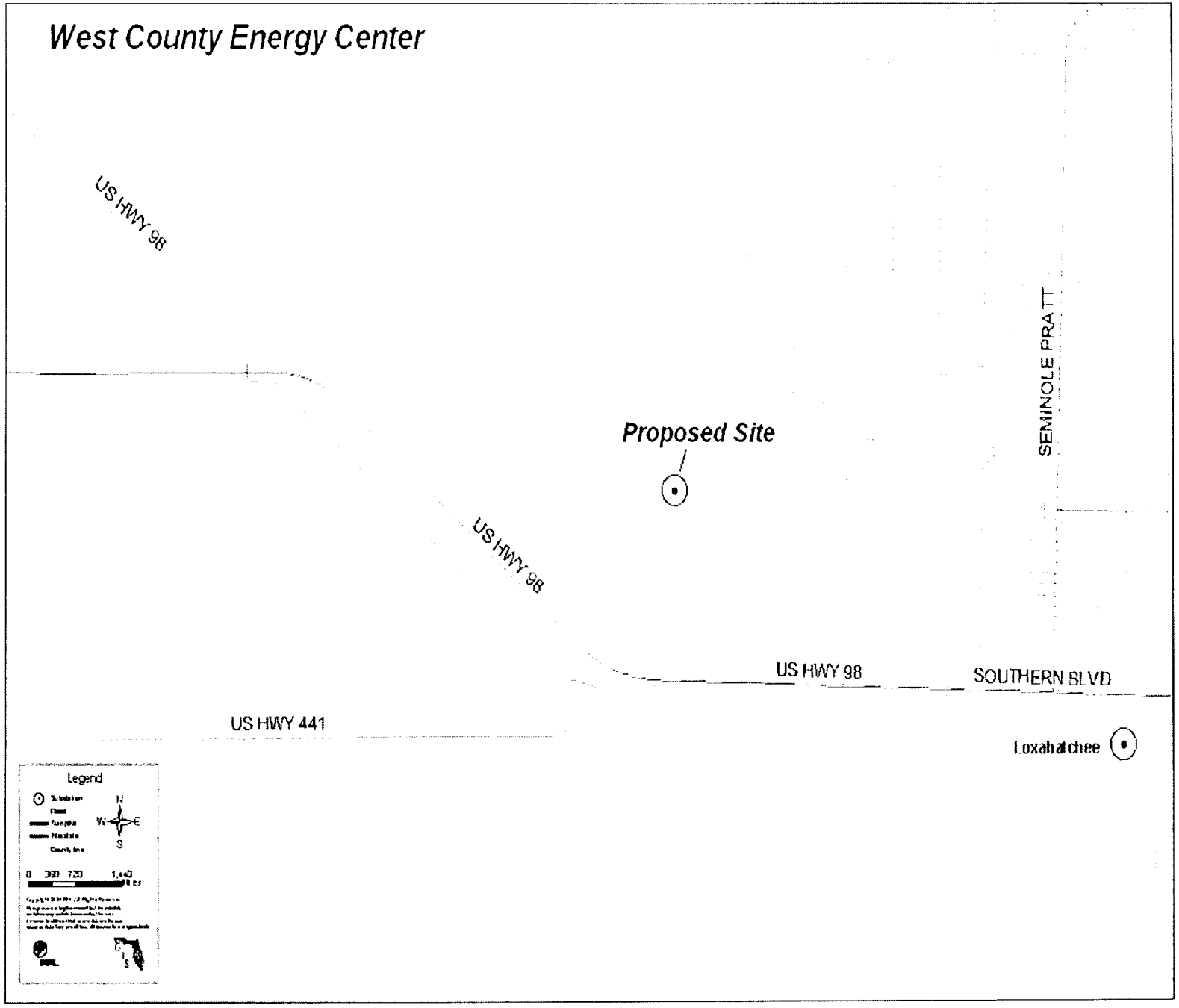
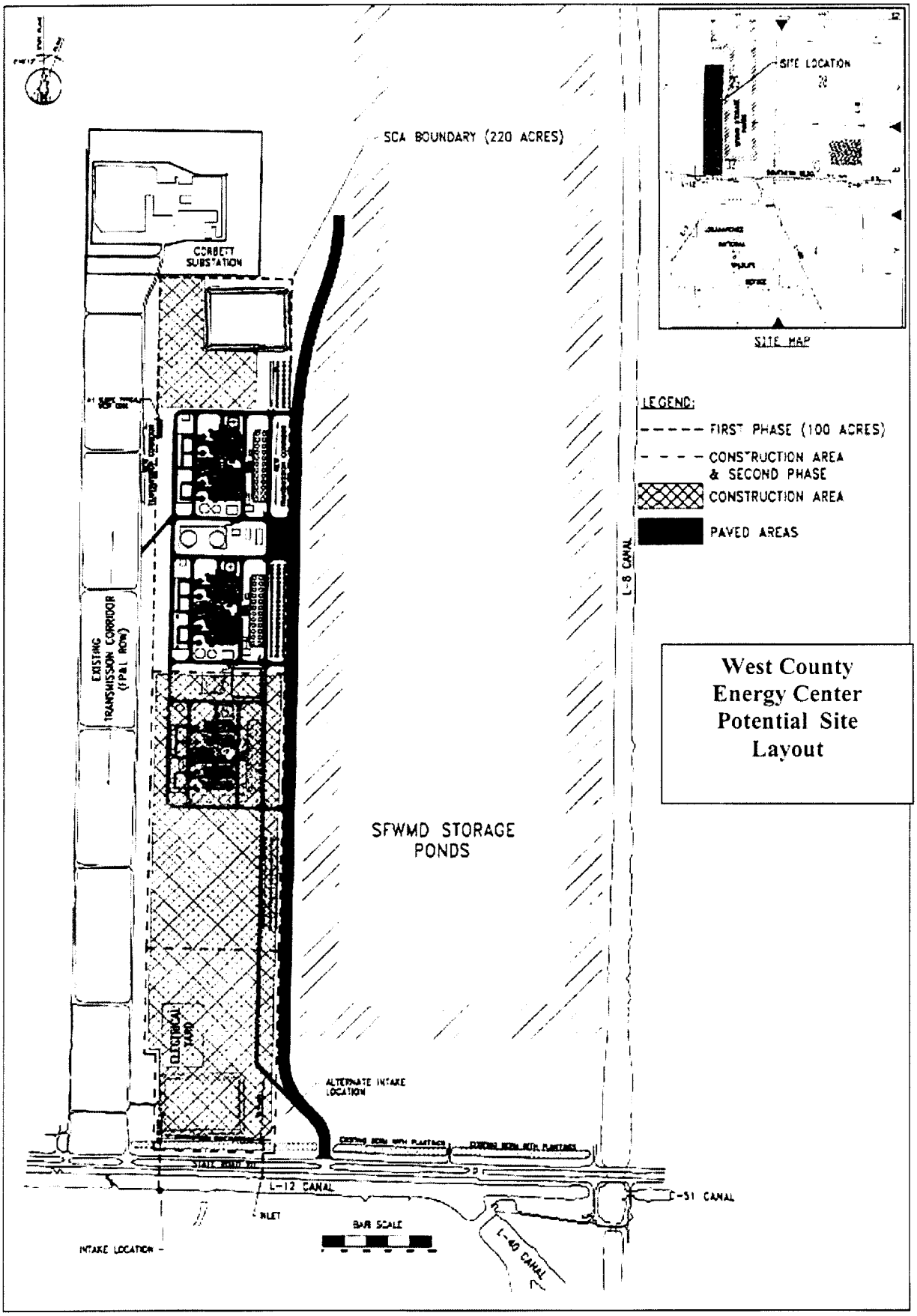

