Progress Energy

ORIGINAL

JAMES A. MCGEE
ASSOCIATE GENERAL COUNSEL
PROGRESS ENERGY SERVICE COMPANY, LLC

April 11, 2003

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HAND DELIVERY

Ms. Blanca S. Bayó, Director
Division of the Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Progress Energy's Ten-Year Site Plan

Dear Ms. Bayó:

On April 4, 2003, Progress Energy Florida filed a corrected page to its Ten-Year Site Plan. A further review of the document has disclosed the need to correct an incomplete forecast assumption. To minimize the inconvenience and potential confusion associated with inserting revised pages into the original document, a revised document has been prepared that incorporates both revisions.

Accordingly, I have enclosed for filing on behalf of Progress Energy Florida, Inc., an original and fifteen copies of its revised Ten-Year Site Plan, as well as an additional ten copies for the other agencies and organizations on your distribution list. In addition, I have enclosed a diskette containing the revised document in PDF format.

Please acknowledge your receipt of the above filing on the enclosed copy of this letter and return to the undersigned. Again, I apologize for any inconvenience this may have caused and thank you for your assistance in rectifying the matter.

Very truly yours,

James A. McGee

AUS
CAF
CMP
COM
CTR
ECR M.Haff
GCL
OPC
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SEC 1
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JAM/scc
Enclosures

cc: Mr. Michael Haff

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100 Central Avenue (33701) • Post Office Box 14042 (33733) • St. Petersburg, Florida
Phone: 727.820.5184 • Fax: 727.820.5519 • Email: james.mcgee@pgnmail.com

Progress Energy Florida
Ten-Year Site Plan

April 2003
(Revised 04/08/03)

2003-2012

Submitted to:
Florida Public Service Commission

Progress Energy

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LIST OF REQUIRED SCHEDULES

PROGRESS ENERGY FLORIDA

CODE IDENTIFICATION SHEET

Generating Unit Type

ST - Steam Turbine - Non-Nuclear
NP - Steam Power - Nuclear
CT - Combustion Turbine (Gas 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

INTRODUCTION

Section 186.801 of the Florida Statutes requires generating electric 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 25.072, Florida Administration 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 they 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

Detailed schedules and a description of PEF's TYSP follow.

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CHAPTER 1

Description of
EXISTING FACILITIES

Progress Energy

CHAPTER 1

Description of EXISTING FACILITIES

EXISTING FACILITIES OVERVIEW

OWNERSHIP

Progress Energy Florida is a wholly owned subsidiary of Progress Energy, Inc. (Progress Energy), a registered holding company under the Public Utility Holding Company Act (PUHCA) of 1935. Progress Energy and its subsidiaries, including Florida, are subject to the regulatory provisions of the PUHCA. Progress Energy is the parent company of PEF and certain other subsidiaries.

AREA OF SERVICE

Progress Energy Florida provided electric service during 2002 to an average of 1.5 million customers in west central 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. Progress Energy Florida is interconnected with 20 municipal and 9 rural electric cooperative systems. Major wholesale power sales customers include Seminole Electric Cooperative, Inc., Florida Municipal Power Agency, Florida Power & Light, and Tampa Electric Company. PEF's Service Area is shown in Figure 1.1.

TRANSMISSION/DISTRIBUTION

As of December 31, 2002, Progress Energy Florida distributed electricity through 370 substations and had the second largest transmission network in Florida. Progress Energy Florida has 4,736 circuit miles of transmission lines, of which 2,600 circuit miles are operated at 500, 230, or 115 kV and the balance at 69 kV. Progress Energy Florida has 28,143 circuit miles of distribution lines, which operate at various voltages ranging from 2.4 to 25 kV. A map of the Electric System can be found in Figure 1.2.

ENERGY MANAGEMENT

PEF customers participating in the company's residential Energy Management program are managing future growth and costs. Approximately 400,000 customers participated in the Energy Management program at the end of the year, contributing more than 720,000 kW of winter peak shaving capacity for use during high load periods.

TOTAL CAPACITY RESOURCE

As of December 31, 2002, PEF had total summer capacity resources of approximately 9,268 MW consisting of installed capacity of 7,955 MW (excluding joint ownership) and 1,313 MW of firm purchased power. Hines Unit 2 is a 516 MW combined-cycle unit under construction and currently scheduled for completion in late 2003. 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

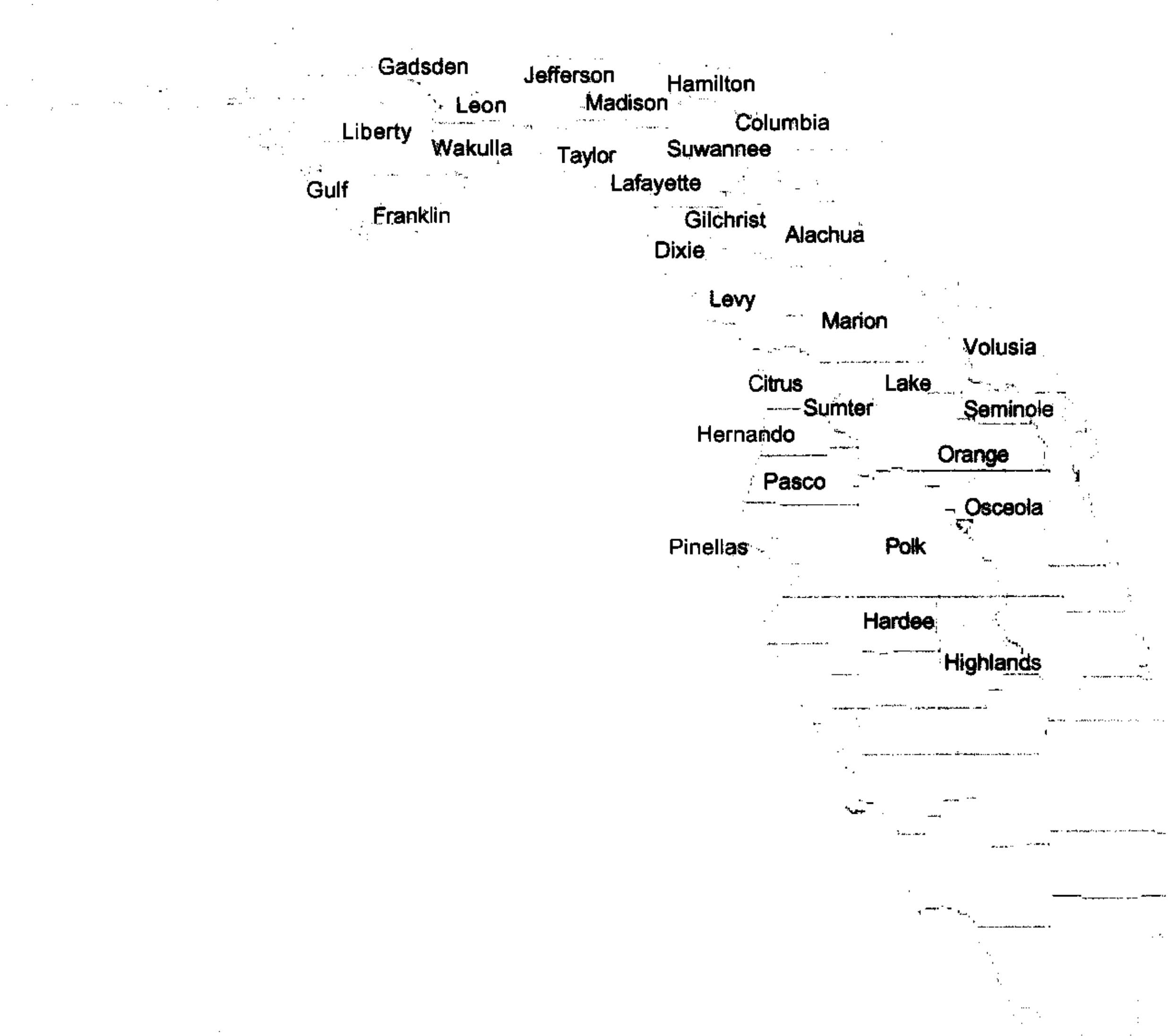
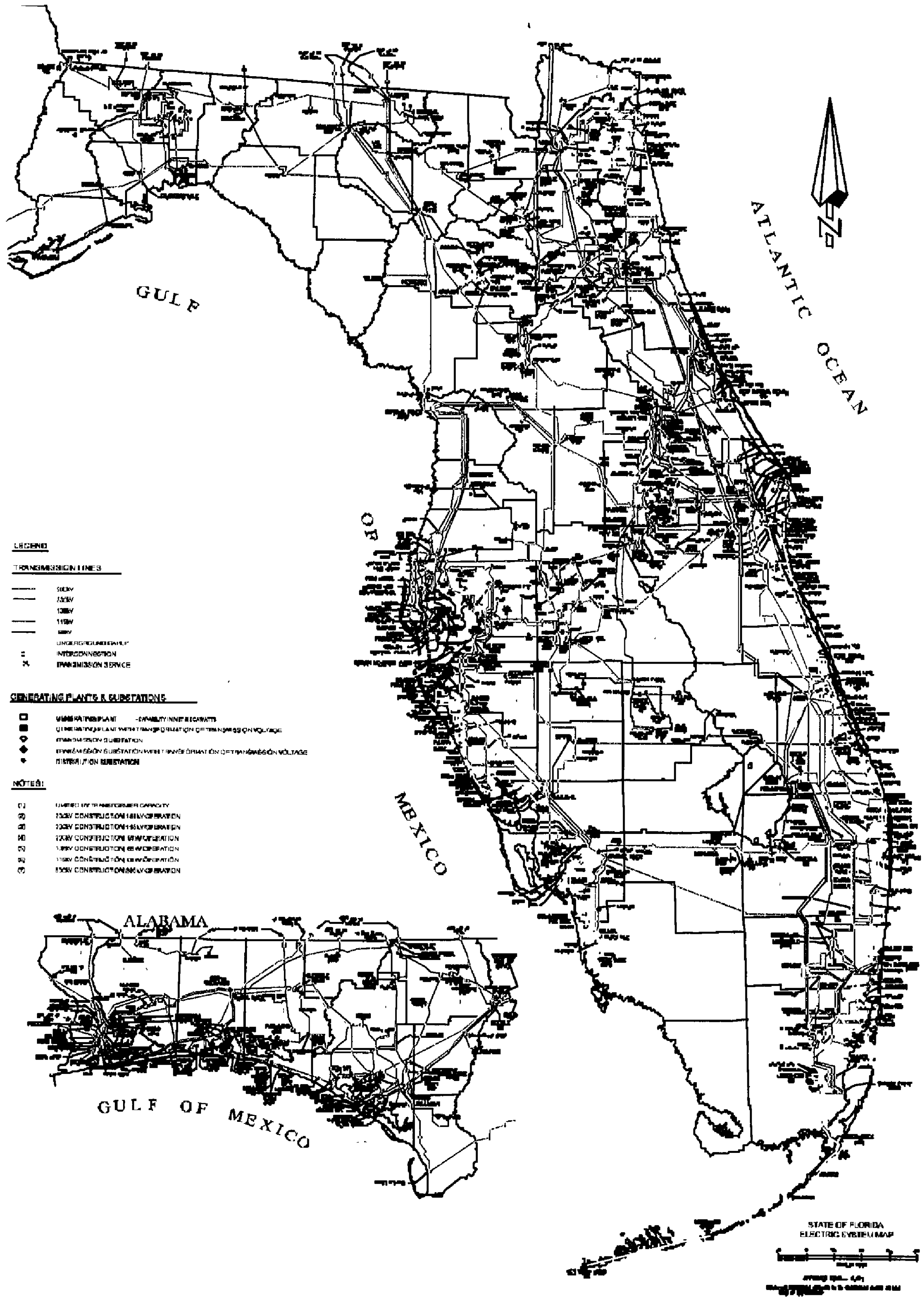


