DUKE ENERGY FLORIDA

Dianne M. Triplett
ASSOCIATE GENERAL COUNSEL
Duke Energy Florida, LLC

March 31, 2017

VIA ELECTRONIC DELIVERY

Ms. Carlotta Stauffer, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Ten-Year Site Plan as of December 31, 2016

Dear Ms. Stauffer:

Pursuant to Rule 25-22.071, F.A.C., please find enclosed for filing Duke Energy Florida, LLC's 2017 Ten-Year Site Plan.

Thank you for your assistance in this matter. Please feel free to call me at (727) 820-4692 should you have any questions.

Sincerely,

/s/ Dianne M. Triplett

Dianne M. Triplett

DMT:at
Attachment

Duke Energy Florida, LLC
Ten-Year Site Plan

April 2017

2017-2026

Submitted to:
Florida Public Service Commission

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LIST OF REQUIRED SCHEDULES

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TABLES AND FIGURES

CODE IDENTIFICATION SHEET

Generating Unit Type

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

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
SO – Solar PV

Fuel Transportation

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

Future Generating Unit Status

A - Generating unit capability increased
D – Generating unit capability decreased
FC - Existing generator planned for conversion to another fuel or energy source
P - Planned for installation but not authorized; not under construction
RP - Proposed for repowering or life extension
RT - Existing generator scheduled for retirement
T - Regulatory approval received but not under construction
U - Under construction, less than or equal to 50% complete
V - Under construction, more than 50% complete

INTRODUCTION

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

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

This TYSP document contains four chapters as indicated below:

- **CHAPTER 1 - DESCRIPTION OF EXISTING FACILITIES**

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

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

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

- **CHAPTER 3 - FORECAST OF FACILITIES REQUIREMENTS**

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

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

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

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CHAPTER 1

DESCRIPTION OF EXISTING FACILITIES

CHAPTER 1

DESCRIPTION OF EXISTING FACILITIES

EXISTING FACILITIES OVERVIEW

OWNERSHIP

Duke Energy Florida, LLC (DEF or the Company) is a wholly owned subsidiary of Duke Energy Corporation (Duke Energy).

AREA OF SERVICE

DEF has an obligation to serve approximately 1.8 million customers in Florida. Its service area covers approximately 20,000 square miles in west central Florida and includes the densely populated areas around Orlando, as well as the cities of Saint Petersburg and Clearwater. DEF is interconnected with 21 municipal and nine rural electric cooperative systems who serve additional customers in Florida. DEF is subject to the rules and regulations of the Federal Energy Regulatory Commission (FERC), the Nuclear Regulatory Commission (NRC), and the FPSC. DEF's Service Area is shown in Figure 1.1.

TRANSMISSION/DISTRIBUTION

The Company is part of a nationwide interconnected power network that enables power to be exchanged between utilities. The DEF transmission system includes approximately 5,200 circuit miles of transmission lines. The distribution system includes approximately 18,000 circuit miles of overhead distribution conductors and approximately 14,000 circuit miles of underground distribution cable.