Legend
Major roads
Water
Municipality
Ag Production
Ag Reserve
Commercial
Conservation
Industrial
Institutional
Recreation
Residential—High Density
Residential—Low Density
Residential—Medium Density
Rural Residential
Special Agriculture
Utility/Transportation
Not to Scale: 1" = ~3 miles
SITE


West County Energy Center
US HWY 98
Proposed Site
SEMINOLE PRATT
US HWY 98
US HWY 98
SOUTHERN BLVD
US HWY 441
Loxahatchee
Legend
N
W
E
S
0 360 720 1,440


SCA BOUNDARY (220 ACRES)
CORBETT SUBSTATION
EXISTING TRANSMISSION CORRIDOR (FP&L ROW)
ELECTRICAL YARD
SFWMD STORAGE PONDS
L-8 CANAL
ALTERNATE INTAKE LOCATION
L-12 CANAL
L-51 CANAL
L-40 CANAL
INLET
INTAKE LOCATION
BAR SCALE
SITE LOCATION
SITE MAP
LEGEND:
FIRST PHASE (100 ACRES)
CONSTRUCTION AREA & SECOND PHASE
CONSTRUCTION AREA
PAVED AREAS
West County Energy Center Potential Site Layout

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Environmental and Land Use Information:

Supplemental Information

Potential Site #1: Andytown

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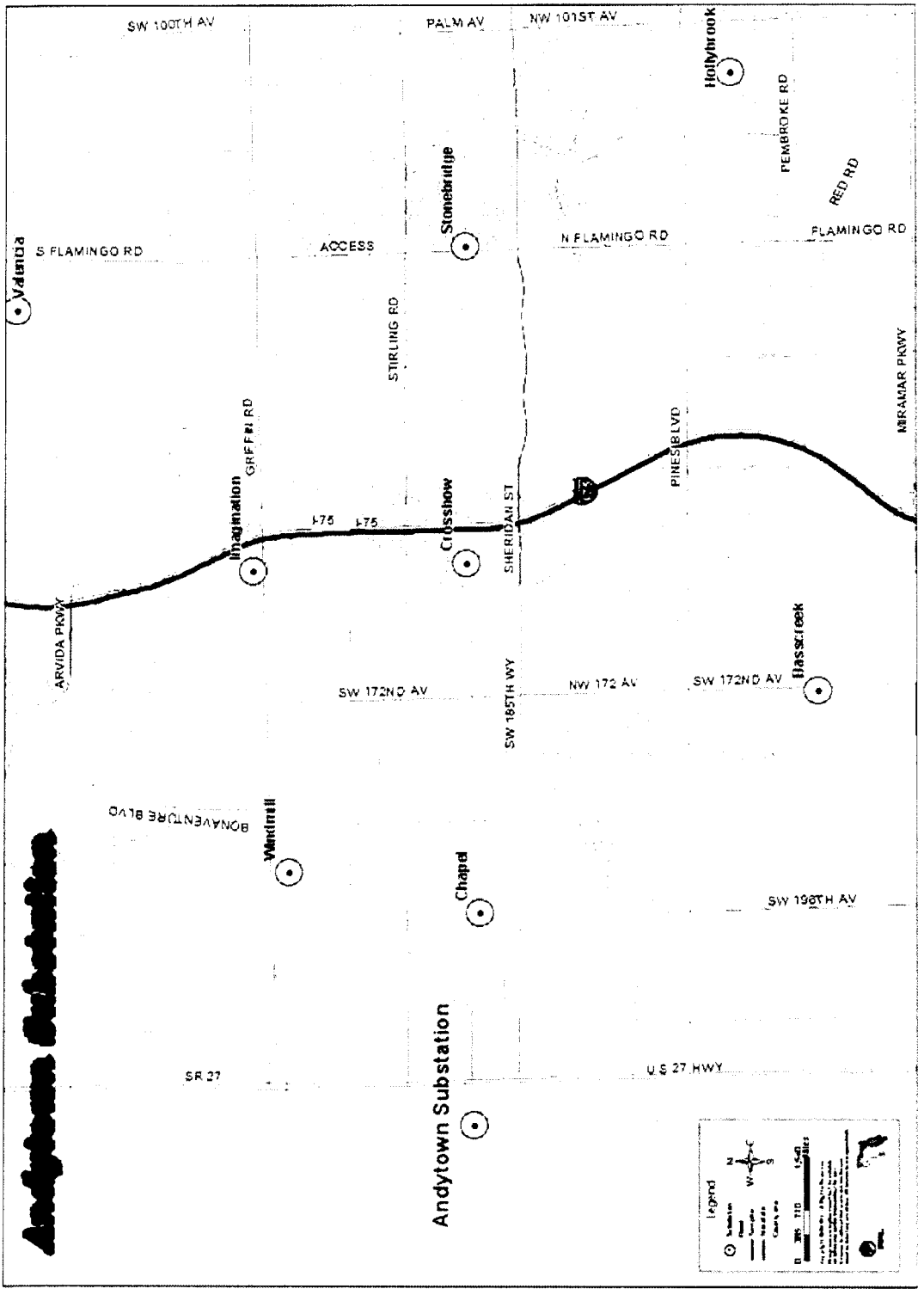
SW 100TH AV
PALM AV
NW 101ST AV
Hollybrook
PEMBROKE RD
RED RD
Stonebridge
N FLAMINGO RD
FLAMINGO RD
Valencia
S FLAMINGO RD
ACCESS
STIRLING RD
GRIFFIN RD
MIRAMAR PKWY
PINES BLVD
Imagination
I-75
I-75
Crosshow
SHERIDAN ST
ARVIDA PKWY
SW 172ND AV
SW 185TH WY
NW 172 AV
SW 172ND AV
Bass creek
BONAVENTURE BLVD
Windmill
Chapel
SW 196TH AV
Andytown Substation
SR 27
U S 27 HWY
Legend