FIGURE 1.2

Electric System Map



PROGRESS ENERGY FLORIDA

SCHEDULE 1
EXISTING GENERATING FACILITIES
AS OF DECEMBER 31, 2002

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
								ALT FUEL	COM'L IN-	EXPECTED	GEN MAX	NET CAPABILITY	
	UNIT	LOCATION	UNIT	FUEL		FUEL TRANSPORT		DAYS	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER
PLANT NAME	NO.	(COUNTY)	TYPE	PRI	ALT	PRI	ALT	USE	MO./YEAR	MO./YEAR	KW	MW	MW
												993	1,044
ANCLOTE	1	PASCO	ST	RFO	NG	PL	PL		10/1974		556,200	498	522
	2		ST	RFO	NG	PL	PL		10/1978		556,200	495	522
												52	64
AVON PARK	P1	HIGHLANDS	GT	NG	DFO	PL	TK	3	12/1968		33,790	26	32
	P2		GT	DFO		TK			12/1968		33,790	26	32
												631	671
BARTOW	1	PINELLAS	ST	RFO		WA			09/1958		127,500	121	123
	2		ST	RFO		WA			08/1961		127,500	119	121
	3		ST	RFO	NG	WA	PL		07/1963		239,360	204	208
	P1, P3		GT	DFO		WA			06/1972		111,400	92	106
	P2		GT	NG	DFO	PL	WA	8	06/1972		55,700	46	53
	P4		GT	NG	DFO	PL	WA	8	06/1972		55,700	49	60
												184	232
BAYBORO	P1-P4	PINELLAS	GT	DFO		WA TK			04/1973		226,800	184	232
												3,067	3,123
CRYSTAL RIVER	1	CITRUS	ST	BIT		WA,RR			10/1966		440,550	379	383
	2		ST	BIT		WA,RR			11/1969		523,800	486	491
	3 *		ST	NUC		TK			03/1977		890,460	765	782
	4		ST	BIT		WA,RR			12/1982		739,260	720	735
	5		ST	BIT		WA,RR			10/1984		739,260	717	732
												667	762
DEBARY	P1-P6	VOLUSIA	GT	DFO		TK,RR			04/1976		401,220	324	390
	P7-P9		GT	NG	DFO	PL	TK,RR	8	11/1992		345,000	258	279
	P10		GT	DFO		TK,RR			11/1992		115,000	85	93
												122	134
HIGGINS	P1-P2	PINELLAS	GT	NG	DFO	PL	TK	1	04/1969		67,580	54	64
	P3-P4		GT	NG	DFO	PL	TK	1	12/1970		85,850	68	70
												482	529
HINES ENERGY COMPLEX	1	POLK	CC	NG	DFO	PL	TK	6	04/1999		546,550	482	529
												1,041	1,206
INTERCESSION CITY	P1-P6	OSCEOLA	GT	DFO		PL,TK			05/1974		340,200	294	366
	P7-P10		GT	NG	DFO	PL	PL,TK	5	11/1993		460,000	352	376
	P11 **		GT	DFO		PL,TK			01/1997		165,000	143	170
	P12-P14		GT	NG	DFO	PL	PL,TK	5	12/2000		345,000	252	294
												13	16
RIO PINAR	P1	ORANGE	GT	DFO		TK			11/1970		19,290	13	16
												307	347
SUWANNEE RIVER	1	SUWANNEE	ST	RFO	NG	TK	PL		11/1953		34,500	32	33
	2		ST	RFO	NG	TK	PL		11/1954		37,500	31	32
	3		ST	RFO	NG	TK	PL		10/1956		75,000	80	81
	P1, P3		GT	NG	DFO	PL	TK	10	11/1980		122,400	110	134
	P2		GT	DFO		TK			11/1980		61,200	54	67
												207	223
TIGER BAY	1	POLK	CC	NG		PL			08/1997		278,223	207	223
												154	194
TURNER	P1-P2	VOLUSIA	GT	DFO		TK			10/1970		38,580	26	32
	P3		GT	DFO		TK			08/1974		71,200	65	82
	P4		GT	DFO		TK			08/1974		71,200	63	80
												35	41
UNIV OF FLA	P1	ALACHUA	GT	NG		PL			01/1994		43,000	35	41
												7,955	**8,586**

* REPRESENTS 91.78% PEF OWNERSHIP OF UNIT
** SUMMER CAPABILITY (JUNE THROUGH SEPTEMBER) OWNED BY GEORGIA POWER COMPANY

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CHAPTER 2

Forecast of ELECTRIC POWER DEMAND And ENERGY CONSUMPTION

Progress Energy

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 1.6 percent between 2003 and 2012, less than the ten-year historical average of 2.2 percent. The ten-year historical growth rate falls to 2.0 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 -- results 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, which had grown at an average of 3.9 percent between 1993 and 2002, is expected to increase by 2.3 percent per year from 2003-2012 in the base case, 2.6 percent in the high case and 1.9 percent in the low case.

Summer net firm demand is expected to grow an average of 2.5 percent per year during the next ten years. This compares to the 3.4 percent average annual growth rate experienced throughout the last ten years. High and low summer growth rates for net firm demand are 2.9 percent and

2.2 percent per year, respectively. Winter net firm demand is projected to grow at 2.3 percent per year after having increased by 4.3 percent per year from 1993 to 2002. High and low winter net firm demand growth rates are 2.6 percent and 2.0 percent, respectively.

Summer net firm retail demand is expected to grow an average of 2.5 percent per year during the next ten years; this compares to the 3.3 percent average annual growth rate experienced throughout the last ten years. High and low summer growth rates for net firm retail demand are 2.9 percent and 2.1 percent per year, respectively. Winter net firm retail demand is projected to grow at approximately 2.2 percent per year after having increased by 3.7 percent per year from 1993 to 2002. High and low winter net firm retail demand growth rates are 2.6 percent and 1.8 percent, respectively.

ENERGY CONSUMPTION and FORECAST CONSUMPTION SCHEDULES

History and Forecast of Energy Consumption and Number of Customers by Customer Class are shown on Schedules 2.1, 2.2 and 2.3.

History and Forecast of Base, High and Low Summer Peak Demand are shown on Schedules 3.1.1, 3.1.2 and 3.1.3.

History and Forecast of Base, High, and Low Winter Peak Demand are shown on Schedules 3.2.1, 3.2.2 and 3.2.3.

History and Forecast of Base, High and Low Annual Net Energy for Load are shown on Schedules 3.3.1, 3.3.2 and 3.3.3.

Previous Year Actual and Two-Year Forecast of Peak Demand and Net Energy for Load by Month are shown on Schedule 4.

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
1993	2,663,086	2.473	13,373	1,076,657	12,421	7,885	119,811	65,812
1994	2,734,821	2.485	13,863	1,100,537	12,597	8,252	122,987	67,097
1995	2,801,105	2.491	14,938	1,124,679	13,282	8,612	126,189	68,247
1996	2,847,802	2.494	15,481	1,141,671	13,560	8,848	129,440	68,356
1997	2,895,266	2.495	15,080	1,160,611	12,993	9,257	132,504	69,862
1998	2,959,509	2.502	16,526	1,182,786	13,972	9,999	136,345	73,336
1999	3,047,293	2.511	16,245	1,213,470	13,387	10,327	140,897	73,295
2000	3,044,459	2 467	17,116	1,234,286	13,867	10,813	143,475	75,368
2001	3,141,867	2.465	17,604	1,274,672	13,810	11,061	146,983	75,251
2002	3,207,661	2.465	18,754	1,301,515	14,409	11,420	150,577	75,842
2003	3,257,240	2.461	19,025	1,323,365	14,376	11,891	152,768	77,837
2004	3,304,629	2.460	19,496	1,343,486	14,512	12,313	155,315	79,278
2005	3,347,997	2.455	19,956	1,363,476	14,636	12,716	157,154	80,914
2006	3,394,454	2.451	20,428	1,384,860	14,751	13,090	159,862	81,883
2007	3,447,017	2.449	20,905	1,407,587	14,852	13,459	162,739	82,703
2008	3,505,442	2.449	21,409	1,431,210	14,959	13,834	165,728	83,474
2009	3,566,998	2.451	21,912	1,455,275	15,057	14,210	168,773	84,196
2010	3,628,453	2.453	22,422	1,479,339	15,157	14,597	171,819	84,956
2011	3,696,399	2.454	22,932	1,506,312	15,224	14,994	175,282	85,542
2012	3,747,779	2.455	23,448	1,526,460	15,361	15,399	177,785	86,616

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
1993	3,381	3,107	1,088,188	0	25	1,865	26,529
1994	3,580	3,186	1,123,666	0	26	1,954	27,675
1995	3,864	3,143	1,229,399	0	27	2,058	29,499
1996	4,224	2,927	1,443,116	0	26	2,205	30,784
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	1,676,188	0	28	2,626	34,832
2001	3,872	2,551	1,517,771	0	28	2,698	35,263
2002	3,835	2,535	1,513,143	0	28	2,822	36,859
2003	3,966	2,520	1,573,810	0	29	2,946	37,857
2004	4,120	2,520	1,634,921	0	29	3,054	39,012
2005	4,245	2,520	1,684,524	0	29	3,167	40,113
2006	4,318	2,520	1,713,492	0	30	3,280	41,146
2007	4,368	2,520	1,733,333	0	30	3,394	42,156
2008	4,419	2,520	1,753,571	0	30	3,509	43,201
2009	4,467	2,520	1,772,619	0	30	3,626	44,245
2010	4,515	2,520	1,791,667	0	31	3,743	45,308
2011	4,562	2,520	1,810,317	0	31	3,863	46,382
2012	4,608	2,520	1,828,571	0	31	3,986	47,472

PROGRESS ENERGY FLORIDA

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

(1)	(2)	(3)	(4)	(5)	(6)
YEAR	SALES FOR RESALE GWh	UTILITY USE & LOSSES GWh	NET ENERGY FOR LOAD GWh	OTHER CUSTOMERS (AVERAGE NO.)	TOTAL NO. OF CUSTOMERS
1993	1,695	2,020	30,244	15,077	1,214,652
1994	1,819	1,680	31,174	17,181	1,243,891
1995	1,846	2,322	33,667	17,774	1,271,785
1996	2,089	1,842	34,715	18,035	1,292,073
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	20,004	1,400,299
2001	3,839	1,830	40,933	20,752	1,444,958
2002	3,173	2,534	42,567	21,156	1,475,783
2003	2,537	2,714	43,108	21,824	1,500,477
2004	2,456	2,494	43,962	22,387	1,523,708
2005	2,536	2,557	45,206	22,952	1,546,102
2006	2,732	2,643	46,521	23,513	1,570,755
2007	2,648	2,609	47,413	24,077	1,596,923
2008	2,448	2,699	48,348	24,641	1,624,099
2009	2,395	2,759	49,399	25,206	1,651,774
2010	2,350	2,809	50,467	25,769	1,679,447
2011	2,319	2,882	51,583	26,419	1,710,533
2012	2,311	2,939	52,722	26,898	1,733,663

PROGRESS ENERGY FLORIDA

SCHEDULE 3 1 1
HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW)
BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM / IND LOAD MANAGEMENT	COMM / IND CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
1993	6,913	833	6,080	272	502	48	27	70	155	5,839
1994	6,880	787	6,093	262	527	52	30	81	154	5,774
1995	7,523	959	6,564	269	503	64	40	106	160	6,381
1996	7,470	828	6,642	309	565	69	41	120	167	6,199
1997	7,786	874	6,912	288	555	78	41	131	170	6,523
1998	8,367	943	7,424	291	438	97	42	142	182	7,175
1999	9,039	1,326	7,713	292	505	113	45	153	183	7,747
2000	8,911	1,319	7,592	277	455	127	48	155	75	7,774
2001	8,471	1,118	7,353	283	414	139	54	156	75	7,350
2002	9,034	1,205	7,829	305	390	153	43	159	75	7,909
2003	8,777	687	8,089	325	341	169	45	161	75	7,661
2004	8,953	680	8,273	386	300	183	47	162	75	7,800
2005	9,101	664	8,437	394	266	197	49	164	75	7,957
2006	9,464	849	8,615	397	236	211	51	165	75	8,329
2007	9,716	916	8,800	398	210	226	53	166	75	8,589
2008	9,896	904	8,992	380	187	240	55	167	75	8,792
2009	10,075	888	9,187	371	167	253	58	168	75	8,984
2010	10,253	872	9,381	351	150	259	58	169	75	9,192
2011	10,445	873	9,572	352	134	259	57	169	75	9,400
2012	10,634	873	9,761	353	120	259	56	169	75	9,602

Historical Values (1993 - 2002):

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) = Residential Heat Works load control, voltage reduction and customer-owned self-service cogeneration

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

Projected Values (2003 - 2012):

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) = 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) 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
1993	6,913	833	6,080	272	502	48	27	70	155	5,839
1994	6,880	787	6,093	262	527	52	30	81	154	5,774
1995	7,523	959	6,564	269	503	64	40	106	160	6,381
1996	7,470	828	6,642	309	565	69	41	120	167	6,199
1997	7,786	874	6,912	288	555	78	41	131	170	6,523
1998	8,367	943	7,424	291	438	97	42	142	182	7,175
1999	9,039	1,326	7,713	292	505	113	45	153	183	7,747
2000	8,911	1,319	7,592	277	455	127	48	155	75	7,774
2001	8,471	1,118	7,353	283	414	139	54	156	75	7,350
2002	9,034	1,205	7,829	305	390	153	43	159	75	7,909
2003	8,924	687	8,237	325	341	169	45	161	75	7,809
2004	9,122	680	8,442	386	300	183	47	162	75	7,969
2005	9,298	664	8,635	394	266	197	49	164	75	8,155
2006	9,677	849	8,828	397	236	211	51	165	75	8,542
2007	9,965	916	9,049	398	210	226	53	166	75	8,838
2008	10,165	904	9,261	380	187	240	55	167	75	9,061
2009	10,392	888	9,504	371	167	253	58	168	75	9,301
2010	10,629	872	9,758	351	150	259	58	169	75	9,568
2011	10,864	873	9,991	352	134	259	57	169	75	9,819
2012	11,116	873	10,244	353	120	259	56	169	75	10,085

