Progress Energy

ORIGINAL

April 2, 2007

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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

Re: *Ten-Year Site Plan as of December 31, 2006* 070000

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 2007 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.

Very truly yours,

John T. Burnett LMS

John T. Burnett

CMP ______
COM ______ JTB:lms
CTR ______ Enclosure
ECR ______
GCL ______
OPC ______
RCA ______
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Progress Energy Service Company, LLC
106 E. College Avenue, Suite 800
Highpoint Center
Tallahassee, FL 32301

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Progress Energy Florida
Ten-Year Site Plan

April 2007

2007-2016

Submitted to:
Florida Public Service Commission

Progress Energy

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LIST OF REQUIRED SCHEDULES

LIST OF
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
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

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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. It is compiled in accordance with FPSC Rules 25-22.070 through 22.072, Florida Administrative Code.

Progress Energy Florida's (PEF's) TYSP is based on 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.

The TYSP document contains four chapters as described below:

CHAPTER 1

DESCRIPTION OF EXISTING FACILITIES

CHAPTER 2

FORECAST OF ELECTRICAL POWER DEMAND AND ENERGY CONSUMPTION

CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

CHAPTER 4

ENVIRONMENTAL AND LAND USE INFORMATION

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CHAPTER 1

DESCRIPTION OF EXISTING FACILITIES

Progress Energy

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CHAPTER 1

DESCRIPTION OF EXISTING FACILITIES

EXISTING FACILITIES OVERVIEW

OWNERSHIP

PEF 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 (PUCHA) 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. Progress Energy is the parent company of PEF and certain other subsidiaries.

AREA OF SERVICE

PEF provided electric service during 2006 to an average of 1.6 million customers in Florida. Its service area covers approximately 20,000 square miles and includes the densely populated areas around Orlando, as well as the cities of St. Petersburg and Clearwater. PEF is interconnected with 22 municipal and 9 rural electric cooperative systems. PEF is subject to the rules and regulations of the Federal Energy Regulatory Commission (FERC) 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 miles of underground cable. A map of the Electric System can be found in Figure 1.2.

ENERGY MANAGEMENT and ENERGY EFFICIENCY

PEF customers participating in the company's residential Energy Management program help to manage future growth and costs. Approximately 389,000 customers participated in the Energy Management program at the end of 2006, contributing about 755,000 kW of winter peak-shaving capacity for use during high load periods.

PEF's DSM Plan currently consists of seven residential programs, eight commercial and industrial programs, and one research and development program. This includes the 39 additional DSM measures and 2 new residential programs approved by the FPSC on January 5, 2007. (Docket 060647: Consummating Order PSC-07-0017-CO-EG making Order PSC-0601018-TRG-EG effective and final). Megawatt contributions to the TYSP have increased as a result of these changes to conservation, standby, and residential load management programs.

TOTAL CAPACITY RESOURCE

As of December 31, 2006, PEF had total summer capacity resources of approximately 10,752 MW consisting of installed capacity of 8,844 MW (excluding Crystal River 3 joint ownership) and 1,908 MW of firm purchased power. Additional information on PEF's existing generating resources is shown on Schedule 1 and Table 3.1.

FIGURE 1.1

PROGRESS ENERGY FLORIDA

Service Area Map

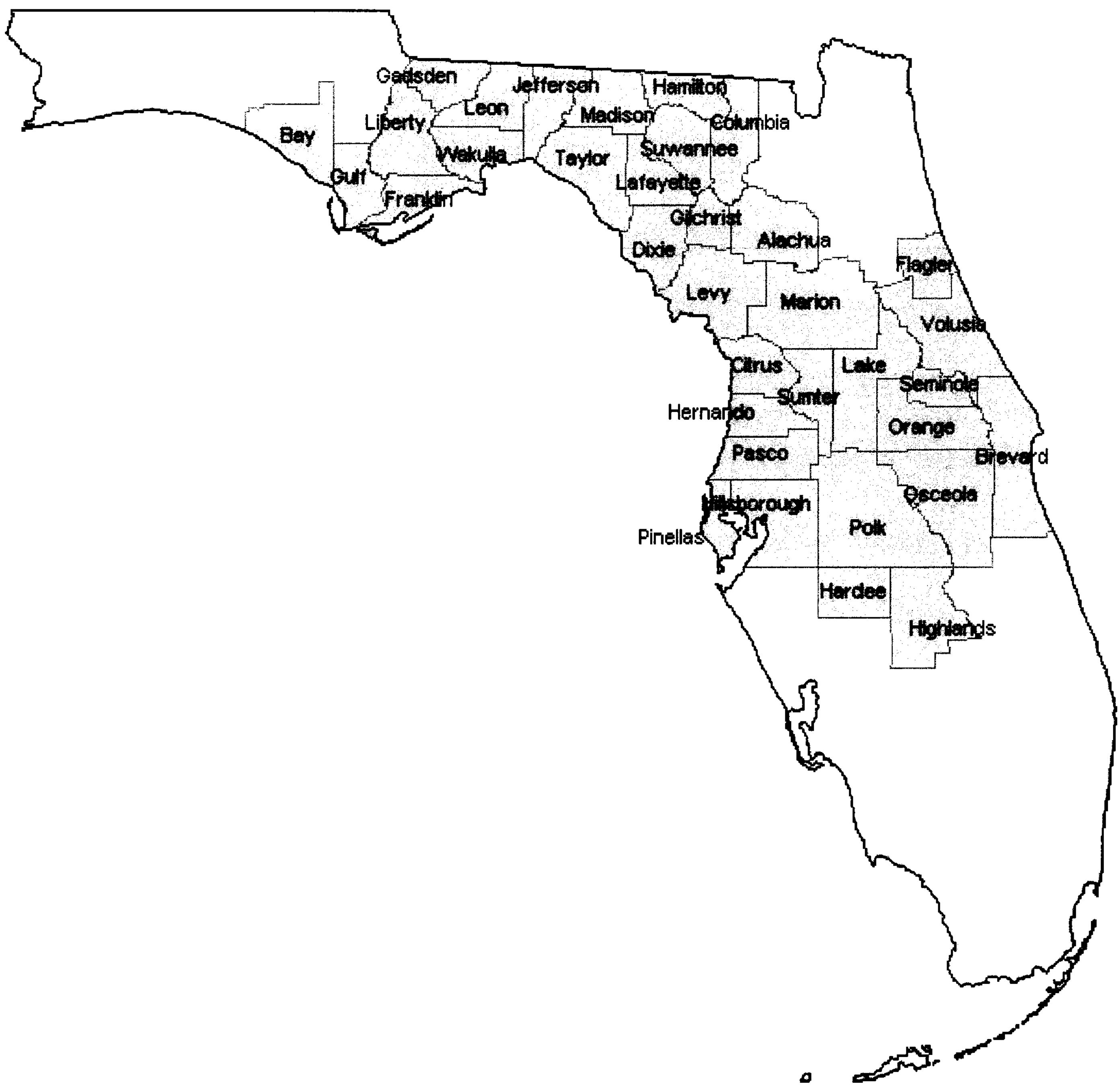

FIGURE 1.2

PROGRESS ENERGY FLORIDA

Electric System Map

PROGRESS ENERGY FLORIDA

SCHEDULE 1
EXISTING GENERATING FACILITIES

AS OF DECEMBER 31, 2006

(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	498	522
ANCLOTE	2	PASCO	ST	RFO	NG	PL	PL		10/78		556,200	507	526
BARTOW	1	PINELLAS	ST	RFO		WA			09/58		127,500	121	125
BARTOW	2	PINELLAS	ST	RFO		WA			08/61		127,500	119	124
BARTOW	3	PINELLAS	ST	RFO	NG	WA	PL		07/63		239,360	204	215
CRYSTAL RIVER	1	CITRUS	ST	BIT		RR	WA		10/66		440,550	379	386
CRYSTAL RIVER	2	CITRUS	ST	BIT		RR	WA		11/69		523,800	491	496
CRYSTAL RIVER	3 *	CITRUS	ST	NUC		TK			03/77		890,460	769	788
CRYSTAL RIVER	4	CITRUS	ST	BIT		WA	RR		12/82		739,260	722	734
CRYSTAL RIVER	5	CITRUS	ST	BIT		WA	RR		10/84		739,260	721	734
SUWANNEE RIVER	1	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/53		34,500	30	33
SUWANNEE RIVER	2	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/54		37,500	31	31
SUWANNEE RIVER	3	SUWANNEE	ST	RFO	NG	TK/RR	PL		10/56		75,000	80	82
												4,672	**4,796**
COMBINED-CYCLE													
HINES ENERGY COMPLEX	1	POLK	CC	NG	DFO	PL	TK	2***	04/99		546,500	463	528
HINES ENERGY COMPLEX	2	POLK	CC	NG	DFO	PL	TK		12/03		548,250	490	562
HINES ENERGY COMPLEX	3	POLK	CC	NG	DFO	PL	TK		11/05		561,000	503	570
TIGER BAY	1	POLK	CC	NG		PL			08/97		278,100	203	225
												1,659	**1,885**
COMBUSTION TURBINE													
AVON PARK	P1	HIGHLANDS	GT	NG	DFO	PL	TK	3***	12/68		33,790	25	34
AVON PARK	P2	HIGHLANDS	GT	DFO		TK			12/68		33,790	25	36
BARTOW	P1, P3	PINELLAS	GT	DFO		WA			05/72, 06/72		111,400	86	112
BARTOW	P2	PINELLAS	GT	NG	DFO	PL	WA	8	06/72		55,700	44	56
BARTOW	P4	PINELLAS	GT	NG	DFO	PL	WA	8	06/72		55,700	46	58
BAYBORO	P1-P4	PINELLAS	GT	DFO		WA			04/73		226,800	177	232
DEBARY	P1-P6	VOLUSIA	GT	DFO		TK			12/75-04/76		401,220	311	393
DEBARY	P7-P9	VOLUSIA	GT	NG	DFO	PL	TK	8	10/92		345,000	249	287
DEBARY	P10	VOLUSIA	GT	DFO		TK			10/92		115,000	83	99
HIGGINS	P1-P2	PINELLAS	GT	NG	DFO	PL	TK		03/69, 04/69		67,580	53	68
HIGGINS	P3-P4	PINELLAS	GT	NG	DFO	PL	TK	1	12/70, 01/71		85,850	57	65
INTERCESSION CITY	P1-P6	OSCEOLA	GT	DFO		PL,TK			05/74		340,200	282	369
INTERCESSION CITY	P7-P10	OSCEOLA	GT	NG	DFO	PL	PL,TK	5	10/93		460,000	332	376
INTERCESSION CITY	P11 **	OSCEOLA	GT	DFO		PL,TK			01/97		165,000	143	161
INTERCESSION CITY	P12-P14	OSCEOLA	GT	NG	DFO	PL	PL,TK	5	12/00		345,000	235	278
RIO PINAR	P1	ORANGE	GT	DFO		TK			11/70		19,290	13	16
SUWANNEE RIVER	P1, P3	SUWANNEE	GT	NG	DFO	PL	TK	9****	10/80, 11/80		122,400	106	133
SUWANNEE RIVER	P2	SUWANNEE	GT	DFO		TK			10/80		61,200	51	66
TURNER	P1-P2	VOLUSIA	GT	DFO		TK			10/70		38,580	22	32
TURNER	P3	VOLUSIA	GT	DFO		TK			08/74		71,200	64	85
TURNER	P4	VOLUSIA	GT	DFO		TK			08/74		71,200	64	84
UNIV. OF FLA.	P1	ALACHUA	GT	NG		PL			01/94		43,000	45	47
												2,513	**3,087**
											TOTAL RESOURCES (MW)	**8,844**	**9,768**

* REPRESENTS APPROXIMATELY 91.8% PEF OWNERSHIP OF UNIT

** SUMMER CAPABILITY (JUNE THROUGH SEPTEMBER) OWNED BY GEORGIA POWER COMPANY

*** FOR ENTIRE PLANT

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

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CHAPTER 2

FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION

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CHAPTER 2

FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION

OVERVIEW

The following Schedules 2, 3 and 4 represent PEF's history and forecast of customers, energy sales (GWh), and peak demand (MW). High and low scenarios are also presented for sensitivity purposes.

The base case was developed using assumptions to predict a forecast with a 50/50 probability, or most likely scenario. The high and low scenarios, which have a 90/10 probability of occurrence or an 80 percent probability of an outcome falling between the high and low cases, employed a Monte Carlo simulation procedure that studied 1,000 possible outcomes of retail demand and energy.

