Progress Energy

April 1, 2009

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COMMISSION CLERK

VIA HAND DELIVERY

Ms. Ann Cole, Commission Clerk
Florida Public Servce Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

090000-OT

Re: Ten-Year Site Plan as of December 31, 2008

Dear Ms. Cole:

Pursuant to Rule 25-22.071, F.A.C., please find enclosed for filing the original and twenty-five (25) copies of Progress Energy Florida, Inc.'s 2009 Ten-Year Site Plan.

Please acknowledge your receipt of the above filing on the enclosed copy of this letter and return to the undersigned. Thank you for your assistance in this matter.

Sincerely,

John T. Burnett LMS

John T. Burnett

JTB:lms
Enclosure

COM
ECR
GCL 1
OPC
RCP
SSC
SGA
ADM
CLK 2

Progress Energy Service Company, LLC
106 E. College Avenue, Suite 800
Highpoint Center
Tallahassee, FL 32301

Progress Energy Florida, Inc.
Ten-Year Site Plan

April 2009

2009-2018

Submitted to:
Florida Public Service Commission

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REQUIRED SCHEDULES

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TABLES AND FIGURES

CODE IDENTIFICATION SHEET

Generating Unit Type

ST - Steam Turbine - Non-Nuclear
NP - Steam Power - Nuclear
GT - Gas Turbine
CT - Combustion Turbine
CC - Combined cycle
SPP - Small Power Producer
COG - Cogeneration Facility

Fuel Type

NUC - Nuclear (Uranium)
NG - Natural Gas
RFO - No. 6 Residual Fuel Oil
DFO - No. 2 Distillate Fuel Oil
BIT - Bituminous Coal
MSW - Municipal Solid Waste
WH - Waste Heat
BIO - Biomass

Fuel Transportation

WA - Water
TK - Truck
RR - Railroad
PL - Pipeline
UN - Unknown

Future Generating Unit Status

A - Generating unit capability increased
D – Generating unit capability decreased
FC - Existing generator planned for conversion to another fuel or energy source
P - Planned for installation but not authorized; not under construction
RP - Proposed for repowering or life extension
RT - Existing generator scheduled for retirement
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

INTRODUCTION

Section 186.801 of the Florida Statutes requires electric generating utilities to submit a Ten-Year Site Plan (TYSP) to the Florida Public Service Commission (FPSC). The TYSP includes historical and projected data pertaining to the utility's load and resource needs as well as a review of those needs. Florida Power Corporation d/b/a Progress Energy Florida, Inc. TYSP is compiled in accordance with FPSC Rules 25-22.070 through 22.072, Florida Administrative Code.

Progress Energy Florida, Inc.'s (PEF) TYSP is based on the projections of long-term planning requirements that are dynamic in nature and subject to change. These planning documents should be used for general guidance concerning PEF's planning assumptions and projections, and should not be taken as an assurance that particular events discussed in the TYSP will materialize or that particular plans will be implemented. Information and projections pertinent to periods further out in time are inherently subject to greater uncertainty.

This TYSP document contains four (4) chapters as indicated below:

- **CHAPTER 1 DESCRIPTION OF EXISTING FACILITIES**

  This chapter provides an overview of PEF's generating resources as well as the transmission and distribution system.

- **CHAPTER 2 FORECAST OF ELECTRICAL POWER DEMAND AND ENERGY CONSUMPTION**

  Chapter 2 presents the history and forecast for load and peak demand as well as the forecast methodology used. DSM savings and fuel requirement projections are also included.

- **CHAPTER 3 FORECAST OF FACILITIES REQUIREMENTS**

  The resource planning forecast, transmission planning forecast as well as the proposed generating facilities and bulk transmission line additions status are discussed in Chapter 3.

- **CHAPTER 4 ENVIRONMENTAL AND LAND USE INFORMATION**

  Preferred and potential site locations along with any environmental and land use information are presented in this chapter.

CHAPTER 1

DESCRIPTION OF EXISTING FACILITIES

CHAPTER 1

DESCRIPTION OF EXISTING FACILITIES

EXISTING FACILITIES OVERVIEW

OWNERSHIP

Florida Power Corporation d/b/a Progress Energy Florida, Inc. (PEF or the Company) is a wholly owned subsidiary of Progress Energy, Inc. (Progress Energy). Congress enacted legislation in 2005 repealing the Public Utilities Holding Company Act of 1935 (PUHCA) effective February 8, 2006. Subsequent to that date, Progress Energy is no longer subject to regulation by the Securities and Exchange Commission as a public utility holding company.

AREA OF SERVICE

PEF has an obligation to serve approximately 1.6 million customers in Florida. Its service area covers approximately 20,000 square miles in west central Florida and includes the densely populated areas around Orlando, as well as the cities of Saint Petersburg and Clearwater. PEF is interconnected with twenty-two (22) municipal and nine (9) rural electric cooperative systems. PEF is subject to the rules and regulations of the Federal Energy Regulatory Commission (FERC), the Nuclear Regulatory Commission (NRC), and the FPSC. PEF's Service Area is shown in Figure 1.1.

TRANSMISSION/DISTRIBUTION

The Company is part of a nationwide interconnected power network that enables power to be exchanged between utilities. The PEF transmission system includes approximately 5,000 circuit miles of transmission lines. The distribution system includes approximately 18,000 circuit miles of overhead distribution conductors and approximately 13,000 circuit miles of underground distribution cable.

ENERGY MANAGEMENT and ENERGY EFFICIENCY

PEF customers participating in the company's residential Energy Management program help to manage future growth and costs. Approximately 391,500 customers participated in the Energy

Management program at the end of 2008, contributing about 769,900 kW of winter peak-shaving capacity for use during high load periods.

PEF's DSM Plan currently consists of seven (7) residential programs, eight (8) commercial and industrial programs, and one (1) research and development program. PEF will be proposing new DSM goals on June 1, 2009, for the period 2010-2019. The goals will include ten-year projections of the total cost-effective, winter and summer peak demand (kW) and annual energy (kWh) savings for commercial/industrial and residential customer segments. When approved, PEF will be expected to submit a plan designed to meet the approved goals for the ten-year period.

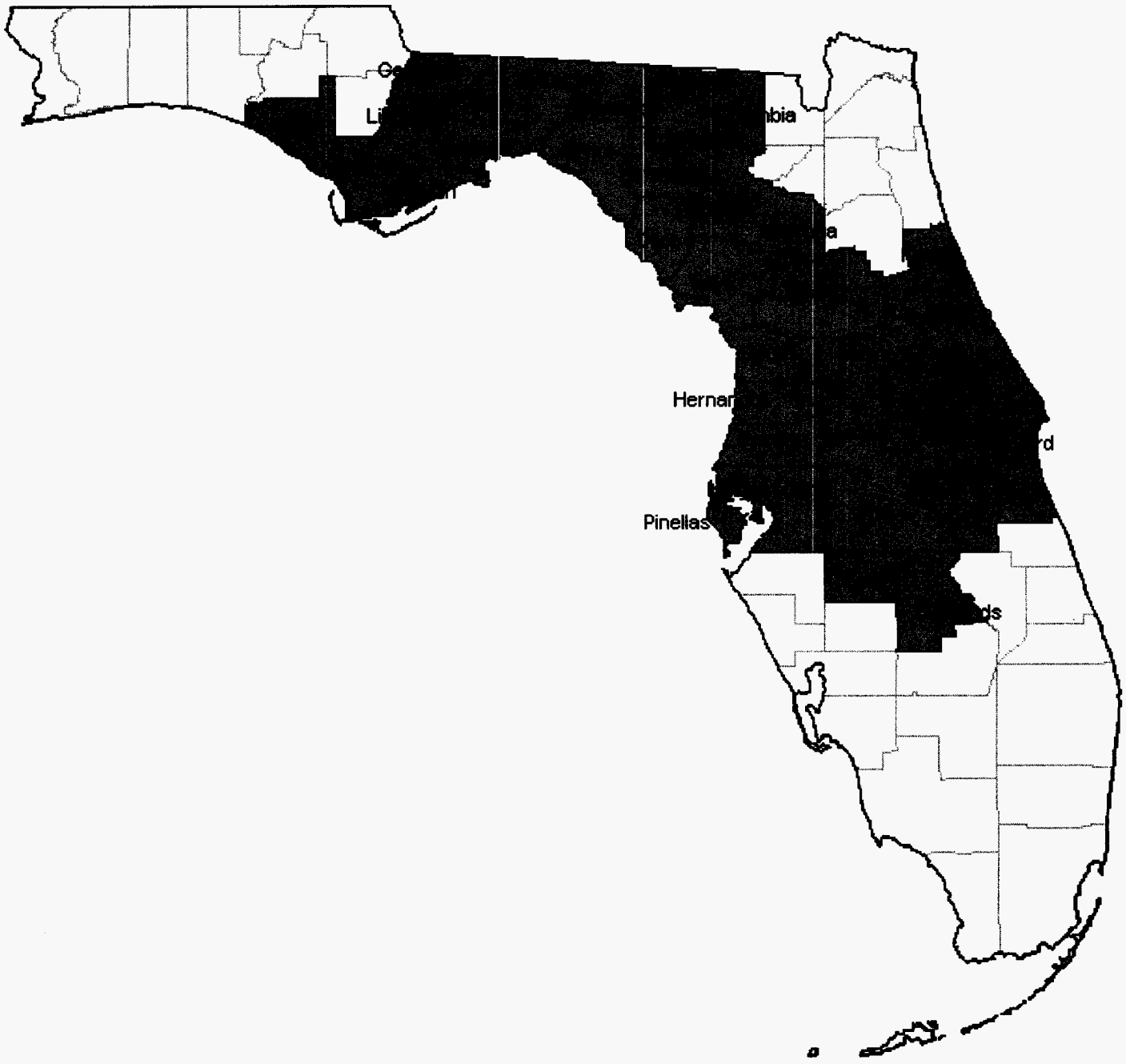
TOTAL CAPACITY RESOURCE

As of December 31, 2008, PEF had total summer capacity resources of approximately 11,197 MW consisting of installed capacity of 9,289 MW (excluding Crystal River Unit 3 joint ownership) and 1,908 MW of firm purchased power. Additional information on PEF's existing generating resources can be found in Schedule 1 and Table 3.1.

FIGURE 1.1

PROGRESS ENERGY FLORIDA

Service Area Map



PROGRESS ENERGY FLORIDA

SCHEDULE 1
EXISTING GENERATING FACILITIES

AS OF DECEMBER 31, 2008

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
									COM'L IN-	EXPECTED	GEN. MAX.	NET CAPABILITY	
	UNIT	LOCATION	UNIT	FUEL		FUEL TRANSPORT		ALT. FUEL	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER
PLANT NAME	NO.	(COUNTY)	TYPE	PRI.	ALT.	PRI.	ALT.	DAYS USE	MO./YEAR	MO./YEAR	KW	MW	MW
STEAM													
ANCLOTE	1	PASCO	ST	RFO	NG	PL	PL		10/74		556,200	501	517
ANCLOTE	2	PASCO	ST	RFO	NG	PL	PL		10/78		556,200	510	521
BARTOW	1	PINELLAS	ST	RFO		WA			9/58	6/2009	127,500	122	122
BARTOW	2	PINELLAS	ST	RFO		WA			8/61	6/2009	127,500	103	107
BARTOW	3	PINELLAS	ST	RFO	NG	WA	PL		7/63	6/2009	239,360	201	211
CRYSTAL RIVER	1	CITRUS	ST	BIT		RR	WA		10/66		440,550	375	376
CRYSTAL RIVER	2	CITRUS	ST	BIT		RR	WA		11/69		523,800	494	500
CRYSTAL RIVER	3 *	CITRUS	NP	NUC		TK			3/77		890,460	789	805
CRYSTAL RIVER	4	CITRUS	ST	BIT		WA	RR		12/82		739,260	722	732
CRYSTAL RIVER	5	CITRUS	ST	BIT		WA	RR		10/84		739,260	720	732
SUWANNEE RIVER	1	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/53	*****	34,500	30	30
SUWANNEE RIVER	2	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/54	*****	37,500	30	30
SUWANNEE RIVER	3	SUWANNEE	ST	RFO	NG	TK/RR	PL		10/56	*****	75,000	71	73
												4,668	**4,756**
COMBINED-CYCLE													
HINES ENERGY COMPLEX	1	POLK	CC	NG	DFO	PL	TK	2***	4/99		546,500	462	528
HINES ENERGY COMPLEX	2	POLK	CC	NG	DFO	PL	TK		12/03		548,250	490	563
HINES ENERGY COMPLEX	3	POLK	CC	NG	DFO	PL	TK		11/05		561,000	488	569
HINES ENERGY COMPLEX	4	POLK	CC	NG	DFO	PL	TK		12/07		610,000	472	544
TIGER BAY	1	POLK	CC	NG		PL			8/97		278,100	205	224
												2,117	**2,428**
COMBUSTION TURBINE													
AVON PARK	P1	HIGHLANDS	CT	NG	DFO	PL	TK	3***	12/68	*****	33,790	24	34
AVON PARK	P2	HIGHLANDS	CT	DFO		TK			12/68	*****	33,790	24	35
BARTOW	P1, P3	PINELLAS	CT	DFO		WA			5/72, 6/72		111,400	87	110
BARTOW	P2	PINELLAS	CT	NG	DFO	PL	WA	8	6/72		55,700	43	57
BARTOW	P4	PINELLAS	CT	NG	DFO	PL	WA	8	6/72		55,700	47	61
BAYBORO	P1-P4	PINELLAS	CT	DFO		WA			4/73		226,800	174	231
DEBARY	P1-P6	VOLUSIA	CT	DFO		TK			12/75-4/76		401,220	316	393
DEBARY	P7-P9	VOLUSIA	CT	NG	DFO	PL	TK	8	10/92		345,000	247	295
DEBARY	P10	VOLUSIA	CT	DFO		TK			10/92		115,000	82	97
HIGGINS	P1-P2	PINELLAS	CT	NG	DFO	PL	TK		3/69, 4/69	*****	67,580	51	64
HIGGINS	P3-P4	PINELLAS	CT	NG	DFO	PL	TK	1	12/70, 1/71	*****	85,850	62	65
INTERCESSION CITY	P1-P6	OSCEOLA	CT	DFO		PL,TK			5/74		340,200	284	370
INTERCESSION CITY	P7-P10	OSCEOLA	CT	NG	DFO	PL	PL,TK	5	10/93		460,000	328	376
INTERCESSION CITY	P11 **	OSCEOLA	CT	DFO		PL,TK			1/97		165,000	143	161
INTERCESSION CITY	P12-P14	OSCEOLA	CT	NG	DFO	PL	PL,TK	5	12/00		345,000	232	279
RIO PINAR	P1	ORANGE	CT	DFO		TK			11/70	*****	19,290	12	16
SUWANNEE RIVER	P1, P3	SUWANNEE	CT	NG	DFO	PL	TK	9****	10/80, 11/80		122,400	103	134
SUWANNEE RIVER	P2	SUWANNEE	CT	DFO		TK			10/80		61,200	50	66
TURNER	P1-P2	VOLUSIA	CT	DFO		TK			10/70	*****	38,580	22	32
TURNER	P3	VOLUSIA	CT	DFO		TK			8/74		71,200	63	83
TURNER	P4	VOLUSIA	CT	DFO		TK			8/74		71,200	64	84
UNIV. OF FLA.	P1	ALACHUA	CT	NG		PL			1/94		43,000	46	47
												2,504	**3,090**
										TOTAL RESOURCES (MW)		**9,289**	**10,274**

* REPRESENTS PEF OWNERSHIP OF UNIT WHICH IS APPROXIMATELY 91.8%.

** THE 143 MW SUMMER CAPABILITY (JUNE THROUGH SEPTEMBER) IS OWNED BY GEORGIA POWER COMPANY

*** FOR ENTIRE PLANT

**** P1 REQUIRES A 3-4 DAY OUTAGE IN ORDER TO SWITCH BETWEEN NG & DFO

***** SUWANNEE STEAM UNITS ESTIMATED TO BE SHUTDOWN BY 10/2015; PEAKERS at AVON PARK, HIGGINS, RIO PINAR, TURNER ARE ESTIMATED TO BE PUT IN COLD STAND-BY OR RETIRED BY 6/2016.

CHAPTER 2

FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION

CHAPTER 2

FORECAST OF ELECTRIC POWER DEMAND

AND

ENERGY CONSUMPTION

OVERVIEW

The information presented in the following Schedules 2, 3 and 4 represents PEF's history and forecast of customers, energy sales (GWh), and peak demand (MW). Assumptions were made to predict a forecast with a 50/50 probability, or the most likely scenario.

PEF's customer growth is expected to average 1.5 percent between 2009 and 2018, which is less than the ten-year historical average of 2.0 percent. Slower population growth, based on the latest projection from the University of Florida's Bureau of Economic and Business Research (BEBR), and economic conditions less favorable for the housing/construction industry, including, for example, tighter mortgage credit availability and higher property taxes and insurance rates, results in a lower customer projection when compared to the higher historical growth rate. This translates into lower projected energy and demand growth rates from historic rate levels.

Net energy for load (NEL), which had grown at an average of 2.2 percent between 1999 and 2008, is expected to increase by 1.5 percent per year from 2009 to 2018. A lower contribution from the wholesale jurisdiction, whose billed energy grew an average of 8.2 percent between 1999 and 2008, results in lower expected system growth going forward at just 0.3 percent. Retail billed energy, which grew at a 1.6 percent average rate historically, is expected to grow 1.7 percent over the next ten-year period. The higher projected growth rate is solely due to a return to a more typical weather pattern in the forecast.

Summer net firm demand is expected to grow at an average of 1.4 percent per year during the next ten (10) years. This is lower than the 1.9 percent growth rate experienced throughout the last ten (10) years. Again, slower customer growth and lower contribution from the wholesale jurisdiction are expected going forward. Also, higher load management capability for the projected period holds down growth in firm peak demand.