Historical Values (1993 - 2002):

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) = Residential Heat Works load control, voltage reduction and customer-owned self-service cogeneration

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

Projected Values (2003 - 2012):

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) = 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)	(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
1993	6,913	833	6,080	272	502	48	27	70	155	5,839
1994	6,880	787	6,093	262	527	52	30	81	154	5,774
1995	7,523	959	6,564	269	503	64	40	106	160	6,381
1996	7,470	828	6,642	309	565	69	41	120	167	6,199
1997	7,786	874	6,912	288	555	78	41	131	170	6,523
1998	8,367	943	7,424	291	438	97	42	142	182	7,175
1999	9,039	1,326	7,713	292	505	113	45	153	183	7,747
2000	8,911	1,319	7,592	277	455	127	48	155	75	7,774
2001	8,471	1,118	7,353	283	414	139	54	156	75	7,350
2002	9,034	1,205	7,829	305	390	153	43	159	75	7,909
2003	8,217	687	7,530	325	341	169	45	161	75	7,101
2004	8,367	680	7,687	386	300	183	47	162	75	7,214
2005	8,479	664	7,815	394	266	197	49	164	75	7,335
2006	8,796	849	7,947	397	236	211	51	165	75	7,661
2007	9,001	916	8,085	398	210	226	53	166	75	7,874
2008	9,131	904	8,227	380	187	240	55	167	75	8,028
2009	9,250	888	8,362	371	167	253	58	168	75	8,159
2010	9,391	872	8,519	351	150	259	58	169	75	8,330
2011	9,520	873	8,647	352	134	259	57	169	75	8,474
2012	9,666	873	8,793	353	120	259	56	169	75	8,634

Historical Values (1993 - 2002):

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) = Residential Heat Works load control, voltage reduction and customer-owned self-service cogeneration

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

Projected Values (2003 - 2012):

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) = 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
1992/93	7,191	851	6,340	155	599	67	0	57	159	6,154
1993/94	7,184	972	6,212	199	759	90	2	66	165	5,903
1994/95	9,084	1,145	7,939	281	997	101	5	75	131	7,494
1995/96	10,562	1,489	9,073	255	1,156	106	15	95	201	8,734
1996/97	8,486	1,235	7,251	290	917	133	16	104	190	6,836
1997/98	7,717	941	6,776	318	663	124	17	117	168	6,310
1998/99	10,473	1,741	8,732	305	874	196	18	117	187	8,776
1999/00	10,040	1,728	8,312	225	849	229	20	119	182	8,416
2000/01	11,450	1,984	9,466	255	809	254	29	120	194	9,789
2001/02	10,676	1,625	9,051	285	770	278	24	121	187	9,011
2002/03	10,298	1,399	8,899	308	723	305	27	121	186	8,627
2003/04	10,420	1,313	9,107	380	691	332	30	122	188	8,676
2004/05	10,620	1,334	9,286	392	665	361	33	123	190	8,855
2005/06	10,866	1,397	9,469	399	644	390	36	124	192	9,080
2006/07	11,365	1,703	9,662	400	628	419	39	125	194	9,560
2007/08	11,520	1,675	9,845	381	615	448	43	126	196	9,711
2008/09	11,730	1,696	10,034	371	605	477	46	127	198	9,905
2009/10	11,948	1,724	10,224	362	598	505	49	128	200	10,106
2010/11	12,164	1,751	10,413	353	591	505	49	128	203	10,336
2011/12	12,384	1,786	10,598	354	584	505	49	128	205	10,559

Historical Values (1993 - 2002):

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) = Residential Heat Works load control, voltage reduction and customer-owned self-service cogeneration

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

Projected Values (2003 - 2012):

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) 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
1992/93	7,191	851	6,340	155	599	67	0	57	159	6,154
1993/94	7,184	972	6,212	199	759	90	2	66	165	5,903
1994/95	9,084	1,145	7,939	281	997	101	5	75	131	7,494
1995/96	10,562	1,489	9,073	255	1,156	106	15	95	201	8,734
1996/97	8,486	1,235	7,251	290	917	133	16	104	190	6,836
1997/98	7,717	941	6,776	318	663	124	17	117	168	6,310
1998/99	10,473	1,741	8,732	305	874	196	18	117	187	8,776
1999/00	10,040	1,728	8,312	225	849	229	20	119	182	8,416
2000/01	11,450	1,984	9,466	255	809	254	29	120	194	9,789
2001/02	10,676	1,625	9,051	285	770	278	24	121	187	9,011
2002/03	10,460	1,399	9,060	308	723	305	27	121	186	8,789
2003/04	10,603	1,313	9,290	380	691	332	30	122	188	8,859
2004/05	10,834	1,334	9,500	392	665	361	33	123	190	9,070
2005/06	11,097	1,397	9,700	399	644	390	36	124	192	9,312
2006/07	11,636	1,703	9,932	400	628	419	39	125	194	9,830
2007/08	11,810	1,675	10,134	381	615	448	43	126	196	10,000
2008/09	12,072	1,696	10,377	371	605	477	46	127	198	10,248
2009/10	12,351	1,724	10,628	362	598	505	49	128	200	10,510
2010/11	12,613	1,751	10,863	353	591	505	49	128	203	10,785
2011/12	12,899	1,786	11,114	354	584	505	49	128	205	11,075

Historical Values (1993 - 2002):

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) = Residential Heat Works load control, voltage reduction and customer-owned self-service cogeneration.

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

Projected Values (2003 - 2012):

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
1992/93	7,191	851	6,340	155	599	67	0	57	159	6,154
1993/94	7,184	972	6,212	199	759	90	2	66	165	5,903
1994/95	9,084	1,145	7,939	281	997	101	5	75	131	7,494
1995/96	10,562	1,489	9,073	255	1,156	106	15	95	201	8,734
1996/97	8,486	1,235	7,251	290	917	133	16	104	190	6,836
1997/98	7,717	941	6,776	318	663	124	17	117	168	6,310
1998/99	10,473	1,741	8,732	305	874	196	18	117	187	8,776
1999/00	10,040	1,728	8,312	225	849	229	20	119	182	8,416
2000/01	11,450	1,984	9,466	255	809	254	29	120	194	9,789
2001/02	10,676	1,625	9,051	285	770	278	24	121	187	9,011
2002/03	10,129	1,399	8,729	308	723	305	27	121	186	8,458
2003/04	10,238	1,313	8,925	380	691	332	30	122	188	8,494
2004/05	10,416	1,334	9,082	392	665	361	33	123	190	8,652
2005/06	10,630	1,397	9,233	399	644	390	36	124	192	8,845
2006/07	11,096	1,703	9,392	400	628	419	39	125	194	9,290
2007/08	11,214	1,675	9,538	381	615	448	43	126	196	9,404
2008/09	11,376	1,696	9,681	371	605	477	46	127	198	9,552
2009/10	11,562	1,724	9,839	362	598	505	49	128	200	9,721
2010/11	11,712	1,751	9,962	353	591	505	49	128	203	9,884
2011/12	11,887	1,786	10,102	354	584	505	49	128	205	10,063

Historical Values (1993 - 2002):

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) = Residential Heat Works load control, voltage reduction and customer-owned self-service cogeneration.

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

Projected Values (2003 - 2012):

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)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL	RESIDENTIAL CONSERVATION	COMM / IND CONSERVATION	OTHER ENERGY REDUCTIONS	RETAIL	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) *
1993	31,164	202	195	524	26,528	1,695	2,020	30,243	51.3
1994	32,150	219	220	536	27,675	1,819	1,680	31,174	51.2
1995	34,696	234	246	549	29,499	1,846	2,322	33,667	49.8
1996	35,812	249	285	562	30,785	2,089	1,841	34,715	44.9
1997	35,753	268	317	563	30,850	1,758	1,997	34,605	49.0
1998	38,950	289	333	565	33,387	2,340	2,036	37,763	53 9
1999	40,376	312	339	565	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	44,422	397	353	564	37,857	2,537	2,714	43,108	57.0
2004	45,299	417	355	565	39,013	2,456	2,493	43,962	57.7
2005	46,564	438	356	564	40,113	2,536	2,557	45,206	58.3
2006	47,902	459	358	564	41,145	2,732	2,644	46,521	58.5
2007	48,815	479	359	564	42,155	2,648	2,610	47,413	56.6
2008	49,773	499	361	565	43,202	2,448	2,698	48,348	56 7
2009	50,844	519	362	564	44,245	2,395	2,759	49,399	56 9
2010	51,912	519	362	564	45,308	2,350	2,809	50,467	57.0
2011	53,028	519	362	564	46,382	2,319	2,882	51,583	57.0
2012	54,168	519	362	565	47,472	2,311	2,939	52,722	56.8

NOTE · 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 1993 AND 1998 HISTORICAL LOAD FACTORS 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)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL	RESIDENTIAL CONSERVATION	COMM / IND CONSERVATION	OTHER ENERGY REDUCTIONS	RETAIL	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) *
1993	31,164	202	195	524	26,528	1,695	2,020	30,243	51.3
1994	32,150	219	220	536	27,675	1,819	1,680	31,174	51.2
1995	34,696	234	246	549	29,499	1,846	2,322	33,667	49.8
1996	35,812	249	285	562	30,785	2,089	1,841	34,715	44 9
1997	35,753	268	317	563	30,850	1,758	1,997	34,605	49.0
1998	38,950	289	333	565	33,387	2,340	2,036	37,763	53.9
1999	40,376	312	339	565	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	397	353	564	38,585	2,537	2,796	43,918	57 0
2004	46,188	417	355	565	39,848	2,456	2,547	44,851	57.6
2005	47,608	438	356	564	41,099	2,536	2,615	46,250	58 2
2006	49,043	459	358	564	42,218	2,732	2,712	47,662	58.4
2007	50,149	479	359	564	43,416	2,648	2,683	48,747	56.6
2008	51,222	499	361	565	44,564	2,448	2,785	49,797	56.7
2009	52,566	519	362	564	45,863	2,395	2,863	51,121	56.9
2010	53,949	519	362	564	47,228	2,350	2,926	52,504	57.0
2011	55,308	519	362	564	48,527	2,319	3,017	53,863	57 0
2012	56,791	519	362	565	49,948	2,311	3,086	55,345	56.9

NOTE : 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 1993 AND 1998 HISTORICAL LOAD FACTORS 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)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL	RESIDENTIAL CONSERVATION	COMM. / IND. CONSERVATION	OTHER ENERGY REDUCTIONS	RETAIL	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) *
1993	31,164	202	195	524	26,528	1,695	2,020	30,243	51.3
1994	32,150	219	220	536	27,675	1,819	1,680	31,174	51 2
1995	34,696	234	246	549	29,499	1,846	2,322	33,667	49.8
1996	35,812	249	285	562	30,785	2,089	1,841	34,715	44 9
1997	35,753	268	317	563	30,850	1,758	1,997	34,605	49 0
1998	38,950	289	333	565	33,387	2,340	2,036	37,763	53.9
1999	40,376	312	339	565	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	43,580	397	353	564	37,096	2,537	2,633	42,266	57.0
2004	44,422	417	355	565	38,186	2,456	2,443	43,085	57.7
2005	45,569	438	356	564	39,178	2,536	2,497	44,211	58 3
2006	46,743	459	358	564	40,054	2,732	2,576	45,362	58.5
2007	47,479	479	359	564	40,898	2,648	2,531	46,077	56.6
2008	48,245	499	361	565	41,764	2,448	2,608	46,820	56.7
2009	49,071	519	362	564	42,571	2,395	2,660	47,626	56.9
2010	49,959	519	362	564	43,472	2,350	2,692	48,514	57.0
2011	50,740	519	362	564	44,223	2,319	2,753	49,295	56.9
2012	51,641	519	362	565	45,087	2,311	2,797	50,195	56.8

NOTE : 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 1993 AND 1998 HISTORICAL LOAD FACTORS 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).

LOAD MANAGEMENT VALUES FROM 1994 FORWARD REFLECT ACTUAL HOURS OF OPERATION, PRIOR TO 1994 THE HOURS OF OPERATION WERE ASSUMED TO BE 100 HOURS PER YEAR.