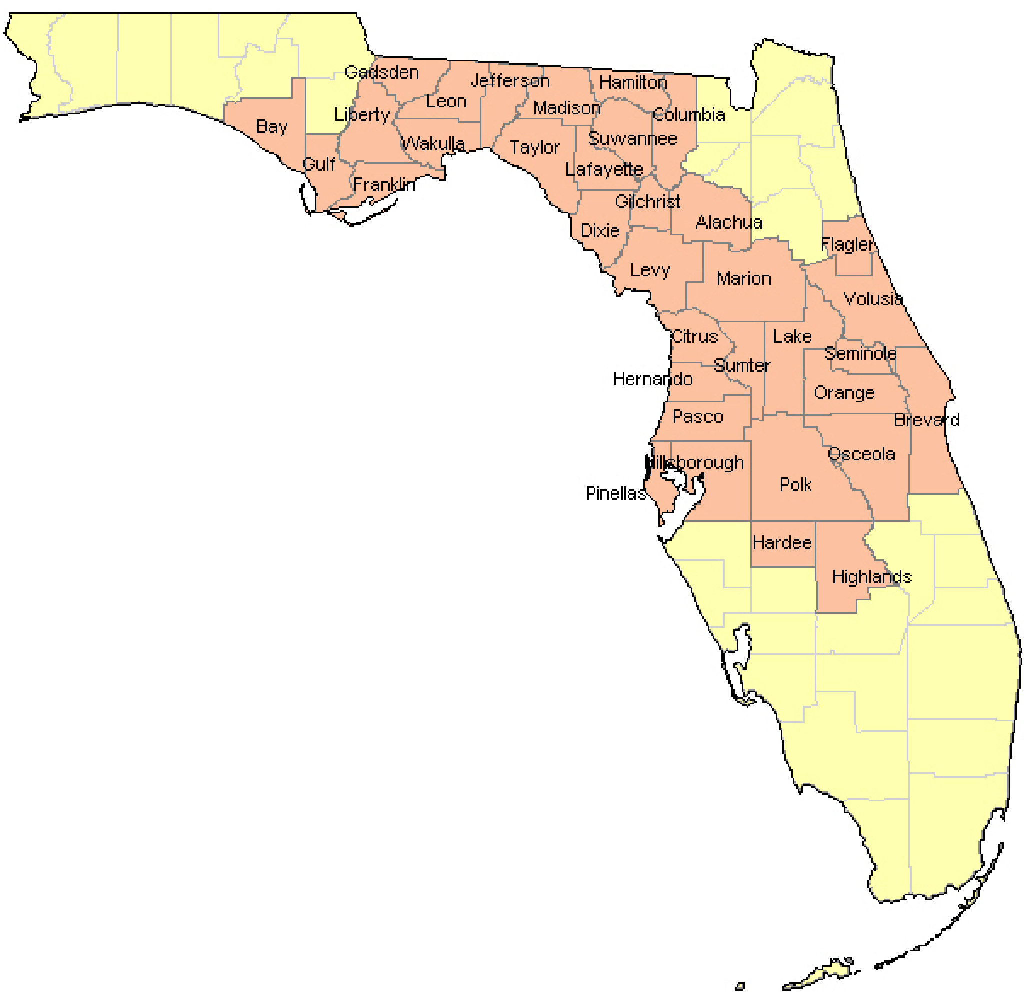
ENERGY MANAGEMENT and ENERGY EFFICIENCY

The Company's residential Energy Management program represents a demand response type of program where participating customers help manage future growth and costs. Approximately 426,000 customers participated in the residential Energy Management program during 2016, contributing about 675 MW of winter peak-shaving capacity for use during high load periods. DEF's currently approved DSM programs consist of five residential programs, six commercial and industrial programs and one research and development program.

TOTAL CAPACITY RESOURCE

As of December 31, 2016, DEF had total summer capacity resources of 10,614 MW consisting of installed capacity of 8,323 MW and 2,291 MW of firm purchased power. Additional information on DEF's existing generating resources can be found in Schedule 1 and Table 3.1 (Chapter 3).