Summer net firm retail demand is expected to grow at an average of 1.7 percent per year during the next ten (10) years; this is lower than the 2.0 percent average annual growth rate experienced throughout the last ten-year period. The historical growth percentage was driven by a period of strong customer growth and declining load management capability while the projection period assumed weaker growth and return to higher load management capability.

ENERGY CONSUMPTION AND DEMAND FORECAST SCHEDULES

SCHEDULE	DESCRIPTION
2.1, 2.2 and 2.3	History and Forecast of Energy Consumption and Number of Customers by Customer Class
3.1	History and Forecast of Summer Peak Demand (MW)
3.2	History and Forecast of Winter Peak Demand (MW)
3.3	History and Forecast of Annual Net Energy for Load (GWh)
4	Previous Year Actual and Two-Year Forecast of Peak Demand and Net Energy for Load by Month

PROGRESS ENERGY FLORIDA

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 AND RESIDENTIAL					COMMERCIAL		
YEAR	PEF POPULATION	MEMBERS PER HOUSEHOLD	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER
1999	3,047,024	2.511	16,245	1,213,470	13,387	10,327	140,897	73,293
2000	3,044,983	2.467	17,116	1,234,286	13,867	10,813	143,475	75,368
2001	3,142,066	2.465	17,604	1,274,672	13,810	11,061	146,983	75,251
2002	3,210,839	2.467	18,754	1,301,515	14,409	11,420	150,577	75,842
2003	3,287,164	2.468	19,429	1,331,914	14,587	11,553	154,294	74,876
2004	3,368,023	2.468	19,347	1,364,677	14,177	11,734	158,780	73,898
2005	3,449,223	2.469	19,894	1,397,012	14,240	11,945	161,001	74,190
2006	3,533,542	2.468	20,021	1,431,743	13,983	11,975	162,774	73,568
2007	3,552,304	2.462	19,912	1,442,853	13,800	12,184	162,837	74,821
2008	3,573,335	2.466	19,328	1,449,041	13,339	12,139	162,569	74,669
2009	3,573,429	2.466	19,641	1,449,079	13,554	11,811	162,834	72,534
2010	3,593,985	2.466	19,563	1,457,415	13,423	11,921	164,668	72,394
2011	3,632,641	2.465	20,023	1,473,688	13,587	12,243	168,321	72,736
2012	3,685,417	2.465	20,725	1,495,098	13,862	12,535	172,582	72,632
2013	3,750,377	2.465	21,184	1,521,451	13,924	12,720	175,977	72,282
2014	3,817,129	2.465	21,523	1,548,531	13,899	12,909	179,465	71,930
2015	3,882,787	2.465	21,689	1,575,167	13,769	13,037	182,896	71,281
2016	3,943,504	2.464	21,968	1,600,448	13,726	13,276	186,152	71,318
2017	4,002,775	2.464	22,478	1,624,503	13,837	13,528	189,252	71,481
2018	4,059,992	2.464	23,005	1,647,724	13,962	13,788	192,244	71,721

PROGRESS ENERGY FLORIDA

SCHEDULE 2.2
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		INDUSTRIAL					
YEAR	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	RAILROADS AND RAILWAYS GWh	STREET & HIGHWAY LIGHTING GWh	OTHER SALES TO PUBLIC AUTHORITIES GWh	TOTAL SALES TO ULTIMATE CONSUMERS GWh
1999	4,334	2,629	1,648,536	0	27	2,509	33,442
2000	4,249	2,535	1,676,134	0	28	2,626	34,832
2001	3,872	2,551	1,517,836	0	28	2,698	35,262
2002	3,835	2,535	1,512,821	0	28	2,822	36,859
2003	4,001	2,643	1,513,810	0	29	2,946	37,958
2004	4,069	2,733	1,488,840	0	28	3,016	38,194
2005	4,140	2,703	1,531,632	0	27	3,171	39,176
2006	4,160	2,697	1,542,455	0	27	3,249	39,432
2007	3,819	2,668	1,431,409	0	26	3,341	39,282
2008	3,786	2,587	1,463,471	0	26	3,276	38,555
2009	3,890	2,571	1,513,030	0	25	3,354	38,721
2010	3,930	2,565	1,532,164	0	24	3,381	38,819
2011	4,108	2,565	1,601,559	0	24	3,437	39,835
2012	4,265	2,565	1,662,768	0	23	3,519	41,067
2013	4,565	2,565	1,779,727	0	22	3,615	42,106
2014	4,564	2,565	1,779,337	0	22	3,715	42,733
2015	4,492	2,565	1,751,267	0	21	3,812	43,051
2016	4,271	2,565	1,665,107	0	20	3,909	43,444
2017	4,281	2,565	1,669,006	0	20	4,001	44,308
2018	4,295	2,565	1,674,464	0	19	4,091	45,198

PROGRESS ENERGY FLORIDA

SCHEDULE 2.3
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)
YEAR	SALES FOR RESALE GWh	UTILITY USE & LOSSES GWh	NET ENERGY FOR LOAD GWh	OTHER CUSTOMERS (AVERAGE NO.)	TOTAL NO. OF CUSTOMERS
1999	3,267	2,451	39,160	19,600	1,376,597
2000	3,732	2,678	41,242	20,004	1,400,299
2001	3,839	1,832	40,933	20,752	1,444,958
2002	3,173	2,535	42,567	21,155	1,475,783
2003	3,359	2,594	43,911	21,665	1,510,516
2004	4,301	2,773	45,268	22,437	1,548,627
2005	5,195	2,507	46,878	22,701	1,583,417
2006	4,220	2,389	46,041	23,182	1,620,396
2007	5,598	2,753	47,633	24,010	1,632,368
2008	6,619	2,484	47,658	24,738	1,638,935
2009	7,144	2,691	48,556	24,948	1,639,432
2010	7,262	2,684	48,765	25,103	1,649,751
2011	7,255	2,756	49,846	25,437	1,670,011
2012	8,457	2,961	52,485	25,881	1,696,126
2013	8,658	2,883	53,647	26,415	1,726,408
2014	7,217	2,809	52,759	26,993	1,757,554
2015	7,157	2,909	53,117	27,574	1,788,202
2016	7,219	2,981	53,644	28,130	1,817,295
2017	7,270	3,034	54,612	28,658	1,844,978
2018	7,323	3,093	55,614	29,173	1,871,706

PROGRESS ENERGY FLORIDA

SCHEDULE 3.1
HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW)
BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
1999	9,039	1,326	7,713	292	505	115	45	156	183	7,743
2000	8,916	1,319	7,597	277	455	129	48	158	75	7,774
2001	8,847	1,117	7,730	283	418	142	48	159	75	7,722
2002	9,426	1,203	8,223	305	392	156	43	161	75	8,294
2003	8,886	887	7,999	300	355	172	44	164	75	7,776
2004	9,589	1,071	8,518	531	331	188	39	166	110	8,224
2005	10,356	1118	9,238	448	310	206	38	169	110	9,074
2006	10,153	1257	8,896	329	307	226	37	172	66	9,016
2007	10,937	1544	9,393	334	291	243	45	179	110	9,735
2008	10,593	1512	9,081	500	284	259	76	189	110	9,176
2009	10,825	1,611	9,214	304	294	275	104	198	110	9,540
2010	10,844	1,534	9,310	302	311	291	117	207	125	9,490
2011	11,008	1,522	9,486	324	330	308	126	216	125	9,578
2012	11,388	1,691	9,697	343	350	325	136	226	125	9,885
2013	11,685	1,716	9,969	395	369	342	145	235	125	10,075
2014	11,728	1,535	10,193	396	386	359	154	244	125	10,063
2015	11,965	1,558	10,406	391	402	366	157	248	125	10,275
2016	12,160	1,587	10,573	352	413	380	156	256	125	10,478
2017	12,383	1,611	10,771	353	421	393	156	263	125	10,672
2018	12,600	1,638	10,962	354	428	405	156	269	125	10,864

Historical Values (1999 - 2008):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) =Customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

Projected Values (2009 - 2018):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

PROGRESS ENERGY FLORIDA

SCHEDULE 3.2
HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW)
BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
1998/99	10,473	1,741	8,732	305	874	200	18	119	187	8,770
1999/00	10,047	1,728	8,319	225	849	234	20	121	182	8,416
2000/01	11,458	1,984	9,474	255	829	259	23	123	185	9,785
2001/02	10,685	1,624	9,061	285	822	285	24	123	188	8,958
2002/03	11,555	1,538	10,017	271	795	313	27	124	198	9,826
2003/04	9,325	1,167	8,158	498	788	343	26	125	262	7,284
2004/05	10,833	1,600	9,233	575	779	371	26	125	283	8,673
2005/06	10,700	1,467	9,233	298	762	413	26	126	239	8,835
2006/07	9,899	1,576	8,323	304	671	454	26	128	262	8,055
2007/08	10,967	1,828	9,139	234	763	487	43	135	278	9,027
2008/09	12,108	2,017	10,091	303	770	530	81	141	296	9,987
2009/10	12,246	2,100	10,146	302	787	572	103	148	311	10,022
2010/11	12,457	2,177	10,280	324	805	615	113	155	312	10,133
2011/12	12,895	2,428	10,467	343	822	658	123	162	315	10,472
2012/13	13,285	2,564	10,721	394	840	702	133	169	319	10,728
2013/14	13,254	2,313	10,941	396	858	746	143	176	322	10,613
2014/15	13,553	2,399	11,154	391	875	790	152	183	326	10,836
2015/16	13,810	2,487	11,323	352	893	829	152	189	328	11,067
2016/17	14,096	2,573	11,523	353	900	868	152	195	331	11,297
2017/18	14,372	2,658	11,714	354	907	905	152	201	334	11,518
2018/19	14,643	2,745	11,898	355	912	942	152	207	337	11,738

Historical Values (1999 - 2008):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

Projected Values (2009 - 2019):

Cols. (2) - (4) forecasted peak without load control and conservation.

Cols. (5) - (9) = Represent cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

PROGRESS ENERGY FLORIDA

SCHEDULE 3.3
HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh)
BASE CASE

(1)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL	RESIDENTIAL CONSERVATION	COMM. / IND. CONSERVATION	OTHER ENERGY REDUCTIONS*	RETAIL	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) **
1999	40,375	312	339	564	33,441	3,267	2,452	39,160	50.0
2000	42,486	334	345	565	34,832	3,732	2,678	41,242	50.5
2001	42,200	354	349	564	35,263	3,839	1,831	40,933	47.5
2002	43,861	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,234	402	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,834	426	360	780	38,193	4,301	2,774	45,268	56.5
2005	48,475	455	363	779	39,177	5,195	2,506	46,878	52.3
2006	47,399	484	365	509	39,432	4,220	2,389	46,041	52.1
2007	49,310	511	387	779	39,282	5,598	2,753	47,633	52.3
2008	49,169	541	404	565	38,556	6,619	2,483	47,658	53.1
2009	50,328	571	422	779	38,721	7,144	2,691	48,556	55.5
2010	50,677	601	440	871	38,819	7,262	2,684	48,765	55.5
2011	51,806	631	458	871	39,834	7,255	2,757	49,846	56.2
2012	54,495	661	476	873	41,067	8,457	2,961	52,485	57.1
2013	55,703	691	494	871	42,107	8,658	2,882	53,647	57.1
2014	54,863	721	512	871	42,733	7,217	2,809	52,759	56.7
2015	55,264	748	528	871	43,051	7,157	2,909	53,117	56.0
2016	55,836	775	544	873	43,444	7,219	2,981	53,644	55.2
2017	56,843	801	559	871	44,308	7,270	3,034	54,612	55.2
2018	57,885	826	574	871	45,198	7,323	3,093	55,614	55.1

* Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration.

** Load Factors for historical years are calculated using the actual winter peak demand except the 1998, 2004 and 2007 historical load factors which are based on the actual summer peak demand.
Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2)

PROGRESS ENERGY FLORIDA

SCHEDULE 4

PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND

AND NET ENERGY FOR LOAD BY MONTH

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ACTUAL		FORECAST		FORECAST	
	2008		2009		2010	
	PEAK DEMAND	NEL	PEAK DEMAND	NEL	PEAK DEMAND	NEL
MONTH	MW	GWh	MW	GWh	MW	GWh
JANUARY	10,210	3,637	11,327	3,901	11,400	3,887
FEBRUARY	8,225	3,251	9,087	3,366	9,068	3,332
MARCH	6,797	3,511	7,927	3,653	7,890	3,616
APRIL	7,648	3,813	8,261	3,614	8,273	3,599
MAY	9,301	4,420	9,413	4,273	9,400	4,306
JUNE	9,899	4,628	9,884	4,508	9,877	4,550
JULY	10,018	4,723	10,171	4,830	10,159	4,850
AUGUST	10,036	4,730	10,242	4,916	10,221	4,943
SEPTEMBER	9,503	4,575	9,536	4,431	9,563	4,464
OCTOBER	8,061	3,780	8,859	3,964	8,933	4,013
NOVEMBER	7,448	3,278	7,337	3,355	7,374	3,399
DECEMBER	8,135	3,312	8,278	3,745	8,356	3,806
TOTAL		47,658		48,556		48,765

FUEL REQUIREMENTS AND ENERGY SOURCES

PEF's actual and projected nuclear, coal, oil, and gas requirements (by fuel unit) are shown in Schedule 5. PEF's two-year actual and ten-year projected energy sources by fuel-type, are presented in Schedules 6.1 and 6.2, in GWh and percent (%) respectively. PEF's fuel requirements and energy sources reflect a diverse fuel supply system that is not dependent on any one fuel source. Near term natural gas consumption is projected to increase as plants and purchases with tolling agreements are added to meet future load growth. However, a decrease in future fossil fuel consumption is projected with the addition of planned new, advanced design nuclear units.

PROGRESS ENERGY FLORIDA

SCHEDULE 5

FUEL REQUIREMENTS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
				-ACTUAL-											
	FUEL REQUIREMENTS		UNITS	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
(1)	NUCLEAR		TRILLION BTU	63	66	52	68	60	78	74	79	74	129	205	244
(2)	COAL		1,000 TON	6,108	5,806	5,285	5,516	6,268	6,920	7,025	6,498	6,897	6,633	5,466	5,110
(3)	RESIDUAL	TOTAL	1,000 BBL	7,360	4,287	3,241	592	583	671	946	881	989	903	545	600
(4)		STEAM	1,000 BBL	7,360	4,287	3,241	592	583	671	946	881	989	903	545	600
(5)		CC	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(6)		CT	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(7)		DIESEL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(8)	DISTILLATE	TOTAL	1,000 BBL	692	372	210	103	133	151	178	206	236	261	195	304
(9)		STEAM	1,000 BBL	83	79	63	73	61	61	80	88	74	99	176	272
(10)		CC	1,000 BBL	22	8	0	0	0	0	0	0	0	0	0	0
(11)		CT	1,000 BBL	586	285	147	30	72	90	98	118	162	162	19	32
(12)		DIESEL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(13)	NATURAL GAS	TOTAL	1,000 MCF	83,300	112,295	148,618	159,991	167,713	159,494	164,892	169,994	168,824	146,545	129,075	115,820
(14)		STEAM	1,000 MCF	5,054	17,380	18,086	20,170	20,319	20,606	21,902	20,927	20,340	17,023	16,751	16,803
(15)		CC	1,000 MCF	65,369	83,148	119,431	131,267	138,453	131,123	133,230	138,801	135,361	119,205	106,512	93,553
(16)		CT	1,000 MCF	12,877	11,767	11,101	8,555	8,940	7,765	9,760	10,267	13,123	10,317	5,812	5,464
	OTHER (SPECIFY)														
(17)	OTHER, DISTILLATE	ANNUAL FIRM INTERCHANGE	1,000 BBL	N/A	N/A	22	6	7	0	0	0	0	0	0	0
(18)	OTHER, NATURAL GAS	ANNUAL FIRM INTERCHANGE, CC	1,000 MCF	N/A	N/A	0	0	0	0	0	0	0	0	0	0
(18.1)	OTHER, NATURAL GAS	ANNUAL FIRM INTERCHANGE, CT	1,000 MCF	N/A	N/A	7,168	7,063	9,594	14,130	19,885	19,756	20,656	17,680	11,047	9,672

PROGRESS ENERGY FLORIDA

SCHEDULE 6.1

ENERGY SOURCES (GWh)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
				-ACTUAL-											
	ENERGY SOURCES		UNITS	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
(1)	ANNUAL FIRM INTERCHANGE 1/		GWh	2,956	2,719	1,227	1,147	998	1,365	1,922	1,901	1,999	1,705	1,023	826
(2)	NUCLEAR		GWh	6,124	6,425	5,068	6,839	5,985	7,869	7,389	7,936	7,391	13,113	20,976	24,955
(3)	COAL		GWh	15,293	14,219	13,049	13,007	14,672	16,281	16,550	15,300	16,226	15,549	12,727	11,884
(4)	RESIDUAL	TOTAL	GWh	4,575	2,534	2,030	378	372	429	606	562	631	578	349	384
(5)		STEAM	GWh	4,575	2,534	2,030	378	372	429	606	562	631	578	349	384
(6)		CC	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(7)		CT	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(8)		DIESEL	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(9)	DISTILLATE	TOTAL	GWh	307	169	64	14	31	39	41	50	70	70	9	13
(10)		STEAM	GWh	50	46	0	0	0	0	0	0	0	0	0	0
(11)		CC	GWh	13	6	0	0	0	0	0	0	0	0	0	0
(12)		CT	GWh	244	116	64	14	31	39	41	50	70	70	9	13
(13)		DIESEL	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(14)	NATURAL GAS	TOTAL	GWh	10,579	14,239	19,950	21,495	22,658	21,359	22,009	22,779	22,480	19,497	17,065	15,136
(15)		STEAM	GWh	475	1,609	1,628	1,827	1,844	1,876	2,013	1,913	1,870	1,596	1,562	1,569
(16)		CC	GWh	9,093	11,745	17,309	18,871	19,982	18,751	19,095	19,929	19,406	16,935	14,927	13,026
(17)		CT	GWh	1,011	885	1,013	797	832	731	901	937	1,204	966	576	542
(18)	OTHER 2/														
	QF PURCHASES		GWh	3,002	2,780	2,421	2,338	2,337	2,344	2,156	1,334	1,334	1,331	1,314	1,302
	RENEWABLES		GWh	1,210	984	1,164	1,163	1,164	1,167	1,166	1,162	1,164	1,163	1,150	1,114
	IMPORT FROM OUT OF STATE		GWh	3,658	3,639	3,583	2,385	1,628	1,633	1,808	1,734	1,823	637	0	0
	EXPORT TO OUT OF STATE		GWh	-71	-49	0	0	0	0	0	0	0	0	0	0
(19)	NET ENERGY FOR LOAD		GWh	47,633	47,658	48,556	48,765	49,846	52,485	53,647	52,759	53,117	53,644	54,612	55,614

1/ NET ENERGY PURCHASED (+) OR SOLD (-) WITHIN THE FRCC REGION.