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Environmental and Land Use Information:
Supplemental Information

Potential Site #2: Cape Canaveral

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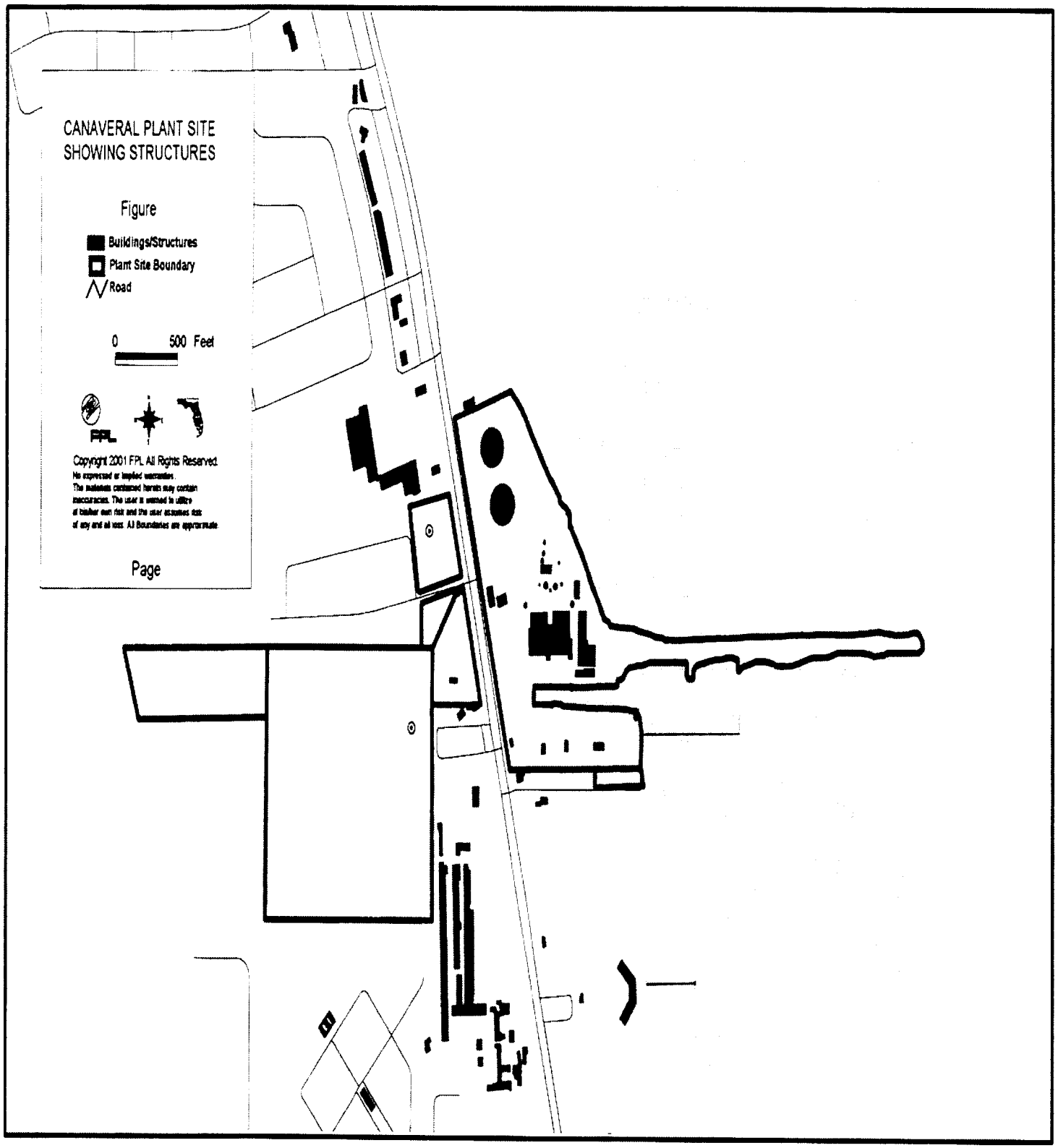
CANAVERAL PLANT SITE
SHOWING STRUCTURES
Figure
Buildings/Structures
Plant Site Boundary
Road
0
500 Feet
FPL
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Page

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Environmental and Land Use Information:

Supplemental Information

Potential Site #3: Desoto

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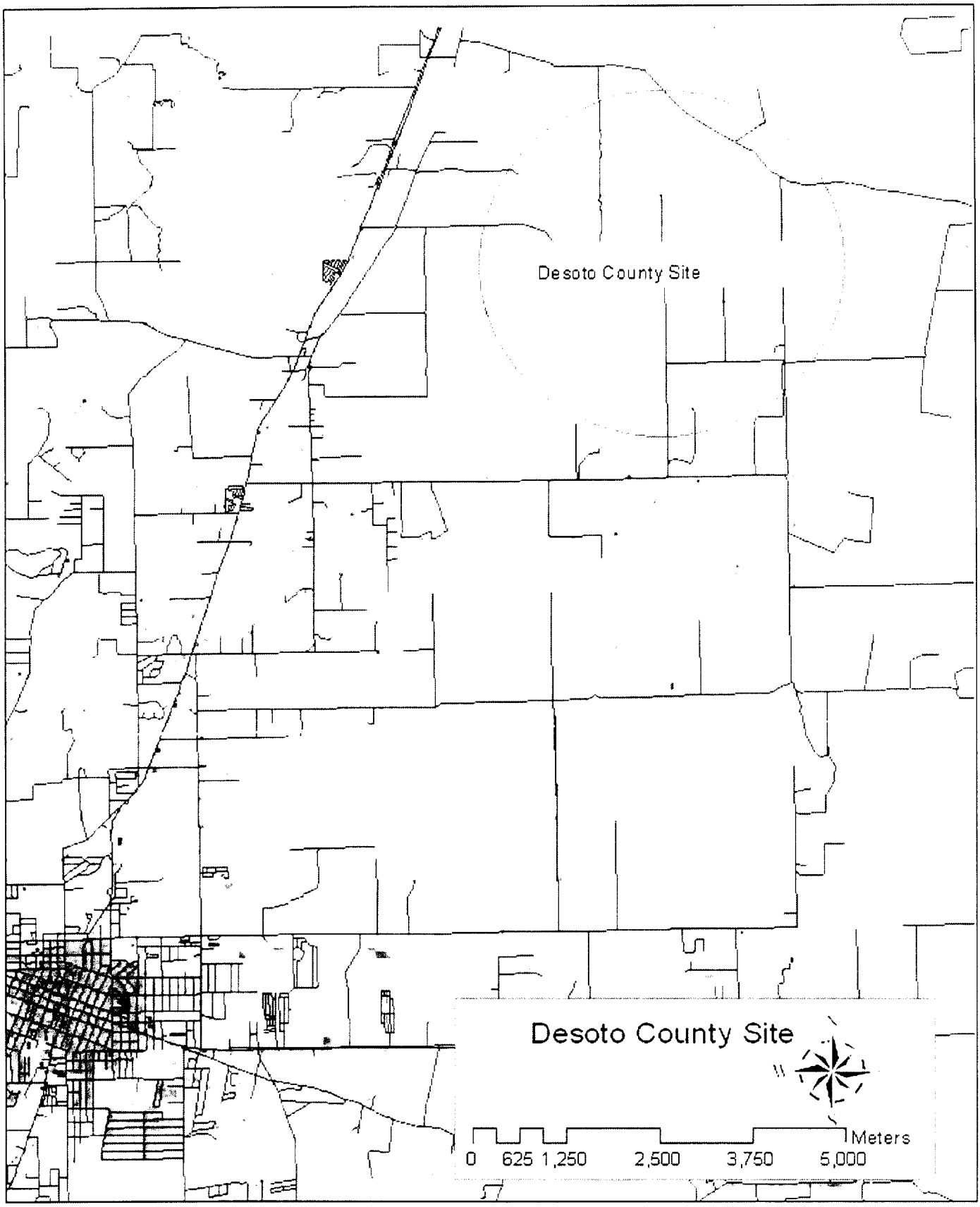
Desoto County Site
Desoto County Site
N
Meters
0 625 1,250 2,500 3,750 5,000

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Environmental and Land Use Information:

Supplemental Information

Potential Site #4: Ft. Myers

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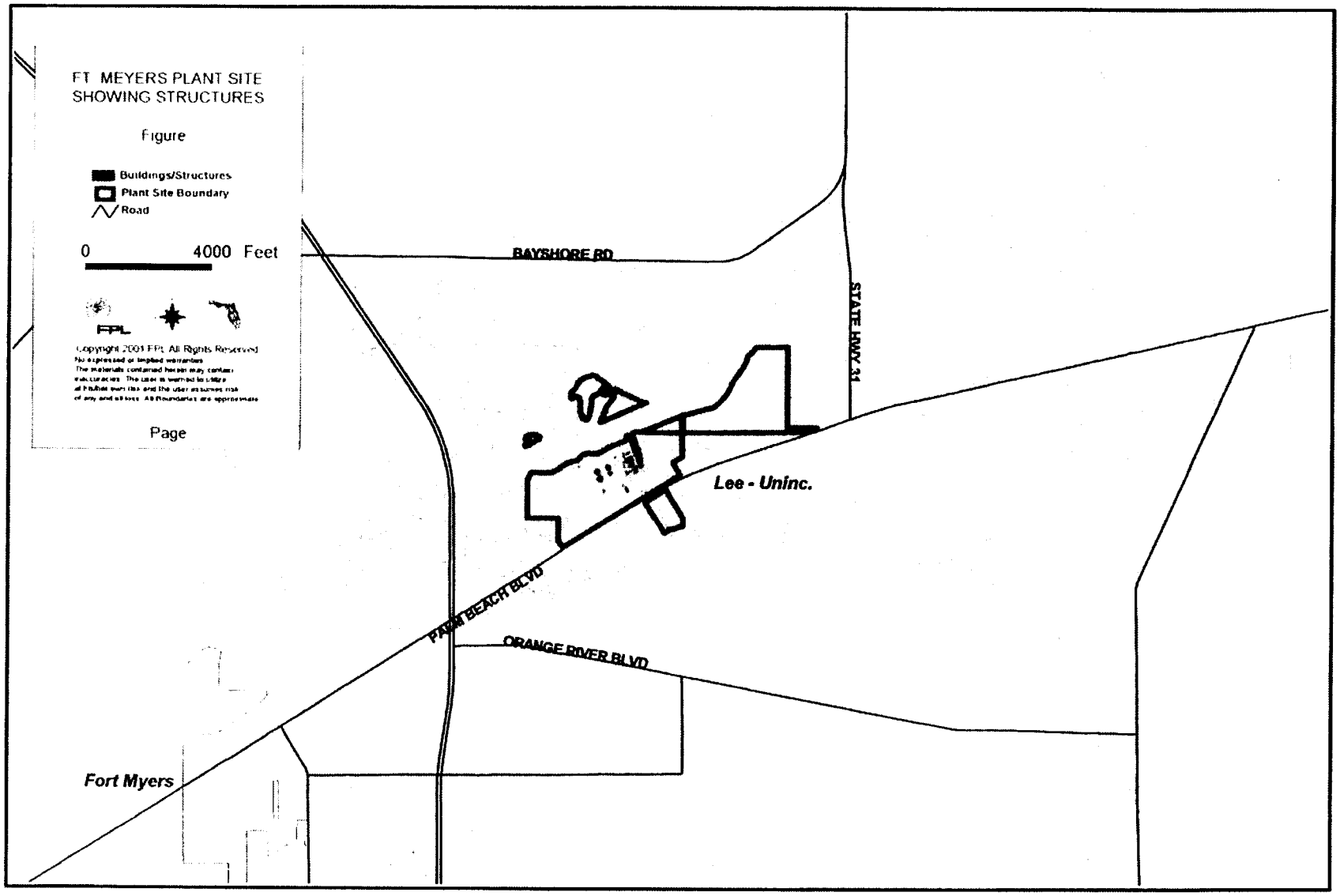
FT MEYERS PLANT SITE
SHOWING STRUCTURES
Figure
Buildings/Structures
Plant Site Boundary
Road
0
4000 Feet
FPL
Page
BAYSHORE RD
STATE HWY 31
Lee - Uninc.
PALM BEACH BLVD
ORANGE RIVER BLVD
Fort Myers