PEF's customer growth is expected to average 1.8 percent between 2007 and 2016, less than the ten-year historical average of 2.4 percent. The ten-year historical growth rate falls to 2.1 percent when accounting for the creation of PEF's Seasonal Service Rate tariff, which artificially inflates customer growth figures. Slower population growth - based on the latest projection from the University of Florida's Bureau of Economic and Business Research – and economic conditions less favorable for the housing/construction industry (including, for example, higher interest rates, property insurance and property taxes) result in a lower base case 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 3.2 percent between 1997 and 2006, is expected to increase by 2.6 percent per year from 2007-2016 in the base case, 2.7 percent in the high case and 2.2 percent in the low case. A lower contribution from the wholesale jurisdiction, which grew an average of 10.2 percent between 1997 and 2006, results in lower expected system growth going forward than the historic rate. Retail NEL, which grew at a

2.8 percent average rate historically, is expected to grow 2.5 percent over the next ten years. Wholesale NEL is expected to average 2.9 percent between 2007 and 2016.

Summer net firm demand is expected to grow an average of 2.1 percent per year during the next ten years. This compares to the 3.6 percent growth rate experienced throughout the last ten years. Again, lower contribution from the wholesale jurisdiction is expected going forward and a higher load management capability for the projected period. High and low summer growth rates for net firm demand are 2.3 percent and 1.8 percent per year, respectively. Winter net firm demand is projected to grow at 2.5 percent per year after having increased by 2.9 percent per year from 1997 to 2006. High and low winter net firm demand growth rates are 2.7 percent and 2.2 percent, respectively.

Summer net firm retail demand is expected to grow an average of 2.1 percent per year during the next ten years; this compares to the 3.6 percent average annual growth rate experienced throughout the last ten years. The historical growth percentage is driven by a period of declining load management capability while the projection period has a return to higher capability. High and low summer growth rates for net firm retail demand are 2.4 percent and 1.8 percent per year, respectively. Winter net firm retail demand is projected to grow at approximately 1.9 percent per year after having grown by 3.1 percent from 1997 to 2006. Again, higher load control capability is incorporated in the projection period. High and low winter net firm retail demand growth rates are 2.2 percent and 1.6 percent, respectively.

ENERGY CONSUMPTION AND DEMAND FORECAST SCHEDULES

SCHEDULE	DESCRIPTION
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3.1.1, 3.1.2 and 3.1.3	History and Forecast of Base, High and Low Summer Peak Demand (MW)
3.2.1, 3.2.2 and 3.2.3	History and Forecast of Base, High, and Low Winter Peak Demand (MW)
3.3.1, 3.3.2 and 3.3.3	History and Forecast of Base, High and Low 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
1997	2,878,315	2.480	15,080	1,160,611	12,993	9,257	132,504	69,862
1998	2,941,589	2.487	16,526	1,182,786	13,972	9,999	136,345	73,336
1999	3,028,821	2.496	16,245	1,213,470	13,387	10,327	140,897	73,295
2000	3,026,469	2.452	17,116	1,234,286	13,867	10,813	143,475	75,365
2001	3,122,946	2.450	17,604	1,274,672	13,811	11,061	146,983	75,254
2002	3,191,315	2.452	18,754	1,301,515	14,409	11,420	150,577	75,842
2003	3,267,185	2.453	19,429	1,331,914	14,587	11,553	154,294	74,877
2004	3,348,917	2.454	19,347	1,364,677	14,177	11,734	158,780	73,901
2005	3,429,664	2.455	19,894	1,397,012	14,240	11,945	161,001	74,192
2006	3,512,066	2.453	20,021	1,431,743	13,984	11,975	162,774	73,568
2007	3,565,718	2.455	20,891	1,452,431	14,383	12,340	167,150	73,826
2008	3,629,609	2.450	21,457	1,481,473	14,484	12,674	170,889	74,165
2009	3,694,808	2.447	22,026	1,509,934	14,587	13,009	174,552	74,528
2010	3,762,611	2.446	22,605	1,538,271	14,695	13,361	178,195	74,980
2011	3,828,922	2.444	23,192	1,566,662	14,803	13,708	181,846	75,382
2012	3,895,566	2.442	23,792	1,595,236	14,914	14,056	185,520	75,765
2013	3,959,232	2.438	24,404	1,623,967	15,027	14,417	189,213	76,195
2014	4,025,804	2.436	25,027	1,652,629	15,144	14,796	192,896	76,705
2015	4,091,505	2.434	25,693	1,680,980	15,285	15,202	196,539	77,349
2016	4,155,712	2.432	26,363	1,708,763	15,428	15,622	200,111	78,067

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
1997	4,188	2,830	1,479,859	0	27	2,299	30,851
1998	4,375	2,707	1,616,180	0	27	2,459	33,386
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	35,263
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	39,177
2006	4,160	2,697	1,542,455	0	27	3,249	39,432
2007	4,155	2,701	1,538,319	0	28	3,353	40,767
2008	4,393	2,701	1,626,435	0	28	3,457	42,009
2009	4,423	2,701	1,637,542	0	28	3,570	43,056
2010	4,451	2,701	1,647,908	0	28	3,682	44,127
2011	4,518	2,701	1,672,714	0	28	3,798	45,244
2012	4,544	2,701	1,682,340	0	28	3,916	46,336
2013	4,571	2,701	1,692,336	0	28	4,038	47,458
2014	4,599	2,701	1,702,703	0	28	4,164	48,614
2015	4,587	2,701	1,698,260	0	28	4,293	49,803
2016	4,587	2,701	1,698,260	0	28	4,427	51,027

PROGRESS ENERGY FLORIDA

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

(1) YEAR	(2) SALES FOR RESALE GWh	(3) UTILITY USE & LOSSES GWh	(4) NET ENERGY FOR LOAD GWh	(5) OTHER CUSTOMERS (AVERAGE NO.)	(6) TOTAL NO. OF CUSTOMERS
1997	1,758	1,996	34,605	18,562	1,314,507
1998	2,340	2,037	37,763	19,013	1,340,851
1999	3,267	2,451	39,160	19,601	1,376,597
2000	3,732	2,678	41,242	20,003	1,400,299
2001	3,839	1,831	40,933	20,752	1,444,958
2002	3,173	2,535	42,567	21,156	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	2,506	46,878	22,701	1,583,417
2006	4,220	2,389	46,041	23,182	1,620,396
2007	4,524	2,905	48,194	23,687	1,645,969
2008	4,501	2,958	49,468	24,280	1,679,343
2009	4,527	3,026	50,609	24,877	1,712,064
2010	5,238	3,151	52,516	25,474	1,744,641
2011	5,363	3,169	53,776	26,071	1,777,280
2012	5,437	3,244	55,017	26,669	1,810,126
2013	5,542	3,321	56,321	27,266	1,843,147
2014	5,673	3,445	57,732	27,864	1,876,090
2015	5,795	3,476	59,074	28,460	1,908,680
2016	5,873	3,560	60,460	29,058	1,940,633

PROGRESS ENERGY FLORIDA

SCHEDULE 3.1.1
HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW)
BASE CASE

(1) YEAR	(2) TOTAL	(3) WHOLESALE	(4) RETAIL	(5) INTERRUPTIBLE	(6) RESIDENTIAL LOAD MANAGEMENT	(7) RESIDENTIAL CONSERVATION	(8) COMM. / IND. LOAD MANAGEMENT	(9) COMM. / IND. CONSERVATION	(OTH) OTHER DEMAND REDUCTIONS	(10) NET FIRM DEMAND
1997	7,786	874	6,912	288	555	78	41	124	170	6,531
1998	8,367	943	7,424	291	438	97	42	134	182	7,183
1999	9,039	1,326	7,713	292	505	113	45	145	183	7,756
2000	8,902	1,319	7,583	277	455	127	48	146	75	7,774
2001	8,832	1,117	7,715	283	414	139	48	147	75	7,726
2002	9,412	1,203	8,209	305	390	153	43	150	75	8,296
2003	8,877	887	7,990	300	393	172	44	154	75	7,738
2004	9,578	1,071	8,507	531	355	188	39	155	110	8,200
2005	10,345	1,118	9,227	448	343	206	38	158	110	9,041
2006	10,186	1,257	8,929	329	319	226	37	161	110	9,003
2007	10,658	1,321	9,337	449	319	243	43	168	110	9,327
2008	10,927	1,337	9,590	473	332	259	52	177	110	9,525
2009	11,010	1,192	9,818	474	351	275	61	185	110	9,553
2010	11,318	1,269	10,049	479	372	292	70	194	110	9,801
2011	11,569	1,287	10,282	484	393	308	80	203	110	9,992
2012	11,807	1,296	10,511	485	414	325	89	211	110	10,173
2013	12,062	1,320	10,742	486	427	342	98	220	110	10,379
2014	12,437	1,469	10,968	483	438	360	107	229	110	10,711
2015	12,671	1,483	11,188	478	441	367	110	232	110	10,932
2016	12,906	1,499	11,407	477	441	367	110	232	110	11,169

Historical Values (1997 - 2006):

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 (2007 - 2016):

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 3.1.2
HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW)
HIGH LOAD FORECAST

(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
1997	7,786	874	6,912	288	555	78	41	124	170	6,531
1998	8,367	943	7,424	291	438	97	42	134	182	7,183
1999	9,039	1,326	7,713	292	505	113	45	145	183	7,756
2000	8,902	1,319	7,583	277	455	127	48	146	75	7,774
2001	8,832	1,117	7,715	283	414	139	48	147	75	7,726
2002	9,412	1,203	8,209	305	390	153	43	150	75	8,296
2003	8,877	887	7,990	300	393	172	44	154	75	7,738
2004	9,578	1,071	8,507	531	355	188	39	155	110	8,200
2005	10,345	1,118	9,227	448	343	206	38	158	110	9,041
2006	10,186	1,257	8,929	329	319	226	37	161	110	9,003
2007	10,801	1,321	9,480	449	319	243	43	168	110	9,470
2008	11,086	1,337	9,748	473	332	259	52	177	110	9,683
2009	11,185	1,192	9,993	474	351	275	61	185	110	9,728
2010	11,513	1,269	10,244	479	372	292	70	194	110	9,996
2011	11,814	1,287	10,527	484	393	308	80	203	110	10,237
2012	12,067	1,296	10,771	485	414	325	89	211	110	10,433
2013	12,369	1,320	11,049	486	427	342	98	220	110	10,686
2014	12,773	1,469	11,304	483	438	360	107	229	110	11,047
2015	13,065	1,483	11,582	478	441	367	110	232	110	11,327
2016	13,338	1,499	11,839	477	441	367	110	232	110	11,601

Historical Values (1997 - 2006):

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 (2007 - 2016):

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 3.1.3
HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW)
LOW LOAD FORECAST

(1) YEAR	(2) TOTAL	(3) WHOLESALE	(4) RETAIL	(5) INTERRUPTIBLE	(6) RESIDENTIAL LOAD MANAGEMENT	(7) RESIDENTIAL CONSERVATION	(8) COMM. / IND. LOAD MANAGEMENT	(9) COMM. / IND. CONSERVATION	(OTH) OTHER DEMAND REDUCTIONS	(10) NET FIRM DEMAND
1997	7,786	874	6,912	288	555	78	41	124	170	6,531
1998	8,367	943	7,424	291	438	97	42	134	182	7,183
1999	9,039	1,326	7,713	292	505	113	45	145	183	7,756
2000	8,902	1,319	7,583	277	455	127	48	146	75	7,774
2001	8,832	1,117	7,715	283	414	139	48	147	75	7,726
2002	9,412	1,203	8,209	305	390	153	43	150	75	8,296
2003	8,877	887	7,990	300	393	172	44	154	75	7,738
2004	9,578	1,071	8,507	531	355	188	39	155	110	8,200
2005	10,345	1,118	9,227	448	343	206	38	158	110	9,041
2006	10,186	1,257	8,929	329	319	226	37	161	110	9,003
2007	10,524	1,321	9,203	449	319	243	43	168	110	9,193
2008	10,776	1,337	9,438	473	332	259	52	177	110	9,373
2009	10,849	1,192	9,657	474	351	275	61	185	110	9,392
2010	11,122	1,269	9,853	479	372	292	70	194	110	9,605
2011	11,350	1,287	10,063	484	393	308	80	203	110	9,773
2012	11,548	1,296	10,252	485	414	325	89	211	110	9,914
2013	11,778	1,320	10,458	486	427	342	98	220	110	10,095
2014	12,106	1,469	10,637	483	438	360	107	229	110	10,380
2015	12,305	1,483	10,822	478	441	367	110	232	110	10,567
2016	12,513	1,499	11,014	477	441	367	110	232	110	10,776