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 2002		FORECAST 2003		FORECAST 2004	
	PEAK DEMAND	NEL	PEAK DEMAND	NEL	PEAK DEMAND	NEL
MONTH	MW	GWh	MW	GWh	MW	GWh
JANUARY	9,721	3,320	8,627	3,746	8,676	3,547
FEBRUARY	8,941	2,679	7,254	3,004	7,186	3,100
MARCH	8,345	3,165	6,200	3,195	6,127	3,245
APRIL	7,208	3,381	6,182	3,190	6,160	3,206
MAY	8,127	3,841	7,003	3,687	7,130	3,787
JUNE	8,076	3,766	7,421	4,019	7,565	4,133
JULY	9,034	4,104	7,635	4,191	7,773	4,313
AUGUST	8,372	4,107	7,661	4,427	7,801	4,554
SEPTEMBER	8,362	4,067	7,182	3,917	7,304	4,031
OCTOBER	7,920	3,855	6,384	3,410	6,511	3,527
NOVEMBER	6,978	2,988	5,610	3,004	5,661	3,108
DECEMBER	7,828	3,295	6,939	3,319	7,024	3,410
TOTAL		42,568		43,109		43,961

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 source reflect a diverse fuel supply system that is not dependent on any one fuel source. PEF expects its fuel diversity to be further enhanced with the addition of future planned combined cycle generation units fueled by natural gas. Natural gas consumption is projected to increase as plants are added to meet future load growth. PEF's coal, nuclear, and purchased power requirements are projected to remain relatively stable over the planning horizon.

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	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
(1)	NUCLEAR		TRILLION BTU	62	69	64	71	65	70	65	71	54	70	65	71
(2)	COAL		1,000 TON	5,468	5,557	6,273	5,996	6,467	6,123	6,120	6,331	6,406	6,417	6,447	6,472
(3)	RESIDUAL	TOTAL	1,000 BBL	9,726	9,851	9,398	8,738	10,813	8,682	9,400	10,478	12,242	12,015	12,686	12,587
(4)		STEAM	1,000 BBL	9,726	9,851	9,398	8,738	10,813	8,682	9,400	10,478	12,242	12,015	12,686	12,587
(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	1,434	1,548	1,030	529	526	427	444	446	531	463	678	581
(9)		STEAM	1,000 BBL	122	108	36	43	37	46	46	41	40	35	36	34
(10)		CC	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(11)		CT	1,000 BBL	1,312	1,440	994	486	489	381	398	405	491	428	642	547
(12)		DIESEL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(13)	NATURAL GAS	TOTAL	1,000 MCF	48,932	55,916	47,071	56,848	51,054	72,821	81,854	73,671	88,667	85,120	93,923	96,593
(14)		STEAM	1,000 MCF	4,793	4,717	0	0	0	0	0	0	0	0	0	0
(15)		CC	1,000 MCF	30,733	35,526	27,676	43,420	35,147	60,632	65,046	61,054	70,433	71,866	76,882	83,851
(16)		CT	1,000 MCF	13,406	15,673	19,395	13,428	15,907	12,189	16,808	12,617	18,234	13,254	17,041	12,742
(17)	OTHER (SPECIFY)			0	0	0	0	0	0	0	0	0	0	0	0

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	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
(1)	ANNUAL FIRM INTERCHANGE 1/		GWh	645	27	255	91	98	64	81	69	94	70	12	0
(2)	NUCLEAR		GWh	5,979	6,700	6,037	6,658	6,136	6,640	6,098	6,658	5,089	6,640	6,154	6,658
(3)	COAL		GWh	14,164	14,406	16,900	16,156	17,448	16,502	16,480	17,083	17,298	17,331	17,415	17,482
(4)	RESIDUAL	TOTAL	GWh	6,167	6,319	6,007	5,569	7,096	5,558	6,083	6,871	8,138	7,984	8,461	8,417
(5)		STEAM	GWh	6,167	6,319	6,007	5,569	7,096	5,558	6,083	6,871	8,138	7,984	8,461	8,417
(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	558	607	422	197	203	157	169	168	206	179	268	230
(10)		STEAM	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(11)		CC	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(12)		CT	GWh	558	607	422	197	203	157	169	168	206	179	268	230
(13)		DIESEL	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(14)	NATURAL GAS	TOTAL	GWh	5,764	6,446	5,246	7,057	6,090	9,458	10,497	9,575	11,370	11,143	12,162	12,800
(15)		STEAM	GWh	488	462	0	0	0	0	0	0	0	0	0	0
(16)		CC	GWh	4,237	4,816	3,740	5,981	4,797	8,448	9,085	8,496	9,846	10,011	10,725	11,706
(17)		CT	GWh	1,039	1,168	1,506	1,076	1,293	1,010	1,412	1,079	1,524	1,132	1,437	1,094
(18)	OTHER 2/														
	QF PURCHASES		GWh	5,216	5,091	5,333	5,319	5,234	5,241	5,105	5,014	4,302	4,218	4,209	4,226
	IMPORT FROM OUT OF STATE		GWh	2,808	3,317	2,908	2,915	2,901	2,901	2,900	2,910	2,902	2,902	2,902	2,909
	EXPORT TO OUT OF STATE		GWh	-368	-346	0	0	0	0	0	0	0	0	0	0
(19)	NET ENERGY FOR LOAD		GWh	40,933	42,567	43,108	43,962	45,206	46,521	47,413	48,348	49,399	50,467	51,583	52,722

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	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
(1)	ANNUAL FIRM INTERCHANGE 1/		%	1.6%	0.1%	0.6%	0.2%	0 2%	0 1%	0.2%	0.1%	0.2%	0 1%	0 0%	0.0%
(2)	NUCLEAR		%	14.6%	15.7%	14 0%	15.1%	13.6%	14 3%	12 9%	13.8%	10 3%	13.2%	11 9%	12 6%
(3)	COAL		%	34.6%	33 8%	39.2%	36.7%	38.6%	35.5%	34.8%	35.3%	35.0%	34.3%	33 8%	33.2%
(4)	RESIDUAL	TOTAL	%	15.1%	14.8%	13.9%	12.7%	15.7%	11.9%	12.8%	14 2%	16.5%	15.8%	16.4%	16 0%
(5)		STEAM	%	15.1%	14 8%	13.9%	12.7%	15.7%	11.9%	12.8%	14.2%	16.5%	15.8%	16.4%	16.0%
(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	%	1 4%	1.4%	1.0%	0.4%	0.4%	0.3%	0 4%	0 3%	0 4%	0.4%	0.5%	0 4%
(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	%	1.4%	1.4%	1 0%	0.4%	0 4%	0 3%	0 4%	0.3%	0.4%	0.4%	0.5%	0.4%
(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	%	14.1%	15.1%	12.2%	16.1%	13.5%	20.3%	22.1%	19 8%	23.0%	22.1%	23.6%	24.3%
(15)		STEAM	%	1.2%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0 0%
(16)		CC	%	10 4%	11.3%	8.7%	13.6%	10 6%	18.2%	19 2%	17.6%	19 9%	19.8%	20.8%	22.2%
(17)		CT	%	2 5%	2.7%	3.5%	2.4%	2.9%	2.2%	3 0%	2 2%	3.1%	2.2%	2.8%	2.1%
(18)	OTHER 2/														
	QF PURCHASES		%	12.7%	12.0%	12.4%	12.1%	11 6%	11.3%	10 8%	10 4%	8.7%	8.4%	8.2%	8.0%
	IMPORT FROM OUT OF STATE		%	6.9%	7.8%	6.7%	6.6%	6.4%	6.2%	6.1%	6 0%	5 9%	5.8%	5.6%	5 5%
	EXPORT TO OUT OF STATE		%	-0 9%	-0.8%	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

The need for accurate forecasts of long-range electric energy consumption, customer growth and peak demand shape is a crucial planning function for any electric utility. 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 chapter will describe the underlying methodology of the customer, energy, and peak demand forecast including any assumptions incorporated within each. Also included is a description of how Demand-Side Management (DSM) impacts affect 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 class 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 forecaster at PEF with the tools needed to frame the most likely scenario of the company's future demand.

FORECAST ASSUMPTIONS

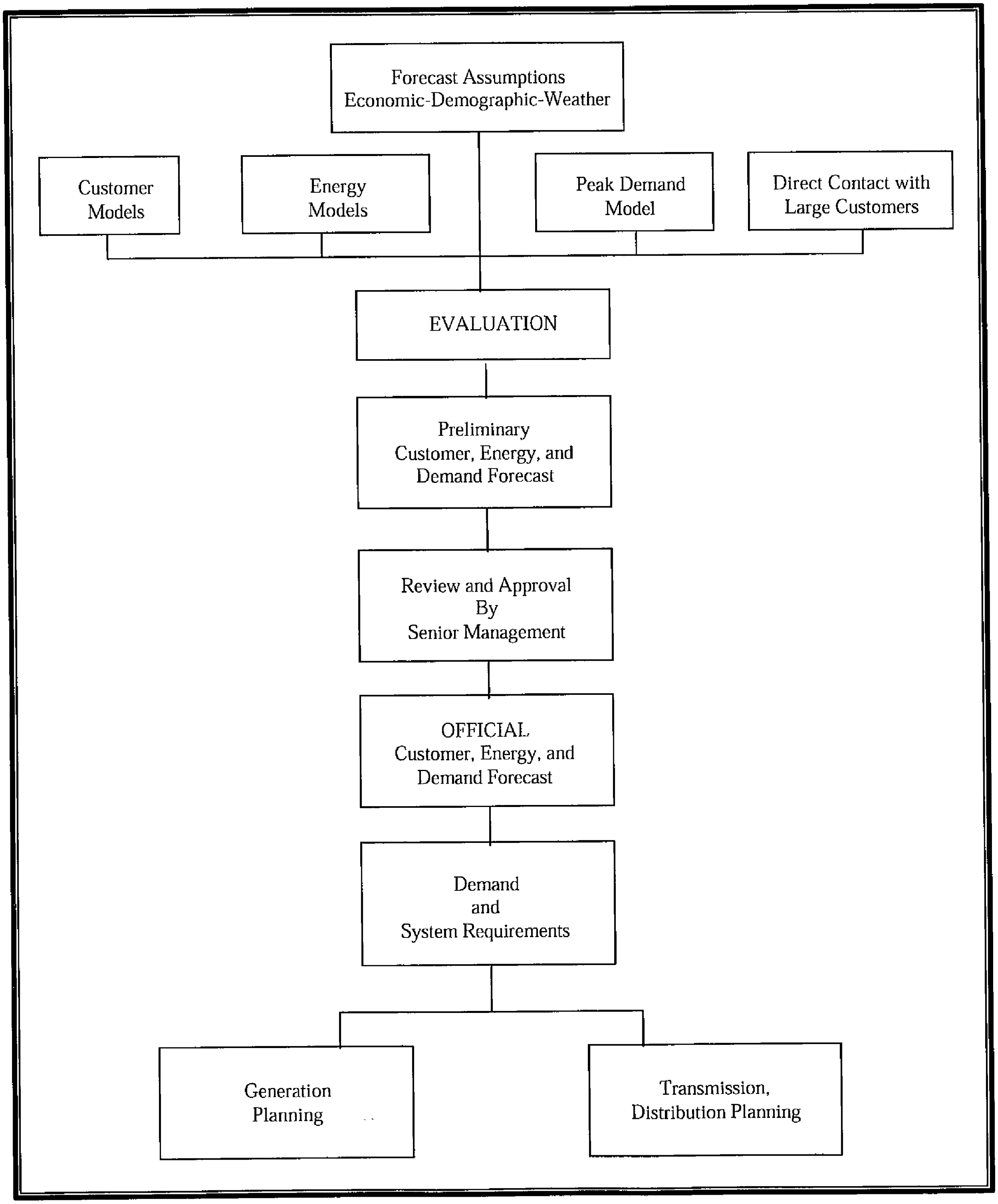
The first step in any forecasting effort is the development of assumptions upon which the forecast is based. The Financial Planning & Regulatory Services Department develops these assumptions based on discussions with a number of organizations within Progress Energy, as well as through the research efforts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

GENERAL ASSUMPTIONS

1. Normal weather conditions are assumed over the forecast horizon. For kilowatt-hour sales projections, normal weather is based on a historical thirty-year average of service area weighted

FIGURE 2.1

Customer, Energy, and Demand Forecast



billing month degree days. Peak demand projections are based on a thirty-year historical average of system-weighted temperatures at time of peak.

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. 132 (February 2002) provide the basis for development of the customer forecast. State and national economic assumptions produced by Economy.Com in its national and Florida forecasts (Quarter 2, 2002) are also incorporated.

3. Within the Progress Energy Florida service area the phosphate mining industry is the dominant sector in the industrial sales class. Five major customers accounted for almost 30 percent of PEF's industrial class MWh sales in 2002. 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 depends heavily on plant operations which are heavily influenced by the state of these global conditions as well as local conditions. There has been excess mining capacity in the industry for the past few years due to weak farm commodity prices and a strong U.S exchange rate. Weak farm commodity prices lead to lower crop production, which results in less demand for fertilizer products. A strong U.S. currency results in U.S. fertilizer producers becoming less price competitive. Going forward, energy consumption is expected to bounce back in 2003-2004 but not to the levels experienced in the year 2000. The increase projected in 2003 is mainly due to the elimination of extended vacation shutdowns that held down 2002 results. A stronger 2004 increase is based on a weaker U.S. dollar that will result in improved competitiveness of the Florida producer worldwide.