FIGURE 1.1
DUKE ENERGY FLORIDA
County Service Area Map



DUKE ENERGY FLORIDA

SCHEDULE 1
EXISTING GENERATING FACILITIES

AS OF DECEMBER 31, 2016

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
									COM'L IN-	EXPECTED	GEN. MAX.	NET CAPABILITY	
	UNIT	LOCATION	UNIT	FUEL		FUEL TRANSPORT		ALT. FUEL	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER
PLANT NAME	NO.	(COUNTY)	TYPE	PRI.	ALT.	PRI.	ALT.	DAYS USE	MO./YEAR	MO./YEAR	KW	MW	MW
STEAM													
ANCLOTE	1	PASCO	ST	NG		PL			10/74		556,200	508	524
ANCLOTE	2	PASCO	ST	NG		PL			10/78		556,200	505	524
CRYSTAL RIVER	1	CITRUS	ST	BIT		RR	WA		10/66	4/2018 ***	440,550	324	332
CRYSTAL RIVER	2	CITRUS	ST	BIT		RR	WA		11/69	4/2018 ***	523,800	442	448
CRYSTAL RIVER	4	CITRUS	ST	BIT		WA	RR		12/82		739,260	712	721
CRYSTAL RIVER	5	CITRUS	ST	BIT		WA	RR		10/84		739,260	710	721
SUWANNEE RIVER	1	SUWANNEE	ST	NG		PL		**	11/53	12/2016	0	0	0
SUWANNEE RIVER	2	SUWANNEE	ST	NG		PL		**	11/54	12/2016	0	0	0
SUWANNEE RIVER	3	SUWANNEE	ST	NG		PL		**	10/56	12/2016	0	0	0
											Steam Total	**3,201**	**3,270**
COMBINED-CYCLE													
BARTOW	4	PINELLAS	CC	NG	DFO	PL	TK	**	6/09		1,253,000	1,120	1,120
HINES ENERGY COMPLEX	1	POLK	CC	NG	DFO	PL	TK	**	4/99		546,500	445	528
HINES ENERGY COMPLEX	2	POLK	CC	NG	DFO	PL	TK	**	12/03		548,250	477	563
HINES ENERGY COMPLEX	3	POLK	CC	NG	DFO	PL	TK	**	11/05		561,000	471	564
HINES ENERGY COMPLEX	4	POLK	CC	NG	DFO	PL	TK	**	12/07		610,000	454	544
TIGER BAY	1	POLK	CC	NG		PL	TK		8/97		278,100	200	231
											CC Total	**3,167**	**3,550**
COMBUSTION TURBINE													
AVON PARK	P1	HIGHLANDS	GT	NG	DFO	PL	TK	**	12/68	5/2020 ***	33,790	24	25
AVON PARK	P2	HIGHLANDS	GT	DFO		TK		**	12/68	5/2020 ***	33,790	24	25
BARTOW	P1	PINELLAS	GT	DFO		WA		**	5/72		55,700	41	52
BARTOW	P2	PINELLAS	GT	NG	DFO	PL	WA	**	6/72		55,700	41	57
BARTOW	P3	PINELLAS	GT	DFO		WA		**	6/72		55,700	41	53
BARTOW	P4	PINELLAS	GT	NG	DFO	PL	WA	**	6/72		55,700	45	61
BAYBORO	P1	PINELLAS	GT	DFO		WA		**	4/73		56,700	44	56
BAYBORO	P2	PINELLAS	GT	DFO		WA		**	4/73		56,700	41	52
BAYBORO	P3	PINELLAS	GT	DFO		WA		**	4/73		56,700	43	55
BAYBORO	P4	PINELLAS	GT	DFO		WA		**	4/73		56,700	43	54
DEBARY	P1	VOLUSIA	GT	DFO		TK		**	12/75-4/76	12/2016	0	0	0
DEBARY	P2	VOLUSIA	GT	DFO		TK		**	12/75-4/76		66,870	48	64
DEBARY	P3	VOLUSIA	GT	DFO		TK		**	12/75-4/76		66,870	50	63
DEBARY	P4	VOLUSIA	GT	DFO		TK		**	12/75-4/76		66,870	50	63
DEBARY	P5	VOLUSIA	GT	DFO		TK		**	12/75-4/76		66,870	50	63
DEBARY	P6	VOLUSIA	GT	DFO		TK		**	12/75-4/76		66,870	51	63
DEBARY	P7	VOLUSIA	GT	NG	DFO	PL	TK	**	10/92		115,000	79	97
DEBARY	P8	VOLUSIA	GT	NG	DFO	PL	TK	**	10/92		115,000	78	96
DEBARY	P9	VOLUSIA	GT	NG	DFO	PL	TK	**	10/92		115,000	80	97
DEBARY	P10	VOLUSIA	GT	DFO		TK		**	10/92		115,000	75	95
HIGGINS ****	P1	PINELLAS	GT	NG		PL		**	3/69	5/2020 ***	33,790	0	0
HIGGINS ****	P2	PINELLAS	GT	NG		PL		**	4/69	5/2020 ***	33,790	0	0
HIGGINS ****	P3	PINELLAS	GT	NG		PL		**	12/70	5/2020 ***	42,925	0	0
HIGGINS ****	P4	PINELLAS	GT	NG		PL		**	1/71	5/2020 ***	42,925	0	0
INTERCESSION CITY	P1	OSCEOLA	GT	DFO		PL,TK		**	5/74		56,700	47	63
INTERCESSION CITY	P2	OSCEOLA	GT	DFO		PL,TK		**	5/74		56,700	46	61
INTERCESSION CITY	P3	OSCEOLA	GT	DFO		PL,TK		**	5/74		56,700	46	63
INTERCESSION CITY	P4	OSCEOLA	GT	DFO		PL,TK		**	5/74		56,700	46	62
INTERCESSION CITY	P5	OSCEOLA	GT	DFO		PL,TK		**	5/74		56,700	45	61
INTERCESSION CITY	P6	OSCEOLA	GT	DFO		PL,TK		**	5/74		56,700	47	62
INTERCESSION CITY	P7	OSCEOLA	GT	NG	DFO	PL	PL,TK	**	10/93		115,000	78	94
INTERCESSION CITY	P8	OSCEOLA	GT	NG	DFO	PL	PL,TK	**	10/93		115,000	79	95
INTERCESSION CITY	P9	OSCEOLA	GT	NG	DFO	PL	PL,TK	**	10/93		115,000	79	95
INTERCESSION CITY	P10	OSCEOLA	GT	NG	DFO	PL	PL,TK	**	10/93		115,000	78	95
INTERCESSION CITY	P11 *	OSCEOLA	GT	DFO		PL,TK		**	1/97		165,000	0	161
INTERCESSION CITY	P12	OSCEOLA	GT	NG	DFO	PL	PL,TK	**	12/00		115,000	73	92
INTERCESSION CITY	P13	OSCEOLA	GT	NG	DFO	PL	PL,TK	**	12/00		115,000	75	92
INTERCESSION CITY	P14	OSCEOLA	GT	NG	DFO	PL	PL,TK	**	12/00		115,000	72	92
RIO PINAR	P1	ORANGE	GT	DFO		TK		**	11/70	3/2016	0	0	0
SUWANNEE RIVER	P1	SUWANNEE	GT	NG	DFO	PL	TK	**	10/80		61,200	49	67
SUWANNEE RIVER	P2	SUWANNEE	GT	DFO		TK		**	10/80		61,200	50	66
SUWANNEE RIVER	P3	SUWANNEE	GT	NG	DFO	PL	TK	**	11/80		61,200	50	67
TURNER	P1	VOLUSIA	GT	DFO		TK		**	10/70	3/2016	0	0	0
TURNER	P2	VOLUSIA	GT	DFO		TK		**	10/70	3/2016	0	0	0
TURNER	P4	VOLUSIA	GT	DFO		TK		**	8/74	3/2016	0	0	0
UNIV. OF FLA.	P1	ALACHUA	GT	NG		PL			1/94		43,000	47	48
											CT Total	**1,955**	**2,627**
											TOTAL RESOURCES (MW)	**8,323**	**9,447**