Historical Values (1997 - 2006):

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 (2007 - 2016):

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 3.2.1
HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW)
BASE CASE

(1) YEAR	(2) TOTAL	(3) WHOLESALE	(4) RETAIL	(5) INTERRUPTIBLE	(6) RESIDENTIAL LOAD MANAGEMENT	(7) RESIDENTIAL CONSERVATION	(8) COMM. / IND. LOAD MANAGEMENT	(9) COMM. / IND. CONSERVATION	(OTH) OTHER DEMAND REDUCTIONS	(10) NET FIRM DEMAND
1996/97	8,486	1,235	7,251	290	917	133	16	98	190	6,842
1997/98	7,752	941	6,811	318	663	164	17	106	168	6,317
1998/99	10,473	1,741	8,732	305	874	196	18	110	187	8,783
1999/00	10,033	1,728	8,305	225	849	229	20	112	182	8,416
2000/01	11,443	1,984	9,459	255	826	254	23	113	187	9,785
2001/02	10,669	1,624	9,045	285	819	278	24	114	188	8,960
2002/03	11,548	1,538	10,010	271	793	313	27	117	198	9,828
2003/04	9,317	1,167	8,150	498	786	343	26	117	261	7,287
2004/05	10,824	1,600	9,224	575	777	371	26	117	282	8,676
2005/06	10,736	1,467	9,269	298	769	413	26	118	281	8,830
2006/07	11,728	1,711	10,017	366	760	454	27	120	296	9,705
2007/08	12,132	1,789	10,343	452	777	495	37	126	302	9,943
2008/09	12,302	1,727	10,575	453	793	538	47	133	305	10,034
2009/10	12,817	2,012	10,805	454	811	580	57	139	309	10,468
2010/11	13,126	2,082	11,044	464	829	623	67	146	313	10,685
2011/12	13,516	2,241	11,275	465	846	666	76	152	316	10,994
2012/13	13,885	2,377	11,508	466	864	710	86	158	320	11,280
2013/14	14,197	2,456	11,741	467	882	754	96	165	324	11,509
2014/15	14,513	2,548	11,965	461	899	798	105	171	327	11,751
2015/16	14,827	2,639	12,187	456	899	798	105	171	332	12,064
2016/17	15,139	2,729	12,410	457	899	798	105	171	336	12,372

Historical Values (1997 - 2006):

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 (2007 - 2016):

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 3.2.2
HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW)
HIGH LOAD FORECAST

(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
1996/97	8,486	1,235	7,251	290	917	133	16	98	190	6,842
1997/98	7,752	941	6,811	318	663	164	17	106	168	6,317
1998/99	10,473	1,741	8,732	305	874	196	18	110	187	8,783
1999/00	10,033	1,728	8,305	225	849	229	20	112	182	8,416
2000/01	11,443	1,984	9,459	255	826	254	23	113	187	9,785
2001/02	10,669	1,624	9,045	285	819	278	24	114	188	8,960
2002/03	11,548	1,538	10,010	271	793	313	27	117	198	9,828
2003/04	9,317	1,167	8,150	498	786	343	26	117	261	7,287
2004/05	10,824	1,600	9,224	575	777	371	26	117	282	8,676
2005/06	10,736	1,467	9,269	298	769	413	26	118	281	8,830
2006/07	11,880	1,711	10,169	366	760	454	27	120	296	9,857
2007/08	12,300	1,789	10,510	452	777	495	37	126	302	10,111
2008/09	12,487	1,727	10,761	453	793	538	47	133	305	10,219
2009/10	13,022	2,012	11,010	454	811	580	57	139	309	10,672
2010/11	13,383	2,082	11,302	464	829	623	67	146	313	10,943
2011/12	13,788	2,241	11,548	465	846	666	76	152	316	11,266
2012/13	14,207	2,377	11,831	466	864	710	86	158	320	11,603
2013/14	14,548	2,456	12,092	467	882	754	96	165	324	11,860
2014/15	14,923	2,548	12,376	461	899	798	105	171	327	12,161
2015/16	15,275	2,639	12,636	456	899	798	105	171	332	12,513
2016/17	15,643	2,729	12,915	457	899	798	105	171	336	12,876

Historical Values (1997 - 2006):

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 (2007 - 2016):

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 3.2.3
HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW)
LOW LOAD FORECAST

(1) YEAR	(2) TOTAL	(3) WHOLESALE	(4) RETAIL	(5) INTERRUPTIBLE	(6) RESIDENTIAL LOAD MANAGEMENT	(7) RESIDENTIAL CONSERVATION	(8) COMM. / IND. LOAD MANAGEMENT	(9) COMM. / IND. CONSERVATION	(OTH) OTHER DEMAND REDUCTIONS	(10) NET FIRM DEMAND
1996/97	8,486	1,235	7,251	290	917	133	16	98	190	6,842
1997/98	7,752	941	6,811	318	663	164	17	106	168	6,317
1998/99	10,473	1,741	8,732	305	874	196	18	110	187	8,783
1999/00	10,033	1,728	8,305	225	849	229	20	112	182	8,416
2000/01	11,443	1,984	9,459	255	826	254	23	113	187	9,785
2001/02	10,669	1,624	9,045	285	819	278	24	114	188	8,960
2002/03	11,548	1,538	10,010	271	793	313	27	117	198	9,828
2003/04	9,317	1,167	8,150	498	786	343	26	117	261	7,287
2004/05	10,824	1,600	9,224	575	777	371	26	117	282	8,676
2005/06	10,736	1,467	9,269	298	769	413	26	118	281	8,830
2006/07	11,586	1,711	9,875	366	760	454	27	120	296	9,563
2007/08	11,971	1,789	10,181	452	777	495	37	126	302	9,782
2008/09	12,132	1,727	10,406	453	793	538	47	133	305	9,864
2009/10	12,609	2,012	10,597	454	811	580	57	139	309	10,259
2010/11	12,894	2,082	10,813	464	829	623	67	146	313	10,454
2011/12	13,244	2,241	11,004	465	846	666	76	152	316	10,722
2012/13	13,588	2,377	11,212	466	864	710	86	158	320	10,984
2013/14	13,853	2,456	11,397	467	882	754	96	165	324	11,165
2014/15	14,134	2,548	11,587	461	899	798	105	171	327	11,372
2015/16	14,418	2,639	11,779	456	899	798	105	171	332	11,656
2016/17	14,687	2,729	11,959	457	899	798	105	171	336	11,920

Historical Values (1997 - 2006):

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 (2007 - 2016):

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 3.3.1
HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh)
BASE CASE

(1) YEAR	(2) TOTAL	(3) RESIDENTIAL CONSERVATION	(4) COMM. / IND. CONSERVATION	(OTH) OTHER ENERGY REDUCTIONS*	(5) RETAIL	(6) WHOLESALE	(7) UTILITY USE & LOSSES	(8) NET ENERGY FOR LOAD	(9) LOAD FACTOR (%) **
1997	35,752	268	317	562	30,850	1,758	1,997	34,605	49.0
1998	38,949	289	333	564	33,387	2,340	2,036	37,763	53.9
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	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,835	427	360	780	38,193	4,301	2,774	45,268	56.5
2005	48,479	460	363	779	39,177	5,195	2,506	46,878	52.3
2006	47,680	495	365	779	39,432	4,220	2,389	46,041	52.1
2007	49,878	522	383	779	40,766	4,524	2,904	48,194	56.7
2008	51,201	552	401	780	42,009	4,501	2,958	49,468	56.6
2009	52,389	582	419	779	43,055	4,527	3,027	50,609	57.6
2010	54,344	612	437	779	44,127	5,238	3,151	52,516	57.3
2011	55,652	642	455	779	45,243	5,363	3,170	53,776	57.5
2012	56,942	672	473	780	46,337	5,437	3,243	55,017	57.0
2013	58,293	702	491	779	47,457	5,542	3,322	56,321	57.0
2014	59,752	732	509	779	48,614	5,673	3,445	57,732	57.3
2015	61,094	732	509	779	49,802	5,795	3,477	59,074	57.4
2016	62,481	732	509	780	51,027	5,873	3,560	60,460	57.2

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

** Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 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 3.2.1)

PROGRESS ENERGY FLORIDA

SCHEDULE 3.3.2
HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh)
HIGH LOAD FORECAST

(1) YEAR	(2) TOTAL	(3) RESIDENTIAL CONSERVATION	(4) COMM. / IND. CONSERVATION	(OTH) OTHER ENERGY REDUCTIONS*	(5) RETAIL	(6) WHOLESALE	(7) UTILITY USE & LOSSES	(8) NET ENERGY FOR LOAD	(9) LOAD FACTOR (%) **
1997	35,752	268	317	562	30,850	1,758	1,997	34,605	49.0
1998	38,949	289	333	564	33,387	2,340	2,036	37,763	53.9
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	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,835	427	360	780	38,193	4,301	2,774	45,268	56.5
2005	48,479	460	363	779	39,177	5,195	2,506	46,878	52.3
2006	47,680	495	365	779	39,432	4,220	2,389	46,041	52.1
2007	51,005	522	383	779	41,429	4,524	3,368	49,321	57.1
2008	51,987	552	401	780	42,744	4,501	3,009	50,254	56.6
2009	53,260	582	419	779	43,869	4,527	3,084	51,480	57.5
2010	55,320	612	437	779	45,032	5,238	3,222	53,492	57.2
2011	56,877	642	455	779	46,389	5,363	3,249	55,001	57.4
2012	58,250	672	473	780	47,555	5,437	3,333	56,325	56.9
2013	59,848	702	491	779	48,911	5,542	3,423	57,876	56.9
2014	61,459	732	509	779	50,203	5,673	3,563	59,439	57.2
2015	63,097	732	509	779	51,675	5,795	3,607	61,077	57.3
2016	64,684	732	509	780	53,083	5,873	3,707	62,663	57.2

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

** Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 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 3.2.2)

PROGRESS ENERGY FLORIDA

SCHEDULE 3.3.3
HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh)
LOW LOAD FORECAST

(1) YEAR	(2) TOTAL	(3) RESIDENTIAL CONSERVATION	(4) COMM. / IND. CONSERVATION	(OTH) OTHER ENERGY REDUCTIONS*	(5) RETAIL	(6) WHOLESALE	(7) UTILITY USE & LOSSES	(8) NET ENERGY FOR LOAD	(9) LOAD FACTOR (%) **
1997	35,752	268	317	562	30,850	1,758	1,997	34,605	49.0
1998	38,949	289	333	564	33,387	2,340	2,036	37,763	53.9
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	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,835	427	360	780	38,193	4,301	2,774	45,268	56.5
2005	48,479	460	363	779	39,177	5,195	2,506	46,878	52.3
2006	47,680	495	365	779	39,432	4,220	2,389	46,041	52.1
2007	49,569	522	383	779	40,147	4,524	3,214	47,885	57.2
2008	50,448	552	401	780	41,304	4,501	2,910	48,715	56.7
2009	51,583	582	419	779	42,306	4,527	2,970	49,803	57.6
2010	53,358	612	437	779	43,207	5,238	3,085	51,530	57.3
2011	54,549	642	455	779	44,216	5,363	3,094	52,673	57.5
2012	55,637	672	473	780	45,117	5,437	3,158	53,712	57.0
2013	56,860	702	491	779	46,123	5,542	3,223	54,888	57.0
2014	58,077	732	509	779	47,049	5,673	3,335	56,057	57.3
2015	59,234	732	509	779	48,062	5,795	3,357	57,214	57.4
2016	60,468	732	509	780	49,147	5,873	3,427	58,447	57.2

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

** Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 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 3.2.3)

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 2006		FORECAST 2007		FORECAST 2008	
	PEAK DEMAND	NEL	PEAK DEMAND	NEL	PEAK DEMAND	NEL
MONTH	MW	GWh	MW	GWh	MW	GWh
JANUARY	7,870	3,390	9,705	3,772	9,943	3,914
FEBRUARY	10,095	3,191	7,862	3,257	8,014	3,383
MARCH	6,441	3,286	6,692	3,509	6,863	3,631
APRIL	7,837	3,582	7,387	3,498	7,540	3,576
MAY	8,382	4,020	8,482	4,271	8,672	4,361
JUNE	9,349	4,401	8,905	4,478	9,071	4,574
JULY	9,462	4,699	9,156	4,867	9,337	4,985
AUGUST	9,689	4,920	9,327	4,919	9,525	5,047
SEPTEMBER	8,794	4,270	8,553	4,434	8,729	4,537
OCTOBER	8,286	3,763	7,975	3,982	8,202	4,076
NOVEMBER	6,415	3,192	6,463	3,426	6,569	3,502
DECEMBER	6,792	3,327	7,529	3,781	7,717	3,882
TOTAL		46,041		48,194		49,468

NOTE: "Actual" = "Total" - "Interruptible" - "Res. LM" - "C/I LM" - "Voltage Reduction & Standby Generation"

FUEL REQUIREMENTS AND ENERGY SOURCES

PEF's two-year actual and ten-year projected nuclear, coal, oil, and gas requirements (by fuel units) are shown on Schedule 5. PEF's two-year actual and ten-year projected energy sources, in GWh and percent, are shown by fuel type on Schedules 6.1 and 6.2, respectively. PEF's fuel requirements and energy sources reflect a diverse fuel supply system that is not dependent on any one-fuel source. Natural gas consumption is projected to increase as plants and purchases with tolling agreements are added to meet future load growth. However, the planned nuclear addition in 2016 decreases future natural gas consumption as is shown in the projections.