4. PEF supplies load and energy service to wholesale customers on a "full", "partial" and "supplemental" requirement basis. Full requirements customers' demand and energy is assumed to grow at a rate that approximates their historical trend. Partial requirements customer load is assumed to reflect the current contractual obligations received by PEF as of May 31, 2002. The

forecast of energy and demand to the partial requirements customers reflects 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 partial requirements service included in this forecast are with FMPA, the cities of New Smyrna Beach, Tallahassee and Homestead, Reedy Creek Utilities, Tampa Electric and Florida Power & Light. PEF's arrangement with Seminole Electric Cooperative, Inc. (SECI) is to serve "supplemental" service over and above stated levels it commits to supply itself. SECI's projection of its system requirements in the PEF control area has been incorporated into this forecast. This forecast also incorporates three firm bulk power contracts with SECI. The first is a 150 MW stratified intermediate demand (Oct 1995 contract) that is projected to remain until 2013. A second 150 MW stratified intermediate contract has been incorporated into the forecast beginning in June 2006, and a stratified peaking contract for 150 MW begins in December 2006. Two agreements to serve interruptible service at two individual SECI sites have also been signed.

5. This forecast assumes that PEF will successfully renew all 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 Florida Public Service Commission.

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 PEF's retail customers will continue throughout the forecast horizon. The ability of wholesale customers to switch suppliers has ended the company's obligation to serve these customers beyond their contract life. As a result, the company does not plan for generation resources unless a long-term contract is in place. Current "all requirements" customers are assumed to not renew their contracts with PEF. Current "partial requirements" contracts are projected to terminate as terms

reach their expiration date. Deviation from these assumptions can occur if it is determined that a wholesale customer has limited options in the marketplace to replace PEF capacity more economically.

SHORT-TERM ECONOMIC ASSUMPTIONS

The short-term economic outlook (one year out) is still a bit influenced by the terrorist events of September 11th. It is believed that the Florida tourist and travel industry has not yet reached pre 9/11 levels. The reaction on the part of the Federal Reserve Board to continue to reduce interest rates to 40-year lows helped the national housing and automotive industries significantly. This forecast incorporates a moderate economic upturn realizing that the typical boost from the housing and automotive industries, during the initial stages on economic expansion, will most likely not come. While the likelihood of a second Gulf War seems certain, no negative impacts are expected to reach the Florida economy and no additional terrorist events, nor any further "shocks" to any supply or demand condition in the national economy, are incorporated in the forecast. This means a return to "trend" level economic growth for the remaining years of the planning horizon is assumed.

Going forward, this forecast assumes that the Federal Reserve Board (FRB) will orchestrate a proper balance of economic growth with low inflation via monetary policy measures. A shift from pursuing inflationary pressures to maintaining economic growth will keep the economy from slipping back into recession. Energy prices are also expected to settle at an equilibrium level between the depressed prices of the 1998-1999 period and the peaks reached in the winter 2000-2001.

On a regional basis, the aftermath of the September 11th attack will have a lingering but fading impact on the short-term travel and tourism industries in Florida. Airline industry financial woes will limit volume of passenger service for quite a while. Some time will need to pass before airline travelers will attain their previous comfort level. Interest rate levels will continue to influence the pace of economic growth in the State through its impact on the construction industry. Personal income growth is expected to continue growing but not at the torrid pace experienced in recent years. Proposed tax cut plans can boost after tax income but it is difficult to assume how the final package will look. Employment growth is returning in the State, but is not expected to reach the strong pace experienced in the latter '90s.

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 two 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. Sixty years later, there now 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.

The enormous growth in population and corresponding development of the 1980s and 1990s made portions of Florida less desirable 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.

With the bulk of Florida's in-migrants under age 45, the baby boom generation born between 1945 and 1963 helped fuel the rapid population increase Florida experienced during the 1980s. In fact, slower population in-migration to Florida can be expected as the baby boom generation enters the 40s and 50s age bracket. This age group has been significantly characterized as immobile when studies focusing on interstate population flows or job changes are conducted.

Economic Growth Trends

Florida's rapid population growth of the 1980s 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 significant numbers of corporations migrating to Florida capitalizing on the low cost, low tax business environment. In this situation, 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. A cause for concern, however, is the passage of the North American Free Trade Agreement (NAFTA) as well as future trade agreements. At risk here is the bypassing of Florida by manufacturers looking to relocate to a lower cost foreign environment. Mexico is expected to attract a formidable share of American manufacturing jobs that may have otherwise moved to Florida. Also, the stability of Florida's citrus and vegetable industry may be threatened when faced with greater competition from Mexico as tariffs are eliminated.

The forecast assumes negative growth in real electricity price. That is, the change in the nominal, or current dollar, price of electricity over time is expected to be less than the overall rate of inflation.

Real personal incomes are assumed to increase throughout the forecast period thereby boosting the average customer's ability to purchase electricity -- especially since the price of electricity is expected to increase at a rate below general inflation. 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, the forecaster can better capture subtle changes in existing customer usage 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 Economy.Com and the University of Florida's Bureau of Economic and Business Research (BEBR). Internal company forecasts are used for projections of electric price, weather conditions and the length of the billing month. Normal weather, which is assumed throughout the forecast horizon, is equal to the 30-year average of heating and cooling degree days by month as measured at the St Petersburg, Orlando and Tallahassee weather stations. Projections of PEF's demand-side management (conservation programs) are also incorporated into the forecast. Specific sectors are modeled as follows:

Residential Sector

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

Commercial Sector

Commercial kWh use per customer is 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 the unique behavior pattern of this class with respect to its cooling needs. 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 was consumed by the phosphate mining industry. Because this one industry comprises nearly a 30 percent share of the total industrial class, it is separated and modeled apart from the rest of the class. The term "non-phosphate industrial" is used to refer to those customers who comprise the remaining portion of total industrial class sales. Both groups are impacted significantly by changes in economic activity. However, adequately explaining sales levels require separate explanatory variables. Non-phosphate industrial energy sales are modeled using 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 five 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-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 percent of PEF's 2002 electric sales and just 0.1 percent 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 impact 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, the real price of electricity and the average number of sales month billing days, result 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).

Seminole Electric Cooperative, Incorporated (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 firm purchase obligations. SECI provides PEF with a forecast of total monthly peak demands and energy for its load within the PEF control area. Monthly supplemental demands are calculated from the total demand levels it projects in PEF's control area less its own ("committed") resources. Beyond supplemental service, PEF has signed three firm power or "contract demand" agreements with SECI to serve stratified intermediate and peaking load. The first contract, an October 1995 agreement, has one remaining piece that has not expired. This piece involves serving 150 MW of stratified intermediate demand and is assumed to remain a requirement on the PEF system throughout the forecast horizon. The load tied to this piece of the contract was carved out of the supplemental "pay as you take" contract and restructured to a contract demand. The two additional firm power agreements with SECI beginning in 2006 include a 150 MW stratified intermediate contract and a 150 MW stratified peaking contract. Both are expected to expire in December 2013. Energy usage under these contracts is projected using typical intermediate and peak load factors, respectively. Two non-firm or interruptible service agreements are currently in effect between PEF and SECI at two substations amounting to an estimated 65 MW.

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. The majority of 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 for each vicinity. 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 a municipality (New Smyrna Beach), a power authority (Florida Municipal Power Agency) and a utility district (Reedy Creek Improvement District). 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 certain terms of each contract are subject to change each year. More specifically, this means that the level and type of demand under contract can increase or decrease for each year of their contract. The demand forecast for each PR wholesale customer is derived using its historical coincident demand to contract demand relationship (including transmission delivery losses). The demand projections for the Florida Municipal Power Agency (FMPA) also include a "losses service" MW amount to account for the transmission losses PEF incurs when "wheeling" power to its customers in PEF's transmission area. The contract demand level for each PR customer in its last contract year determines the load upon the PEF system for the remaining years of the forecast horizon unless the customer has notified PEF of a willingness to not renew its contract.

The methodology for projecting MWh energy usage for the PR customers differs slightly from customer to customer. This category of service is sporadic in nature and exceptionally difficult to forecast because PR customers are capable of buying "spot" energy in the wholesale market if it is cheaper than the energy under the PEF capacity contract. For example, FMPA utilizes PEF's wholesale energy service only when more economical energy is unavailable. The forecast for FMPA is derived using annual historical load factor calculations to provide the expected level of energy sales based on the level of contracted MW nominated by FMPA. Average monthly-to-annual energy ratios are applied to the forecast in order to obtain monthly profiles. For New Smyrna Beach, recent growth trends and historic load factor calculations are utilized to provide the expected level of MWh sales. Again, these customers have alternative sources of supply to meet their needs. Purchases of energy from PEF will depend heavily on the price of available energy from other sources in the marketplace. Beginning in late 1999, the City of Tallahassee sold back its ownership share of Crystal River 3 nuclear plant to PEF. It replaced this capacity with a long-term contract of 11.4 MW with an expected high load factor.

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, demand-side 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 had no utility-induced conservation or load control ever 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 projections for the months 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 filed with the Florida Public Service Commission in the 1999 DSM Goals Docket. 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 Seminole Electric Cooperative, Incorporated, the Florida Municipal Power Agency, and other electric distribution companies. The SECI supplemental demand projection is based on SECI's forecast of its service area within the PEF control area. The level of MW to be served by PEF is dependent upon the amount of resources SECI supplies to itself or contracts with others. An assumption has been made that beyond the last year of committed capacity declaration (five years out), SECI will hold constant its level of self-serve resources. For the partial requirements customers' demand projections, historical ratios of coincident-to-contract levels of demand are applied to future MW contract levels. Demand requirements continue out at the level indicated by the final year in the respective contract declaration letters. 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) and the winter peak demand, and between each summer month (April to October) and 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 specific information obtained from PEF's industrial service 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 peak demand is then calculated as the arithmetic sum of the five components.

Demand-Side Management

Each projection of every retail class-of-business MWh energy sales forecast is reduced by estimated future energy savings due to PEF-sponsored and Florida Public Service Commission (FPSC)-approved dispatchable and non-dispatchable Demand-Side Management programs. Estimated energy and demand savings for every DSM program are calculated on a program-by-program basis and aggregated to system level. The DSM projections incorporated in this demand and energy forecast meet the new conservation goals established by the FPSC in Order No. PSC-99-1942-FOF-EG, issued October 1, 1999 in Docket No. 971005-EG.

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 electric 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 .10. The high retail scenario similarly represents a bandwidth forecast with an approximate probability of occurrence of .90. 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

In October 1999, the FPSC established new conservation goals for PEF that span the ten-year period from 2000 through 2009 (in Docket 971007-EG, Order No. PSC-99-1942-FOF-EG). As required by Rule 25-17.0021(4), Florida Administrative Code, PEF then submitted for Commission approval a new DSM Plan that was specifically designed to meet the new conservation goals. PEF's DSM Plan was subsequently approved by the Commission on April 17, 2000 (in Docket 991789-EG, Order No. PSC-00-750-PAA-EG). The following tables present PEF's historical DSM performance by showing the Commission-approved conservation goal as well as the conservation savings actually achieved through PEF's DSM programs for the reporting years of 2000-2002.

Historical Residential Conservation Savings Goals and Achievements

	Cumulative Summer MW		Cumulative Winter MW		Cumulative GWh Energy	
Year	**Goal**	**Achieved**	**Goal**	**Achieved**	**Goal**	**Achieved**
2000	10	17	30	35	15	21
2001	20	29	64	72	32	42
2002	32	43	102	111	50	65

Historical Commercial/Industrial Conservation Savings Goals and Achievements

	Cumulative Summer MW		Cumulative Winter MW		Cumulative GWh Energy	
Year	Goal	Achieved	Goal	Achieved	Goal	Achieved
2000	4	12	4	12	2	6
2001	8	18	7	17	4	10
2002	11	28	11	24	6	14

The forecasts contained in this Ten-Year Site Plan document are based on PEF's DSM Plan and, therefore, appropriately reflect the level of DSM savings required to meet the Commission-established conservation goals. PEF's DSM Plan consists of five residential programs, eight commercial and industrial programs, and one research and development program. The programs are subject to periodic monitoring and evaluation for the purpose of ensuring that all DSM resources are acquired in a cost-effective manner and that the program savings are durable. 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). 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, high efficiency electric heat pumps, heat recovery units, and dedicated heat pump water heaters.

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, heat recovery units, and dedicated heat pump water heaters. The highest level of the program incorporates the Environmental Protection Agency's Energy Star Homes Program and qualifies participants for cooperative advertising.

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.

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. Due to the cost of new installations, this program was modified in the 1999 filing to allow for participation in a winter-only program that provides for direct load control of water heating and central heating appliances during the months of November through March.

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 two types of audits: Level 1 - free walk-through audit, and Level 2 - paid walk-through audit. Beginning in 2003, small business customers will 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), motors, and some building retrofit measures (in particular, roof insulation upgrade, duct leakage test and repair, and window film retrofit).

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, motors, and heat recovery units.

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. In response to customer requests, PEF has implemented improvements in the way in which these customer resources are called upon during periods of capacity shortage. Customer response has been favorable to the improvements that have been implemented.

Curtailable Service

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 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. In most cases, each demand reduction and energy efficiency project that is proposed and investigated under this program requires field testing with actual customers.