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Environmental and Land Use Information:
Supplemental Information

Potential Site #5: Lauderdale

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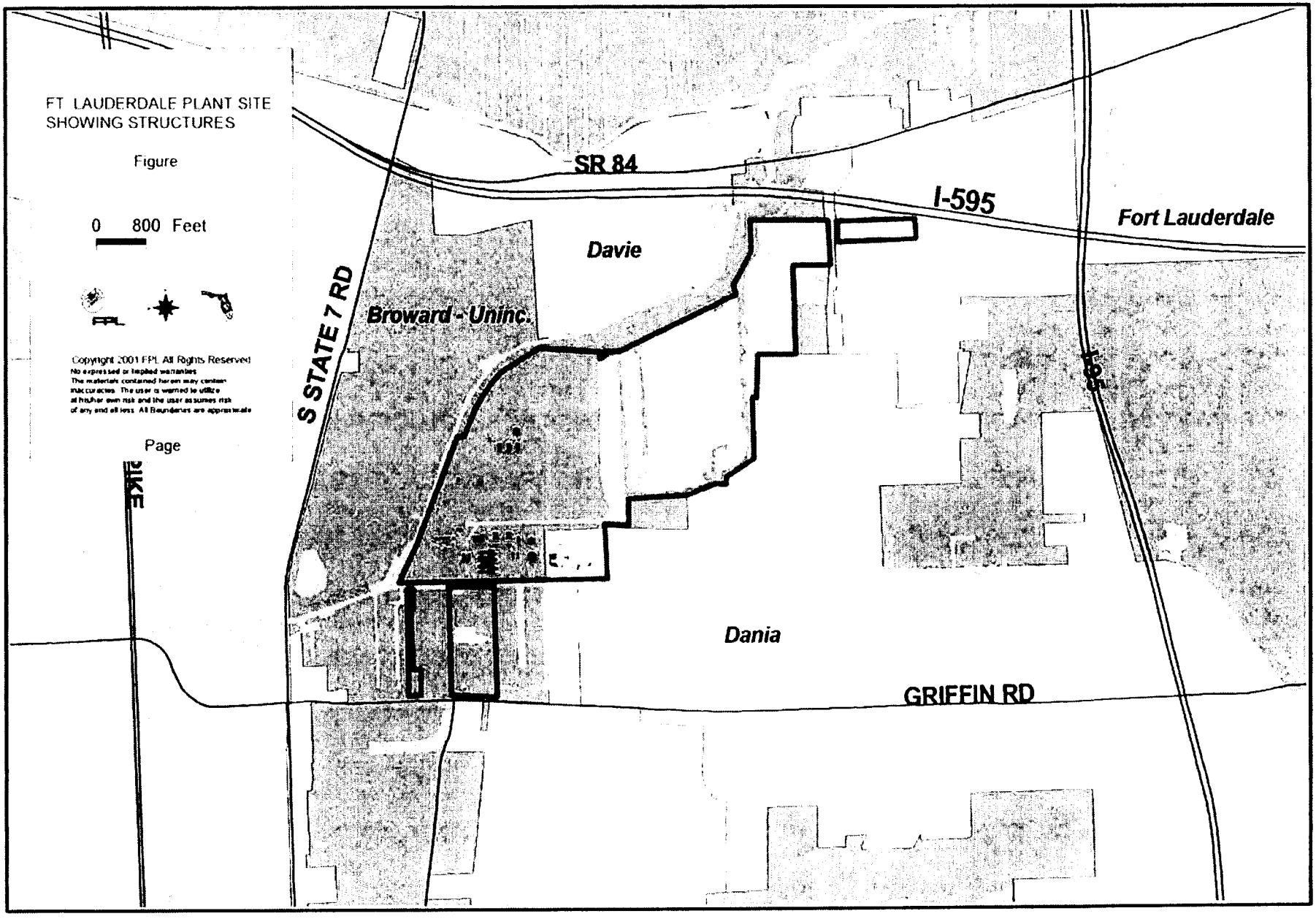
FT LAUDERDALE PLANT SITE
SHOWING STRUCTURES
Figure
0 800 Feet
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inaccuracies. The user is warned to utilize
at his/her own risk and the user assumes risk
of any and all loss. All Boundaries are approximate
Page
SR 84
I-595
Fort Lauderdale
Davie
S STATE 7 RD
Broward - Uninc.
Dania
GRIFFIN RD

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Environmental and Land Use Information:

Supplemental Information

Potential Site #6: Martin

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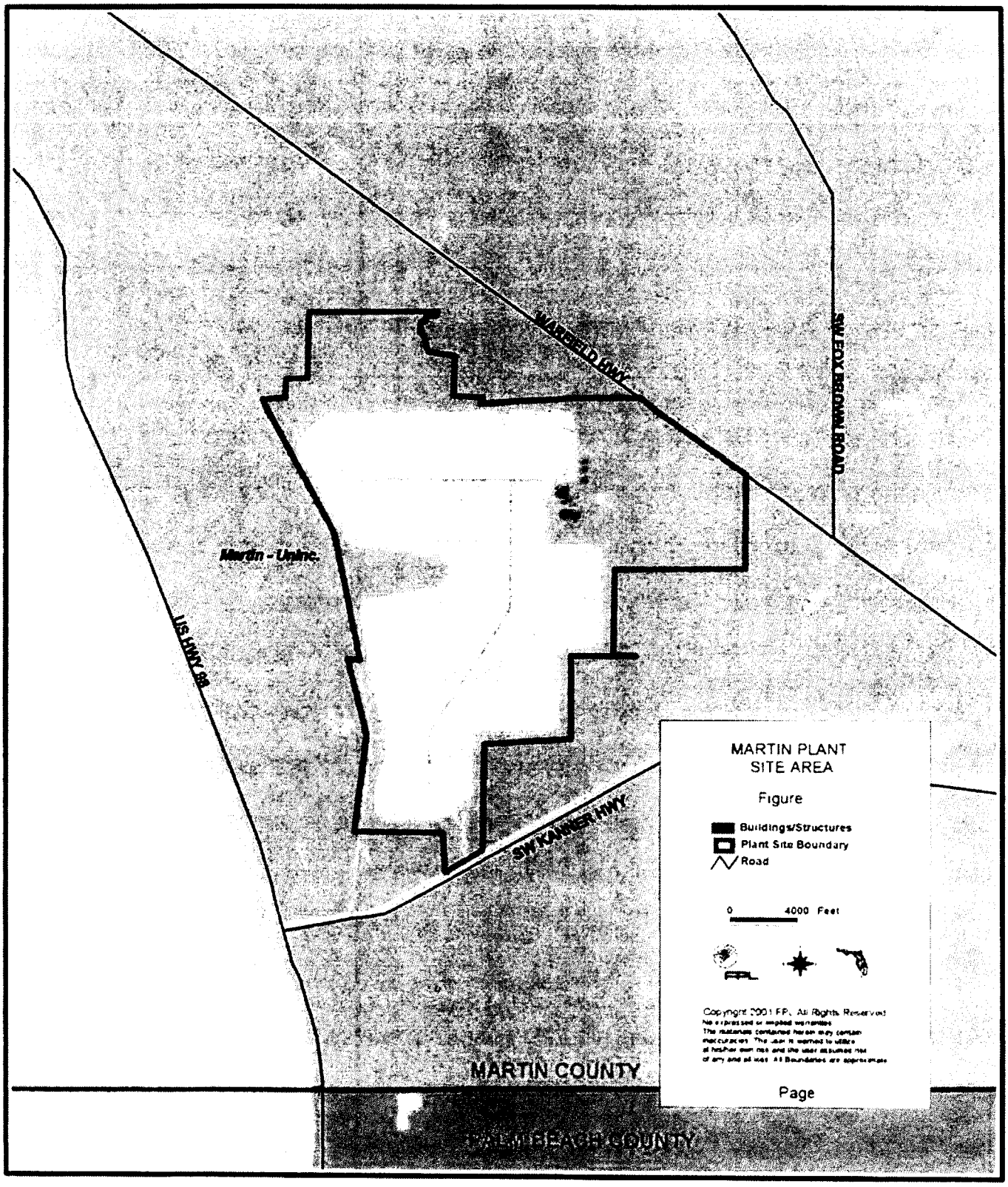
MARTIN PLANT
SITE AREA
Figure
Buildings/Structures
Plant Site Boundary
Road
0
4000 Feet
Page
MARTIN COUNTY
PALM BEACH COUNTY
SW KANNER HWY
SW FOX BROWN ROAD
US HWY 98

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Environmental and Land Use Information:

Supplemental Information

Potential Site #7: Port Everglades

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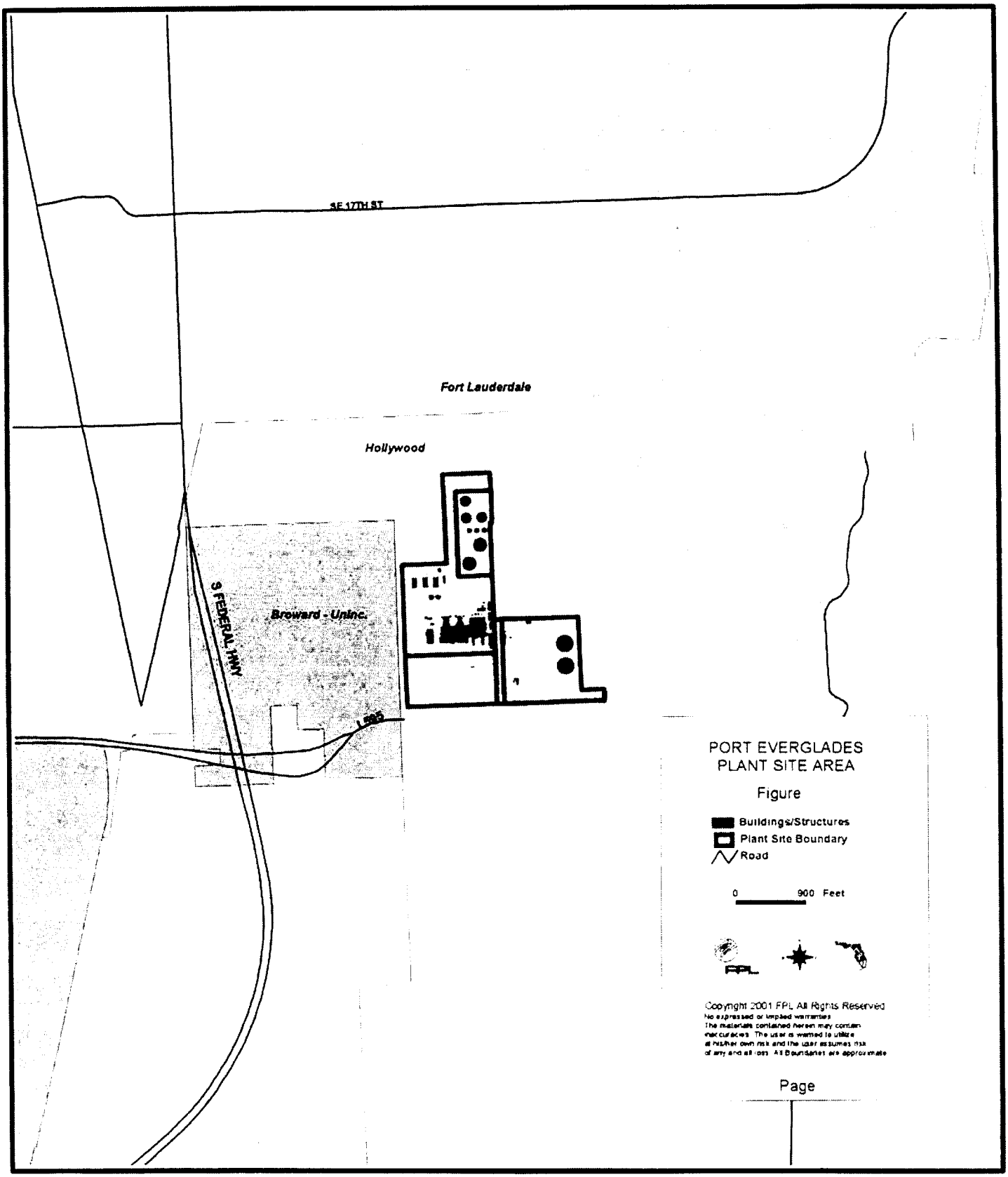
SE 17TH ST
Fort Lauderdale
Hollywood
Broward - UnInc.
S FEDERAL HWY
I-595
PORT EVERGLADES
PLANT SITE AREA
Figure
Buildings/Structures
Plant Site Boundary
Road
0
900 Feet
FPL
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at his/her own risk and the user assumes risk
of any and all loss. All Boundaries are approximate
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Environmental and Land Use Information:

Supplemental Information

Potential Site #8: Riviera Plant

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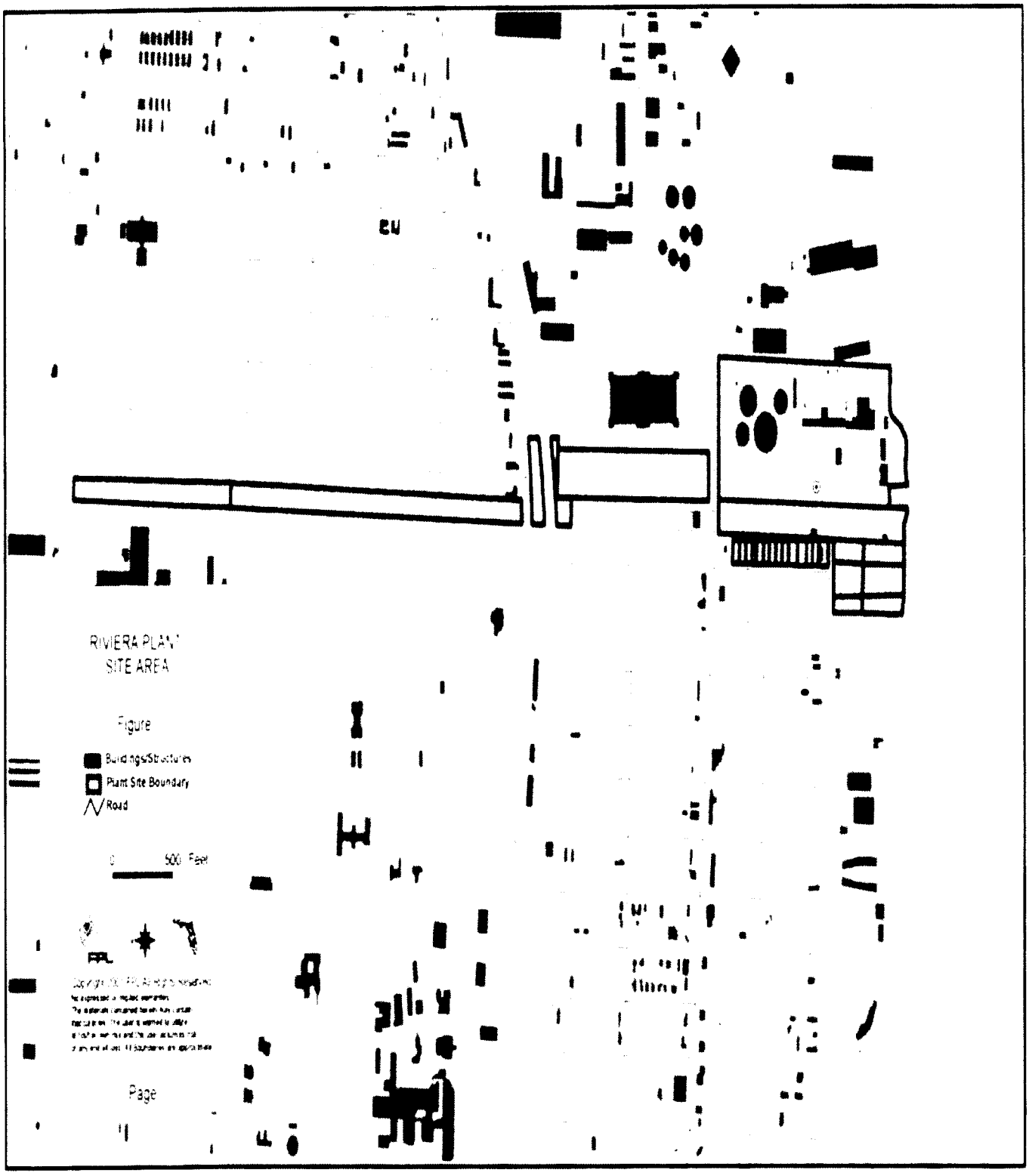
RIVIERA PLANT
SITE AREA
Figure
Buildings/Structures
Plant Site Boundary
Road
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FPL
Page

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CHAPTER V

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 limitations/constraints. External limitations deal with FPL's ties to its neighboring systems. Internal limitations deal with the flow of electricity within the FPL system.

The external limitations are important since they affect the development of assumptions for the amount of external assistance which is available to the FPL system and the amount and price of economy energy purchases. Therefore, these external limitations 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 limitations are addressed by identifying potential geographic locations for potential new units that may not adversely impact such limitations. The internal transmission limitations are also addressed by developing the direct costs for siting new units at different locations, and by, evaluating the cost impacts created by the new unit/unit location combination on the operation of existing units in the FPL system. 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 limitations 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.