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	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
(1)	NUCLEAR		TRILLION BTU	60	66	61	69	52	69	64	81	75	81	75	135
(2)	COAL		1,000 TON	6,249	5,977	6,179	6,059	6,240	6,389	6,977	6,959	6,728	6,874	6,951	6,792
(3)	RESIDUAL	TOTAL	1,000 BBL	10,324	7,353	9,646	8,490	6,338	5,030	5,522	5,384	5,152	5,307	5,190	4,780
(4)		STEAM	1,000 BBL	10,324	7,353	9,646	8,490	6,338	5,030	5,522	5,384	5,152	5,307	5,190	4,780
(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	1,098	713	987	784	901	986	1,196	1,192	1,284	1,220	1,335	1,056
(9)		STEAM	1,000 BBL	97	90	41	38	46	54	53	44	54	42	47	45
(10)		CC	1,000 BBL	3	2	0	0	0	0	0	0	0	0	0	0
(11)		CT	1,000 BBL	998	621	946	746	855	932	1,144	1,148	1,230	1,177	1,288	1,010
(12)		DIESEL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(13)	NATURAL GAS	TOTAL	1,000 MCF	68,447	76,448	83,645	100,282	129,303	140,233	150,996	149,977	168,758	180,835	193,010	175,170
(14)		STEAM	1,000 MCF	732	1,731	0	0	0	0	0	0	0	0	0	0
(15)		CC	1,000 MCF	52,590	61,487	65,316	84,124	112,747	125,315	133,815	132,786	151,618	164,412	175,697	159,507
(16)		CT	1,000 MCF	15,125	13,230	18,328	16,159	16,556	14,918	17,180	17,191	17,140	16,423	17,312	15,663
	OTHER (SPECIFY)														
(17)	OTHER, DISTILLATE	ANNUAL	1,000 BBL	N/A	N/A	47	11	13	5	13	19	15	0	0	0
(18)	OTHER, NATURAL GAS	ANNUAL	1,000 MCF	N/A	N/A	0	0	0	0	0	0	0	0	0	0
(18.1)	OTHER, NATURAL GAS	ANNUAL	1,000 MCF	N/A	N/A	8,512	4,954	4,720	4,327	6,867	6,743	6,524	5,956	6,720	3,861

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	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
(1)	ANNUAL FIRM INTERCHANGE 1/		GWh	2,220	2,091	2,200	1,854	1,881	1,750	734	689	672	592	669	349
(2)	NUCLEAR		GWh	5,829	6,382	5,951	6,671	5,099	6,992	6,473	8,114	7,575	8,183	7,576	13,385
(3)	COAL		GWh	15,834	14,968	15,260	14,781	15,187	14,782	16,149	16,108	15,568	15,900	16,083	15,680
(4)	RESIDUAL	TOTAL	GWh	6,618	4,656	5,968	5,217	3,894	3,092	3,418	3,329	3,181	3,278	3,207	2,926
(5)		STEAM	GWh	6,618	4,656	5,968	5,217	3,894	3,092	3,418	3,329	3,181	3,278	3,207	2,926
(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	414	258	364	277	321	356	449	451	495	464	511	394
(10)		STEAM	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(11)		CC	GWh	0	1	0	0	0	0	0	0	0	0	0	0
(12)		CT	GWh	414	257	364	277	321	356	449	451	495	464	511	394
(13)		DIESEL	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(14)	NATURAL GAS	TOTAL	GWh	8,236	9,657	10,408	12,714	16,828	18,507	19,966	19,780	22,442	24,111	25,777	23,266
(15)		STEAM	GWh	74	161	0	0	0	0	0	0	0	0	0	0
(16)		CC	GWh	7,025	8,517	9,002	11,480	15,510	17,328	18,601	18,416	21,070	22,809	24,400	22,014
(17)		CT	GWh	1,137	979	1,406	1,234	1,318	1,179	1,365	1,363	1,372	1,303	1,377	1,252
(18)	OTHER 2/														
	QF PURCHASES		GWh	4,211	4,394	3,357	3,247	2,552	2,460	2,463	2,468	2,283	1,473	1,473	1,476
	RENEWABLES		GWh	--	--	1,145	1,231	1,301	2,064	2,062	2,065	2,033	1,700	1,658	1,657
	IMPORT FROM OUT OF STATE		GWh	3,599	3,683	3,542	3,476	3,546	2,512	2,061	2,014	2,072	2,031	2,121	1,328
	EXPORT TO OUT OF STATE		GWh	-83	-48	0	0	0	0	0	0	0	0	0	0
(19)	NET ENERGY FOR LOAD		GWh	46,878	46,041	48,194	49,468	50,609	52,516	53,776	55,017	56,321	57,732	59,074	60,460

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	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
(1)	ANNUAL FIRM INTERCHANGE 1/		%	4.7%	4.5%	4.6%	3.7%	3.7%	3.3%	1.4%	1.3%	1.2%	1.0%	1.1%	0.6%
(2)	NUCLEAR		%	12.4%	13.9%	12.3%	13.5%	10.1%	13.3%	12.0%	14.7%	13.4%	14.2%	12.8%	22.1%
(3)	COAL		%	33.8%	32.5%	31.7%	29.9%	30.0%	28.1%	30.0%	29.3%	27.6%	27.5%	27.2%	25.9%
(4)	RESIDUAL	TOTAL	%	14.1%	10.1%	12.4%	10.5%	7.7%	5.9%	6.4%	6.1%	5.6%	5.7%	5.4%	4.8%
(5)		STEAM	%	14.1%	10.1%	12.4%	10.5%	7.7%	5.9%	6.4%	6.1%	5.6%	5.7%	5.4%	4.8%
(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	%	0.9%	0.6%	0.8%	0.6%	0.6%	0.7%	0.8%	0.8%	0.9%	0.8%	0.9%	0.7%
(10)		STEAM	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(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	%	0.9%	0.6%	0.8%	0.6%	0.6%	0.7%	0.8%	0.8%	0.9%	0.8%	0.9%	0.7%
(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	%	17.6%	21.0%	21.6%	25.7%	33.3%	35.2%	37.1%	36.0%	39.8%	41.8%	43.6%	38.5%
(15)		STEAM	%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(16)		CC	%	15.0%	18.5%	18.7%	23.2%	30.6%	33.0%	34.6%	33.5%	37.4%	39.5%	41.3%	36.4%
(17)		CT	%	2.4%	2.1%	2.9%	2.5%	2.6%	2.2%	2.5%	2.5%	2.4%	2.3%	2.3%	2.1%
(18)	OTHER 2/														
	QF PURCHASES		%	9.0%	9.5%	7.0%	6.6%	5.0%	4.7%	4.6%	4.5%	4.1%	2.6%	2.5%	2.4%
	IMPORT FROM OUT OF STATE		%	7.7%	8.0%	7.3%	7.0%	7.0%	4.8%	3.8%	3.7%	3.7%	3.5%	3.6%	2.2%
	EXPORT TO OUT OF STATE		%	-0.2%	-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.

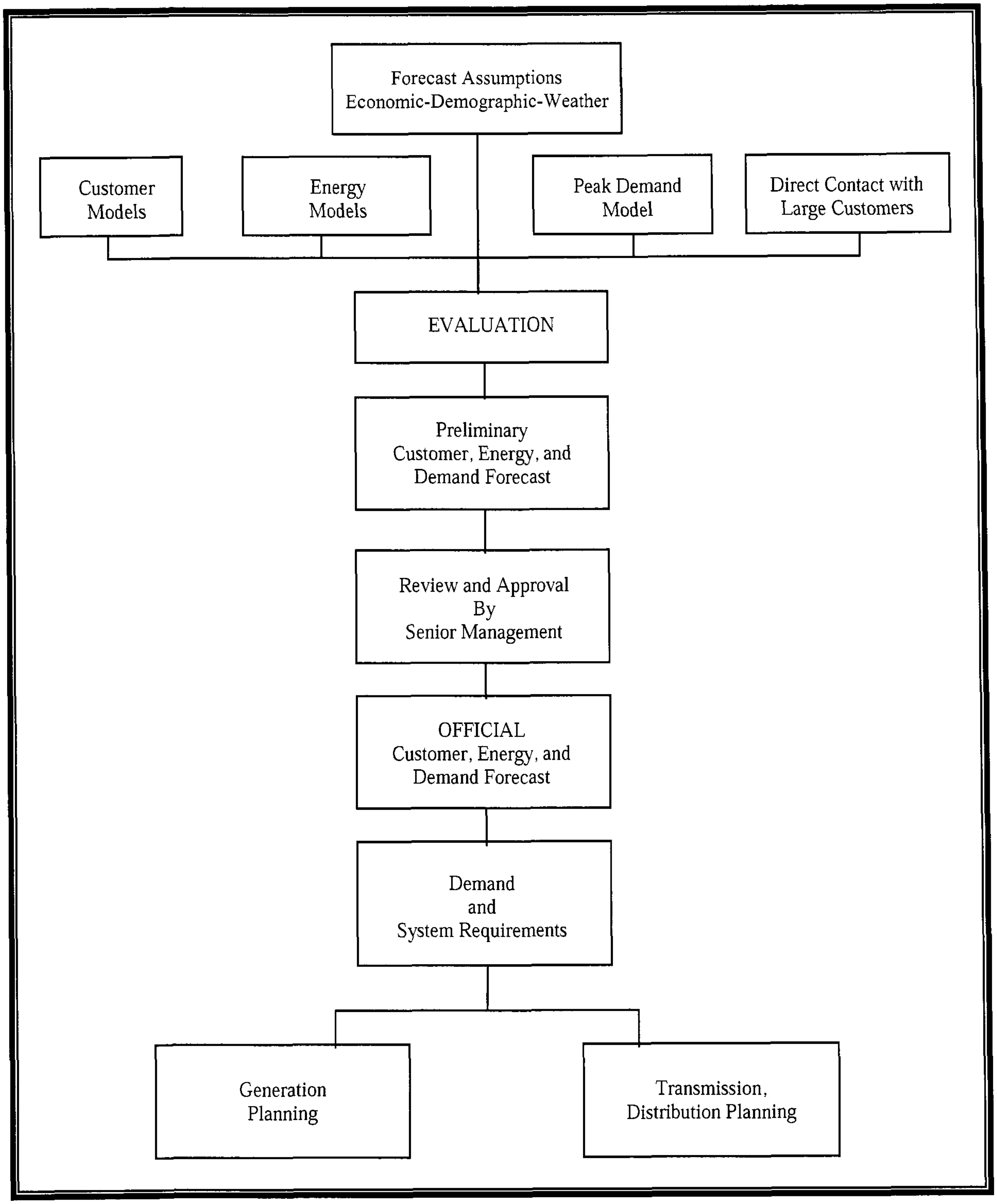
Figure 2.1, entitled "Customer, Energy and Demand Forecast", gives a general description of PEF's forecasting process. Highlighted in the diagram is a disaggregated modeling approach that blends the impacts of average class usage as well as customer growth based on a specific set of assumptions for each 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 Corporate Planning 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 weather stations across Florida (St. Petersburg, Tampa, Orlando, Winter Haven, Gainesville, Daytona, and Tallahassee). For kilowatt-hour sales projections, normal weather is based on a historical thirty-year average of 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 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. 144 (February 2006) provide the basis for development of the customer forecast. State and national economic assumptions produced by Economy.Com in their national and Florida forecasts (March 2006) are also incorporated.