2/ NET ENERGY PURCHASED (+) OR SOLD (-).

PROGRESS ENERGY FLORIDA

SCHEDULE 6.2

ENERGY SOURCES (PERCENT)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
				-ACTUAL-											
	ENERGY SOURCES		UNITS	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
(1)	ANNUAL FIRM INTERCHANGE 1/		%	6.2%	5.7%	2.5%	2.4%	2.0%	2.6%	3.6%	3.6%	3.8%	3.2%	1.9%	1.5%
(2)	NUCLEAR		%	12.9%	13.5%	10.4%	14.0%	12.0%	15.0%	13.8%	15.0%	13.9%	24.4%	38.4%	44.9%
(3)	COAL		%	32.1%	29.8%	26.9%	26.7%	29.4%	31.0%	30.8%	29.0%	30.5%	29.0%	23.3%	21.4%
(4)	RESIDUAL	TOTAL	%	9.6%	5.3%	4.2%	0.8%	0.7%	0.8%	1.1%	1.1%	1.2%	1.1%	0.6%	0.7%
(5)		STEAM	%	9.6%	5.3%	4.2%	0.8%	0.7%	0.8%	1.1%	1.1%	1.2%	1.1%	0.6%	0.7%
(6)		CC	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(7)		CT	%	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)		DIESEL	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(9)	DISTILLATE	TOTAL	%	0.6%	0.4%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%
(10)		STEAM	%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(11)		CC	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(12)		CT	%	0.5%	0.2%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%
(13)		DIESEL	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(14)	NATURAL GAS	TOTAL	%	22.2%	29.9%	41.1%	44.1%	45.5%	40.7%	41.0%	43.2%	42.3%	36.3%	31.2%	27.2%
(15)		STEAM	%	1.0%	3.4%	3.4%	3.7%	3.7%	3.6%	3.8%	3.6%	3.5%	3.0%	2.9%	2.8%
(16)		CC	%	19.1%	24.6%	35.6%	38.7%	40.1%	35.7%	35.6%	37.8%	36.5%	31.6%	27.3%	23.4%
(17)		CT	%	2.1%	1.9%	2.1%	1.6%	1.7%	1.4%	1.7%	1.8%	2.3%	1.8%	1.1%	1.0%
(18)	OTHER 2/														
	QF PURCHASES		%	6.3%	5.8%	5.0%	4.8%	4.7%	4.5%	4.0%	2.5%	2.5%	2.5%	2.4%	2.3%
	RENEWABLES		%	2.5%	2.1%	2.4%	2.4%	2.3%	2.2%	2.2%	2.2%	2.2%	2.2%	2.1%	2.0%
	IMPORT FROM OUT OF STATE		%	7.7%	7.6%	7.4%	4.9%	3.3%	3.1%	3.4%	3.3%	3.4%	1.2%	0.0%	0.0%
	EXPORT TO OUT OF STATE		%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(19)	NET ENERGY FOR LOAD		%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1/ NET ENERGY PURCHASED (+) OR SOLD (-) WITHIN THE FRCC REGION.

2/ NET ENERGY PURCHASED (+) OR SOLD (-).

FORECASTING METHODS AND PROCEDURES

INTRODUCTION

Accurate forecasts of long-range electric energy consumption, customer growth, and peak demand are essential elements in electric utility planning. Accurate projections of a utility's future load growth require a forecasting methodology with the ability to account for a variety of factors influencing electric energy usage over the planning horizon. PEF's forecasting framework utilizes a set of econometric models to achieve this end. This section will describe the underlying methodology of the customer, energy, and peak demand forecasts including the principal assumptions incorporated within each. Also included is a description of how Demand-Side Management (DSM) impacts the forecast, the development of high and low forecast scenarios and a review of DSM programs.

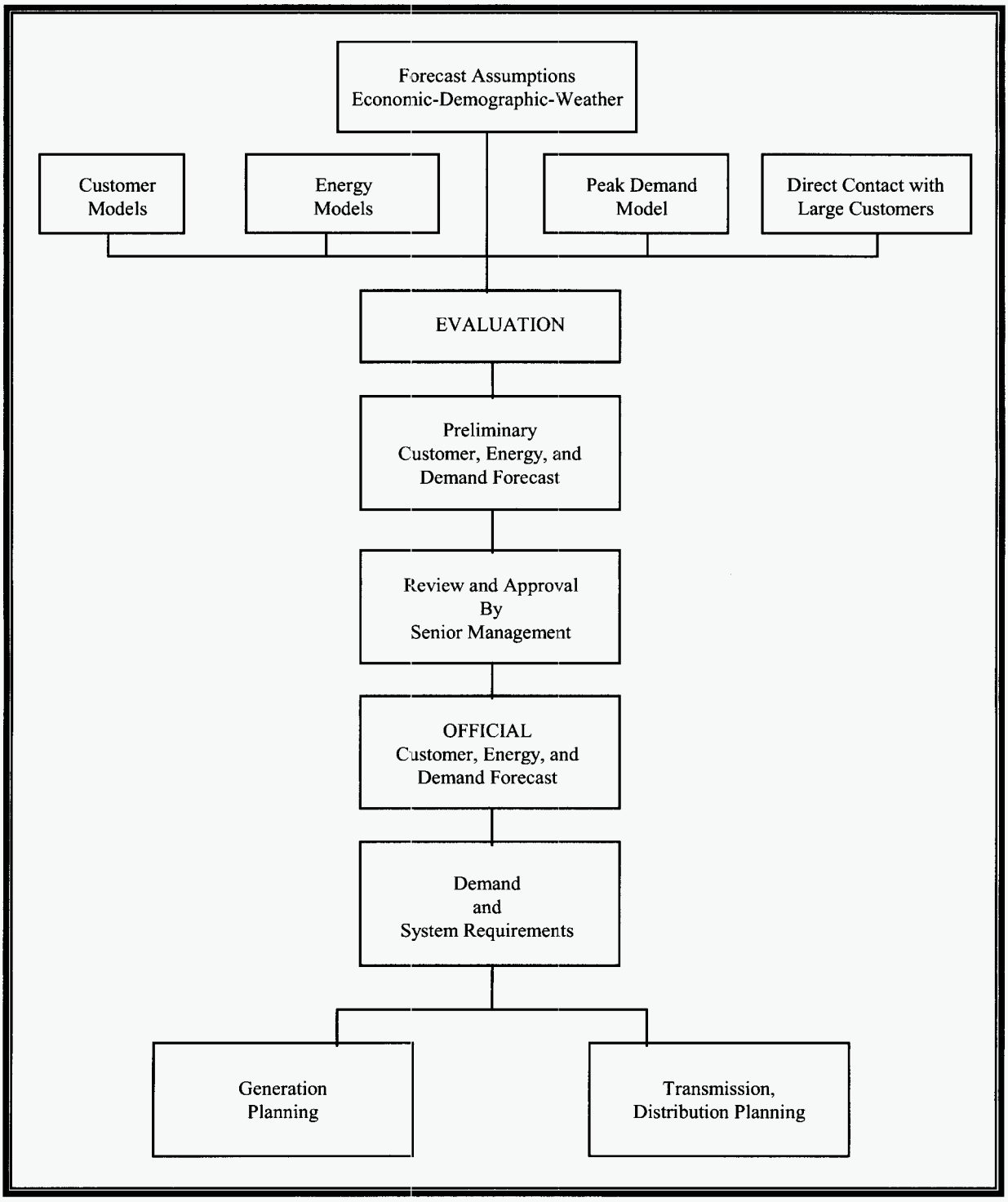
Figure 2.1, entitled "Customer, Energy and Demand Forecast", gives a general description of PEF's forecasting process. Highlighted in the diagram is a disaggregated modeling approach that blends the impacts of average class usage, as well as customer growth, based on a specific set of assumptions for each class. Also accounted for is some direct contact with large customers. These inputs provide the tools needed to frame the most likely scenario of the company's future demand.

FORECAST ASSUMPTIONS

The first step in any forecasting effort is the development of assumptions upon which the forecast is based. The Financial Services Department develops these assumptions based on discussions with a number of departments within PEF, as well as through the research efforts of a number of external sources. These assumptions specify major factors that influence the level of customers, energy sales, or peak demand over the forecast horizon. The following set of assumptions forms the basis for the forecast presented in this document.

FIGURE 2.1

Customer, Energy, and Demand Forecast



GENERAL ASSUMPTIONS

1. Normal weather conditions for energy sales are assumed over the forecast horizon using a sales-weighted thirty-year average of conditions at seven (7) weather stations across Florida (Saint Petersburg, Tampa, Orlando, Winter Haven, Gainesville, Daytona Beach, and Tallahassee). For kilowatt-hour sales projections, normal weather is based on a historical thirty-year average of the service area weighted billing month degree-days. Seasonal peak demand projections are based on a thirty-year historical average of system-weighted temperatures at time of seasonal peak at the Tampa, Orlando, and Tallahassee weather stations; the other weather stations are not used in developing the historic average because they lack the historic hourly data needed for peak-weather normalization.

2. The population projections produced by the Bureau of Economic and Business Research (BEBR) at the University of Florida as published in "Florida Population Studies" Bulletin No. 150 (March 2008) provide the basis for development of the customer forecast. An update to include a downward revision to State-wide growth made by the BEBR in July 2008 was incorporated to capture the latest trends being witnessed in the PEF service area. State and national economic assumptions produced by Economy.Com in their national and Florida forecasts (September 2008) are also included.

3. Within the PEF service area, the phosphate mining industry is the dominant sector in the industrial sales class. Four (4) major customers accounted for 32 percent of the industrial class MWh sales in 2008. These energy intensive customers mine and process phosphate-based fertilizer products for the global marketplace. The supply and demand for their products are dictated by global conditions that include, but are not limited to, foreign competition, national/international agricultural industry conditions, exchange-rate fluctuations, and international trade pacts. Load and energy consumption at the PEF-served mining or chemical processing sites depend heavily on plant operations, which are heavily influenced by these global as well as the local conditions. After years of excess mining capacity and weak product pricing power, the industry has consolidated down to just a few players in time to take advantage of better market conditions. In addition, a weaker U.S currency value on the foreign exchange has helped the industry in two (2) ways. First, American farm commodities have

become more competitive overseas which has contributed to higher crop production at home. The demand for corn-based ethanol has also increased farm acreage. Both impacts are expected to continue to maintain and increase the demand for fertilizer products. Second, a weak U.S. dollar results in U.S. fertilizer producers becoming more price competitive relative to foreign producers. Going forward, energy consumption is expected to increase in the near term, as a new mine operation is expected to open. A significant risk to this projection lies in the volatile price of energy, which is a major cost of both mining and producing phosphoric fertilizers. The energy projection for this industry assumes no major reductions or shutdowns of operations in the service territory. This includes any change in output from self-owned generation facilities, which remove load from PEF generation facilities.

4. PEF supplies load and energy service to wholesale customers on a "full", "partial", and "supplemental" requirement basis. Full requirements (FR) customers' demand and energy is assumed to grow at a rate that approximates their historical trend. Contracts for this service include the cities of Bartow, Chattahoochee, Mt. Dora, Quincy, Williston, and Winter Park. Partial requirements (PR) customer load is assumed to reflect the current contractual obligations reflected by the nature of the stratified load they have contracted for, plus their ability to receive dispatched energy from power marketers any time it is more economical for them to do so. Contracts for PR service included in this forecast are with the Florida Municipal Power Agency (FMPA), Reedy Creek Utilities, TECO Energy, Seminole Electric Cooperative, Inc. (SECI) and the cities of New Smyrna Beach, Tallahassee, Gainesville and Homestead.

   PEF's contractual arrangement with SECI includes a "supplemental" service contract (1983 contract) for service over and above stated levels they commit to supply themselves. This contract has been renegotiated and will change from a supplemental nature sale to a "stratified capacity" sale consisting of a base, peaking and system average pieces beginning in 2014 when the term of this contract expires in December 2013. A firm contract with SECI for stratified intermediate service, which includes both 450 MW (October 1995 contract) and an additional 150 MW in 2012, is contained in this projection. Another contract with varying levels of stratified demands ranging from 75 MW to 300 MW will be served in 2009 and a

FR contract which will commence in 2010 and last through the forecast horizon, are also contained in this forecast. Finally, an agreement to provide interruptible service at a SECI metering site has also been included in this projection.

5. This forecast assumes that PEF will successfully renew all future franchise agreements.

6. This forecast incorporates demand and energy reductions from PEF's dispatchable and non-dispatchable DSM programs required to meet the approved goals set by the FPSC.

7. Expected energy and demand reductions from customer-owned self-service cogeneration facilities are also included in this forecast. PEF will supply the supplemental load of self-service cogeneration customers. While PEF offers "standby" service to all cogeneration customers, the forecast does not assume an unplanned need for power at time of peak.

8. This forecast assumes that the regulatory environment and the obligation to serve our retail customers will continue throughout the forecast horizon. Regarding wholesale customers, the company does not plan for generation resources unless a long-term contract is in place. Current FR customers are assumed to renew their contracts with PEF except those who have given notice to terminate. Current PR contracts are projected to terminate as terms reach their expiration date. Deviation from these assumptions can occur, based on information provided by the Portfolio Management Department.

SHORT-TERM ECONOMIC ASSUMPTIONS

The economic outlook for this forecast was developed in mid-2008 as the homebuilding market continued its significant downturn. This market shift has contributed to the lack of PEF customer growth.

The forecast was developed in a year of economic instability. Record high oil prices decreased consumption, therefore assisting in slowing economic growth. Initial claims for unemployment insurance had increased significantly and State and National employment levels had decreased each month. The Federal Reserve Board commenced a series of interest rate cuts in response to the

economic changes. The early stages of the serious credit crisis had just begun. In Florida, the rising home foreclosures and falling home values as well as a large inventory of unsold homes is expected to hold down new construction for most of 2009. A significant increase in electric prices was assumed as utilities needed to pass-through higher fuel costs. This would result in a decrease in average customer usage. However Florida real estate values have decreased enough to no longer be considered over-valued. This is expected to result in a return to more normal levels of new resident migration and home buying.

LONG-TERM ECONOMIC ASSUMPTIONS

The long-term economic outlook assumes that changes in economic and demographic conditions, as well as technological change in the electric utility industry, will follow a trended behavior pattern. The main focus involves identifying these trends. No attempt is made to predict business cycle fluctuations or rapid penetration of a significant technological breakthrough impacting electric utility energy sales during this period.

Population Growth Trends

This forecast assumes Florida will experience slower new resident migration and population growth over parts of the long term, as reflected in the BEBR projections. Florida's climate and low cost of living have historically attracted a major share of the retirement population from the eastern half of the United States. This will continue to occur primarily because the soon to be retiring baby-boom generation will increase the size of available retirees capable of moving to the South. Working against this significant trend will be several aesthetic and economic factors. First, the enormous growth in population and corresponding development of the 1980s, 1990s and early 2000s made portions of Florida less desirable and less affordable for retirement living. This perceived diminished quality of retiree life, along with increasing competition from neighboring states, will cause a slight decline in Florida's share of these prospective new residents over the long term. Second, and to a lesser extent, there is a lingering fear for safety and expense from hurricane damage.

Economic Growth Trends

Since the beginning of the Post-911 period, Florida experienced a 1980s-style population explosion and rapid service-sector job creation. The State has benefited greatly from generational lows in interest rates, which, along with investors' unfriendly attitude toward the equity markets, set the stage for a tremendous surge in home construction. The national level of homebuilding in 2004-2006, set an all time record. This growth produced strong gains in both the construction industry and service-producing sectors of the Florida economy.

However, the 2007-2009 period will reflect a record slump. Nationwide, the amount of housing sector credit has reduced. The availability of money making its way into the mortgage market has significantly decreased as the risk to lenders has risen. U.S. consumer debt has increased, since the 2001 economic downturn. With the lack of income growth, credit being unavailable, and reduced wealth, a growing U.S. savings rate occurs as well as a return to trend-level growth.

As the economy begins a new cyclical upturn, a short period of demand created by retirees who were unable to sell their homes and unusually low mortgage rates should begin by 2010. A more sustained level of customer growth nearing the historical average will occur.

The historically low interest rates are expected to produce an increase in home occupancy. More importantly, the decline in home prices has returned the housing market to a more typical level while providing a more affordable product. Going forward, these and other impacts indicate that a more level growth pattern is expected.

The forecast assumes stable growth in real electricity price over the long term. That is, the change in the nominal price of electricity per kWh over time is expected to be close to the overall rate of inflation. This also implies that future fuel price escalation will track at or below the general rate of inflation throughout the forecast horizon.