* DEF ACQUIRED THE 140 MW SUMMER CAPABILITY (JUNE THROUGH SEPTEMBER) THAT WAS OWNED BY GEORGIA POWER COMPANY. DEF HAS FILED A TRANSMISSION SERVICE REQUEST (TSR) FOR P11 SUMMER CAPACITY. THE P11 140 MW SUMMER CAPACITY IS CONSIDERED NON-FIRM UNTIL THE TSR IS COMPLETED AND FIRM TRANSMISSION SERVICE CAN BE SCHEDULED TO DEF.

** APPROXIMATELY 2 TO 8 DAYS OF OIL USE TYPICALLY TARGETED FOR ENTIRE PLANT.

*** DATES FOR RETIREMENT ARE APPROXIMATE AND SUBJECT TO CHANGE

**** HIGGINS P1 20 MW, P2 25 MW, P3 31 MW & P4 31 MW (SUMMER MW) IS NON-FIRM CAPACITY AND SHOWN AS 0 MW EACH DUE TO SINGLE NON-FIRM FUEL SOURCE.

NOTE: DEF HAS 8.9 MW OF NON-FIRM UTILITY OWNED SOLAR. OSCEOLA SOLAR (3.8 MW) AND PERRY SOLAR (5.1 MW) IN SERVICE 4/2016 AND 8/2016, RESPECTIVELY