3. Within the PEF service area the phosphate mining industry is the dominant sector in the industrial sales class. Four major customers accounted for 30% of the industrial class MWh sales in 2006. These energy intensive customers mine and process phosphate-based fertilizer products for the global marketplace. Both supply and demand conditions 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 the state of these global conditions as well as local conditions. After years of excess mining capacity and weak product pricing power, the industry has consolidated down to fewer players in time to take advantage of better market conditions. Also, a weaker U.S currency value on the foreign exchange is expected to help the industry in two ways. First, American farm commodities will be more competitive overseas and lead to higher crop production at home. This will result in greater 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 (natural gas), which is a major cost of fertilizer production. Operations at several sites in the U.S. have already scaled back or shutdown in 2005-2006 due to profitability concerns caused by high energy prices. The energy projection for this industry assumes no major reductions or shutdowns of operations in the service territory.

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), New Smyrna Beach, Tallahassee, Homestead, Reedy Creek Utilities, TECO Energy (Market Mitigation Sale) and Seminole Electric Cooperative, Inc. (SECI). 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 is projected to become a "winter only" seasonal purchase in 2014 when the term of this contract expires in December 2013. A firm PR contract with SECI includes 450 MW of stratified intermediate service (October 1995 contract) which is projected to continue through the forecast horizon. In addition, a FR contract to serve SECI load, will commence in 2010, and last through the forecast horizon. 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 self-service cogeneration 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 standby power.

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 Regulated Commercial Operations Department.

SHORT-TERM ECONOMIC ASSUMPTIONS

The economic outlook for this forecast was developed in 2006 as energy prices were hitting record highs around the world. The consensus was that the U.S. economy, which was growing at a reasonable rate, would not slip into recession due to the higher cost of energy. Instead, a "soft patch" in economic activity apparent at the time of this forecast development as high gasoline prices had been reducing consumer confidence levels. Short term interest rates, controlled mostly by Federal Reserve Board (FED) policy decisions, peaked in mid-2006 and have remained stable after 17 increases based upon signs coming from a weakening construction industry and lower inflation. Economists are not in complete agreement about where monetary policy may go from here. A slight majority suspect that the FED has ended its "tightening" policy of gradually raising interest rates as opposed to those who believe that new inflationary fears will require more rate increases.

Consensus opinion believes that the economic stimulus supplied by the three federal tax cuts and the refinancing boom have successfully kept the U.S. economy out of recession after the September 11, 2001 terrorist attacks. Now, with rates back up to more normal levels, and talk of rescinding some of the tax cuts, stimulus from these two economic tools is not expected going forward. One item believed to become a positive factor for future economic momentum is the weaker U.S. currency. Up to this point several major U.S. trading partners, mainly China, have their currencies pegged to the U.S. Dollar. This has kept the typical advantages of a weaker currency from helping U.S. manufacturers. Going forward, it is expected that economic and political pressures will force the Chinese to de-link their currency and allow it to appreciate in value. This likely will make American-produced products more competitive with imported Chinese goods, as well as other goods produced around the globe.

The housing sector, which had a record run in the first half of the decade, has peaked and has now slowed. While the fall-off in housing starts has only taken the industry down to normal levels seen before the run-up, no one feels confident predicting when the bottom will be reached. Home sales have dipped significantly and the number of unsold and even vacant homes has hit record levels leading to significant price reductions in some areas of the country. On top of all this, the number of foreclosures and mortgages in default has risen of late. More homeowners, struggling to meet higher payments from adjustable-rate loans, are walking away from homes as they become "upside-down" in the mortgage (when the market price falls below the outstanding loan amount.) All of this does not bode well for Florida, which played a major part in the recent housing boom. In order to grow out of this, migration into the State will need to absorb this overhang in available housing at a time when out-of-state homeowners may have a difficult time selling their property.

The Florida economy has faired much better than the nation, especially in terms of job growth. The tourism industry, which has bounced back from the terrorism fears of 2001, will now have to juggle the impact of high oil prices on the travel industry. Also, the increases in property insurance and property taxes in Florida have caused anxiety. Florida's reputation as a low cost-of-living state has been impacted.

Besides growth in State population, growth in energy consumption can also be directly tied to the levels of economic activity as measured by total personal income and employment. Florida has experienced excellent employment growth since the last recession – better than most other states. However, due to the run-up in energy prices, the need for greater national energy independence and the wider review of the potential effects of climate change upon the environment, energy consumption of all types and at all consumer levels are coming under greater scrutiny. In addition, federal and state tax incentives to conserve energy are becoming more widespread and energy-saving capital improvements are becoming more economically viable. Even players with significant economic influence – like Wal-Mart stores – are pressing their suppliers to become more energy efficient. Just as occurred after each of the Arab oil embargoes, all of these factors may drive the country to improve energy use per unit of Gross Domestic Product (GDP), which could reduce the growth in energy demand. The level of energy prices will obviously play a major role in the outcome.

LONG-TERM ECONOMIC ASSUMPTIONS

The long-term economic outlook assumes that changes in economic and demographic conditions will follow a trended behavior pattern. The main focus involves identifying these trends. No attempt is made to predict business cycle fluctuations during this period.

Population Growth Trends

This forecast assumes Florida will experience slower in-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, but at less than historic rates for several reasons. First, Americans entering retirement age during the late 1990s and early twenty-first century were born during the Great Depression era of the 1930s. This decade experienced a low birth rate due to the economic conditions at that time. Now that this generation is retiring, there exists a smaller pool of retirees capable of migrating to Florida. As we enter into the second decade of the new century and the baby-boom generation enters retirement age, the reverse effect can be expected.

Second, 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 diminished the quality of retiree life, and along with increasing competition from neighboring states, is expected to cause a slight decline in Florida's share of these prospective new residents over the long term.

Another reason for a population growth slowdown appears to be the fear and expense of Hurricanes. The summers of 2004 and 2005 may force some in-migrants to rethink their retirement location as the inconvenience caused by recent destruction and ever-increasing cost of property insurance makes Florida a less desirable place to live.

Economic Growth Trends

Florida has been recently experiencing a 1980s-style population explosion and 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 explosion in home construction. The national level of homebuilding in 2005, which rose to more than 31% higher than in 2000, set an all time record. This growth produced strong gains in both the construction industry and service-producing sectors of the Florida economy.

We now see that this pace of growth has not been sustained, and the economic environment that produced this construction boom has returned to normal. Interest rates have risen to more "long term" norms. Investment in equity markets over housing has occurred as well. More importantly, affordability rates have dropped as housing prices in many parts of Florida have out-paced many areas of the country. This could have a major impact on retiree decisions to move into the area. Making matters worse is the availability and affordability of homeowners insurance, which has become a concern of increasing importance since the Hurricane seasons of 2004 and 2005.

Florida's rapid population growth of late has created a period of strong job creation, especially in the service sector industries. While the service-oriented economy expanded to support an increasing population level, there were also a number of corporations migrating to Florida capitalizing on the low cost, low tax business environment. This being the case, increased job opportunities in Florida created greater in-migration among the nation's working age population. Florida's ability to attract businesses from other states because of its "comparative advantage" is expected to continue throughout the forecast period but at a less significant level. Florida's successful effort to attract a large biotech firm, Scripps Research, has the potential to draw a whole new growth industry to the State, the same way Disney and NASA once did.

The forecast assumes negative growth in real electricity price. That is, the change in the nominal price of electricity per kWh over time is expected to be less than 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. 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 and mortgage rates. County level population projections for the 29 counties, in which PEF serves residential customers, are provided by the BEBR.

Commercial Sector

Commercial MWh energy sales are forecast based on commercial (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 bases where 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 industry comprises nearly a 30% 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 developed by Economy.Com, 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 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 are projected to increase due to growth in the service area population base. Because this class comprised less than 0.01% of PEF's 2006 electric sales and just 0.1% of total customers, 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., 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. SPA customers are 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).

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 an agreement with SECI to serve stratified intermediate and peaking energy. This agreement involves serving 450 MW of stratified intermediate demand that is assumed to remain a requirement on the PEF system throughout the forecast horizon. A "winter-only" seasonal peaking strata contract for 600 MW will replace the supplemental contract in 2014. An agreement to provide non-firm service is currently in effect between PEF and SECI amounting to an estimated 15 MW. Another contract, signed in 2004 to supply full requirements service for 150 MW, will begin in 2010.

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 met by PEF. The full requirement customers are modeled individually using local weather station data and population growth trends. 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, and Tallahassee, and other power providers like FMPA. 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 terms of the FMPA contract is subject to change each year via a letter of "declared" MW nomination. More specifically, this means that the level and type of demand and energy under contract can increase or decrease for each year a value is nominated. 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 dissected into five 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 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 has been made that beyond the last year of committed capacity declaration (five years out), SECI will shift their level of self-serve resources to meet their base and intermediate load needs. For FMPA and NSB demand projections, historical ratios of coincident-to-contract levels of demand are applied to future MW contract levels. Demand requirements continue at the MW level indicated by the final year in their respective contract declaration letter. The full requirements municipal demand forecast is estimated for individual cities using linear econometric equations modeling both weather and economic impacts specific to each locale. The seasonal (winter and summer) projections become the January and August peak values, respectively. The non-seasonal peak months are calculated using monthly allocation factors derived from applying the historical relationship between each winter month (November to March) relative to the winter peak, and each summer month (April to October) in relation to the summer peak demand.

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. 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 field representatives.

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 components.

HIGH AND LOW FORECAST SCENARIOS

The high and low bandwidth scenarios around the base MWh energy sales forecast are developed using a Monte Carlo simulation applied to a multivariate regression model that closely replicates the base retail MWh energy forecast in aggregate. This model accounts for variation in Gross Domestic Product, retail customers and electricity price. The base forecasts for these variables were developed based on input from Economy.Com and internal company price projections. Variation around the base forecast predictor variables used in the Monte Carlo simulation was based on an 80 percent confidence interval calculated around variation in each variable's historic growth rate. While the total number of degree-days (weather) was also incorporated into the model specification, the high and low scenarios do not attempt to capture extreme weather conditions. Normal weather conditions were assumed in all three scenarios.

The Monte Carlo simulation was produced through the estimation of 1,000 scenarios for each year of the forecast horizon. These simulations allowed for random normal variation in the growth trajectories of the economic input variables (while accounting for cross-correlation amongst these variables), as well as simultaneous variation in the equation (model error) and coefficient estimates. These scenarios were then sorted and rank ordered from one to a thousand, while the simulated scenario with no variation was adjusted to equal the base forecast.

The low retail scenario was chosen from among the ranked scenarios resulting in a bandwidth forecast reflecting an approximate probability of occurrence of 0.10. The high retail scenario similarly represents a bandwidth forecast with an approximate probability of occurrence also at 0.10. In both scenarios, the high and low peak demand bandwidth forecasts, are projected from the energy forecasts using the load factor implicit in the base forecast scenario.

CONSERVATION

PEF's DSM performance is shown in the following tables, which compare the conservation savings actually achieved through PEF's DSM programs for the reporting years of 2005 and 2006 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 39 additional DSM measures and 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

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

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 years. PEF's DSM Plan consists of seven residential programs, eight commercial and industrial programs, and one research and development program. On January 5, 2007, the FPSC issued a PAA Order approving 39 additional DSM measures and 2 residential programs. (Docket 060647: Consummating Order PSC-07-0017-CO-EG making Order PSC-06-1018-TRF-EG effective and final). Megawatt contributions to the TYSP, reflected in this report, have increased as a result of these changes to conservation, standby and residential load management programs. 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. 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). Additionally, a student audit was piloted in 2006. 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. The additional measures within this program include spray-in wall insulation, central AC 14 SEER non-electric heat, supply and return plenum duct seal, proper sizing of hi-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 Environmental Protection Agency's Energy Star Homes Program and qualifies participants for cooperative advertising. New 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 newly approved Neighborhood Energy Saver (NES) Program consists of 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 (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

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/month.

Renewable Energy Saver Program (2007)

The Renewable Energy Saver 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 customers/contractors awareness of the capabilities of renewable energy technologies.
3. Educate customers/contractors about additional opportunities to generate / 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 Saver Program consists of two measures:

- Solar Water Heater with Energy Management – 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 and the solar thermal system must provide a minimum of 50% of the water-heating load.

- Solar Photovoltaics with Energy Management – This measure promotes environmental stewardship and renewable energy education through the installation of solar energy systems at schools within Progress Energy Florida'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 Solar Photovoltaics with Energy Management Fund. The fund will accumulate associated participant credits for a period of two years, at which time the customer may elect to renew for an additional two 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 the following types of audits: 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 and 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), and some building retrofit measures (in particular, ceiling insulation upgrade, duct leakage test and repair, energy-recovery ventilation and Energy Star cool roof coating products.) Newly approved measures within this program include 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 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 and Energy Star cool roof coating products. Additional options, beginning in 2007, include 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 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 Broadband-Over-the

Power-Line-In-Premise 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 efficiently use energy, while advancing demand response capabilities. Additional projects include the evaluation of off-peak generation storage for on-peak demand consumption. In most cases, each demand reduction and energy efficiency project that is proposed and investigated under this program requires field-testing with customers.