Real personal incomes are assumed to increase throughout the forecast period thereby boosting the average customer's ability to purchase electricity. As incomes grow faster than the price of electricity, consumers, on average, will remain inclined to purchase additional electric appliances and increase their utilization of existing end-uses.

FORECAST METHODOLOGY

The PEF forecast of customers, energy sales, and peak demand is developed using customer class-specific econometric models. These models are expressly designed to capture class-specific variation over time. By modeling customer growth and average energy usage individually, subtle changes in existing customer usage are better captured as well as growth from new customers. Peak demand models are projected on a disaggregated basis as well. This allows for appropriate handling of individual assumptions in the areas of wholesale contracts, load management, and interruptible service.

ENERGY AND CUSTOMER FORECAST

In the retail jurisdiction, customer class models have been specified showing a historical relationship to weather and economic/demographic indicators using monthly data for sales models and annual data for customer models. Sales are regressed against "driver" variables that best explain monthly fluctuations over the historical sample period. Forecasts of these input variables are either derived internally or come from a review of the latest projections made by several independent forecasting concerns. The external sources of data include Moody's Economy.Com and the University of Florida's Bureau of Economic and Business Research (BEBR). Internal company forecasts are used for projections of electricity price, weather conditions, and the length of the billing month. Normal weather, which is assumed throughout the forecast horizon, is based on the 30-year average of heating and cooling degree-days by month as measured at several weather stations throughout Florida for energy projections and temperatures around the hour of peak for the firm retail demand forecast. Projections of PEF's demand-side management (conservation programs) are also incorporated as reductions to the forecast. Specific sectors are modeled as follows:

Residential Sector

Residential kWh usage per customer is modeled as a function of real Florida personal income, cooling degree-days, heating degree-days, the real price of electricity to the residential class and the average number of billing days in each sales month. This equation captures significant variation in residential usage caused by economic cycles, weather fluctuations, electric price movements, and sales month duration. Projections of kWh usage per customer combined with the customer forecast provide the forecast of total residential energy sales. The residential customer forecast is developed by correlating annual customer growth with PEF service area population growth. County level population projections for the twenty-nine (29) counties, in which PEF serves residential customers, are provided by the BEBR.

Commercial Sector

Commercial MWh energy sales are forecast based on commercial sector (non-agricultural, non-manufacturing and non-governmental) employment, the real price of electricity to the commercial class, the average number of billing days in each sales month and heating and cooling degree-days. The measure of cooling degree-days utilized here differs slightly from that used in the residential sector reflecting different temperature base sensitivities, when heating and cooling load become observable. Commercial customers are projected as a function of the number of residential customers served.

Industrial Sector

Energy sales to this sector are separated into two sub-sectors. A significant portion of industrial energy use is consumed by the phosphate mining industry. Because this one (1) industry is a thirty-two (32) percent share of the total industrial class, it is separated and modeled apart from the rest of the class. The term "non-phosphate industrial" is used to refer to those customers who comprise the remaining portion of total industrial class sales. Both groups are impacted significantly by changes in economic activity. However, adequately explaining sales levels requires separate explanatory variables. Non-phosphate industrial energy sales are modeled using Florida manufacturing employment and a Florida industrial production index, the real price of electricity to the industrial class, and the average number of sales month billing days.

The industrial phosphate mining industry is modeled using customer-specific information with respect to expected market conditions. Since this sub-sector is comprised of only four (4) customers, the forecast is dependent upon information received from direct customer contact. PEF industrial customer representatives provide specific phosphate customer information regarding customer production schedules, inventory levels, area mine-out and start-up predictions, and changes in self-service generation or energy supply situations over the forecast horizon.

Street Lighting

Electricity sales to the street and highway lighting class has varied up and down but overall has remained flat for the past fifteen (15) years. A slight decline is expected as improvements in efficiency are projected. The number of accounts, which has dropped by two-thirds in the past fourteen (14) years due to most transferring to public authority ownership, is expected to decline further before leveling off in the intermediate term. A simple time-trend was used to project energy consumption and customer growth in this class.

Public Authorities

Energy sales to public authorities (SPA), comprised mostly of government operated services, is also projected to grow with the size of the service area. The level of government services, and thus energy use per customer, can be tied to the population base, as well as to the state of the economy. Factors affecting population growth will affect the need for additional governmental services (i.e. public schools, city services, etc.) thereby increasing SPA energy usage per customer. Government employment has been determined to be the best indicator of the level of government services provided. This variable, along with heating and cooling degree-days (class specific), the real price of electricity and the average number of sales month billing days, results in a significant level of explained variation over the historical sample period. Intercept shift variables are also included in this model to account for the large change in school-related energy use in the billing months of January, July, and August. The SPA customer forecast is projected linearly as a function of a time-trend.

Sales for Resale Sector

The Sales for Resale sector encompasses all firm sales to other electric power entities. This includes sales to other utilities (municipal or investor-owned) as well as power agencies (rural electric authority or municipal).

Seminole Electric Cooperative, Inc. (SECI) is a wholesale, or sales for resale, customer of PEF on both a supplemental contract basis and contract demand basis. Under the supplemental contract, PEF provides service for those energy requirements above the level of generation capacity served by either SECI's own facilities or its firm purchase obligations. Monthly supplemental energy is developed using an average historical load shape of total SECI load in the PEF control area, subtracting out the level of SECI "committed" capacity from each hour. Beyond supplemental service, PEF has several agreements with SECI to serve various types of stratified demand levels deemed by their resource planners as necessary.

The municipal sales for resale class includes a number of customers, divergent not only in scope of service, (i.e. full or partial requirement), but also in composition of ultimate consumers. Each customer is modeled separately in order to accurately reflect its individual profile. Several of the customers in this class are municipalities whose full energy requirements are supplied by PEF. The full requirement customers' energy projections grow at a rate that approximates their historical trend. Since the ultimate consumers of electricity in this sector are, to a large degree, residential and commercial customers, it is assumed that their use patterns will follow those of the PEF retail-based residential and commercial customer classes. PEF serves partial requirement service (PR) to municipalities such as New Smyrna Beach (NSB), Homestead, Gainesville and Tallahassee, and other power providers like FMPA and Reedy Creek Utilities. In each case, these customers contract with PEF for a specific level and type of demand needed to provide their particular electrical system with an appropriate level of reliability. The energy forecast for each contract is derived using its historical load factors where enough history exists, or typical load factors for a given type of contracted stratified load. The energy projections for FMPA also include a "losses service contract" for energy PEF supplies to FMPA for transmission losses incurred when "wheeling" power to their ultimate customers in PEF's transmission area. This projection is based on the projected

requirements of the aggregated needs of the cities of Ocala, Leesburg, Bushnell, Havana, and Newberry.

PEAK DEMAND FORECAST

The forecast of peak demand also employs a disaggregated econometric methodology. For seasonal (winter and summer) peak demands, as well as each month of the year, PEF's coincident system peak is separated into five (5) major components. These components consist of potential firm retail load, conservation and load management program capability, wholesale demand, company use demand and interruptible demand.

Potential firm retail load refers to projections of PEF retail hourly seasonal net peak demand (excluding the non-firm interruptible/curtailable/standby services) before the cumulative effects of any conservation activity or the activation of PEF's Load Management program. The historical values of this series are constructed to show the size of PEF's firm retail net peak demand assuming no utility-induced conservation or load control had taken place. The value of constructing such a "clean" series enables the forecaster to observe and correlate the underlying trend in retail peak demand to total system customer levels and coincident weather conditions at the time of the peak without the impacts of year-to-year variation in conservation activity or load control reductions. Seasonal peaks are projected using historical seasonal peak data regardless of which month the peak occurred. The projections become the potential retail demand projection for the month of January (winter) and August (summer) since this is typically when the seasonal peaks occur. The non-seasonal peak months are projected the same as the seasonal peaks, but the analysis is limited to the specific month being projected.

Energy conservation and direct load control estimates are consistent with PEF's DSM goals that have been approved by the FPSC. These estimates are incorporated into the MW forecast. Projections of dispatchable and cumulative non-dispatchable DSM are subtracted from the projection of potential firm retail demand resulting in a projected series of retail monthly peak demand figures one would expect to occur.

Sales for Resale demand projections represent load supplied by PEF to other electric utilities such as SECI, FMPA, and other electric distribution companies. The SECI supplemental demand

projection is based on a trend of their historical demand within the PEF control area. The level of MW to be served by PEF is dependent upon the amount of generation resources SECI supplies itself or contracts from others. An assumption is made that SECI will shift their level of self-serve resources to meet their base and intermediate load needs. For Partial Requirement demand projections, contract levels dictate the level of monthly demands. The Full Requirement municipal demand forecast is estimated for individual cities using historically trended growth rates.

PEF "company use" at the time of system peak is estimated using load research metering studies and is assumed to remain stable over the forecast horizon as it has historically. The interruptible and curtailable service (IS and CS) load component is developed from historic trends, as well as the incorporation of specific information obtained from PEF's large industrial accounts by account executives.

Each of the peak demand components described above is a positive value except for the DSM program MW impacts and IS and CS load. These impacts represent a reduction in peak demand and are assigned a negative value. Total system firm peak demand is then calculated as the arithmetic sum of the five (5) components.

CONSERVATION

PEF's DSM performance is presented in the following tables, which compare the conservation savings actually achieved through PEF's DSM programs for the reporting years of 2005 through 2008 with the Commission-approved conservations goals.

On August 9, 2004, the FPSC issued a PAA Order approving new conservation goals for PEF that span the ten-year period from 2005 through 2014, as well as a new DSM Plan for PEF that was specifically designed to meet the new conservation goals (Docket 040031-EG, Order No. PSC-04-0769-PAA-EG). On January 5, 2007, the FPSC issued a PAA Order approving thirty-nine (39) additional DSM measures and two (2) residential programs, which will serve to increase the demand and energy savings available through PEF's DSM Plan (Docket 060647: Consummating Order PSC-07-0017-CO-EG making Order PSC-06-1018-TRF-EG effective and final).

Residential Conservation Savings Goals and Achievements

	Summer MW		Winter MW		Annual GWh Energy	
Year	Goal	Achieved	Goal	Achieved	Goal	Achieved
2005	13	18	43	48	21	29
2006	21	37	75	99	35	58
2007	30	58	108	153	50	85
2008	38	87	142	207	65	117

Commercial Conservation Savings Goals and Achievements

	Summer MW		Winter MW		Annual GWh Energy	
Year	Goal	Achieved	Goal	Achieved	Goal	Achieved
2005	4	8	3	6	3	3
2006	7	16	7	12	6	9
2007	11	44	10	38	9	30
2008	14	97	14	86	12	78

The forecasts contained in this Ten-Year Site Plan document are based on these 2007 program additions and modifications to PEF's DSM Plan and, therefore, appropriately reflect the most current projection of DSM savings over the next ten (10) years. PEF's DSM Plan consists of seven (7) residential programs, eight (8) commercial and industrial programs, and one (1) research and development program. The programs are subject to periodic monitoring and evaluation for the purpose of ensuring that all DSM resources are acquired in a cost-effective manner and that the program savings are durable. The following is a brief description of these programs.

RESIDENTIAL PROGRAMS

Home Energy Check Program

This energy audit program provides customers with an analysis of their current energy use and recommendations on how they can save on their electricity bills through low-cost or no-cost energy-saving practices and measures. The Home Energy Check program offers PEF customers

the following types of audits: Type 1: Free Walk-Through Audit (Home Energy Check); Type 2: Customer-Completed Mail In Audit (Do It Yourself Home Energy Check); Type 3: Online Home Energy Check (Internet Option)-a customer-completed audit; Type 4: Phone Assisted Audit – a customer assisted survey of structure and appliance use; Type 5: Computer Assisted Audit; Type 6: Home Energy Rating Audit (Class I, II, III); Type 7: Student Mail In Audit - a student-completed audit. The Home Energy Check Program serves as the foundation of the Home Energy Improvement Program in that the audit is a prerequisite for participation in the energy saving measures offered in the Home Energy Improvement Program.

Home Energy Improvement Program

This is the umbrella program to increase energy efficiency for existing residential homes. It combines efficiency improvements to the thermal envelope with upgraded electric appliances. The program provides incentives for attic insulation upgrades, duct testing and repair, and high efficiency electric heat pumps. Additional measures within this program include spray-in wall insulation, central AC 14 SEER non-electric heat, and supply and return plenum duct seal, proper sizing of high efficiency HVAC, HVAC commissioning, reflective roof coating for manufactured homes, reflective roof for single-family homes, window film or screen, and replacement windows.

Residential New Construction Program

This program promotes energy efficient new home construction in order to provide customers with more efficient dwellings combined with improved environmental comfort. The program provides education and information to the design and building community on energy efficient equipment and construction. It also facilitates the design and construction of energy efficient homes by working directly with the builders to comply with program requirements. The program provides incentives to the builder for high efficiency electric heat pumps and high performance windows. The highest level of the program incorporates the U.S. Environmental Protection Agency's Energy Star Homes Program and qualifies participants for cooperative advertising. Additional measures within the Residential New Construction Program include HVAC commissioning, window film or screen, reflective roof for single-family homes, attic spray-on foam insulation, conditioned space air handler, and energy recovery ventilation.

Low Income Weatherization Assistance Program

This umbrella program seeks to improve energy efficiency for low-income customers in existing residential dwellings. It combines efficiency improvements to the thermal envelope with upgraded electric appliances. The program provides incentives for attic insulation upgrades, duct testing and repair, reduced air infiltration, water heater wrap, HVAC maintenance, high efficiency heat pumps, heat recovery units, and dedicated heat pump water heaters.

Neighborhood Energy Saver Program

The Neighborhood Energy Saver (NES) Program consists of twelve (12) measures including compact fluorescent bulb replacement, water heater wrap and insulation for water pipes, water heater temperature check and adjustment, low-flow faucet aerator, low-flow showerhead, refrigerator coil brush, HVAC filters, and weatherization measures (i.e. weather stripping, door sweeps, etc.). In addition to the installation of new conservation measures, an important component of this program is educating families on energy efficiency techniques and the promotion of behavioral changes to help customers control their energy usage.

Residential Energy Management Program (EnergyWise)

This is a voluntary customer program that allows PEF to reduce peak demand and thus defer generation construction. Peak demand is reduced by interrupting service to selected electrical equipment with radio-controlled switches installed on the customer's premises. These interruptions are at PEF's option, during specified time periods, and coincident with hours of peak demand. Participating customers receive a monthly credit on their electricity bills prorated above 600 kWh per month.

Renewable Energy Program

The Renewable Energy Program is designed to reduce system peak demand and increase renewable energy generation on the PEF grid. The program seeks to meet the following overall goals:

1. Obtain energy and demand reductions that are significant and measurable.

2. Enhance customer/contractor awareness of the capabilities of renewable energy technologies.
3. Educate customer/contractor about additional opportunities to generate and use renewable energy.
4. Develop and offer renewable energy measures to the marketplace.
5. Minimize "lost opportunities" in the renewable energy market.
6. Increase participation in the PEF Load Management program.

The Renewable Energy Program consists of two (2) measures:

- Solar Water Heater with EnergyWise – This measure encourages residential customers to install a solar thermal water heating system. The customer must have whole house electric cooling, electric water heating, and electric heating to be eligible for this program. Pool heaters and photovoltaic systems would not qualify. In order to qualify for this incentive, the heating, air conditioning, and water heating systems must be on the Energy Management Program (EnergyWise) and the solar thermal system must provide a minimum of fifty (50) percent of the water-heating load.
- Solar Photovoltaics with Energy Wise (SolarWise for Schools) – This measure promotes environmental stewardship and renewable energy education through the installation of solar energy systems at schools within PEF's service territory. Customers participating in the Winter-Only Energy Management or Year-Round Energy Management plan can elect to donate their monthly credit toward the SolarWise for Schools. The program will accumulate associated participant credits in a separate fund for a period of two (2) years, at which time the customer may elect to renew for an additional two (2) years. All proceeds collected from participating customers, and their associated monthly credits, will be used to promote photovoltaics and renewable energy education opportunities.

COMMERCIAL/INDUSTRIAL (C/I) PROGRAMS

Business Energy Check Program

This energy audit program provides commercial and industrial customers with an assessment of the current energy usage at their facilities, recommendations on how they can improve the environmental conditions of their facilities while saving on their electricity bills, and information

on low-cost energy efficiency measures. The Business Energy Check consists of a free walk-through audit and a paid walk-through audit. Small business customers also have the option to complete a Business Energy Check online at Progress Energy's website. In most cases, this program is a prerequisite for participation in the other C/I programs.

Better Business Program

This is the umbrella efficiency program for existing commercial and industrial customers. The program provides customers with information, education, and advice on energy-related issues as well as incentives on efficiency measures that are cost-effective to PEF and its customers. The Better Business Program promotes energy efficient heating, ventilation, air conditioning (HVAC), building retrofit measures (in particular, ceiling insulation upgrade, duct leakage test and repair, energy-recovery ventilation, and Energy Star cool roof coating products), demand-control ventilation, efficient compressed air systems, efficient motors, efficient indoor lighting, green roof, occupancy sensors, packaged AC steam cleaning, roof insulation, roof-top unit recommissioning, thermal energy storage and window film or screen.

Commercial/Industrial New Construction Program

The primary goal of this program is to foster the design and construction of energy efficient buildings. The new construction program: 1) provides education and information to the design community on all aspects of energy efficient building design; 2) requires that the building design, at a minimum, surpass the State of Florida energy code; 3) provides financial incentives for specific energy efficient equipment; and 4) provides energy design awards to building design teams. Incentives will be provided for high efficiency HVAC equipment, energy recovery ventilation, Energy Star cool roof coating products, demand-control ventilation, efficient compressed air systems, efficient motors, efficient indoor lighting, green roof, occupancy sensors, roof insulation, thermal energy storage and window film or screen.