CHAPTER 2

FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION

CHAPTER 2

FORECAST OF ELECTRIC POWER DEMAND

AND

ENERGY CONSUMPTION

OVERVIEW

The information presented in Schedules 2, 3, and 4 represents DEF's history and forecast of customers, energy sales (GWh), and peak demand (MW). In general, this discussion refers to DEF's Base Forecasts. Over the last ten years the nation and the State of Florida have gone through the worst economic downturn in eighty years. An economic recovery is in progress for most sectors of the Florida economy and is expected to continue in this ten year projection. County population growth rate projections from the University of Florida's Bureau of Economic and Business Research (BEBR) were incorporated into this projection. DEF grew at an average ten-year growth of 1.0 percent from 2007 – 2016. During this ten year period, the initial five years (from 2007 – 2011, Great Recession included) experienced an average population growth rate of 0.6 percent (Schedule 2.1, Column 2) while the later five years (2012-2016) grew at an average rate of 1.6 percent. Demographic conditions going forward look more amenable to a sustained 1.1 percent level of population growth over the 2017-2026 period. It is also noted that a return to more normal growth is expected as the economic sectors continue to improve allowing more young adults with the financial ability to leave their parents households and begin forming their own households. Referring to Schedule 2.3, Column 6, DEF's current total customer growth over the 2007 to 2016 period went from 1,632,368 to 1,743,149, an average annual growth of 0.7 percent. Growth between the most recent historical years (2014 to 2016), however, reflects an increase from 1,699,091 to 1,743,149 customers, or 1.3 percent, indicating that the economic turnaround is in progress. The customer growth rate is expected to increase slightly from current 2015/16 levels to an annual average of approximately 1.5 percent between 2017 and 2026, bringing the total customer forecast to 2,030,251 customers in 2026.

From 2007 to 2016 Net energy for load (NEL) dropped from 47,633 to 42,854 GWH (Schedule 3.3, Column 8), a total drop of 4,779 GWH or -1.2 percent per year, primarily due to the economic recession and the weak economic recovery that followed. Sales for Resale in 2016, or

Wholesale Load (Schedule 3.3, Column 6), represented 3,795 GWH or 79 percent of the total energy decline of 4,779 GWH. It is noted that Wholesale load currently represents less than 4 percent of total NEL. In keeping with the increase in customer count beginning in 2014, DEF has seen a rebound in NEL provided to retail residential and commercial customers from 2014 to 2016. An improved economic environment, including improved in-migration population rates, construction activity, wage growth and consumer spending, is expected to drive the DEF service area NEL forecast. The 2017 to 2026 period is projecting an average annual NEL growth rate of 0.9 percent.

During the 2007 to 2016 historical period the DEF Summer net firm demand (Schedule 3.1, Column 10) declined from 9,735 MW to 8,946 MW, an average -0.9 percent per year. Most of the decline came from the DEF wholesale load sector (Column 3), which dropped from a level of 1,544 MW in 2007 to 893 MW in 2016. The projected ten year period summer net firm demand growth rate of 0.8 percent is primarily driven by higher population/customer levels and improved economic activity improving net firm retail demand.

ENERGY CONSUMPTION AND DEMAND FORECAST SCHEDULES

The below schedules have been provided to represent DEF's expectations for a Base Case as well as reasonable High and Low forecast scenarios for resource planning purposes. (Base-B, High-H and Low-L):

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

DUKE ENERGY FLORIDA

SCHEDULE 2.1.1
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS
BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	RURAL AND RESIDENTIAL					COMMERCIAL		
YEAR	DEF POPULATION	MEMBERS PER HOUSEHOLD	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER
HISTORY:								
2007	3,531,483	2.448	19,912	1,442,853	13,800	12,184	162,837	74,821
2008	3,561,727	2.458	19,328	1,449,041	13,339	12,139	162,569	74,669
2009	3,564,937	2.473	19,399	1,441,325	13,459	11,883	161,390	73,632
2010	3,621,407	2.495	20,524	1,451,466	14,140	11,896	161,674	73,579
2011	3,623,813	2.495	19,238	1,452,454	13,245	11,892	162,071	73,374
2012	3,633,620	2.491	18,251	1,458,690	12,512	11,723	163,297	71,792
2013	3,709,240	2.493	18,508	1,488,159	12,437	11,718	165,936	70,617
2014	3,771,164	2.508	19,003	1,503,758	12,637	11,789	167,253	70,485
2015	3,822,265	2.507	19,932	1,524,605	13,074	12,070	169,147	71,359
2016	3,871,784	2.508	20,265	1,543,967	13,126	12,094	170,999	70,724
FORECAST:								
2017	3,928,490	2.492	19,984	1,576,297	12,678	11,926	174,287	68,429
2018	3,975,115	2.479	20,091	1,603,814	12,527	12,023	177,472	67,745
2019	4,022,002	2.466	20,188	1,630,825	12,379	12,041	180,751	66,617
2020	4,068,255	2.455	20,466	1,657,284	12,349	12,183	183,944	66,233
2021	4,113,548	2.444	20,713	1,682,926	12,308	12,330	186,820	66,002
2022	4,157,253	2.434	20,833	1,707,729	12,199	12,453	189,589	65,684
2023	4,198,718	2.425	21,042	1,731,782	12,151	12,553	192,268	65,291
2024	4,239,561	2.415	21,214	1,755,186	12,087	12,623	194,871	64,775
2025	4,278,245	2.406	21,634	1,778,040	12,167	12,815	197,411	64,914
2026	4,317,059	2.398	21,751	1,800,421	12,081	12,815	199,897	64,106