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CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

Progress Energy

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CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

RESOURCE PLANNING FORECAST

OVERVIEW OF CURRENT FORECAST

Supply-Side Resources

PEF has a summer total capacity resource of 10,752 MW, as shown in Table 3.1. This capacity resource includes nuclear (769 MW), fossil steam (3,903MW), combined cycle plants (1,659 MW), combustion turbine (2,513 MW, 143 MW of which is owned by Georgia Power for the months June through September), utility purchased power (484 MW), independent power purchases (611 MW), and non-utility purchased power (813 MW). Table 3.2 shows PEF's contracts for firm capacity provided by Qualifying Facilities (QF's).

Demand-Side Programs

Total DSM resources are shown in Schedules 3.1.1 and 3.2.1 of Chapter 2. These programs include Non-Dispatchable DSM, Interruptible Load, and Dispatchable Load Control resources. PEF's 2007 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 are shown 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 3,575 MWs through the summer of 2016. As identified in Schedule 8, PEF's next planned unit is the Hines 4 Unit, a 461 MW (summer) power block with a December 2007 in-service date. PEF's self-build option for Hines Unit 4 was determined to be the most cost-effective alternative, followed by the Bartow Repowering Project to be completed by June 2009.

PEF's Base Expansion Plan projects the need for additional units with proposed in-service dates from 2007 through 2016. These units, together with the OUC purchase (December 2006 – February 2007), the Central Power & Lime purchase (December 2005 - December 2010), the Reliant/Osceola purchase (January 2007 - February 2009), the TEA purchase (from January 2007 - February 2007, and June 2007 - September 2007), purchases currently under negotiation for the summers of 2007 and 2008, the Shady Hills Purchase (April 2007 - April 2024), and the Southern Company Purchase (June 2010 - December 2017) help the PEF system meet the growing energy requirements of its customer base. Additionally, some undesignated seasonal purchases for 2007 and 2008 are projected as well to meet requirements. Some of the identified unit additions may be impacted by PEF's ability to extend or replace existing purchase power contracts, as well as contracts with cogenerators and QF's. Status reports and specifications for new generation facilities are included in Schedule 9. Shown in Schedule 10 are the new transmission lines associated with Hines #4 and the Bartow Repowering Project.

Current planning studies identify gas-fired units as the most economic alternatives for system expansion in the near term. New nuclear technologies appear to offer more favorable long-term economics, and provide favorable environmental characteristics, measured against possible emission limits imposed by the recently issued Clean Air Interstate Rule (CAIR). PEF is currently evaluating the nuclear option with the intent of pursuing preliminary licensing activities for the addition of new nuclear capacity in 2016. In the years prior to the addition of new nuclear capacity, PEF also is investigating the possibility of coal gasification as a fuel source for one of the combined cycle facilities listed in the resource plan.

TABLE 3.1

PROGRESS ENERGY FLORIDA

TOTAL CAPACITY RESOURCES OF POWER PLANTS AND PURCHASED POWER CONTRACTS

AS OF DECEMBER 31, 2006

PLANTS	NUMBER OF UNITS	SUMMER NET DEPENDABLE CAPABILITY (MW)	
Nuclear Steam			
Crystal River	1	769	*(1)*
Total Nuclear Steam	1	769	
Fossil Steam			
Crystal River	4	2,313	
Anclote	2	1,005	
Bartow	3	444	
Suwannee River	3	141	
Total Fossil Steam	12	3,903	
Combined Cycle			
Hines Energy Complex	3	1,456	
Tiger Bay	1	203	
Total Combined cycle	4	1,659	
Combustion Turbine			
DeBary	10	643	
Intercession City	14	992	*(2)*
Bayboro	4	177	
Bartow	4	176	
Suwannee	3	157	
Turner	4	150	
Higgins	4	110	
Avon Park	2	50	
University of Florida	1	45	
Rio Pinar	1	13	
Total Combustion Turbine	47	2,513	
Total Units	**64**		
Total Net Generating Capability		**8,844**	

(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	19	813	
Investor Owned Utilities	2	484	
Independent Power Producers	2	611	
TOTAL CAPACITY RESOURCES		**10,752**	

TABLE 3.2

PROGRESS ENERGY FLORIDA

QUALIFYING FACILITY GENERATION CONTRACTS

AS OF DECEMBER 31, 2006

Facility Name	Firm Capacity (MW)
Bay County Resource Recovery	11.0
Cargill	15.0
Dade County Resource Recovery	43.0
El Dorado	114.2
Lake Cogen	110.0
Lake County Resource Recovery	12.8
LFC Jefferson	8.5
LFC Madison	8.5
Mulberry	79.2
Orange Cogen (CFR-Biogen)	74.0
Orlando Cogen	79.2
Pasco Cogen	109.0
Pasco County Resource Recovery	23.0
Pinellas County Resource Recovery 1	40.0
Pinellas County Resource Recovery 2	14.8
Ridge Generating Station	39.6
Royster	30.8
TOTAL	**812.6**

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	FIRM	FIRM		TOTAL	SYSTEM FIRM					
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	SUMMER PEAK	RESERVE MARGIN		SCHEDULED	RESERVE MARGIN	
	CAPACITY	IMPORT	EXPORT	QF	AVAILABLE	DEMAND	BEFORE MAINTENANCE		MAINTENANCE	AFTER MAINTENANCE	
YEAR	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2007	8,701	1,661 *	0	803	11,165	9,327	1,838	20%	0	1,838	20%
2008	9,175	1,503 *	0	799	11,477	9,525	1,952	20%	0	1,952	20%
2009	9,881	1,095	0	659	11,635	9,553	2,082	22%	0	2,082	22%
2010	9,891	1,253	0	775	11,919	9,801	2,118	22%	0	2,118	22%
2011	9,926	1,370	0	775	12,071	9,992	2,079	21%	0	2,079	21%
2012	10,077	1,530	0	775	12,382	10,173	2,209	22%	0	2,209	22%
2013	10,614	1,530	0	665	12,809	10,379	2,430	23%	0	2,430	23%
2014	11,151	1,530	0	478	13,159	10,711	2,448	23%	0	2,448	23%
2015	11,151	1,530	0	478	13,159	10,933	2,226	20%	0	2,226	20%
2016	12,276	1,459	0	478	14,213	11,169	3,044	27%	0	3,044	27%

* Progress Energy is pursuing summer seasonal purchases of approximately 200 MW in 2007 and 250 MW in 2008. 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	FIRM	FIRM		TOTAL	SYSTEM FIRM					
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	WINTER PEAK	RESERVE MARGIN		SCHEDULED	RESERVE MARGIN	
	CAPACITY	IMPORT	EXPORT	QF	AVAILABLE	DEMAND	BEFORE MAINTENANCE		MAINTENANCE	AFTER MAINTENANCE	
YEAR	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2006/07	9,768	1,133	0	802	11,703	9,705	1,998	21%	0	1,998	21%
2007/08	10,286	1,295	0	788	12,369	9,944	2,425	24%	0	2,425	24%
2008/09	10,308	1,295	0	690	12,293	10,034	2,259	23%	0	2,259	23%
2009/10	11,144	1,137	0	775	13,056	10,467	2,589	25%	0	2,589	25%
2010/11	11,114	1,172	0	775	13,061	10,686	2,375	22%	0	2,375	22%
2011/12	11,254	1,442	0	775	13,471	10,994	2,477	23%	0	2,477	23%
2012/13	11,265	1,612	0	775	13,653	11,280	2,373	21%	0	2,373	21%
2013/14	11,883	1,612	0	491	13,987	11,510	2,477	22%	0	2,477	22%
2014/15	12,501	1,612	0	478	14,592	11,751	2,841	24%	0	2,841	24%
2015/16	12,501	1,541	0	478	14,521	12,064	2,457	20%	0	2,457	20%
2016/17	13,626	1,541	0	478	15,645	12,371	3,274	26%	0	3,274	26%

PROGRESS ENERGY FLORIDA

SCHEDULE 8
PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

AS OF JANUARY 1, 2006 THROUGH DECEMBER 31, 2016

(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			
	UNIT	LOCATION	UNIT	FUEL		FUEL TRANSPORT		START	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER		
PLANT NAME	NO.	(COUNTY)	TYPE	PRI.	ALT.	PRI.	ALT.	MO. / YR	MO. / YR	MO. / YR	KW	MW	MW	STATUS	NOTES
HINES	1	POLK	CC						12/2007			1	1	A	(3)
HINES	4	POLK	CC	NG	DFO	PL	TK	12/2005	12/2007			461	517	V	(1)
HINES	1	POLK	CC						05/2008			2	2	A	(3)
TIGER BAY	1	POLK	CC						05/2008			10	10	A	(3)
CRYSTAL RIVER	4	CITRUS	ST						11/2008			10	10	A	(3)
CRYSTAL RIVER	5	CITRUS	ST						04/2009			(30)	(30)	D	(2)
CRYSTAL RIVER	5	CITRUS	ST						05/2009			10	10	A	(3)
BARTOW	1-3	PINELLAS	ST							06/2009		(444)	(464)	RP	(4)
BARTOW	1	PINELLAS	CC	NG	DFO	PL	WA	12/2006	06/2009			1159	1279	RP	(4)
CRYSTAL RIVER	3	CITRUS	ST						12/2009			40	40	A	(3)
CRYSTAL RIVER	4	CITRUS	ST						04/2010			(30)	(30)	D	(2)
HINES	1	POLK	CC						06/2011			35	0	A	(3)
CRYSTAL RIVER	3	CITRUS	ST						12/2011			140	140	A	(3)
CRYSTAL RIVER	1	CITRUS	ST						03/2012			11	11	A	(3)
UNCOMMITTED	1	UNKNOWN	CC	NG	DFO	PL	TK	06/2010	06/2013			537	618	P	(1)
UNCOMMITTED	2	UNKNOWN	CC	NG	DFO	PL	TK	06/2011	06/2014			537	618	P	(1)
UNCOMMITTED	3	UNKNOWN	NP	NUC	--	RR	--	01/2010	06/2016			1125	1125	P	(1)

NOTES
(1) Committed new unit.
(2) Planned derations due to FGD scrubber installations.
(3) Planned uprates.
(4) Repowering

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2006

(1)	Plant Name and Unit Number:	**HINES ENERGY COMPLEX UNIT #4**	
(2)	Capacity		
	a. Summer:	461	
	b. Winter:	517	
(3)	Technology Type:	COMBINED CYCLE	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	12/2005	
	b. Commercial in-service date:	12/2007	(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 POND	
(8)	Total Site Area:	8,200 ACRES	
(9)	Construction Status:	REGULATORY APPROVAL RECEIVED UNDER CONSTRUCTION	
(10)	Certification Status:	SITE PERMITTED	
(11)	Status with Federal Agencies:	SITE PERMITTED	
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):	6.0 %	
	b. Forced Outage Factor (FOF):	3.0 %	
	c. Equivalent Availability Factor (EAF):	91.2 %	
	d. Resulting Capacity Factor (%):	49.0 %	
	e. Average Net Operating Heat Rate (ANOHR):	7,866 BTU/kWh	
(13)	Projected Unit Financial Data		
	a. Book Life (Years):	25	
	b. Total Installed Cost (In-service year $/kW):	552.15	
	c. Direct Construction Cost ($/kW):	468.30	
	d. AFUDC Amount ($/kW):	83.84	
	e. Escalation ($/kW):	0.00	
	f. Fixed O&M ($/kW-yr):	1.29	
	g. Variable O&M ($/MWh):	2.45	
	h. K Factor:	NO CALCULATION	

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2007

(1)	Plant Name and Unit Number:	**BARTOW REPOWERING - CC #1**
(2)	Capacity	
	a. Summer:	1,159
	b. Winter:	1,279
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	12/2006
	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 (%):	65.3 %
	e. Average Net Operating Heat Rate (ANOHR):	7,236 BTU/kWh
(13)	Projected Unit Financial Data	
	a. Book Life (Years):	25
	b. Total Installed Cost (In-service year $/kW):	545.53 (INCREMENTAL COST)
	c. Direct Construction Cost ($/kW):	435.60
	d. AFUDC Amount ($/kW):	109.93
	e. Escalation ($/kW):	0.00
	f. Fixed O&M ($/kW-yr):	4.65
	g. Variable O&M ($/MWh):	2.57
	h. K Factor:	NO CALCULATION