Innovation Incentive Program

This program promotes a reduction in demand and energy by subsidizing energy conservation projects for customers in PEF's service territory. The intent of the program is to encourage legitimate energy efficiency measures that reduce kW demand and or kWh energy, but are not

addressed by other programs. Energy efficiency opportunities are identified by PEF representatives during a Business Energy Check audit. If a candidate project meets program specifications, it will be eligible for an incentive payment, subject to PEF approval.

Commercial Energy Management Program (Rate Schedule GSLM-1)

This direct load control program reduces PEF's demand during peak or emergency conditions. As described in PEF's DSM Plan, this program is currently closed to new participants. It is applicable to existing program participants who have electric space cooling equipment suitable for interruptible operation and are eligible for service under the Rate Schedule GS-1, GST-1, GSD-1, or GSDT-1. The program is also applicable to existing participants who have any of the following electrical equipment installed on permanent residential structures and utilized for domestic (household) purposes: 1) water heater(s), 2) central electric heating systems(s), 3) central electric cooling system(s), and or 4) swimming pool pump(s). Customers receive a monthly credit on their bills depending on the type of equipment in the program and the interruption schedule.

Standby Generation Program

This demand control program reduces PEF's demand based upon the indirect control of customer generation equipment. This is a voluntary program available to all commercial, industrial, and agricultural customers who have on-site generation capability of at least 50 kW, and are willing to reduce their PEF demand when PEF deems it necessary. The customers participating in the Standby Generation program receive a monthly credit on their electricity bills according to the demonstrated ability of the customer to reduce demand at PEF's request.

Interruptible Service Program

This direct load control program reduces PEF's demand at times of capacity shortage during peak or emergency conditions. The program is available to qualified non-residential customers with an average billing demand of 500 kW or more, who are willing to have their power interrupted. PEF will have remote control of the circuit breaker or disconnect switch supplying the customer's equipment. In return for this ability to interrupt load, customers participating in

the Interruptible Service program receive a monthly interruptible demand credit applied to their electric bills.

Curtailable Service

This direct load control program reduces PEF's demand at times of peak or emergency conditions. The program is available to qualified non-residential customers with an average billing demand of 500 kW or more, who are willing to curtail 25 percent of their average monthly billing demand. Customers participating in the Curtailable Service program receive a monthly curtailable demand credit applied to their electric bills.

RESEARCH AND DEVELOPMENT PROGRAMS

Technology Development Program

The primary purpose of this program is to establish a system to "Aggressively pursue research, development and demonstration projects jointly with others as well as individual projects" (Rule 25-17.001(5)(f), Florida Administration Code). PEF will undertake certain development, educational and demonstration projects that have promise to become cost-effective demand reduction and energy efficiency programs. This would include projects like Price Responsive Demand Reduction with a Home Area Network for load management capabilities, which the Company is currently evaluating and testing. The objective of this project is to develop the next generation of load management with goals of increasing customer awareness to use energy more efficiently, while advancing demand response capabilities. Additional projects include the evaluation of off-peak generation with energy storage for on-peak demand consumption, and Plug-In Hybrid Electric Vehicles with vehicle-to-grid discharge. In most cases, each demand reduction and energy efficiency project that is proposed and investigated under this program requires field-testing with customers.

CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

RESOURCE PLANNING FORECAST

OVERVIEW OF CURRENT FORECAST

Supply-Side Resources

PEF has a summer total capacity resource of 11,197 MW (see Table 3.1). This capacity resource includes nuclear (789 MW), fossil steam (3,879 MW), combined cycle plants (2,117 MW), combustion turbine (2,504 MW; 143 MW of which is owned by Georgia Power for the months June through September), utility purchased power (485 MW), independent power purchases (636 MW), and non-utility purchased power (787 MW). Table 3.2 presents PEF's firm capacity contracts with Qualifying Facilities (QF's).

Demand-Side Programs

Total Demand-Side Management (DSM) resources are presented in Schedules 3.1 and 3.2 of Chapter 2. These programs include Non-Dispatchable DSM, Interruptible Load, and Dispatchable Load Control resources. PEF's 2009 Ten-Year Site Plan Demand-Side Management projections are consistent with the DSM Goals established by the Commission in Docket No. 040031-EG.

Capacity and Demand Forecast

PEF's forecasts of capacity and demand for the projected summer and winter peaks can been found in Schedules 7.1 and 7.2, respectively. PEF's forecasts of capacity and demand are based on serving expected growth in retail requirements in its regulated service area and meeting commitments to wholesale power customers who have entered into supply contracts with PEF. In its planning process, PEF balances its supply plan for the needs of retail and wholesale customers and endeavors to ensure that cost-effective resources are available to meet the needs across the customer base. Over the years, as wholesale markets have grown more competitive, PEF has remained active in the competitive solicitations while planning in a manner that maintains an appropriate balance of commitments and resources within the overall regulated supply framework.

Base Expansion Plan

PEF's planned supply resource additions and changes are shown in Schedule 8 and are referred to as PEF's Base Expansion Plan. This Plan includes a net gain in summer capacity of 3,020 MWs. As identified in Schedule 8, PEF's next planned unit is the Bartow Repowering Project with an expected completion date of June 2009. This project is followed by the planned installation of combustion turbine technology in 2014 and 2015 at the Suwannee River Plant and new nuclear generation at the Company's Levy County site in 2016 and 2017. These additions depend, in part, on projected load growth, and obtaining all necessary state and federal permits under current schedules. Changes in these or other factors could impact PEF's base expansion plan.

PEF's Base Expansion Plan projects the need for additional units with proposed in-service dates during the ten-year period from 2009 through 2017. These units, together with purchases from Qualifying Facilities (QF), Investor Owned Utilities, and Independent Power Producers including but not limited to Reliant/Osceola (June 2006 - February 2009), Mirant Shady Hills (April 2007 - April 2024), Southern Company (June 2010 - May 2016), as well as two undesignated purchases in 2013 and 2015, help the PEF system meet the growing energy requirements of its customer base. The capacity needs identified in this plan may be impacted by PEF's ability to extend or replace existing purchase power cogenerator and QF contracts and to secure the new renewable purchased power resources in their respective projected timeframes. Status reports and specifications for the planned new generation facilities are included in Schedule 9. The new transmission lines associated with the Bartow Repowering Project as well as the Levy County nuclear units are shown in Schedule 10.

TABLE 3.1

PROGRESS ENERGY FLORIDA

TOTAL CAPACITY RESOURCES OF POWER PLANTS AND PURCHASED POWER CONTRACTS

AS OF DECEMBER 31, 2008

PLANTS	NUMBER OF UNITS	SUMMER NET DEPENDABLE CAPABILITY (MW)	
Nuclear Steam			
Crystal River	1	789	*(1)*
Total Nuclear Steam	1	789	
Fossil Steam			
Crystal River	4	2,311	
Anclote	2	1,011	
Bartow	3	426	
Suwannee River	3	131	
Total Fossil Steam	12	3,879	
Combined Cycle			
Hines Energy Complex	4	1,912	
Tiger Bay	1	205	
Total Combined cycle	5	2,117	
Combustion Turbine			
DeBary	10	645	
Intercession City	14	987	*(2)*
Bayboro	4	174	
Bartow	4	177	
Suwannee	3	153	
Turner	4	149	
Higgins	4	113	
Avon Park	2	48	
University of Florida	1	46	
Rio Pinar	1	12	
Total Combustion Turbine	47	2,504	
Total Units	**65**		
Total Net Generating Capability		**9,289**	

(1) Adjusted for sale of approximately 8.2% of total capacity

(2) Includes 143 MW owned by Georgia Power Company (Jun-Sep)

Purchased Power			
Qualifying Facility Contracts	15	787	
Investor Owned Utilities	2	485	
Independent Power Producers	2	636	
TOTAL CAPACITY RESOURCES		11,197	

TABLE 3.2

PROGRESS ENERGY FLORIDA

QUALIFYING FACILITY GENERATION CONTRACTS

AS OF DECEMBER 31, 2008

Facility Name	Firm Capacity (MW)
Dade County Resource Recovery	43
El Dorado	114.2
Lake Cogen	110
Lake County Resource Recovery	12.8
LFC Jefferson	8.5
LFC Madison	8.5
Mulberry	79.2
Orange Cogen (CFR-Biogen)	74
Orlando Cogen	79.2
Pasco Cogen	109
Pasco County Resource Recovery	23
Pinellas County Resource Recovery 1	40
Pinellas County Resource Recovery 2	14.8
Ridge Generating Station	39.6
Royster	30.8
TOTAL	**786.6**

PROGRESS ENERGY FLORIDA

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)
	TOTAL[a] INSTALLED CAPACITY	FIRM[b] CAPACITY IMPORT	FIRM CAPACITY EXPORT	QF	TOTAL CAPACITY AVAILABLE	SYSTEM FIRM SUMMER PEAK DEMAND	RESERVE MARGIN BEFORE MAINTENANCE		SCHEDULED MAINTENANCE	RESERVE MARGIN AFTER MAINTENANCE	
YEAR[c]	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2009	9,901	1,467	0	173	11,542	9,540	2,002	21%	0	2,002	21%
2010	9,849	1,588	0	173	11,610	9,490	2,120	22%	0	2,120	22%
2011	9,849	1,672	0	173	11,694	9,578	2,116	22%	0	2,116	22%
2012	9,977	1,989	0	173	12,139	9,885	2,254	23%	0	2,254	23%
2013	9,977	1,944	0	173	12,094	10,075	2,020	20%	0	2,020	20%
2014	10,155	1,757	0	173	12,086	10,063	2,023	20%	0	2,023	20%
2015	10,332	1,827	0	173	12,333	10,275	2,058	20%	0	2,058	20%
2016	11,099	1,335	0	173	12,608	10,478	2,130	20%	0	2,130	20%
2017	12,191	1,335	0	173	13,700	10,672	3,028	28%	0	3,028	28%
2018	12,191	1,335	0	173	13,700	10,864	2,836	26%	0	2,836	26%

Notes:

a. Total Installed Capacity does not include the 143 MW to Southern Company from Intercession City, P11.

b. FIRM Capacity Import includes Cogeneration, Utility and Independent Power Producers, and Short Term Purchase Contracts.

c. These estimates include summer seasonal purchases of approximately 65 and 80 MW in 2013 and 2015 respectively. The deals are not yet consummated as of the time of the Ten-Year Site Plan filing. Since the purchase is expected to be from peaking capacity, no energy impact has been included in the plan at this time.

PROGRESS ENERGY FLORIDA

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)
	TOTAL[a] INSTALLED CAPACITY	FIRM[b] CAPACITY IMPORT	FIRM CAPACITY EXPORT	QF	TOTAL CAPACITY AVAILABLE	SYSTEM FIRM WINTER PEAK DEMAND	RESERVE MARGIN BEFORE MAINTENANCE		SCHEDULED MAINTENANCE	RESERVE MARGIN AFTER MAINTENANCE	
YEAR	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2008/09	10,307	1,667	0	173	12,147	9,987	2,161	22%	0	2,161	22%
2009/10	11,115	1,479	0	173	12,767	10,022	2,745	27%	0	2,745	27%
2010/11	11,083	1,635	0	173	12,892	10,133	2,758	27%	0	2,758	27%
2011/12	11,212	1,725	0	173	13,110	10,472	2,637	25%	0	2,637	25%
2012/13	11,212	2,073	0	173	13,458	10,728	2,730	25%	0	2,730	25%
2013/14	11,212	1,831	0	173	13,216	10,613	2,603	25%	0	2,603	25%
2014/15	11,417	1,831	0	173	13,422	10,836	2,586	24%	0	2,586	24%
2015/16	11,476	1,831	0	173	13,481	11,067	2,414	22%	0	2,414	22%
2016/17	12,345	1,419	0	173	13,938	11,297	2,641	23%	0	2,641	23%
2017/18	13,465	1,419	0	173	15,058	11,518	3,540	31%	0	3,540	31%

Notes:

a. Total Installed Capacity does not include the 143 MW to Southern Company from Intercession City, P11.

b. FIRM Capacity Import includes Cogeneration, Utility and Independent Power Producers, and Short Term Purchase Contracts.

PROGRESS ENERGY FLORIDA

SCHEDULE 8

PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

AS OF JANUARY 1, 2009 THROUGH DECEMBER 31, 2018

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
								CONST.	COM'L IN-	EXPECTED	GEN. MAX.	NET CAPABILITY[a]			
PLANT NAME	UNIT NO.	LOCATION (COUNTY)	UNIT TYPE	FUEL PRI.	FUEL ALT.	FUEL TRANSPORT PRI.	FUEL TRANSPORT ALT.	START MO. / YR	SERVICE MO. / YR	RETIREMENT MO. / YR	NAMEPLATE KW	SUMMER MW	WINTER MW	STATUS[b]	NOTES[c]
CRYSTAL RIVER	5	CITRUS	ST						5/2009			14	14	A	(5)
BARTOW	1-3	PINELLAS	ST							6/2009		(444)	(464)	RP	(4)
BARTOW	4	PINELLAS	CC	NG	DFO	PL	WA	01/2007	6/2009			1159	1279	V	(4)
CRYSTAL RIVER	3	CITRUS	NP						12/2009			26	26	A	(3)
CRYSTAL RIVER	5	CITRUS	ST						12/2009			(46)	(46)	D	(2);(2a)
CRYSTAL RIVER	4	CITRUS	ST						5/2010			14	14	A	(5)
CRYSTAL RIVER	4	CITRUS	ST						6/2010			(46)	(46)	D	(2)
CRYSTAL RIVER	3	CITRUS	NP						12/2011			129	129	A	(3)
SUWANNEE RIVER	1-3	SUWANNEE	ST							d.		(129)	(146)		(1)
SUWANNEE RIVER	P4	SUWANNEE	CT						6/2014			178	205	P	(1)
SUWANNEE RIVER	P5	SUWANNEE	CT						6/2015			178	205	P	(1)
RIO PINAR	P1	ORGANGE	CT							d.		(12)	(16)		(1)
TURNER	P1-P2	VOLUSIA	CT							d.		(22)	(32)		(1)
AVON PARK	P1-P2	HIGHLANDS	CT							d.		(49)	(70)		(1)
HIGGINS	P1-P4	PINELLAS	CT							d.		(113)	(133)		(1)
LEVY	1	LEVY	NP	NUC		RR		01/2010	6/2016			1092	1120	P	(1)
LEVY	2	LEVY	NP	NUC		RR		01/2011	6/2017			1092	1120	P	(1)

a. Net capability of Crystal River 3 represents approximately 91.8% PEF Ownership.
b. See page v. for Code Legend of Future Generating Unit Status.
c. NOTES
(1) Planned, Prospective, or Committed project.
(2) Planned derations due to FGD scrubber installations.
(2a) Less than 5% of total derate expected to come online in 5/2009 in relation to SCR in-service date.
(3) Planned uprates.
(4) Repowering.
(5) Turbine Project.
d. Suwannee 1-3 expect to be shut down by 10/2015. Peakers at Avon Park, Higgins, Rio Pinar, Turner estimated to be in cold stand-by or retired by 6/2016.

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2009

(1)	Plant Name and Unit Number:	**Bartow Repowering - Unit No. 4**
(2)	Capacity	
	a. Summer:	1,159
	b. Winter:	1,279
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	01/2007
	b. Commercial in-service date:	06/2009 (EXPECTED)
(5)	Fuel	
	a. Primary fuel:	NATURAL GAS
	b. Alternate fuel:	DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOx COMBUSTION with SELECTIVE CATALYTIC REDUCTION
(7)	Cooling Method:	COOLING WATER
(8)	Total Site Area:	1,348 ACRES
(9)	Construction Status:	UNDER CONSTRUCTION
(10)	Certification Status:	N/A
(11)	Status with Federal Agencies:	IN PROCESS
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	6.9 %
	b. Forced Outage Factor (FOF):	4.6 %
	c. Equivalent Availability Factor (EAF):	88.8 %
	d. Resulting Capacity Factor (%):	65.2 %
	e. Average Net Operating Heat Rate (ANOHR):	7,190 BTU/kWh
(13)	Projected Unit Financial Data	
	a. Book Life (Years):	25
	b. Total Installed Cost (In-service year $/kW):	498.05 (INCREMENTAL COST)
	c. Direct Construction Cost ($/kW):	433.93
	d. AFUDC Amount ($/kW):	64.11
	e. Escalation ($/kW):	0.00
	f. Fixed O&M ($/kW-yr):	3.84
	g. Variable O&M ($/MWh):	2.75
	h. K Factor:	NO CALCULATION

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2009

(1)	Plant Name and Unit Number:	**Suwannee P4**
(2)	Capacity	
	a. Summer:	178
	b. Winter:	205
(3)	Technology Type:	COMBUSTION TURBINE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	1/2012
	b. Commercial in-service date:	6/2014 (EXPECTED)
(5)	Fuel	
	a. Primary fuel:	NATURAL GAS
	b. Alternate fuel:	DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	UNKNOWN
(7)	Cooling Method:	UNKNOWN
(8)	Total Site Area:	596 ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	4.0 %
	b. Forced Outage Factor (FOF):	2.1 %
	c. Equivalent Availability Factor (EAF):	94.1 %
	d. Resulting Capacity Factor (%):	7.6 %
	e. Average Net Operating Heat Rate (ANOHR):	10,760 BTU/kWh
(13)	Projected Unit Financial Data	
	a. Book Life (Years):	25
	b. Total Installed Cost (In-service year $/kW):	976.34
	c. Direct Construction Cost ($/kW):	745.95
	d. AFUDC Amount ($/kW):	94.73
	e. Escalation ($/kW):	135.66
	f. Fixed O&M ($/kW-yr):	8.45
	g. Variable O&M ($/MWh):	7.95
	h. K Factor:	NO CALCULATION