DUKE ENERGY FLORIDA

SCHEDULE 2.1.2
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS
HIGH CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	RURAL AND RESIDENTIAL					COMMERCIAL		
YEAR	DEF POPULATION	MEMBERS PER HOUSEHOLD	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER
HISTORY:								
2007	3,531,483	2.448	19,912	1,442,853	13,800	12,184	162,837	74,821
2008	3,561,727	2.458	19,328	1,449,041	13,339	12,139	162,569	74,669
2009	3,564,937	2.473	19,399	1,441,325	13,459	11,883	161,390	73,632
2010	3,621,407	2.495	20,524	1,451,466	14,140	11,896	161,674	73,579
2011	3,623,813	2.495	19,238	1,452,454	13,245	11,892	162,071	73,374
2012	3,633,620	2.491	18,251	1,458,690	12,512	11,723	163,297	71,792
2013	3,709,240	2.493	18,508	1,488,159	12,437	11,718	165,936	70,617
2014	3,771,164	2.508	19,003	1,503,758	12,637	11,789	167,253	70,485
2015	3,822,265	2.507	19,932	1,524,605	13,074	12,070	169,147	71,359
2016	3,871,784	2.508	20,265	1,543,967	13,126	12,094	170,999	70,724
FORECAST:								
2017	3,974,885	2.492	20,485	1,594,913	12,844	11,909	175,813	67,739
2018	4,067,758	2.479	20,891	1,641,192	12,729	12,056	180,940	66,628
2019	4,161,601	2.466	21,354	1,687,429	12,655	12,142	186,341	65,158
2020	4,250,858	2.455	21,994	1,731,671	12,701	12,371	191,514	64,594
2021	4,330,835	2.444	22,533	1,771,822	12,717	12,588	196,008	64,223
2022	4,401,664	2.434	22,914	1,808,129	12,673	12,775	200,058	63,856
2023	4,465,540	2.425	23,366	1,841,834	12,686	12,941	203,809	63,497
2024	4,527,253	2.415	23,784	1,874,291	12,690	13,082	207,414	63,072
2025	4,588,115	2.406	24,456	1,906,822	12,826	13,350	211,023	63,264
2026	4,652,721	2.398	24,844	1,940,408	12,803	13,421	214,745	62,498

DUKE ENERGY FLORIDA

SCHEDULE 2.1.3
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS
LOW CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	RURAL AND RESIDENTIAL					COMMERCIAL		
YEAR	DEF POPULATION	MEMBERS PER HOUSEHOLD	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER
HISTORY:								
2007	3,531,483	2.448	19,912	1,442,853	13,800	12,184	162,837	74,821
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2009	3,564,937	2.473	19,399	1,441,325	13,459	11,883	161,390	73,632
2010	3,621,407	2.495	20,524	1,451,466	14,140	11,896	161,674	73,579
2011	3,623,813	2.495	19,238	1,452,454	13,245	11,892	162,071	73,374
2012	3,633,620	2.491	18,251	1,458,690	12,512	11,723	163,297	71,792
2013	3,709,240	2.493	18,508	1,488,159	12,437	11,718	165,936	70,617
2014	3,771,164	2.508	19,003	1,503,758	12,637	11,789	167,253	70,485
2015	3,822,265	2.507	19,932	1,524,605	13,074	12,070	169,147	71,359
2016	3,871,784	2.508	20,265	1,543,967	13,126	12,094	170,999	70,724
FORECAST:								
2017	3,871,226	2.492	19,007	1,553,320	12,236	11,857	172,191	68,861
2018	3,862,803	2.479	18,730	1,558,500	12,018	11,882	172,891	68,723
2019	3,851,797	2.466	18,492	1,561,811	11,840	11,844	173,481	68,273
2020	3,842,799	2.455	18,444	1,565,440	11,782	11,947	174,102	68,618
2021	3,840,724	2.444	18,387	1,571,309	11,702	12,039	174,762	68,886
2022	3,845,027	2.434	18,238	1,579,472	11,547	12,098	175,673	68,868
2023	3,853,037	2.425	18,207	1,589,204	11,457	12,136	176,757	68,661
2024	3,863,980	2.415	18,165	1,599,695	11,355	12,147	177,924	68,272
2025	3,874,278	2.406	18,332	1,610,151	11,385	12,276	179,088	68,545
2026	3,884,330	2.398	18,254	1,619,952	11,268	12,220	180,178	67,824