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2007

(1)	Plant Name and Unit Number:	**UNCOMMITTED #1**
(2)	Capacity	
	a. Summer:	537
	b. Winter:	618
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	6/2010
	b. Commercial in-service date:	6/2013 (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:	UNKNOWN
(8)	Total Site Area:	UNKNOWN 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):	4.1 %
	b. Forced Outage Factor (FOF):	5.5 %
	c. Equivalent Availability Factor (EAF):	90.6 %
	d. Resulting Capacity Factor (%):	62.9 %
	e. Average Net Operating Heat Rate (ANOHR):	7,442 BTU/kWh
(13)	Projected Unit Financial Data	
	a. Book Life (Years):	25
	b. Total Installed Cost (In-service year $/kW):	834.79
	c. Direct Construction Cost ($/kW):	590.31
	d. AFUDC Amount ($/kW):	117.79
	e. Escalation ($/kW):	126.69
	f. Fixed O&M ($/kW-yr):	11.39
	g. Variable O&M ($/MWh):	1.94
	h. K Factor:	NO CALCULATION

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2007

(1)	Plant Name and Unit Number:	**UNCOMMITTED #2**
(2)	Capacity	
	a. Summer:	537
	b. Winter:	618
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	6/2011
	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:	DRY LOW NOx COMBUSTION with SELECTIVE CATALYTIC REDUCTION
(7)	Cooling Method:	UNKNOWN
(8)	Total Site Area:	UNKNOWN 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):	4.1 %
	b. Forced Outage Factor (FOF):	5.5 %
	c. Equivalent Availability Factor (EAF):	90.6 %
	d. Resulting Capacity Factor (%):	58.6 %
	e. Average Net Operating Heat Rate (ANOHR):	7,457 BTU/kWh
(13)	Projected Unit Financial Data	
	a. Book Life (Years):	25
	b. Total Installed Cost (In-service year $/kW):	857.75
	c. Direct Construction Cost ($/kW):	590.31
	d. AFUDC Amount ($/kW):	121.03
	e. Escalation ($/kW):	146.41
	f. Fixed O&M ($/kW-yr):	11.39
	g. Variable O&M ($/MWh):	1.94
	h. K Factor:	NO CALCULATION

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2007

(1)	Plant Name and Unit Number:	**UNCOMMITTED #3**
(2)	Capacity	
	a. Summer:	1125
	b. Winter:	1125
(3)	Technology Type:	ADVANCED LIGHT WATER NUCLEAR
(4)	Anticipated Construction Timing	
	a. Field construction start date:	1/2010
	b. Commercial in-service date:	12/2016 (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:	UNKNOWN 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):	6.1 %
	b. Forced Outage Factor (FOF):	3.8 %
	c. Equivalent Availability Factor (EAF):	90.3 %
	d. Resulting Capacity Factor (%):	89.6 %
	e. Average Net Operating Heat Rate (ANOHR):	10,400 BTU/kWh
(13)	Projected Unit Financial Data	
	a. Book Life (Years):	40
	b. Total Installed Cost (In-service year $/kW):	3616.21
	c. Direct Construction Cost ($/kW):	2175.99
	d. AFUDC Amount ($/kW):	741.67
	e. Escalation ($/kW):	698.55
	f. Fixed O&M ($/kW-yr):	84.91
	g. Variable O&M ($/MWh):	0.52
	h. K Factor:	NO CALCULATION

SOURCE: EIA Annual Energy Outlook

PROGRESS ENERGY FLORIDA

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

HINES UNIT #4

(1) POINT OF ORIGIN AND TERMINATION:	West Lake Wales Substation-Hines Energy Complex
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	Existing Hines Energy Complex Site and new transmission right-of-way
(4) LINE LENGTH:	21 miles
(5) VOLTAGE:	230kV
(6) ANTICIPATED CONSTRUCTION TIMING:	12/2007
(7) ANTICIPATED CAPITAL INVESTMENT:	$46,283,089 *
(8) SUBSTATIONS:	N/A
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

* As recognized by the Florida Public Service Commission in its Order Granting Petition for Determination of Need for Hines Unit 4, the projected capital estimate may vary during construction of the Hines 4 facility.

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:	230kV
(6) ANTICIPATED CONSTRUCTION TIMING:	06/2009
(7) ANTICIPATED CAPITAL INVESTMENT:	$72,408,125 *
(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:	115kV
(6) ANTICIPATED CONSTRUCTION TIMING:	09/2008
(7) ANTICIPATED CAPITAL INVESTMENT:	$4,000,000 *
(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:	230kV
(6) ANTICIPATED CONSTRUCTION TIMING:	09/2008
(7) ANTICIPATED CAPITAL INVESTMENT:	$11,000,000 *
(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-or-way
(4) LINE LENGTH:	0.4 miles
(5) VOLTAGE:	230kV
(6) ANTICIPATED CONSTRUCTION TIMING:	09/2008
(7) ANTICIPATED CAPITAL INVESTMENT:	$12,000,000 *
(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

INTEGRATED RESOURCE PLANNING OVERVIEW

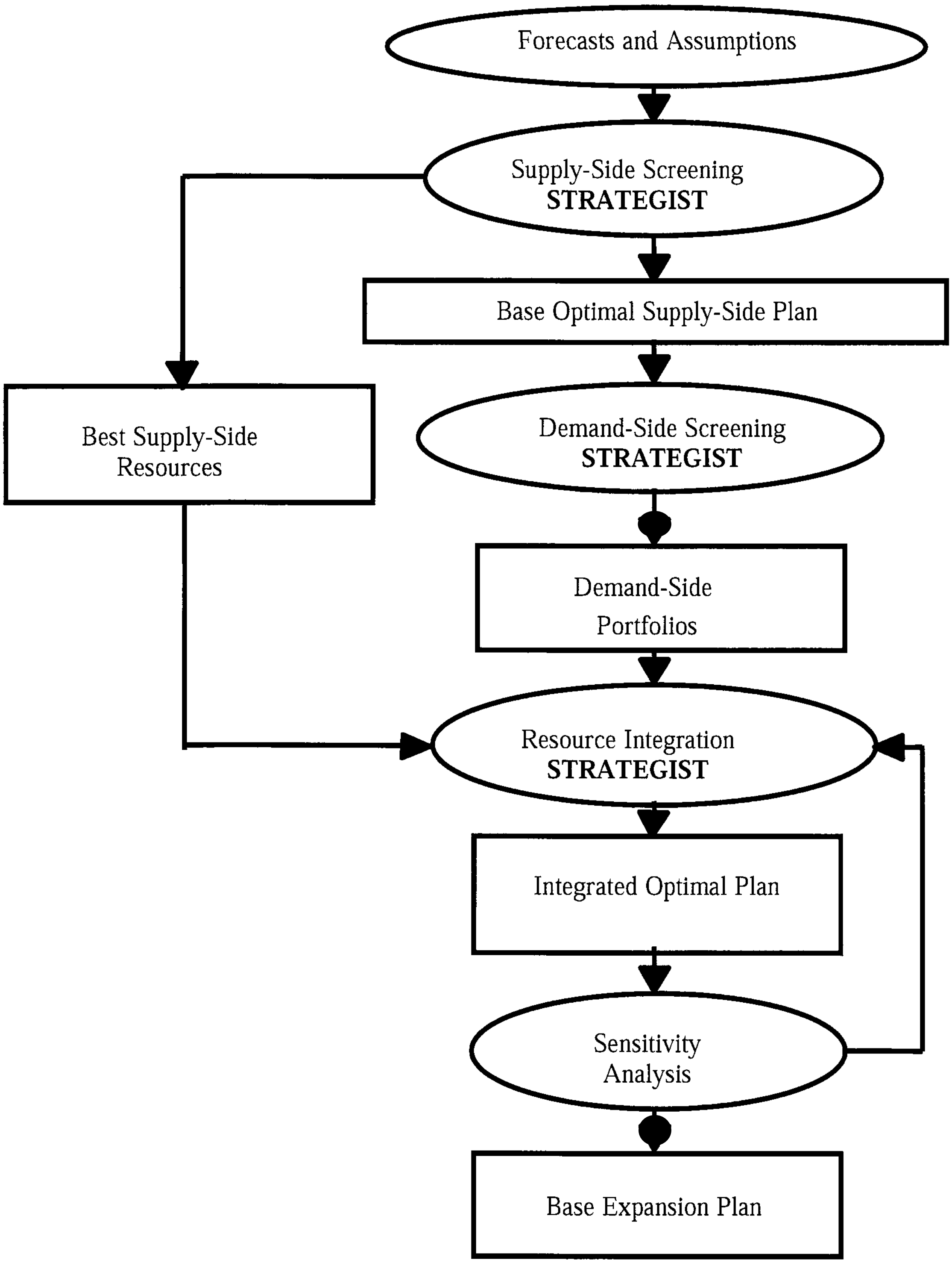
PEF employs an Integrated Resource Planning (IRP) process to determine the most cost-effective mix of supply- and demand-side alternatives that will reliably satisfy our customers' future demand and energy needs. PEF's IRP process incorporates state-of-the-art computer models used to evaluate a wide 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 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 under sensitivity analysis 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 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

IRP Process Overview



THE 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 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 only considers the peak load and amount of installed resources, LOLP also 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 day in ten 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 20% Reserve Margin requirement and probabilistic analyses are conducted to ensure that the one day in ten 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.

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. The optimization program 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 is also collected. These resources are pre-screened to eliminate those alternatives that are still in research and development, addressed by other regulations (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 plans that provide the lowest revenue requirements are then further tested using sensitivity analysis. The economics of the plan may be evaluated under high and low forecast scenarios for load, fuel, and financial assumptions, or any other sensitivities which, in the judgment of the planner, are relevant given existing circumstances to ensure that the plan does not unduly burden the company or the ratepayers if the future unfolds in a manner significantly different from the base forecasts. From the sensitivity assessment, the ten-year 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 evolves as 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 detail in Chapter 2 of this TYSP.

Fuel Forecast

Base Fuel Case: 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% debt and 55% equity capital structure, projected debt cost of 5.9%, and an equity return of 11.75%. These assumptions resulted in a weighted average cost of capital of 9.36% and an after-tax discount rate of 8.10%.

TYSP RESOURCE ADDITIONS

In this TYSP, PEF's supply-side resources include the projected combined cycle (CC) expansion of the Hines Energy Complex (HEC) with Unit 4 forecasted to be in-service by December 2007. The TYSP also includes repowering the Bartow Steam Units with F-Class combined cycle technology with a forecasted in-service date of June 2009. Two generic combined cycle units are included in the TYSP with forecasted in-service dates of June 2013 and June 2014 and a generic nuclear unit in June 2016.

The Company continues to study the economics of baseload generation alternatives including gas, coal, and nuclear. Analyses indicate that nuclear resources may provide economical baseload generation in the long-term. Therefore, this TYSP includes the addition of an advanced nuclear unit during the planning horizon with a forecasted in-service date of June 2016.

PEF will continue, however, to evaluate the nuclear schedule and reassess alternatives for this time period considering, among other things, projected load growth, fuel prices, and environmental compliance considerations. The Company will continue to examine the merits of new generation alternatives and adjust its resource plans accordingly to ensure the optimal selection of resource additions. The Company has not designated specific site(s) for future generic combined cycle or nuclear additions. However, the Company is continuing to evaluate the suitability of a site in Levy County for the potential location of a new nuclear power plant complex.

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:

Mosaic Phosphate/Cargill (15 MW)

PCS Phosphate (As-Available)

Waste Wood, Tires, and Landfill Gas:

Ridge Generating Station (39.6 MW)

Photovoltaics

Various customer and PEF owned installations (400 kW connected to PEF)

In addition, PEF has entered into contracts with G2 Energy (11 MW) and Florida Biomass Group (116.6 MW). The G2 Energy facility will be powered with landfill gas and the Florida Biomass Group facility will utilize an energy crop.

PEF continues to seek out renewable suppliers that can provide reliable capacity and energy at economic rates. PEF will submit renewable standard offer contracts in compliance with the newly revised FPSC rules.

PLAN SENSITIVITIES

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 the Hines 4 addition and Bartow repowering projects in the near term, with generic combined cycles and a nuclear addition in the longer 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. PEF therefore did not conduct detailed sensitivity analyses of the plan to the base case load forecast.

Fuel Forecast

PEF's current TYSP includes new natural gas fueled resources through 2014. The plan also includes uprates to the Crystal River nuclear unit #3 in 2009 and 2011, and a new nuclear unit in 2016, the earliest projected date that a new nuclear plant can be placed in service. PEF focused its fuel forecast sensitivity on price projections for natural gas. 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 mercury and carbon, favors pursuit of the nuclear option. This uncertainty also increases interest in coal gasification, which PEF is investigating as an alternative to some of the natural gas capacity in the planning horizon.