CHAPTER 3

Forecast of
FACILITIES REQUIREMENTS

Progress Energy

CHAPTER 3

Forecast of FACILITIES REQUIREMENTS

RESOURCE PLANNING FORECAST

OVERVIEW OF CURRENT FORECAST

Supply-Side Resources

PEF has a summer total capacity resource of 9,268 MW, as shown in Table 3.1. This capacity resource includes utility purchased power (474 MW), non-utility purchased power (839 MW), combustion turbine (2,619 MW), nuclear (765 MW), fossil steam (3,882 MW) and combined cycle plants (689 MW). Table 3.2 shows PEF's contracts for firm capacity provided by QFs.

Demand-Side Programs

PEF has experienced excellent levels of participation in its Demand-Side Management 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 2003 Ten-Year Site Plan Demand-Side Management projections are consistent with the DSM Goals established by the Commission in Docket No. 971005-EG.

Capacity and Demand Forecast

PEF's forecasts of capacity and demand for the projected summer and winter peaks are shown on 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 2,781 MW of proposed new capacity additions over the next ten years. As identified in Schedule 8, PEF's next planned need is a 516 MW (summer) power block in December 2003. PEF's self-build option for Hines Unit 2 was determined to be the most cost-effective alternative (FPSC Docket No. 001064-EI, Order No. PSC-01-0029-FOF-EI, Issued January 5, 2001). PEF also plans to build the 516 MW (summer) Hines Unit 3 combined-cycle addition in December 2005. This resource was determined to be the most cost-effective alternative for the 2005 addition (FPSC Docket No. 020953-EI, Order No. PSC-03-0175-FOF-EI, issued February 4, 2003).

PEF's Base Expansion Plan projects requirements for additional combined cycle units with proposed in-service dates of 2007, 2009, and 2011. These high efficiency gas-fired combined cycle units, together with a CT unit planned for December 2004 and two additional CT units planned for December 2006, help the PEF system meet the growing energy requirements of its customer base and also contribute to meeting the requirements of the 1990 Clean Air Act Amendments. Fuel switching, SO_2 emission allowance purchases, re-dispatching of system generation and technology improvements are additional options available to PEF to ensure compliance with these important environmental requirements. Status reports and specifications for new generation facilities are included in Schedule 9.

TABLE 3.1

PROGRESS ENERGY FLORIDA
TOTAL CAPACITY RESOURCES
POWER PLANTS AND PURCHASED POWER CONTRACTS
AS OF DECEMBER 31, 2002

PLANTS	NUMBER OF UNITS	NET DEPENDABLE CAPABILITY MW SUMMER
Nuclear Steam		
Crystal River	1	765 *
Fossil Steam		
Crystal River	4	2,302
Anclote	2	993
Paul L. Bartow	3	444
Suwannee River	3	143
Total Fossil Steam	12	3,882
Combined Cycle		
Hines Energy Complex	1	482
Tiger Bay	1	207
Total Combined Cycle	2	689
Combustion Turbine		
DeBary	10	667
Intercession City	14	1,041
Bayboro	4	184
Bartow	4	187
Suwannee	3	164
Turner	4	154
Higgins	4	122
Avon Park	2	52
University of Florida	1	35
Rio Pinar	1	13
Total Combustion Turbine	47	2,619
Total Units	62	
Total Net Generating Capability		**7,955**

* *Adjusted for sale of 8.2% of total capacity*

Purchased Power		
Qualifying Facility Contracts	19	839
Investor Owned Utilities	2	474
TOTAL CAPACITY RESOURCE		**9,268**

TABLE 3.2

PROGRESS ENERGY FLORIDA
QUALIFYING FACILITY GENERATION CONTRACTS
AS OF DECEMBER 31, 2002

Facility Name	Firm Capacity (MW)
Bay County Resource Recovery	11.0
Cargill	15.0
Dade County Resource Recovery	43.0
El Dorado	114.2
Jefferson Power	8.0
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	54.8
Ridge Generating Station	39.6
Royster	30.8
Timber Energy	12.5
US Agrichem	5.6
TOTAL	**838.7**

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 INSTALLED CAPACITY	FIRM CAPACITY IMPORT	FIRM CAPACITY EXPORT	QF	TOTAL CAPACITY AVAILABLE	SYSTEM FIRM SUMMER PEAK DEMAND	RESERVE MARGIN BEFORE MAINTENANCE		SCHEDULED MAINTENANCE	RESERVE MARGIN AFTER MAINTENANCE	
YEAR	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2003	7,812	474	0	839	9,125	7,661	1,464	19%	0	1,464	19%
2004	8,337	474	0	839	9,650	7,800	1,850	24%	0	1,850	24%
2005	8,483	483	0	827	9,793	7,958	1,835	23%	0	1,835	23%
2006	9,000	483	0	827	10,310	8,330	1,980	24%	0	1,980	24%
2007	9,295	483	0	802	10,580	8,589	1,991	23%	0	1,991	23%
2008	9,731	483	0	787	11,001	8,792	2,209	25%	0	2,209	25%
2009	9,731	483	0	647	10,861	8,983	1,878	21%	0	1,878	21%
2010	10,167	483	0	647	11,297	9,192	2,105	23%	0	2,105	23%
2011	10,167	463	0	647	11,277	9,400	1,877	20%	0	1,877	20%
2012	10,603	413	0	647	11,663	9,602	2,061	21%	0	2,061	21%

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 INSTALLED CAPACITY	FIRM CAPACITY IMPORT	FIRM CAPACITY EXPORT	QF	TOTAL CAPACITY AVAILABLE	SYSTEM FIRM WINTER PEAK DEMAND	RESERVE MARGIN BEFORE MAINTENANCE		SCHEDULED MAINTENANCE	RESERVE MARGIN AFTER MAINTENANCE	
YEAR	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2003 / 04	9,175	474	0	839	10,488	8,676	1,812	21%	0	1,812	21%
2004 / 05	9,356	483	0	827	10,666	8,855	1,811	20%	0	1,811	20%
2005 / 06	9,938	483	0	827	11,248	9,080	2,168	24%	0	2,168	24%
2006 / 07	10,303	483	0	802	11,588	9,560	2,028	21%	0	2,028	21%
2007 / 08	10,843	483	0	787	12,113	9,711	2,402	25%	0	2,402	25%
2008 / 09	10,843	483	0	678	12,004	9,905	2,099	21%	0	2,099	21%
2009 / 10	11,383	483	0	647	12,513	10,106	2,407	24%	0	2,407	24%
2010 / 11	11,383	483	0	647	12,513	10,336	2,177	21%	0	2,177	21%
2011 / 12	11,923	413	0	647	12,983	10,560	2,423	23%	0	2,423	23%
2012 / 13	11,923	413	0	647	12,983	10,785	2,198	20%	0	2,198	20%

PROGRESS ENERGY FLORIDA

SCHEDULE 8

PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

AS OF JANUARY 1, 2003 THROUGH DECEMBER 31, 2012

(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 ENERGY COMPLEX	2	POLK	CC	NG	DFO	PL	TK	3/2002	12/2003			516	582	V	
CRYSTAL RIVER	3	CITRUS	ST	NUC		TK			1/2004			7	7	A	1
PEAKER	1	UNKNOWN	GT	NG	DFO	PL	UN	12/2003	12/2004			147	182	P	
HINES ENERGY COMPLEX	3	POLK	CC	NG	DFO	PL	TK	9/2003	12/2005			516	582	T	
PEAKER	2	UNKNOWN	GT	NG	DFO	PL	UN	12/2005	12/2006			147	182	P	
PEAKER	3	UNKNOWN	GT	NG	DFO	PL	UN	12/2005	12/2006			147	182	P	
HINES ENERGY COMPLEX	4	POLK	CC	NG	DFO	PL	TK	9/2005	12/2007			436	540	P	
HINES ENERGY COMPLEX	5	POLK	CC	NG	DFO	PL	TK	9/2007	12/2009			436	540	P	
HINES ENERGY COMPLEX	6	POLK	CC	NG	DFO	PL	TK	9/2009	12/2011			436	540	P	

NOTES

1/ CAPABILITY INCREASE (POWER LEVEL INCREASE) REPRESENTS 91 78% PEF OWNERSHIP OF UNIT.

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES

AS OF JANUARY 1, 2003

(1)	Plant Name and Unit Number:	HINES ENERGY COMPLEX UNIT #2
(2)	Capacity	
	a. Summer:	516
	b. Winter:	582
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	3/2002
	b. Commercial in-service date:	12/2003 (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 PONDS
(8)	Total Site Area:	8,200 ACRES
(9)	Construction Status:	UNDER CONSTRUCTION, MORE THAN 50% COMPLETE
(10)	Certification Status:	SITE PERMITTED
(11)	Status with Federal Agencies:	SITE PERMITTED
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	5.80 %
	b. Forced Outage Factor (FOF):	3.00 %
	c. Equivalent Availability Factor (EAF):	91.40 %
	d. Resulting Capacity Factor (%):	50.00 %
	e. Average Net Operating Heat Rate (ANOHR):	7,023 BTU/kWh

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES

AS OF JANUARY 1,'2003

(1)	Plant Name and Unit Number:	PEAKER 1
(2)	Capacity	
	a. Summer:	147
	b. Winter:	182
(3)	Technology Type:	COMBUSTION TURBINE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	12/2003
	b. Commercial in-service date:	12/2004 (EXPECTED)
(5)	Fuel	
	a. Primary fuel:	NATURAL GAS
	b. Alternate fuel:	DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOx COMBUSTION (NATURAL GAS) WATER INJECTION (DISTILLATE FUEL OIL)
(7)	Cooling Method:	AIR
(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):	6.90 %
	b. Forced Outage Factor (FOF):	4.70 %
	c. Equivalent Availability Factor (EAF):	88.70 %
	d. Resulting Capacity Factor (%):	15.00 %
	e. Average Net Operating Heat Rate (ANOHR):	11,525 BTU/kWh

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES

AS OF JANUARY 1, 2003

(1)	Plant Name and Unit Number:	HINES ENERGY COMPLEX UNIT #3
(2)	Capacity	
	a. Summer:	516
	b. Winter:	582
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	9/2003
	b. Commercial in-service date:	12/2005 (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 PONDS
(8)	Total Site Area:	8,200 ACRES
(9)	Construction Status:	REGULATORY APPROVAL RECEIVED
(10)	Certification Status:	SITE PERMITTED
(11)	Status with Federal Agencies:	SITE PERMITTED
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	5.80 %
	b. Forced Outage Factor (FOF):	3.00 %
	c. Equivalent Availability Factor (EAF):	91.40 %
	d. Resulting Capacity Factor (%):	50.00 %
	e. Average Net Operating Heat Rate (ANOHR):	7,023 BTU/kWh

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES

AS OF JANUARY 1, 2003

(1)	Plant Name and Unit Number:	PEAKER 2
(2)	Capacity	
	a. Summer:	147
	b. Winter:	182
(3)	Technology Type:	COMBUSTION TURBINE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	12/2005
	b. Commercial in-service date:	12/2006 (EXPECTED)
(5)	Fuel	
	a. Primary fuel:	NATURAL GAS
	b. Alternate fuel:	DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOx COMBUSTION (NATURAL GAS) WATER INJECTION (DISTILLATE FUEL OIL)
(7)	Cooling Method:	AIR
(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):	6.90 %
	b. Forced Outage Factor (FOF):	4.70 %
	c. Equivalent Availability Factor (EAF):	88.70 %
	d. Resulting Capacity Factor (%):	15.00 %
	e. Average Net Operating Heat Rate (ANOHR):	11,525 BTU/kWh

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES

AS OF JANUARY 1, 2003

(1)	Plant Name and Unit Number:	PEAKER 3
(2)	Capacity	
	a. Summer:	147
	b. Winter:	182
(3)	Technology Type:	COMBUSTION TURBINE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	12/2005
	b. Commercial in-service date:	12/2006 (EXPECTED)
(5)	Fuel	
	a. Primary fuel:	NATURAL GAS
	b. Alternate fuel:	DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOx COMBUSTION (NATURAL GAS) WATER INJECTION (DISTILLATE FUEL OIL)
(7)	Cooling Method:	AIR
(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):	6.90 %
	b. Forced Outage Factor (FOF):	4.70 %
	c. Equivalent Availability Factor (EAF):	88.70 %
	d. Resulting Capacity Factor (%):	15.00 %
	e. Average Net Operating Heat Rate (ANOHR):	11,525 BTU/kWh

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES

AS OF JANUARY 1, 2003

(1)	Plant Name and Unit Number:	HINES ENERGY COMPLEX UNIT #4
(2)	Capacity	
	a. Summer:	436
	b. Winter:	540
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	9/2005
	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 PONDS
(8)	Total Site Area:	8,200 ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	SITE PERMITTED
(11)	Status with Federal Agencies:	SITE PERMITTED
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	6.90 %
	b. Forced Outage Factor (FOF):	6.70 %
	c. Equivalent Availability Factor (EAF):	86.90 %
	d. Resulting Capacity Factor (%):	50.00 %
	e. Average Net Operating Heat Rate (ANOHR):	7,046 BTU/kWh