DUKE ENERGY FLORIDA

SCHEDULE 2.2.1
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS
BASE CASE

(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
HISTORY:							
2007	3,819	2,668	1,431,409	0	26	3,341	39,282
2008	3,786	2,587	1,463,471	0	26	3,276	38,555
2009	3,285	2,487	1,320,869	0	26	3,230	37,824
2010	3,219	2,481	1,297,461	0	26	3,260	38,925
2011	3,243	2,408	1,346,761	0	25	3,200	37,598
2012	3,160	2,372	1,332,209	0	25	3,221	36,381
2013	3,206	2,343	1,368,331	0	25	3,159	36,616
2014	3,267	2,280	1,432,895	0	25	3,157	37,240
2015	3,293	2,243	1,468,123	0	24	3,234	38,553
2016	3,197	2,178	1,467,860	0	24	3,194	38,774
FORECAST:							
2017	3,079	2,142	1,437,271	0	24	3,135	38,148
2018	3,149	2,114	1,489,824	0	24	3,145	38,432
2019	3,223	2,089	1,542,892	0	24	3,179	38,655
2020	3,386	2,067	1,638,010	0	23	3,216	39,275
2021	3,407	2,046	1,665,007	0	23	3,239	39,713
2022	3,402	2,028	1,677,418	0	23	3,268	39,979
2023	3,387	2,012	1,683,622	0	23	3,296	40,302
2024	3,312	1,997	1,658,660	0	23	3,322	40,494
2025	3,166	1,984	1,595,703	0	23	3,347	40,985
2026	3,141	1,972	1,592,563	0	22	3,373	41,101

DUKE ENERGY FLORIDA

SCHEDULE 2.2.2
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS
HIGH CASE

(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
HISTORY:							
2007	3,819	2,668	1,431,409	0	26	3,341	39,282
2008	3,786	2,587	1,463,471	0	26	3,276	38,555
2009	3,285	2,487	1,320,869	0	26	3,230	37,824
2010	3,219	2,481	1,297,461	0	26	3,260	38,925
2011	3,243	2,408	1,346,761	0	25	3,200	37,598
2012	3,160	2,372	1,332,209	0	25	3,221	36,381
2013	3,206	2,343	1,368,331	0	25	3,159	36,616
2014	3,267	2,280	1,432,895	0	25	3,157	37,240
2015	3,293	2,243	1,468,123	0	24	3,234	38,553
2016	3,197	2,178	1,467,860	0	24	3,194	38,774
FORECAST:							
2017	3,100	2,142	1,447,395	0	24	3,167	38,686
2018	3,184	2,114	1,506,278	0	24	3,200	39,354
2019	3,272	2,089	1,566,433	0	24	3,258	40,050
2020	3,452	2,067	1,670,224	0	23	3,322	41,163
2021	3,487	2,046	1,704,406	0	23	3,369	42,001
2022	3,494	2,028	1,722,896	0	23	3,422	42,628
2023	3,491	2,012	1,735,295	0	23	3,472	43,294
2024	3,429	1,997	1,717,063	0	23	3,521	43,839
2025	3,295	1,984	1,660,692	0	23	3,571	44,695
2026	3,282	1,972	1,664,428	0	22	3,623	45,192