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2009

(1)	Plant Name and Unit Number:	**Suwannee P5**
(2)	Capacity	
	a. Summer:	178
	b. Winter:	205
(3)	Technology Type:	COMBUSTION TURBINE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	1/2013
	b. Commercial in-service date:	6/2015 (EXPECTED)
(5)	Fuel	
	a. Primary fuel:	NATURAL GAS
	b. Alternate fuel:	DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	UNKNOWN
(7)	Cooling Method:	UNKNOWN
(8)	Total Site Area:	596 ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	4.0 %
	b. Forced Outage Factor (FOF):	2.1 %
	c. Equivalent Availability Factor (EAF):	94.1 %
	d. Resulting Capacity Factor (%):	8.0 %
	e. Average Net Operating Heat Rate (ANOHR):	10,830 BTU/kWh
(13)	Projected Unit Financial Data	
	a. Book Life (Years):	25
	b. Total Installed Cost (In-service year $/kW):	627.12
	c. Direct Construction Cost ($/kW):	460.71
	d. AFUDC Amount ($/kW):	60.84
	e. Escalation ($/kW):	105.57
	f. Fixed O&M ($/kW-yr):	3.22
	g. Variable O&M ($/MWh):	7.95
	h. K Factor:	NO CALCULATION

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2009

(1)	Plant Name and Unit Number:	Levy County Unit No. 1
(2)	Capacity	
	a. Summer:	1,092
	b. Winter:	1,120
(3)	Technology Type:	ADVANCED LIGHT WATER NUCLEAR
(4)	Anticipated Construction Timing	
	a. Field construction start date:	1/2010
	b. Commercial in-service date:	6/2016 (EXPECTED)
(5)	Fuel	
	a. Primary fuel:	URANIUM
	b. Alternate fuel:	–
(6)	Air Pollution Control Strategy:	N/A
(7)	Cooling Method:	COOLING TOWER
(8)	Total Site Area:	3,100 ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	5.1 %
	b. Forced Outage Factor (FOF):	3.0 %
	c. Equivalent Availability Factor (EAF):	92.0 %
	d. Resulting Capacity Factor (%):	91 %
	e. Average Net Operating Heat Rate (ANOHR):	9,710 BTU/kWh
(13)	Projected Unit Financial Data	
	a. Book Life (Years):	40
	b. Total Installed Cost (In-service year $/kW):	7425.01
	c. Direct Construction Cost ($/kW):	5165.91
	d. AFUDC Amount ($/kW):	1620.30
	e. Escalation ($/kW):	638.80
	f. Fixed O&M ($/kW-yr):	53.08
	g. Variable O&M ($/MWh):	2.87
	h. K Factor:	NO CALCULATION

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2009

(1)	Plant Name and Unit Number:	Levy County Unit No. 2
(2)	Capacity	
	a. Summer:	1,092
	b. Winter:	1,120
(3)	Technology Type:	ADVANCED LIGHT WATER NUCLEAR
(4)	Anticipated Construction Timing	
	a. Field construction start date:	1/2011
	b. Commercial in-service date:	6/2017 (EXPECTED)
(5)	Fuel	
	a. Primary fuel:	URANIUM
	b. Alternate fuel:	–
(6)	Air Pollution Control Strategy:	N/A
(7)	Cooling Method:	COOLING TOWER
(8)	Total Site Area:	3,100 ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	5.1 %
	b. Forced Outage Factor (FOF):	3.0 %
	c. Equivalent Availability Factor (EAF):	92.0 %
	d. Resulting Capacity Factor (%):	91 %
	e. Average Net Operating Heat Rate (ANOHR):	9,710 BTU/kWh
(13)	Projected Unit Financial Data	
	a. Book Life (Years):	40
	b. Total Installed Cost (In-service year $/kW):	5155.09
	c. Direct Construction Cost ($/kW):	3390.06
	d. AFUDC Amount ($/kW):	1278.60
	e. Escalation ($/kW):	486.43
	f. Fixed O&M ($/kW-yr):	37.16
	g. Variable O&M ($/MWh):	2.87
	h. K Factor:	NO CALCULATION

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

BARTOW REPOWERING

(1) POINT OF ORIGIN AND TERMINATION:	Bartow Plant - Northeast Substation
(2) NUMBER OF LINES:	3
(3) RIGHT-OF-WAY:	Existing transmission line right-of-way
(4) LINE LENGTH:	4 miles
(5) VOLTAGE:	230 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	3/2009
(7) ANTICIPATED CAPITAL INVESTMENT:	$80,200,000 *
(8) SUBSTATIONS:	N/A
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* The projected capital estimate may vary during construction of the Bartow Repowering Project

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

BARTOW REPOWERING

(1) POINT OF ORIGIN AND TERMINATION:	Northeast Substation - Thirty-Second Street Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	New and existing transmission line right-of-ways
(4) LINE LENGTH:	2.4 miles
(5) VOLTAGE:	115 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	3/2009
(7) ANTICIPATED CAPITAL INVESTMENT:	$3,800,000 *
(8) SUBSTATIONS:	Thirty-Second Street Substation - Addition
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* The projected capital estimate may vary during construction of the Bartow Repowering Project

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

BARTOW REPOWERING

(1) POINT OF ORIGIN AND TERMINATION:	Northeast Substation - Fortieth Street Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	New and existing transmission line right-of-ways
(4) LINE LENGTH:	8.3 miles
(5) VOLTAGE:	230 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	3/2009
(7) ANTICIPATED CAPITAL INVESTMENT:	$7,700,000 *
(8) SUBSTATIONS:	N/A
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* The projected capital estimate may vary during construction of the Bartow Repowering Project

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

BARTOW REPOWERING

(1) POINT OF ORIGIN AND TERMINATION:	Pasadena Substation - Fifty-First Street Substation
(2) NUMBER OF LINES:	2
(3) RIGHT-OF-WAY:	Existing transmission line right-of-way
(4) LINE LENGTH:	0.4 miles
(5) VOLTAGE:	230 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	6/2009
(7) ANTICIPATED CAPITAL INVESTMENT:	$12,300,000 *
(8) SUBSTATIONS:	Fifty-First Street Substation - Addition
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* The projected capital estimate may vary during construction of the Bartow Repowering Project

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

LEVY UNITS 1 & 2

(1) POINT OF ORIGIN AND TERMINATION:	Levy - Central Florida South Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	Existing and new transmission line rights-of-way
(4) LINE LENGTH:	50 miles
(5) VOLTAGE:	500 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	6/2016
(7) ANTICIPATED CAPITAL INVESTMENT:	$150,000,000 *
(8) SUBSTATIONS:	Levy, Central Florida South
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* Each of these projects is part of one or more transmission options for the Levy Nuclear project. Out of several options under consideration, the final option is yet to be chosen, and thus this list of projects is subject to change. In addition, the projected capital estimate for this project may vary during construction of the Levy Units.

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

LEVY UNITS 1 & 2

(1) POINT OF ORIGIN AND TERMINATION:	Levy - Crystal River Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	New transmission line right-of-way
(4) LINE LENGTH:	10 miles
(5) VOLTAGE:	500 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	6/2016
(7) ANTICIPATED CAPITAL INVESTMENT:	$30,000,000 *
(8) SUBSTATIONS:	Levy
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* Each of these projects is part of one or more transmission options for the Levy Nuclear project. Out of several options under consideration, the final option is yet to be chosen, and thus this list of projects is subject to change. In addition, the projected capital estimate for this project may vary during construction of the Levy Units.

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

LEVY UNITS 1 & 2

(1) POINT OF ORIGIN AND TERMINATION:	Levy - Citrus Substation
(2) NUMBER OF LINES:	2
(3) RIGHT-OF-WAY:	New transmission line right-of-way
(4) LINE LENGTH:	10 miles
(5) VOLTAGE:	500 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	6/2016
(7) ANTICIPATED CAPITAL INVESTMENT:	$50,000,000 *
(8) SUBSTATIONS:	Levy
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* Each of these projects is part of one or more transmission options for the Levy Nuclear project. Out of several options under consideration, the final option is yet to be chosen, and thus this list of projects is subject to change. In addition, the projected capital estimate for this project may vary during construction of the Levy Units.

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

LEVY UNITS 1 & 2

(1) POINT OF ORIGIN AND TERMINATION:	Crystal River - Brookridge Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	Existing and new transmission line rights-of-way
(4) LINE LENGTH:	35 miles
(5) VOLTAGE:	230 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	6/2016
(7) ANTICIPATED CAPITAL INVESTMENT:	$70,000,000 *
(8) SUBSTATIONS:	N/A
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* Each of these projects is part of one or more transmission options for the Levy Nuclear project. Out of several options under consideration, the final option is yet to be chosen, and thus this list of projects is subject to change. In addition, the projected capital estimate for this project may vary during construction of the Levy Units.

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

LEVY UNITS 1 & 2

(1) POINT OF ORIGIN AND TERMINATION:	Brookridge - Brooksville West Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	Existing and new transmission line rights-of-way
(4) LINE LENGTH:	4 miles
(5) VOLTAGE:	230 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	6/2016
(7) ANTICIPATED CAPITAL INVESTMENT:	$8,000,000 *
(8) SUBSTATIONS:	N/A
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* Each of these projects is part of one or more transmission options for the Levy Nuclear project. Out of several options under consideration, the final option is yet to be chosen, and thus this list of projects is subject to change. In addition, the projected capital estimate for this project may vary during construction of the Levy Units.

PROGRESS ENERGY FLORIDA

SCHEDULE 10
STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

LEVY UNITS 1 & 2

(1) POINT OF ORIGIN AND TERMINATION:	Kathleen - Lake Tarpon Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	Existing and new transmission line rights-of-way
(4) LINE LENGTH:	45 miles
(5) VOLTAGE:	230 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	6/2016
(7) ANTICIPATED CAPITAL INVESTMENT:	$100,000,000 *
(8) SUBSTATIONS:	N/A
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* Each of these projects is part of one or more transmission options for the Levy Nuclear project. Out of several options under consideration, the final option is yet to be chosen, and thus this list of projects is subject to change. In addition, the projected capital estimate for this project may vary during construction of the Levy Units.

INTEGRATED RESOURCE PLANNING OVERVIEW

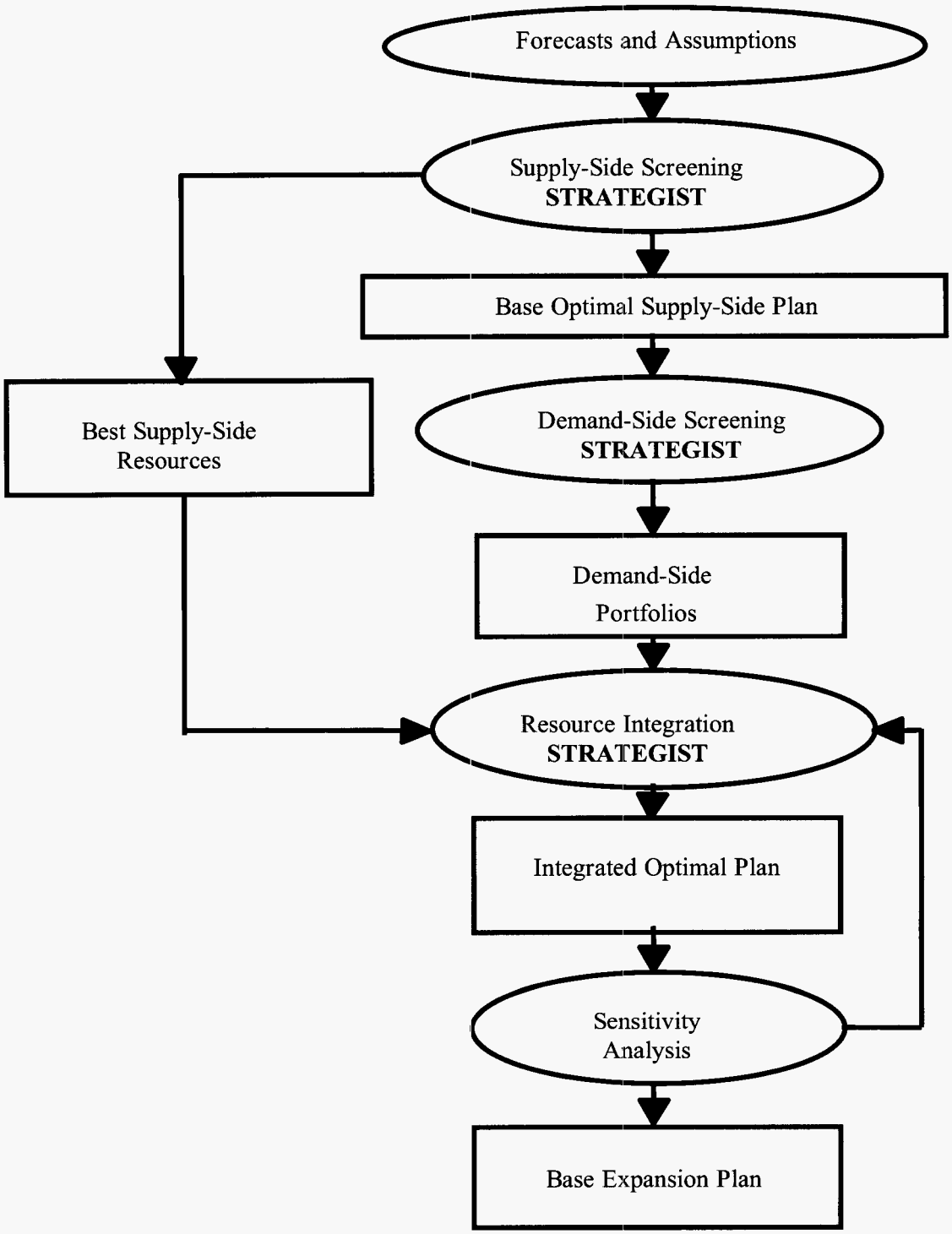
PEF employs an Integrated Resource Planning (IRP) process to determine the most cost-effective mix of supply- and demand-side alternatives that will reliably satisfy our customers' future demand and energy needs. PEF's IRP process incorporates state-of-the-art computer models used to evaluate a wide range of future generation alternatives and cost-effective conservation and dispatchable demand-side management programs on a consistent and integrated basis.

An overview of PEF's IRP Process is shown in Figure 3.1. The process begins with the development of various forecasts, including demand and energy, fuel prices, and economic assumptions. Future supply- and demand-side resource alternatives are identified and extensive cost and operating data are collected to enable these to be modeled in detail. These alternatives are optimized together to determine the most cost-effective plan for PEF to pursue over the next ten (10) years to meet the company's reliability criteria. The resulting ten-year plan, the Integrated Optimal Plan, is then tested under different relevant sensitivity scenarios to identify variances, if any, which would warrant reconsideration of any of the base plan assumptions. If the plan is judged robust and works within the corporate framework, it evolves as the Base Expansion Plan. This process is discussed in more detail in the following section titled "The Integrated Resource Planning (IRP) Process".

The Integrated Resource Plan provides PEF with substantial guidance in assessing and optimizing the Company's overall resource mix on both the supply side and the demand side. When a decision supporting a significant resource commitment is being developed (e.g. plant construction, power purchase, DSM program implementation), the Company will move forward with directional guidance from the IRP and delve much further into the specific levels of examination required. This more detailed assessment will typically address very specific technical requirements and cost estimates, detailed corporate financial considerations, and the most current dynamics of the business and regulatory environments.

FIGURE 3.1

Integrated Resource Planning (IRP) Process Overview



THE INTEGRATED RESOURCE PLANNING (IRP) PROCESS

Forecasts and Assumptions

The evaluation of possible supply- and demand-side alternatives, and development of the optimal plan, is an integral part of the IRP process. These steps together comprise the integration process that begins with the development of forecasts and collection of input data. Base forecasts that reflect PEF's view of the most likely future scenarios are developed, along with high and low forecasts that reflect alternative future scenarios. Computer models used in the process are brought up-to-date to reflect this data, along with the latest operating parameters and maintenance schedules for PEF's existing generating units. This establishes a consistent starting point for all further analysis.

Reliability Criteria

Utilities require a margin of generating capacity above the firm demands of their customers in order to provide reliable service. Periodic scheduled outages are required to perform maintenance and inspections of generating plant equipment and to refuel nuclear plants. At any given time during the year, some capacity may be out of service due to unanticipated equipment failures resulting in forced outages of generation units. Adequate reserve capacity must be available to accommodate these outages and to compensate for higher than projected peak demand due to forecast uncertainty and abnormal weather. In addition, some capacity must be available for operating reserves to maintain the balance between supply and demand on a moment-to-moment basis.

PEF plans its resources in a manner consistent with utility industry planning practices, and employs both deterministic and probabilistic reliability criteria in the resource planning process. A Reserve Margin criterion is used as a deterministic measure of PEF's ability to meet its forecasted seasonal peak load with firm capacity. PEF plans its resources to satisfy a twenty (20) percent Reserve Margin criterion.

Loss of Load Probability (LOLP) is a probabilistic criterion that measures the probability that a company will be unable to meet its load throughout the year. While Reserve Margin considers the peak load and amount of installed resources, LOLP takes into account generating unit sizes, capacity mix, maintenance scheduling, unit availabilities, and capacity assistance available from

other utilities. A standard probabilistic reliability threshold commonly used in the electric utility industry, and the criterion employed by PEF, is a maximum of one (1) day in ten (10) years loss of load probability.

PEF has based its resource planning on the use of dual reliability criteria since the early 1990s, a practice that has been accepted by the FPSC. PEF's resource portfolio is designed to satisfy the twenty (20) percent Reserve Margin requirement and probabilistic analyses are periodically conducted to ensure that the one (1) day in ten (10) years LOLP criterion is also satisfied. By using both the Reserve Margin and LOLP planning criteria, PEF's resource portfolio is designed to have sufficient capacity available to meet customer peak demand, and to provide reliable generation service under expected load conditions. PEF has found that resource additions are typically triggered to meet the twenty (20) percent Reserve Margin thresholds before LOLP becomes a factor.