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES

AS OF JANUARY 1, 2003

(1)	Plant Name and Unit Number:	HINES ENERGY COMPLEX UNIT #5
(2)	Capacity	
	a. Summer:	436
	b. Winter:	540
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	9/2007
	b. Commercial in-service date:	12/2009 (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 PONDS
(8)	Total Site Area:	8,200 ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	SITE PERMITTED
(11)	Status with Federal Agencies:	SITE PERMITTED
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	6.90 %
	b. Forced Outage Factor (FOF):	6.70 %
	c. Equivalent Availability Factor (EAF):	86.90 %
	d. Resulting Capacity Factor (%):	50.00 %
	e. Average Net Operating Heat Rate (ANOHR):	7,046 BTU/kWh

PROGRESS ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES

AS OF JANUARY 1, 2003

(1)	Plant Name and Unit Number:	HINES ENERGY COMPLEX UNIT #6
(2)	Capacity	
	a. Summer:	436
	b. Winter:	540
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing	
	a. Field construction start date:	9/2009
	b. Commercial in-service date:	12/2011 (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 PONDS
(8)	Total Site Area:	8,200 ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	SITE PERMITTED
(11)	Status with Federal Agencies:	SITE PERMITTED
(12)	Projected Unit Performance Data	
	a. Planned Outage Factor (POF):	6.90 %
	b. Forced Outage Factor (FOF):	6.70 %
	c. Equivalent Availability Factor (EAF):	86.90 %
	d. Resulting Capacity Factor (%):	50.00 %
	e. Average Net Operating Heat Rate (ANOHR):	7,046 BTU/kWh

PROGRESS ENERGY FLORIDA

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

HINES ENERGY COMPLEX SITE

(1)	POINT OF ORIGIN AND TERMINATION:	BARCOLA SUBSTATION - HINES ENERGY COMPLEX
(2)	NUMBER OF LINES:	1 (SECOND CIRCUIT OF DOUBLE CIRCUIT CONSTRUCTION)
(3)	RIGHT-OF-WAY:	EXISTING TRANSMISSION LINE AND HINES ENERGY COMPLEX SITE
(4)	LINE LENGTH:	3 MILES
(5)	VOLTAGE:	230 KV
(6)	ANTICIPATED CONSTRUCTION TIMING:	MAY 2003 IN-SERVICE, START CONSTRUCTION EARLY 2003
(7)	ANTICIPATED CAPITAL INVESTMENT:	$ 1,800,000
(8)	SUBSTATIONS:	N/A
(9)	PARTICIPATION WITH OTHER UTILITIES:	N/A

INTEGRATED RESOURCE PLANNING OVERVIEW

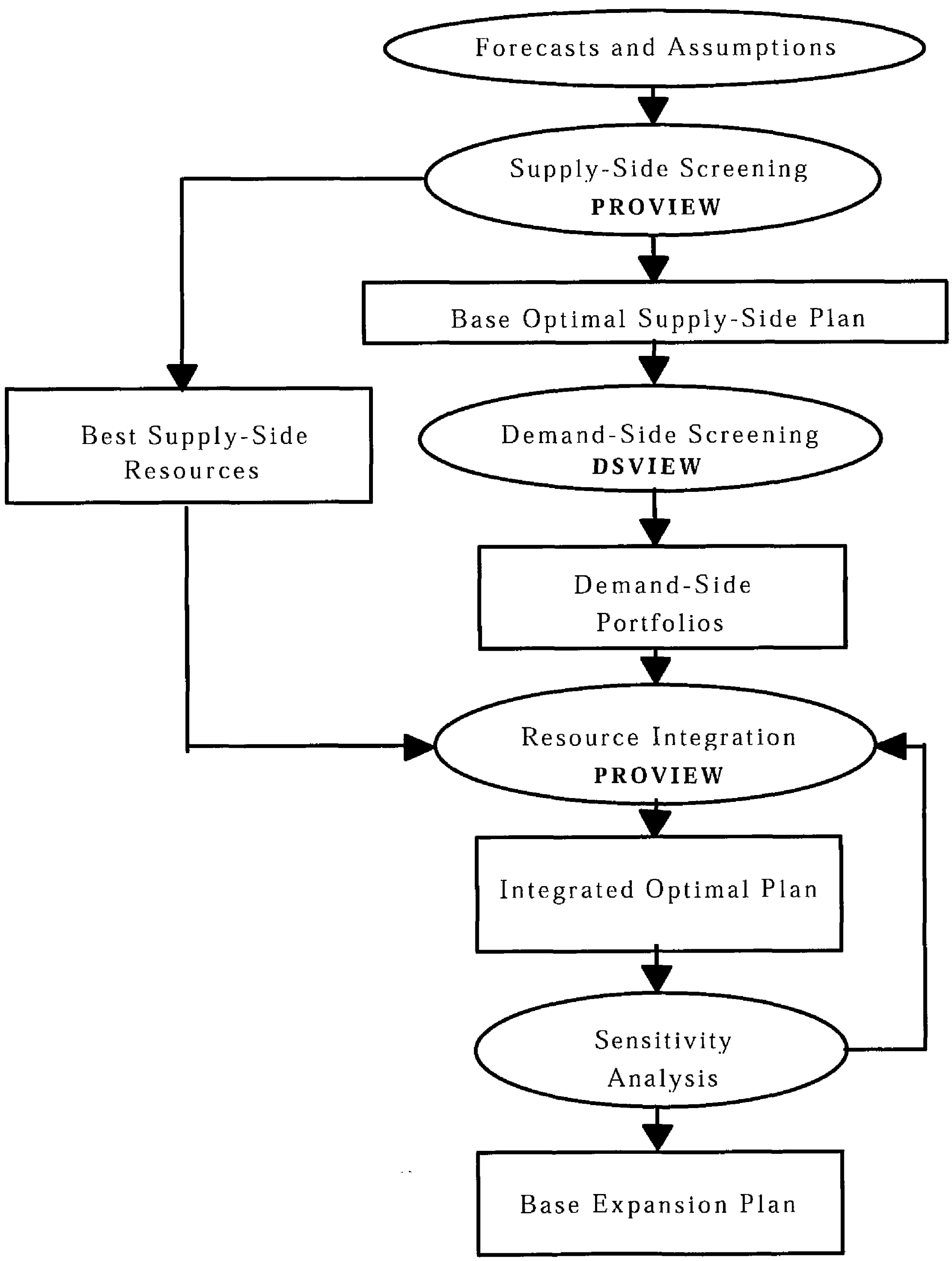
PEF employs an Integrated Resource Planning (IRP) process to determine the most cost-effective mix of supply- and demand-side alternatives that will reliably satisfy our customers' future energy needs. PEF's IRP process incorporates state-of-the-art computer models used to evaluate a wide range of future 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 sensitivity scenarios to identify variances, if any, that 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. At any given time during the year, some plants will be out of service and unavailable due to forced outages or to repair failed equipment. Generating equipment also requires periodic outages to perform maintenance and refuel nuclear plants. Adequate reserves must be available to provide for this unavailable capacity and 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, utilizing dual reliability criteria: a minimum Reserve Margin criterion and a maximum Loss of Load Probability (LOLP) criterion. The Reserve Margin criterion is deterministic and measures PEF's ability to meet its forecasted seasonal peak load with firm capacity. PEF's current minimum Reserve Margin threshold is 15 percent. The FPSC approved a joint proposal from the investor-owned utilities in peninsular Florida to increase minimum planning Reserve Margin levels to at least 20 percent by the summer of 2004 (Docket No. 981890-EU, Order No. PSC-99-2507-S-EU). Thus, PEF raised its target minimum Reserve Margin criterion to 20 percent by the summer of 2004. 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. Where Reserve Margin only considers the peak load and amount of installed resources, LOLP also takes into account unit failures, unit maintenance, and assistance 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 planning on the use of dual reliability criteria since the early 1990s, a practice that has been accepted by the FPSC. By using both the Reserve Margin and LOLP planning criteria, PEF's overall system is designed to have sufficient capacity for peak load conditions, and the generating units are selected to provide reliable service under all expected load conditions. PEF has found that resource additions are typically triggered to meet Reserve Margin thresholds before LOLP becomes a factor; however, PEF considers LOLP a meaningful supplemental reliability measure.

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 PROVIEW 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. The optimization run produces the optimal supply-side resource plan, which is considered the "Base Optimal Supply-Side Plan."

Demand-Side Screening

Like supply-side resources, data about 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. The demand-side screening model, DSVIEW, 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. DSVIEW 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 DSVIEW 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 an Integrated Optimal Plan. 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 for PEF's ratepayers.

Developing the Base Expansion Plan

The plans that provide the lowest revenue requirements are then further tested using sensitivity analysis. The economics of the plan are evaluated under high and low forecast scenarios for load, fuel, and financial assumptions 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

Fuel Forecast

Base Fuel Case: The base case fuel price forecast was developed using short term and long term 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 contractual structure between Progress Fuels Corporation (PFC) and Progress Energy Florida and both contract and spot market coal and transportation arrangements between PFC and its various suppliers. For the longer term, the costs are based on 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.

High and Low Fuel Case: The high and low fuel price scenarios were developed statistically from the base forecast projections to reflect an approximate 80 percent probability that the actual fuel price would fall somewhere between the high and low scenarios.

Special Fuel Case: A constant oil and gas to coal differential fuel sensitivity forecast was also developed to examine the premise that the current differential price of oil and gas to coal could remain constant over time.

Financial Forecast

Base Financial Case: For the Base Financial Case the income tax, depreciation rates, capital structure, inflation rates and debt interest rates were based on PEF's current financial assumptions. In general, the economy has a balanced growth path and a stable inflation rate.

Optimistic Financial Case: In the Optimistic Financial Case there is high growth and low stable inflation rate. Due to low inflation, interest rates remain low, which enhances business development. PEF's composite cost of capital was adjusted to reflect the low inflation rates.

Pessimistic Financial Case: In the Pessimistic Financial Case there is low growth and high inflation. Due to high inflation, interest rates remain high, which depresses consumer expenditures. PEF's composite cost of capital was adjusted to reflect the high inflation rates.

CURRENT PLANNING RESULTS

TYSP Supply-Side Resources

In this TYSP, PEF's supply-side resources include the projected combined cycle expansion of the Hines Energy Complex (HEC) with Units 2 through 6 forecasted to be in service by December 2003, 2005, 2007, 2009, and 2011, respectively. The new units at Hines are state-of-the-art combined cycle units similar to HEC Unit 1. As new advancements in combined cycle technologies mature, PEF will continue to examine the merits of these new alternatives to ensure the lowest possible expansion costs. The TYSP also includes a combustion turbine unit planned in-service by December 2004 and two additional combustion turbine units planned in-service by December 2006. PEF had previously projected the next peaking addition to be installed at the Intercession City site. However, the Company is currently conducting more detailed analyses of other existing generation sites including Hines and Anclote and has not finalized its decision on the preferred site(s) for these combustion turbine additions. PEF expects to finalize combustion turbine site plans by third quarter 2003 to support installation of the December 2004 peaking addition.

Plan Sensitivities

Sensitivities to load, fuel and financial forecasts were analyzed against the base plan. The base plan of constructing combined cycle and combustion turbine units on gas was determined to be robust with respect to changes in the load, fuel and financial forecasts. The low load forecast sensitivity required less combined cycle and combustion turbine generation; the high load forecast indicated that additional combined cycle and combustion turbine units would potentially be required.

The high and low fuel forecast sensitivity results did not suggest any significant reconsideration of the base plan. The high and low financial forecast sensitivity results did not point to any changes to the base plan. The additional sensitivity, which assumes the current differential price of oil and gas to coal remains constant over time, indicated a potential shift toward pulverized coal and combined cycle units. This current differential in oil and gas to coal prices, however, includes recent spikes in natural gas prices that historically have been of a short-term nature and, thus, are not expected to continue over the planning horizon. FPC will continue to monitor these fuel price relationships and watch for any signs of a long-term structural change.

Request for Proposals

PEF issued a request for proposals (RFP) in November 2001, which determined that the Hines 3 combined-cycle unit is the most cost-effective generation addition to satisfy resource needs in December 2005. The FPSC subsequently approved PEF's petition to add a third combined cycle unit at the Hines Energy Complex (FPSC Docket No. 020953-EI, Order No. PSC-03-0175-FOF-EI). PEF will solicit competitive proposals for supply-side alternatives to compare against its future Hines combined-cycle self-build options in accordance with Rule 25-22.82 (F.A.C.).