FPL typically performs economic analyses of competing resource plans using as an economic criterion FPL's levelized system average electric rates (i.e., a Rate Impact Measure or RIM approach). In addition, for analyses in which DSM levels are not changed, FPL uses the equivalent criterion of the cumulative present value of revenue requirements for the FPL system.[2]

During late 2005, the load forecast was revised upward to incorporate the observed increase in population growth and resulting increase in system demand. This increased forecast, compared to the base forecast used earlier in the year, allowed FPL to bracket a range of expected load growth and the corresponding changes to the generation plan. FPL's response to the increased load was to address the near term needs (2006 - 2008) with a combination of increased DSM, available purchases and securing increased transmission capacity for existing purchases. FPL also identified a single CT in 2008 to meet the balance of the near term needs. In the event the load forecast is reduced, this CT can be avoided or delayed. Should load increase, additional DSM, purchased power or additional self-build CT's may be added to maintain the reliability criteria.

[2] 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 most of 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.

FPL conducted an analysis of the comparative economics of a plan that included coal-fired generation compared to an all gas-fired plan. The results of the analysis were presented to the Commission in March, 2005. In this study FPL utilized high, low, and expected or "most likely" fuel cost forecasts to explore the relative system fuel cost differences between a clean coal plan and a plan that included all gas-fired generation additions. This approach allowed FPL to examine the relative economics of these two different types of plans with fuel cost forecasts that varied the price difference between coal and natural gas. Significant changes occurred in long term fuel price forecasts as a result of the events of 2005. Since the natural gas - coal price differential has increased compared to the forecast used in the 2005 Clean Coal Study, it is expected that the economics for coal versus gas have significantly improved.

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.

As described above in the answer to Discussion Item #3, FPL used three fuel forecasts in the comparative economic analysis of clean coal generation. FPL held the coal prices constant, based on the most likely coal price forecast, and developed three natural gas price forecasts (high, low, and expected). The low gas price sensitivity, when compared to the coal price forecast, results in an essentially fixed differential between natural gas prices and coal prices.

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, 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 a 45% debt and 55% equity FPL capital structure, projected debt cost of 6.90%, and an equity return of 11.75%. These assumptions resulted in a weighted average cost of capital of 9.57% and an after-tax discount rate of 8.37%. FPL did not test the sensitivity of its resource plan to varying financial assumptions.

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 both a levelized system average rate perspective for its DSM Goals and DSM Plan work and the equivalent present

value of system revenue requirements perspective when evaluating options that did not result in changes to system DSM levels. (As discussed in response to Discussion Item # 2, both the electricity rate perspective and the cumulative present value of system revenue requirement perspective are identical when DSM levels are unchanged between competing plans.)

Discussion Item # 8: Define and discuss the electric utility's generation and transmission reliability criteria.

FPL uses two system reliability criteria in its resource planning work. One of these is a minimum 20% Summer and Winter reserve margin. 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).

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://floasis.siemens-asp.com/OASIS/FPL/INFO.HTM).

The normal voltage criteria for FPL stations is given below:

Voltage Level (kV)	Vmin (p.u.)	Vmax (p.u.)
69, 115, 138	0.95/0.95	1.05/1.07
230	0.95/0.95	1.06/1.07
500	0.95/0.95	1.07/1.09

There may be isolated cases for which FPL may determine it prudent to deviate from the general criteria stated above. The overall potential impact on customers and the probability of an outage actually occurring, as well as other factors would influence 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 DSM 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; (3) environmental risk and (4) site feasibility.

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 different generating technologies and their associated environmental impacts. Technologies regarded as more acceptable from an environmental perspective for a plan are those which minimize

environmental impacts through highly efficient fuel use and state of the art controls (e.g. clean coal technologies versus conventional pulverized coal).

Site feasibility assesses a wide range of economic, regulatory and environmental factors related to successfully developing and operating the specified technology at the site in question. Projects that are more acceptable have sites with few barriers to successful development.

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, elements of FPL's capacity additions include the construction of new generating capacity at an existing site: Turkey Point. This generation construction project was selected after evaluating competing bids received in response to a Request for Proposals (RFP) issued by FPL in mid-2003. The FPSC approved FPL's decision to construct the new combined cycle unit at FPL's existing Turkey Point site in June 2004.

Similarly, FPL's projected capacity additions in 2009 and 2010 at the West County Energy Center site were selected after comparing these units to four bids received in response to an RFP issued in September 2005. FPL has petitioned the FPSC for approval of a Determination of Need for these units. A decision is expected before the end of the year.

The construction capacity additions projected in this document for 2011 and beyond will be conducted in a manner consistent with the Commissions Bid Rule.

Identification of self-build options for 2008 and for 2011 beyond in FPL's Site Plan is not an indication that FPL has pre-judged any capacity solicitation it may conduct. The identification of future capacity units is required of FPL and represents those alternatives that appear 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 reserves 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 plans to construct a new transmission line (by July 2006) that was certified under the Transmission Line Siting Act (403.52–403.536, F.S.). The new line will connect FPL's Orange River Substation to FPL's Collier Substation (as shown on Table III.F.1). The final order certifying the corridor was issued on July 19 of 2004. The construction of this line is necessary to serve existing and future customers in the Collier and Lee County areas in a reliable and effective manner. FPL has identified the need for a new 230kV transmission line (by December 2008) that requires certification under the Transmission Line Siting Act. The new line will connect FPL's St. Johns Substation to FPL's proposed Pringle Substation (also shown on Table III.F.1). The construction of this line is necessary to serve existing and future customers in the Flagler and St. Johns areas in a reliable and effective manner. FPL has identified the need for a new 230kV transmission line (by December 2011) that requires certification under the Transmission Line Siting Act. The new line will connect FPL's Manatee Substation to FPL's proposed BobWhite Substation (also shown on Table III.F.1). The construction of this line is necessary to serve existing and future customers in the Manatee and Sarasota areas in a reliable and effective manner. Additionally, FPL has identified the need for a new 230kV transmission line (by June 2012) that requires certification under the Transmission Line Siting Act. The new line will connect FPL's future Eve Substation to FPL's Sweatt Substation (also shown on Table III.F.1). The construction of this line is necessary to serve existing and future customers in the Okeechobee and St. Lucie areas in a reliable and effective manner.

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