Supply-Side Screening

Potential supply-side resources are screened to determine those that are the most cost-effective. Data used for the screening analysis is compiled from various industry sources and PEF's experiences. The wide range of resource options is pre-screened to set aside those that do not warrant a detailed cost-effectiveness analysis. Typical screening criteria are costs, fuel source, technology maturity, environmental parameters, and overall resource feasibility.

Economic evaluation of generation alternatives is performed using the Strategist® optimization program. This optimization tool evaluates revenue requirements for specific resource plans generated from multiple combinations of future resource additions that meet system reliability criteria and other system constraints. All resource plans are then ranked by system revenue requirements.

Demand-Side Screening

Like supply-side resources, data for large numbers of potential demand-side resources are also collected. These resources are pre-screened to eliminate those alternatives that are still in research and development, addressed by other regulations (e.g. building code), or not applicable to PEF's

customers. Strategist® is updated with cost data and load impact parameters for each potential DSM measure to be evaluated.

The Base Optimal Supply-Side Plan is used to establish avoidable units for screening future demand-side resources. Each future demand-side alternative is individually tested in this plan over the ten-year planning horizon to determine the benefit or detriment that the addition of this demand-side resource provides to the overall system. Strategist® calculates the benefits and costs for each demand-side measure evaluated and reports the appropriate ratios for the Rate Impact Measure (RIM), the Total Resource Cost Test (TRC), and the Participant Test. Demand-side programs that pass the RIM test are then bundled together to create demand-side portfolios. These portfolios contain the appropriate DSM options and make the optimization solvable with the Strategist® model.

Resource Integration and the Integrated Optimal Plan

The cost-effective generation alternatives and the demand-side portfolios developed in the screening process can then be optimized together to formulate integrated optimal plans. The optimization program considers all possible future combinations of supply- and demand-side alternatives that meet the company's reliability criteria in each year of the ten-year study period and reports those that provide both flexibility and low revenue requirements (rates) for PEF's ratepayers.

Developing the Base Expansion Plan

The integrated optimized plan that provides the lowest revenue requirements may then be further tested using sensitivity analysis. The economics of the plan may be evaluated under high and low forecast scenarios for fuel, load and financial assumptions, or any other sensitivities which the planner deems relevant. From the sensitivity assessment, the plan that is identified as achieving the best balance of flexibility and cost is then reviewed within the corporate framework to determine how the plan potentially impacts or is impacted by many other factors. If the plan is judged robust under this review, it would then be considered the Base Expansion Plan.

KEY CORPORATE FORECASTS

Load Forecast

The assumptions and methodology used to develop the base case load and energy forecast is described in Chapter 2 of this TYSP.

Fuel Forecast

The base case fuel price forecast was developed using short-term and long-term spot market price projections from industry-recognized sources. Coal prices are expected to be relatively stable month to month; however, oil and natural gas prices are expected to be more volatile on a day-to-day and month-to-month basis.

In the short term, the base cost for coal is based on the existing contracts and spot market coal prices and transportation arrangements between PEF and its various suppliers. For the longer term, the prices are based on spot market forecasts reflective of expected market conditions. Oil and natural gas prices are estimated based on current and expected contracts and spot purchase arrangements as well as near-term and long-term market forecasts. Oil and natural gas commodity prices are driven primarily by open market forces of supply and demand. Natural gas firm transportation cost is determined primarily by pipeline tariff rates and tends to change less frequently than commodity prices.

Financial Forecast

The key financial assumptions used in PEF's most recent planning studies were 45 percent debt and 55 percent equity capital structure, projected debt cost of 7.3 percent, and an equity return of 11.75 percent. These assumptions resulted in a weighted average cost of capital of 9.75 percent and an after-tax discount rate of 8.5 percent.

TEN-YEAR SITE PLAN (TYSP) RESOURCE ADDITIONS

In this TYSP, PEF's supply-side resources include the repowering of the P.L. Bartow Plant with F-Class combined cycle technology with an expected in-service date of June 2009. The planned units in this TYSP include the installation of combustion turbine technology at the Suwannee River Plant as well as two (2) nuclear units on a greenfield site in Levy County.

In 2008, the FPSC approved PEF's petition for a Determination of Need for the two (2) nuclear units in Levy County. The Company selected Levy Units 1 and 2 for projected commercial service in 2016 and 2017, respectively, to meet its generation capacity needs in the period 2016 to 2019 and beyond after carefully evaluating planning options through the Company's on-going Integrated Resource Planning (IRP) process outlined herein. The nuclear units were identified as the most cost-effective option to meet the need, taking into account the need to improve fuel diversity, reduce Florida's dependence on fuel oil and natural gas, reduce current and potential future air emission compliance costs, and contribute to the long-term stability of the electric grid. Since nuclear units involve very long licensing and construction lead times, PEF plans to continue with the design and development of the infrastructure and transmission requirements, negotiations for procurement and construction contracts and permitting and licensing to support the current planned in-service dates. However changes in factors such as, the projected load growth and the timeline to obtain all the necessary state and federal permits, could impact PEF's base expansion plan.

Through its ongoing planning process, PEF will continue to evaluate the timetables for all projected resource additions and assess alternatives for the future considering, among other things, projected load growth, fuel prices, current lead times in the construction marketplace, project development timelines for new fuels, and technologies, and environmental compliance considerations. The Company will continue to examine the merits of new generation alternatives and adjust its resource plans accordingly to ensure optimal selection of resource additions based on the best information available.

RENEWABLE ENERGY

PEF continues to make purchases from the following facilities listed by fuel type:

Municipal Solid Waste Facilities:

Lake County Resource Recovery (12.8 MW)

Metro-Dade County Resource Recovery (43 MW)

Pasco County Resource Recovery (23 MW)

Pinellas County Resource Recovery (54.8 MW)

Waste Heat from Exothermic Processes:

PCS Phosphate (As Available)

Waste Wood, Tires, and Landfill Gas:

Ridge Generating Station (39.6 MW)

SI Group Energy (5 MW) (As-Available)

Photovoltaics

Various customer and PEF owned installations (approximately 930 kW)

In addition, PEF has entered into contracts with Biomass Energy Group (116 MW), BG&E (150 MW), Vision Power (40 MW) and Horizon Energy (60 MW). The Biomass Energy Group and the Vision Power facilities will utilize an energy crop, the BG&E units will fire gas from wood products and Horizon Energy will gasify municipal solid waste.

PEF continues to seek out renewable suppliers that can provide reliable capacity and energy at economic rates. In July 2007, PEF issued a Request for Renewables (RFR) soliciting proposals for renewable energy projects. PEF's RFR continues to receive interest and to date has logged over 88 responses. Discussions with potential suppliers are ongoing. PEF will continue to submit renewable standard offer contracts in compliance with FPSC rules.

PLAN CONSIDERATIONS

Load Forecast

In general, higher-than-projected load growth would shift the need for new capacity to an earlier year and lower-than-projected load growth would delay the need for new resources. PEF's TYSP includes in the short-term the Bartow Repowering Project currently under construction and additions of combustion turbine and nuclear units in the long-term. The Company's resource plan provides the flexibility to shift certain resources to earlier or later in-service dates should a significant change in projected customer demand begin to materialize.

Fuel Forecast

PEF's current TYSP includes new natural gas fueled resources in 2009, 2014, and 2015. The plan also includes uprates to the Crystal River nuclear unit No. 3 in 2009 and 2011, and new

nuclear units in 2016 and 2017. Higher gas prices would improve the economics for non gas-fueled resources and lower gas prices would benefit gas-fueled resources. Uncertainty over future environmental regulation, particularly as it relates to carbon, as well as fuel security and reliability considerations, favors pursuit of the nuclear option.

Financial Forecast

PEF's current TYSP includes combustion turbines in 2014 and 2015 with nuclear unit additions in 2016 and 2017. Lower cost of capital and escalation rates would favor options with longer construction lead times and higher capital costs such as the nuclear addition. However, PEF does not expect these assumptions to go much lower than the current base case forecast and nuclear generation is not projected to be feasible before 2016. PEF will continue to assess the economics of future generation alternatives including consideration of the uncertainties in planning assumptions.

TRANSMISSION PLANNING

PEF's transmission planning assessment practices are developed to test the ability of the planned system to meet the reliability criteria as outlined in the FERC Form 715 filing, and to assure the system meets PEF, Florida Reliability Coordinating Council, Inc. (FRCC), and NERC criteria. This involves the use of load flow and transient stability programs to model various contingency situations that may occur, and determining if the system response meets the reliability criteria. In general, this involves running simulations for the loss of any single line, generator, or transformer. PEF normally runs this analysis for system peak and off-peak load levels for possible contingencies, and for both summer and winter. Additional studies are performed to determine the system response to credible, but less probable criteria. These studies include the loss of multiple generators or lines, combinations of each, and some load loss is permissible under these more severe disturbances. These credible, but less probable scenarios are also evaluated at various load levels, since some of the more severe situations occur at average or minimum load conditions. In particular, critical fault clearing times are typically the shortest (most severe) at minimum load conditions, with just a few large base load units supplying the system needs.

As noted in the PEF reliability criteria, some remedial actions are allowed to reduce system loadings, in particular, sectionalizing is allowed to reduce loading on lower voltage lines for bulk system contingencies, but the risk to load on the sectionalized system must be reasonable (it would not be considered prudent to operate for long periods with a sectionalized system). In addition, the number of remedial action steps and the overall complexity of the scheme are evaluated to determine overall acceptability.

Presently, PEF uses the following reference documents to calculate Available Transfer Capability (ATC) for required transmission path postings on the Florida Open Access Same-Time Information System (OASIS):

- FRCC: FRCC ATC Calculation and Coordination Procedures, April 4, 2006, which can be found on the FRCC's website: https://www.frcc.com/ATCWG/Shared%20Documents/FRCC%20ATC%20Coordination%20Procedures.pdf

- NERC: Transmission Transfer Capability, May 1, 1995,

- NERC: Available Transfer Capability – Definitions and Determination, July 30, 1996.

PEF uses the FRCC Capacity Benefit Margin (CBM) methodology to assess its CBM needs. This methodology is summarized as follows:

> "FRCC Transmission Providers make an assessment of the CBM needed on their respective systems by using either deterministic or probabilistic generation reliability analysis. The appropriate amount of transmission interface capability is then reserved for CBM on a per interface basis, taking into account the amount of generation available on other interconnected systems, the respective load peaking diversities of those systems, and Transmission Reliability Margin (TRM). Operating reserves may be included if appropriate in TRM and subsequently subtracted from the CBM if needed."

PEF currently has zero CBM reserved on each of its interfaces (posted paths). PEF's CBM on each path is currently established through the transmission provider functions within PEF using deterministic and probabilistic generation reliability analysis.

Currently, PEF proposes several bulk transmission additions that must be certified under either the Florida Transmission Line Siting Act (TLSA) or the Power Plant Siting Act (PPSA). PEF proposed bulk transmission line additions are summarized in the following Table 3.3. PEF has listed only the larger transmission projects. These projects may change depending upon the outcome of PEF's final corridor and specific route selection process.

TABLE 3.3
PROGRESS ENERGY FLORIDA
LIST OF PROPOSED BULK TRANSMISSION LINE ADDITIONS
2009 – 2018

MVA RATING WINTER	LINE OWNERSHIP	TERMINALS		LINE LENGTH (CKT-MILES)	COMMERCIAL IN-SERVICE DATE (MO./YEAR)	NOMINAL VOLTAGE (kV)
1195	PEF	AVALON	GIFFORD	8	5/2010	230
612	PEF	BARTOW	NORTHEAST - Circuit 1	4	3/2009	230
612	PEF	BARTOW	NORTHEAST -Circuit 2	4	3/2009	230
612	PEF	BARTOW	NORTHEAST -Circuit 3	4	3/2009	230
525	PEF	NORTHEAST	32ND STREET	2.4	3/2009	115
810	PEF	NORTHEAST	40TH STREET	8.3*	3/2009	230
810	PEF	PASADENA	51ST STREET	0.4	6/2009	230
810	PEF	51ST STREET	40TH STREET	0.2	6/2009	230
837	PEF	AVON PARK	FORT MEADE	26†	5/2009	230
925	PEF	HINES ENERGY COMPLEX	WEST LAKE WALES #2	21	5/2012	230
1195	PEF	INTERCESSION CITY	WEST LAKE WALES #2	30	6/2010	230
1195	PEF	INTERCESSION CITY	WEST LAKE WALES #1	30 *	6/2010	230
1141	PEF	BITHLO	STANTON (OUC)	6**	4/2010	230
2870	PEF	LEVY	CENTRAL FLA SOUTH	50***	6/2016	500
2870	PEF	LEVY	CRYSTAL RIVER	10***	6/2016	500
2870	PEF	LEVY	CITRUS #1	10***	6/2016	500
2870	PEF	LEVY	CITRUS #2	10***	6/2016	500
1195	PEF	CRYSTAL RIVER	BROOKRIDGE	35***	6/2016	230
1195	PEF	BROOKRIDGE	BROOKSVILLE WEST	4***	6/2016	230
1195	PEF	KATHLEEN	LAKE TARPON	45***	6/2016	230

* Rebuild existing circuit

** 6 miles is the present estimated distance for PEF's portion of this 12-mile PEF-OUC tie line

***Each of these projects is part of one or more transmission options for the Levy County Nuclear Power Plant project. Out of several options under consideration, the final option has yet to be chosen, and thus the above list of projects is subject to change.

† Convert existing 115 kV line to 230

CHAPTER 4

ENVIRONMENTAL AND LAND USE INFORMATION

Progress Energy

CHAPTER 4
ENVIRONMENTAL AND LAND USE INFORMATION

PREFERRED SITES

PEF's base expansion plan includes the repowering of the existing P.L. Bartow Plant in Pinellas County with combined cycle technology, the potential installation of combustion turbine technology at the Suwannee River Plant, and the installation of two (2) nuclear power units at the Levy County greenfield site. While these sites are suitable for new generation, PEF continues to evaluate other available options for future supply alternatives.

PEF is currently undergoing construction of the P.L. Bartow Plant repowering project, which is scheduled to begin commercial operation in June 2009. The planned combustion turbine technology installation at the Suwannee River Plant with possible operation years of 2014 and 2015 as well as installation of the Levy County nuclear power units with operation planned to begin in 2016 and 2017 are being evaluated. Appropriate permitting requirements for PEF's preferred sites are discussed in the following site descriptions.

P.L. BARTOW PLANT – PINELLAS COUNTY

As mentioned above, PEF is in the process of repowering the existing P.L. Bartow Plant with natural gas-fired 4-on-1 combined cycle technology, which is scheduled to begin commercial operation in June 2009.

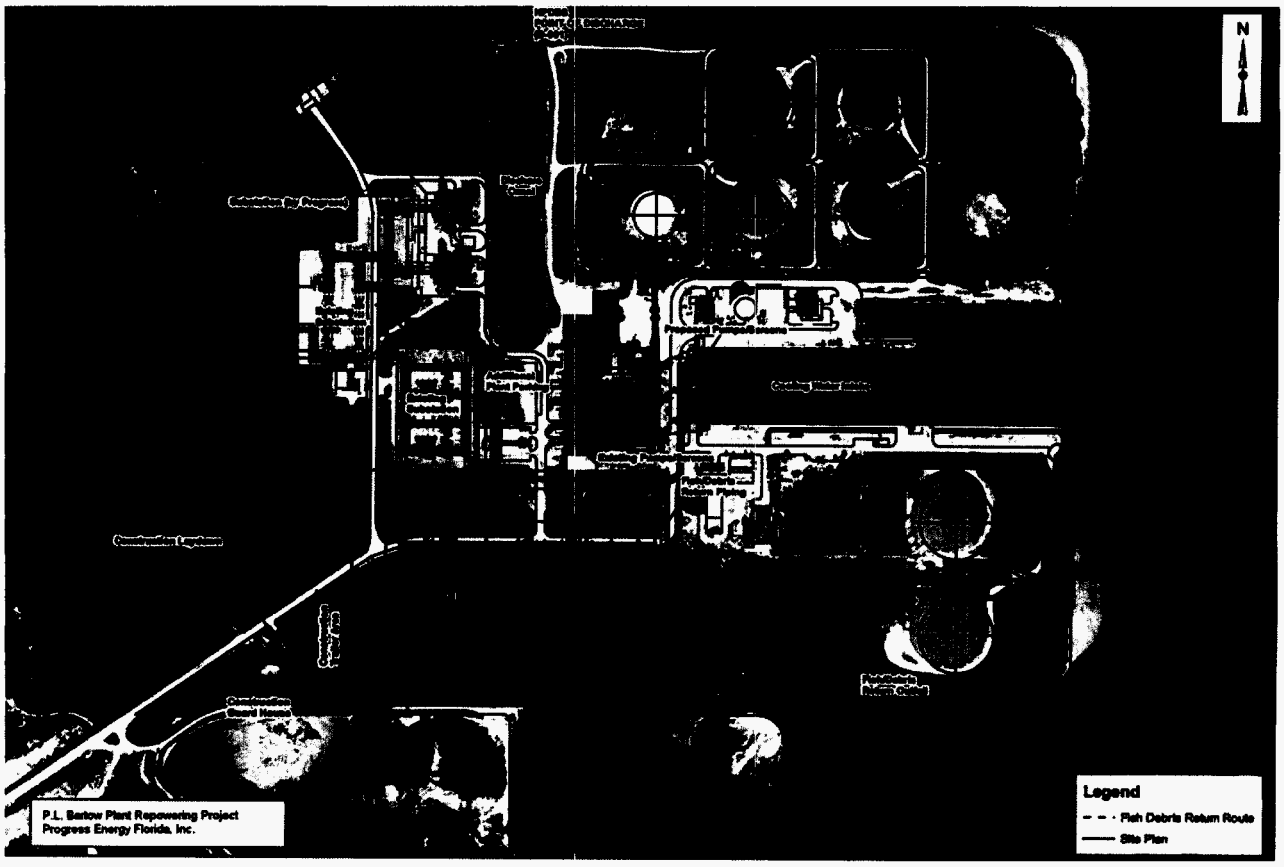
The P.L. Bartow Plant site (see Figure 4.1) consists of 1,348 acres in Pinellas County, on the west shore of Tampa Bay. The site is located on Weedon Island, just north of downtown Saint Petersburg. An adjacent barge fuel oil off-loading facility, a natural gas supply from the Florida Gas Transmission (FGT) pipeline, and a proposed Gulfstream natural gas pipeline provide the necessary fuel. The existing site consists of three (3) boilers, and four (4) combustion turbine peaking units. The repowered site will consist of a 4-on-1 combined cycle unit and the four (4) combustion turbine peaking units.