Similar to the discussion above, a higher differential between gas/oil and nuclear prices would improve the economics for coal and nuclear generation; a smaller differential in gas/oil versus nuclear prices would benefit the economics for a combined cycle plant.

Fuel price forecasts can have a significant impact on the economics of generation alternatives. Consideration of fuel forecast sensitivity for this TYSP did not suggest any significant reconsideration of the base plan. PEF will continue to monitor fuel price relationships to identify long-term structural changes and assess the potential impacts on the economics of resource selection.

Financial Forecast

PEF's current TYSP includes combined cycle additions through 2014 with a nuclear addition in 2016. 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. Conversely, higher financial assumptions would disfavor the nuclear addition. 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. 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, to assure the system meets PEF, Florida Reliability Coordinating Council, Inc. (FRCC) and NERC 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, November 4, 2003, which is posted on the FRCC website: (http://frcc.com/downloads/FRCC%20ATC%20methodology-%20final-11-03.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:

> "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 no bulk transmission additions that must be certified under the Florida Transmission Line Siting Act (TLSA). PEF's proposed bulk transmission line additions are shown in the following table:

TABLE 3.3

PROGRESS ENERGY FLORIDA

LIST OF PROPOSED BULK TRANSMISSION LINE ADDITIONS

2007 - 2016

MVA RATING WINTER	LINE OWNERSHIP	TERMINALS		LINE LENGTH (CKT.-MILES)	COMMERCIAL IN-SERVICE DATE (MO./YEAR)	NOMINAL VOLTAGE (kV)
1141	PEF	HINES ENERGY COMPLEX	WEST LAKE WALES #1	21	12/ 2007	230
1141	PEF	LAKE BRYAN	WINDERMERE #1	10 *	3 / 2008	230
1141	PEF	LAKE BRYAN	WINDERMERE #2	10	3 / 2008	230
1141	PEF	AVALON	GIFFORD	7	7 / 2008	230
612	PEF	BARTOW	NORTHEAST Circuit 1	4	6/2009	230
612	PEF	BARTOW	NORTHEAST Circuit 2	4	6/2009	230
612	PEF	BARTOW	NORTHEAST Circuit 3	4	6/2009	230
525	PEF	NORTHEAST	32ND STREET	2.4	9/2008	115
810	PEF	NORTHEAST	40TH STREET	8.3*	9/2008	230
810	PEF	PASADENA	51ST STREET	0.4	9/2008	230
810	PEF	51ST STREET	40TH STREET	0.2	9/2008	230
837	PEF	AVON PARK	FORT MEADE	26†	6/2009	230
1141	PEF	HINES ENERGY COMPLEX	WEST LAKE WALES #2	21	5 / 2010	230
1141	PEF	INTERCESSION CITY	WEST LAKE WALES #2	30	6 / 2010	230
1141	PEF/TECO	LAKE AGNES (TECO)	GIFFORD	32	6/2011	230
1141	PEF	INTERCESSION CITY	WEST LAKE WALES #1	30 *	6/2011	230

* Rebuild existing circuit
† Convert existing 115 kV line to 230 kV

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CHAPTER 4

ENVIRONMENTAL AND LANDUSE INFORMATION

Progress Energy

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CHAPTER 4

ENVIRONMENTAL AND LAND USE INFORMATION

PREFERRED SITES

PEF's base expansion plan has new combined cycle generation at the Hines Energy Complex (HEC) site in Polk County and the repowering of the existing Bartow Plant in Pinellas County with combined cycle technology. While these sites are suitable for new generation, PEF continues to evaluate other available options for future supply alternatives.

The next combined cycle unit at the HEC (Hines Unit 4) site is scheduled for commercial operation in December 2007. PEF is also committed to repowering the existing Bartow Steam Plant that is scheduled for commercial operation in June 2009. PEF continues to pursue siting opportunities for undesignated combined cycle units and a nuclear unit with commercial operation dates of 2013 and beyond. However, PEF's existing sites, as identified in Table 3.1 of Chapter 3, include the capability to accept additional generation. Additionally, all appropriate permitting requirements will be addressed for PEF's preferred sites as discussed in the following site descriptions. The base expansion plan does not currently designate new sites for generation additions. Therefore, detailed environmental and land use data are not included.

The ability to site new baseload generation (coal and/or nuclear) in Florida is extremely limited, however PEF has identified suitable sites for the nuclear option at this time. However, PEF does not own a site at this time, and therefore details will be provided after the acquisition is completed. Siting studies continue to identify possible sites for new coal/IGCC generation.

HINES ENERGY COMPLEX SITE

In 1990, PEF completed a statewide search for a new 3,000 MW coal capable power plant site. As a result of this work, a large tract of mined-out phosphate land in south central Polk County was selected as the primary alternative. This 8,200-acre site is located south of the City of Bartow, near the cities of Fort Meade and Homeland, south of S.R. 640 and west of U.S. 17/98 (reference Figure 4.1). It is an area that has been extensively mined and remains predominantly unreclaimed.

The Governor and cabinet approved site certification for ultimate site development and construction of the first 470 MW increment on January 25, 1994, in accordance with the rules of the Power Plant Siting Act. Due to the thorough screening during the selection process, and the disturbed nature of the site, there were no major environmental limitations. As would be the situation at any location in the state, air emissions and water consumption were issues during the licensing process.

The site's initial preparation involved moving over 10 million cubic yards of soil and draining 4 billion gallons of water. Construction of the energy complex recycled the land for a beneficial use and promoted habitat restoration.

The Hines Energy Complex is visited by several species of wildlife, including alligators, bobcats, turtles, and over 50 species of birds. The Hines site also contains a wildlife corridor, which creates a continuous connection between the Peace River and the Alafia River.

PEF arranged for the City of Bartow to provide treated effluent for cooling pond make-up. The complex's cooling pond initially covered 722 acres with an eventual expansion to 2,500 acres.

The Hines Energy Complex is designed and permitted to be a zero discharge site. This means that there will be no discharges to surface waters either from the power plant facilities or from storm water runoff. Based on this design, storm water runoff from the site can be used as cooling pond make-up, minimizing groundwater withdrawals.

The Florida Department of Environmental Protection air rules currently list all of Polk County as attainment for ambient air quality standards. The environmental impact on the site will be minimized by PEF's close coordination with regulatory agencies to ensure compliance with all applicable environmental regulations.

As future generation units are added, the remaining network of on-site clay settling ponds will be converted to cooling ponds and combustion waste storage areas, as needed, to support power plant operations. Given the disturbed nature of the property, considerable development has been required in order to make it usable for electric utility application. An industrial rail network and an adequate road system service the site.

The first combined cycle unit at this site, with a capacity of 482 MW summer, began commercial operation in April 1999. The transmission improvements associated with this first unit were the rebuilding of the 230/115 kV double circuit Barcola to Ft. Meade line by increasing the conductor sizes and converting the line to double circuit 230 kV operation.

The second combined cycle unit at this site entered commercial operation in December 2003 with a seasonal capacity rating of 516 MW summer. The transmission improvement associated with the second combined cycle unit at this site involved the addition of a 230 kV circuit from the Hines Energy Complex to Barcola.

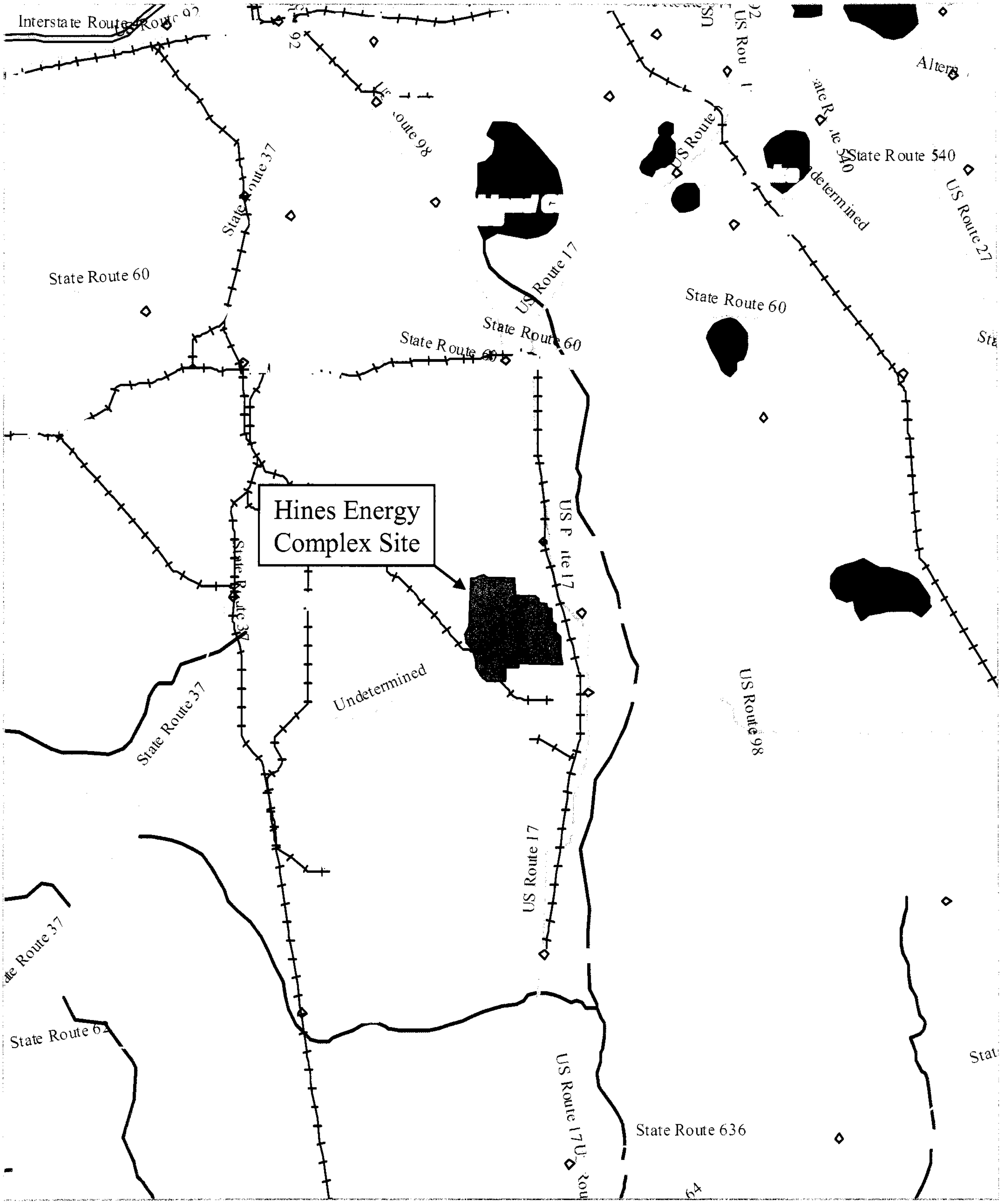
The third combined cycle unit at this site entered commercial operation in November 2005 with a seasonal capacity rating of 501 MW summer, and required no transmission upgrades.

The fourth HEC combined cycle unit is currently under construction. This unit has a commercial operation date of December 2007 with a seasonal capacity rating of 461 MW summer. The transmission improvements associated with the fourth combined cycle unit at this site involved the addition of a 230 kV circuit from the Hines Energy Complex to West Lake-Wales and associated substation expansion and breaker replacements.

The HEC is also a potential site for the combined cycle units projected for 2013 and/or 2014.

FIGURE 4.1

Hines Energy Complex Site (Polk County)



BARTOW SITE

PEF has chosen to repower its existing Bartow Plant with combined cycle technology, which is scheduled for commercial operation in June 2009.

The Bartow site (Figure 4.2) consists of 1,348 acres in Pinellas County, on the west shore of Tampa Bay. The site is on Weedon Island, north of downtown St. Petersburg and adjacent to a barge fuel oil off-loading facility, a natural gas supply from the Florida Gas Transmission (FGT) pipeline, and a proposed Gulfstream natural gas pipeline.

The Florida Department of Environmental Protection air rules currently list all of Pinellas County as attainment for ambient air quality standards. The environmental impact on the site will be minimized by PEF's close coordination with regulatory agencies to ensure compliance with all applicable environmental regulations.

Transmission modifications will be required to accommodate the repowering of Bartow steam units. The Bartow site is also a potential site for the combined cycle units projected for 2013 and/or 2014.

FIGURE 4.2
Bartow Site (Pinellas County)