TRANSMISSION PLANNING

PEF's transmission planning assessment practices are developed to test the ability of the planned system to meet criteria. This involves the use of loadflow and transient stability programs to model various contingency situations that may occur, and determining if the system response meets criteria. In general, this involves running simulations for the loss of any single line, generator, or transformer, with any one generator scheduled out for maintenance. PEF normally runs this analysis for system load levels from minimum to peak for all possible contingencies and for both summer and winter. Additional studies are performed to determine the system response to credible, less probable criteria, to assure the system meets PEF and Florida Reliability Coordinating Council, Inc. (FRCC) criteria. These studies include the loss of multiple generators or lines, and combinations of each, and some load loss is permissible under these more severe disturbances. These credible, 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). Also, 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 8th 2000, which is posted on the FRCC website:

  (http://www.frcc.com/downloads/frccatc.pdf)
- NERC: Transmission Transfer Capability, May 1995

- NERC: Available Transfer Capability – Definitions and Determination, May 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 future bulk transmission line additions are shown in Table 3.3.

TABLE 3.3

LIST OF PROPOSED BULK TRANSMISSION LINE ADDITIONS

2003-2012

LINE OWNERSHIP	TERMINALS		LINE LENGTH CKT. MILES	COMMERCIAL IN-SERVICE DATE (MO./YEAR)	NOMINAL VOLTAGE (kV)
PEF	HINES ENERGY COMPLEX	BARCOLA #2	3	5 / 2003	230
PEF/TECO	BARCOLA	PEBBLEDALE	1 *	6 / 2003	230
PEF/FPL	VANDOLAH	WHIDDEN	14	7/ 2004	230
PEF	LAKE BRYAN	WINDERMERE #1	10 *	6 / 2006	230
PEF	LAKE BRYAN	WINDERMERE #2	10	6 / 2006	230
PEF	HINES ENERGY COMPLEX	WEST LAKE WALES #1	21	5 / 2007	230
PEF	HINES ENERGY COMPLEX	WEST LAKE WALES #2	21	5 / 2007	230
PEF	INTERCESSION CITY	GIFFORD	10	6 / 2008	230
PEF	INTERCESSION CITY	WEST LAKE WALES #1	30 *	6 / 2010	230
PEF	INTERCESSION CITY	WEST LAKE WALES #2	30	6 / 2010	230

* Rebuild existing circuit

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CHAPTER 4

ENVIRONMENTAL and LAND USE INFORMATION

Progress Energy

CHAPTER 4

ENVIRONMENTAL and LAND USE INFORMATION

PREFERRED SITES

PEF's base expansion plan proposes new combined-cycle generation at the Hines Energy Complex (HEC) site in Polk County. New proposed peaking simple-cycle combustion turbine generation site options include Anclote (Pasco County), Intercession City (Osceola County) and the HEC. While the Anclote, Intercession City and HEC sites are currently suitable for new peaking generation, PEF continues to evaluate other available sites and supply alternatives.

The next proposed combined-cycle unit at the HEC site is scheduled for commercial operation in December 2007. The next proposed peaking simple-cycle unit is scheduled for commercial operation in December 2004. The HEC, Intercession City, and Anclote sites meet all of PEF's siting requirements for capacity throughout the planning horizon. PEF's existing sites, as identified in Table 3.1 of Chapter 3, include the capability to further develop generation. 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 include any potential new sites for generating additions. Therefore, detailed environmental or land use data are not included.

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 significant 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 will recycle the land for a beneficial use and promote 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.

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 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 and 529 MW winter, 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 transmission improvement associated with the second combined-cycle unit at this site, planned for commercial operation in December 2003 with seasonal capacity ratings of 516 MW summer and 582 MW winter, is an additional 230 kV circuit from the Hines Energy Complex to Barcola.

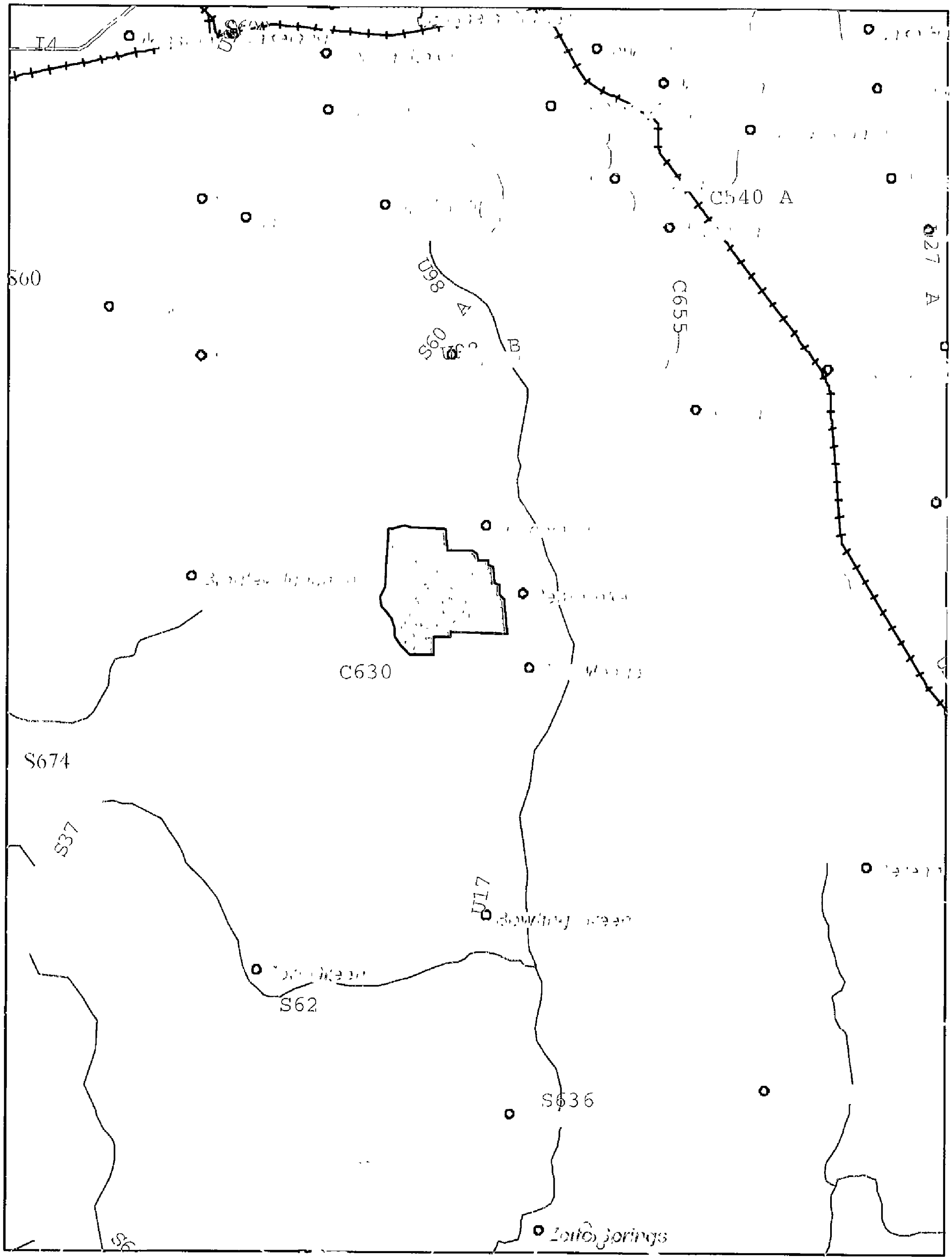
The third HEC combined-cycle unit is planned for commercial operation in December 2005 with seasonal capacity ratings of 516 MW summer and 582 MW winter, and requires no transmission upgrades.

Hines was also chosen as a potential site for installation of peaking combustion turbine units. The seasonal ratings for each proposed peaking combustion turbine unit are projected to be 147 MW summer and 182 MW winter.

Transmission modifications will be required to accommodate the additional combustion turbine peaking units identified in this expansion plan.

FIGURE 4.1

Hines Energy Complex (Polk County)



ANCLOTE SITE

Anclote was chosen as a potential site for installation of peaking combustion turbine units (reference Figure 4.2). The seasonal ratings for each proposed peaking combustion turbine unit are projected to be 147 MW summer and 182 MW winter.

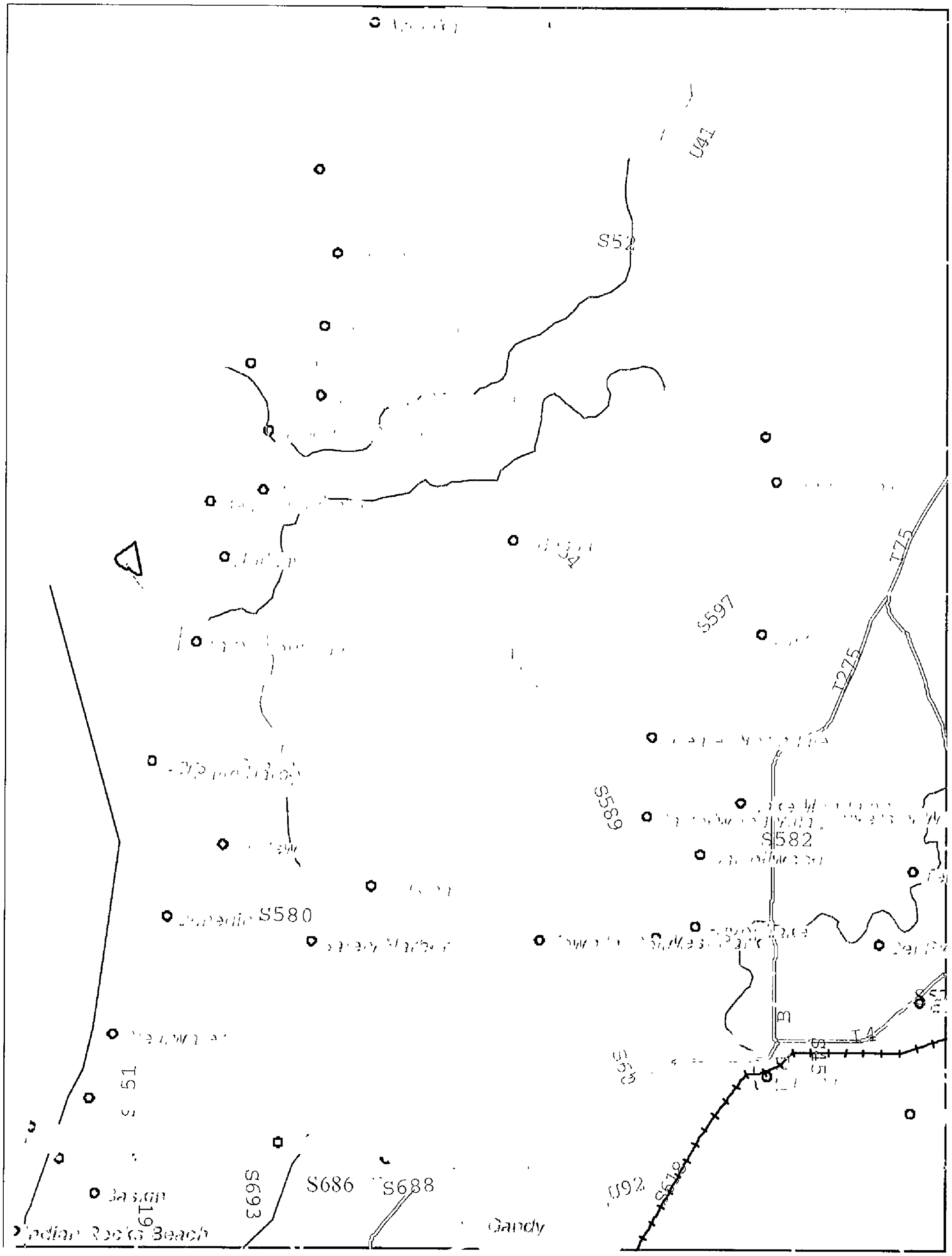
The Anclote site consists of approximately 400 acres in Pasco County (reference the Pasco County Site map). The site is located in Holiday Florida at the mouth of the Anclote River. The site receives make-up water from the city of Tarpon Springs, fuel oil through a pipeline from the Bartow plant, and natural gas from the Florida Gas Transmission (FGT) Pipeline.

The Florida Department of Environmental Protection air rules currently lists all of Pasco 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 additional combustion turbine peaking units identified in this expansion plan

FIGURE 4.2

Anclote (Pasco County)



INTERCESSION CITY SITE

Intercession City was chosen as a potential site for installation of peaking combustion turbine units (reference Figure 4.3). The seasonal ratings for each proposed peaking combustion turbine unit are projected to be 147 MW summer and 182 MW winter.

Intercession City Site consists of 162 acres in Osceola County, two miles west of Intercession City (reference the Osceola County Site map). The site is immediately west of Reedy Creek and the adjacent Reedy Creek Swamp. The site is adjacent to a secondary effluent pipeline from a municipal wastewater treatment plant, an oil pipeline, and natural gas from the Florida Gas Transmission (FGT) and Gulf Stream pipelines.

The Florida Department of Environmental Protection air rules currently lists all of Osceola 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 additional combustion turbine peaking units identified in this expansion plan.

FIGURE 4.3

Intercession City Site (Osceola County)