FIGURE 4.1.a

P.L. Bartow Plant (Pinellas County)

FIGURE 4.1.b

P.L. Bartow Plant (Pinellas County) – Plant Layout



In addition to this repowered unit combusting clean fuels, controls will also be utilized to minimize air emissions. These controls include dry low NO_x (DLN) burners, water injection, and selective catalytic reduction (SCR) systems. This project will have a positive impact on the surrounding air quality.

The repowered site will utilize existing water intake and discharge facilities. It will also use the existing water supply and ground water discharge treatment system. This repowered site has been designed and will operate such that no net new impact on water quality and water use will result.

Transmission modifications will be required to accommodate the repowering of these steam units (see Chapter 3).

SUWANNEE RIVER PLANT – SUWANNEE COUNTY

PEF is considering the installation of combustion turbine technology at the Suwannee River Plant. The resource expansion plan predicts commercial operation start-up of summer 2014 and 2015 to meet the forecasted load.

The Suwannee River Plant site (see Figure 4.2) consists of 596 acres in unincorporated northwest Suwannee County, on the Suwannee River and approximately eleven (11) miles northwest of Live Oak, FL.

Three (3) fuel oil boilers as well as three (3) combustion turbine peaking units make up the current generation at this site. Fuel oil is transported in by rail car and truck, while pipeline natural gas is supplied by Southern Natural Gas. If this project is completed, the site will no longer utilize the fuel oil boilers and it will then consist of five (5) combustion turbines peaking units.

The installation of combustion turbine technology, combustion of clean fuels, as well as use of current combustion and control technology will have a positive effect on the surrounding air quality.

Applicable requirements related to water quality and water usage as a result of this project will be evaluated in more detail as this project moves forward. Combustion turbine technology will have no water discharge to the Suwannee River.

With the potential project site located on or near the existing Suwannee River Plant, local land use and zoning requirements will be evaluated. In addition, noise, natural resources, and wetland impacts will be evaluated and mitigated for, as part of the site design and permitting process.

FIGURE 4.2.a.

Suwannee River Plant (Suwannee County)

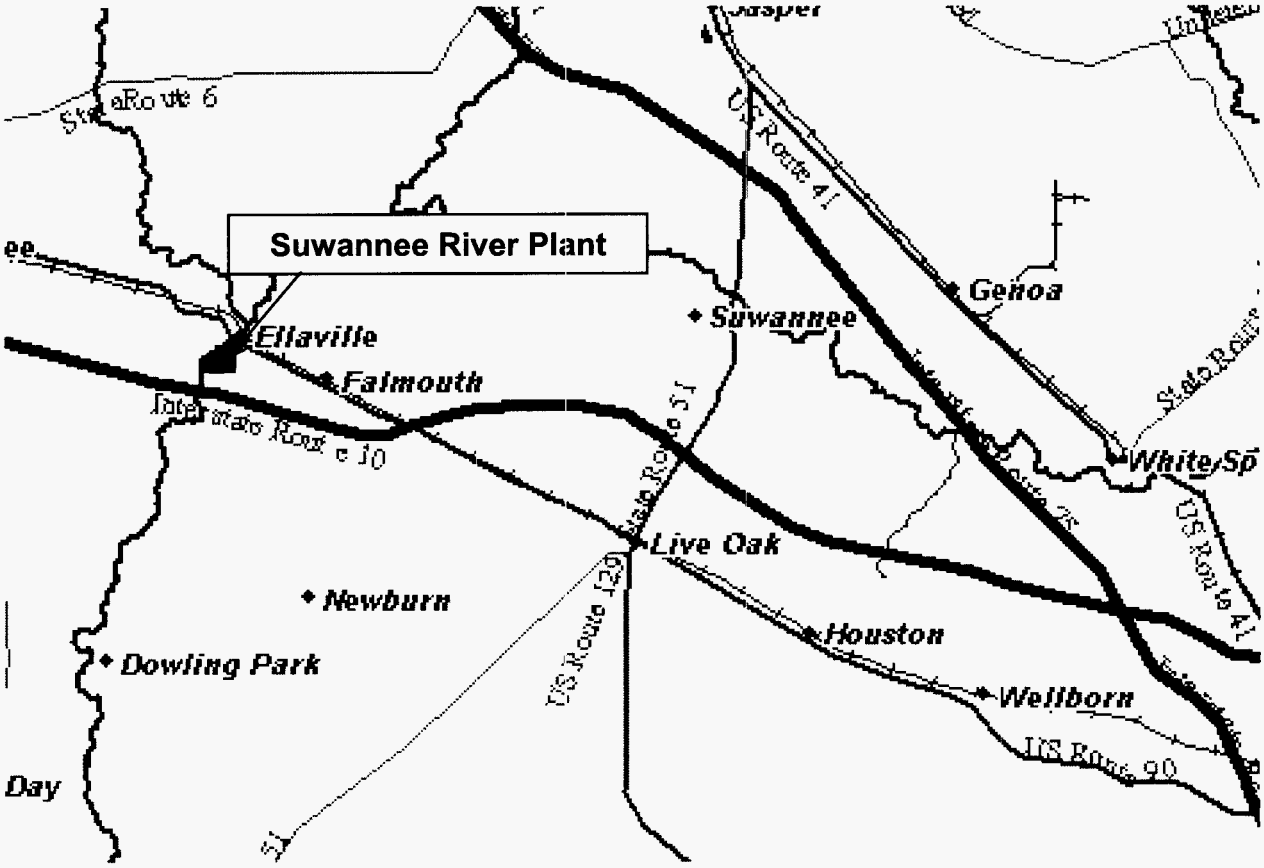
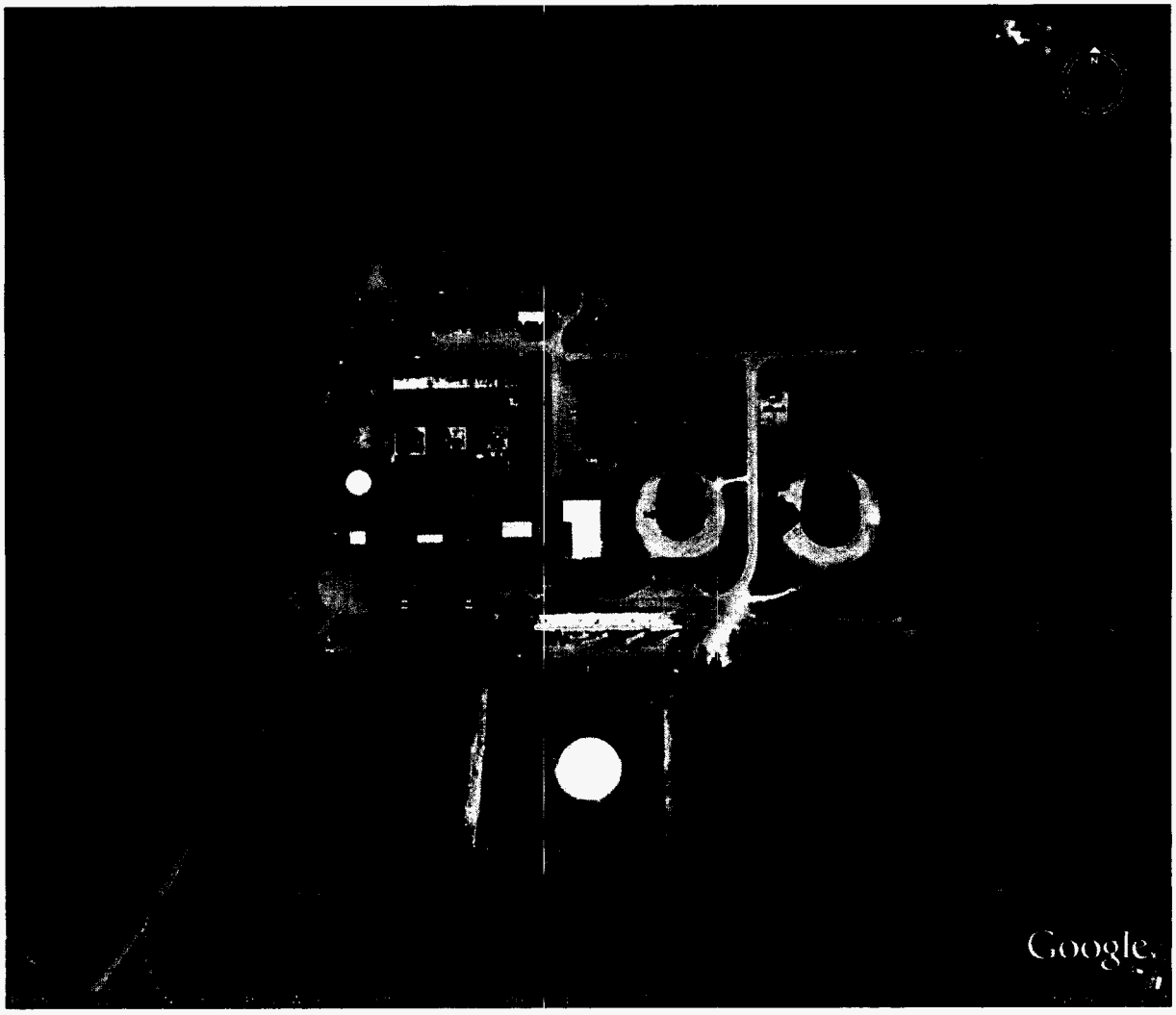


FIGURE 4.2.b.

Suwannee River Plant (Suwannee County) –Plant Layout



LEVY COUNTY NUCLEAR POWER PLANT – LEVY COUNTY

PEF recently named a site in southern Levy County as the preferred location for construction of new generation. The Company is planning the construction of two (2) new nuclear units at this plant site with planned operation to begin in 2016 and 2017.

The Levy County site (see Figure 4.3) is approximately 3,100 acres and located eight (8) miles inland from the Gulf of Mexico and roughly ten (10) miles north of the existing PEF Crystal River Energy Complex.

The site is about 2.5 miles from the Cross Florida Barge Canal, from which the Levy units may draw their makeup water to supply the on-site cooling water system. The Levy County Plant Units 1 and 2, together with the necessary associated site facilities, will occupy approximately ten (10) percent of the 3,100 acre site and the remaining acreage will be preserved as an exclusionary boundary around the developed plant site and a buffer preserve. PEF purchased an additional 2,100 acre tract contiguous with the southern boundary of the Levy site that secures access to a water supply for the site from the Cross Florida Barge Canal as well as transmission corridors from the plant site. The property for many years had been used for silviculture and was designated as Forestry/Rural Residential. The surrounding area land use is predominantly vacant, commercial forestry lands.

This site was chosen based on several considerations including availability of land and water resources, access to the electric transmission system, and environmental considerations. First, the Levy County site had access to an adequate water supply. Second, the site is at a relatively high elevation, which provides additional protection from wind damage and flooding. Third, unlike a number of other sites considered, the Levy site has more favorable geotechnical qualities, which are critical to siting a nuclear power plant. Fourth, the Levy site provides geographical separation from other electrical generating facilities. Even though the Crystal River Energy Complex site has many favorable qualities, adding new nuclear generating capacity to the Crystal River Energy Complex at this time would result in a significant concentration of PEF's generating assets in one geographical location. This increases the likelihood of a significant generation loss from a single event and a potential large scale impact on the PEF system. The

Levy County location also would assist in avoiding a potential loss from a single significant transmission system event that might result in a large-scale impact on the PEF system.

PEF's assessment of the Levy County site addressed whether any threatened and endangered species or archeological and cultural resources would be adversely impacted by the development of the site for nuclear generation units and related facilities. No significant issues were identified in PEF's evaluations of the property.

The proximity of the Levy County site to the PEF's existing Crystal River Unit 3 nuclear plant provides opportunities for efficiencies in shared support functions. The two (2) Levy units will be located on a greenfield site where site and transmission infrastructure must be constructed along with the buildings necessary for the power units. The site will include cooling towers, intake and discharge structures, containment buildings, auxiliary buildings, turbine buildings, diesel generators, warehouses, related site work and infrastructure, including roads, transmission lines, and a transmission substation. The Company submitted a Site Certification Application (SCA) to the Florida Department of Environmental Protection (DEP) on June 2, 2008 for the entire site, including plants and associated facilities for the units. Site certification hearings were completed in March 2009, and the Siting Board may act on the final certification by the end of August 2009.

Nuclear power is a clean source of electric power generation. Electric power generation from nuclear fuel produces no sulfur dioxide (SO_2), nitrogen oxide (NO_x), green house gases (GHG), or other emissions. Therefore, it will have a positive effect on the surrounding air quality.

Water discharged from nuclear plants must meet federal Clean Water Act requirements and state water-quality standards. Before operating, a nuclear plant's licensing process requires an environmental impact statement that carefully examines and resolves all potential impacts to water quality from the operation of the plant. These issues include concerns about the discharge of waste water and the impacts on aquatic life in cooling water used by the plant.

Transmission modifications will be required to accommodate the Levy County Nuclear Power Plant.

FIGURE 4.3.a.

Levy County Nuclear Power Plant (Levy County)

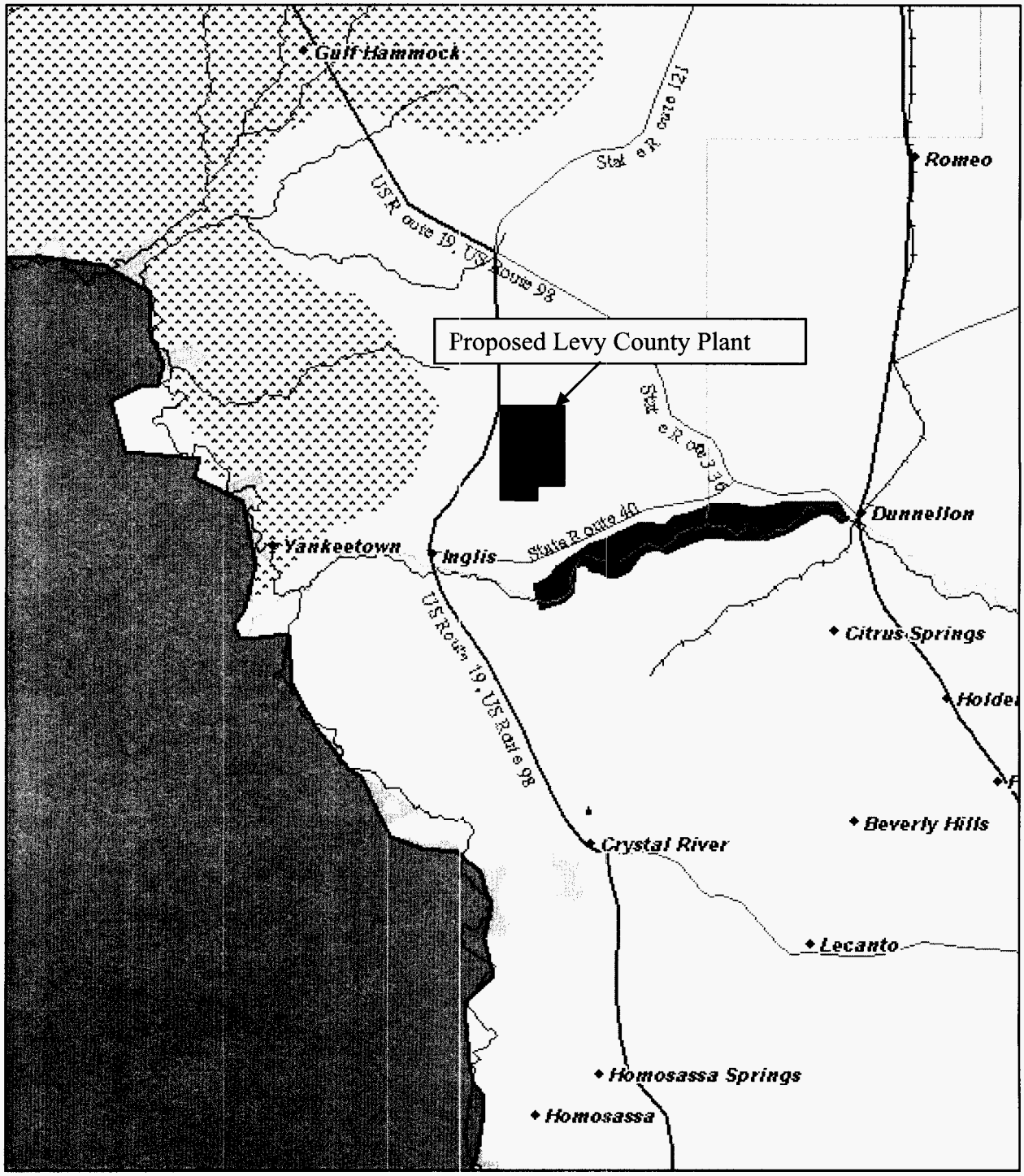


FIGURE 4.3.b.

Levy County Nuclear Power Plant (Levy County) – Aerial View