DUKE ENERGY FLORIDA

SCHEDULE 2.2.3
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS
LOW CASE

(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
HISTORY:							
2007	3,819	2,668	1,431,409	0	26	3,341	39,282
2008	3,786	2,587	1,463,471	0	26	3,276	38,555
2009	3,285	2,487	1,320,869	0	26	3,230	37,824
2010	3,219	2,481	1,297,461	0	26	3,260	38,925
2011	3,243	2,408	1,346,761	0	25	3,200	37,598
2012	3,160	2,372	1,332,209	0	25	3,221	36,381
2013	3,206	2,343	1,368,331	0	25	3,159	36,616
2014	3,267	2,280	1,432,895	0	25	3,157	37,240
2015	3,293	2,243	1,468,123	0	24	3,234	38,553
2016	3,197	2,178	1,467,860	0	24	3,194	38,774
FORECAST:							
2017	3,061	2,142	1,429,257	0	24	3,126	37,076
2018	3,121	2,114	1,476,121	0	24	3,124	36,880
2019	3,184	2,089	1,523,978	0	24	3,147	36,690
2020	3,339	2,067	1,615,451	0	23	3,175	36,928
2021	3,351	2,046	1,637,645	0	23	3,185	36,984
2022	3,335	2,028	1,644,322	0	23	3,199	36,894
2023	3,310	2,012	1,644,934	0	23	3,211	36,888
2024	3,225	1,997	1,614,987	0	23	3,221	36,781
2025	3,069	1,984	1,547,028	0	23	3,231	36,931
2026	3,035	1,972	1,539,275	0	22	3,241	36,773

DUKE ENERGY FLORIDA

SCHEDULE 2.3.1
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS
BASE CASE

(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
HISTORY:					
2007	5,598	2,753	47,633	24,010	1,632,368
2008	6,619	2,484	47,658	24,738	1,638,935
2009	3,696	2,604	44,124	24,993	1,630,195
2010	3,493	3,742	46,160	25,212	1,640,833
2011	2,712	2,180	42,490	25,228	1,642,161
2012	1,768	3,065	41,214	25,480	1,649,839
2013	1,488	2,668	40,772	25,759	1,682,197
2014	1,333	2,402	40,975	25,800	1,699,091
2015	1,243	2,484	42,280	25,866	1,721,861
2016	1,803	2,277	42,854	26,005	1,743,149
FORECAST:					
2017	1,109	2,218	41,475	26,203	1,778,929
2018	1,113	2,343	41,887	26,391	1,809,791
2019	1,310	2,556	42,520	26,581	1,840,246
2020	1,352	2,500	43,127	26,773	1,870,068
2021	1,340	2,410	43,463	26,968	1,898,760
2022	1,341	2,431	43,751	27,163	1,926,509
2023	1,342	2,445	44,089	27,360	1,953,422
2024	1,344	2,591	44,428	27,559	1,979,613
2025	1,343	2,317	44,645	27,759	2,005,194
2026	1,344	2,621	45,066	27,961	2,030,251

DUKE ENERGY FLORIDA

SCHEDULE 2.3.2
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS
HIGH CASE

(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
HISTORY:					
2007	5,598	2,753	47,633	24,010	1,632,368
2008	6,619	2,484	47,658	24,738	1,638,935
2009	3,696	2,604	44,124	24,993	1,630,195
2010	3,493	3,742	46,160	25,212	1,640,833
2011	2,712	2,180	42,490	25,228	1,642,161
2012	1,768	3,065	41,214	25,480	1,649,839
2013	1,488	2,668	40,772	25,759	1,682,197
2014	1,333	2,402	40,975	25,800	1,699,091
2015	1,243	2,484	42,280	25,866	1,721,861
2016	1,803	2,277	42,854	26,005	1,743,149
FORECAST:					
2017	1,109	2,965	42,760	26,202	1,799,070
2018	1,113	3,128	43,595	26,392	1,850,638
2019	1,310	3,384	44,744	26,581	1,902,440
2020	1,352	3,376	45,891	26,773	1,952,025
2021	1,340	3,345	46,686	26,968	1,996,844
2022	1,341	3,406	47,374	27,163	2,037,378
2023	1,342	3,458	48,094	27,360	2,075,015
2024	1,344	3,632	48,815	27,559	2,111,261
2025	1,343	3,409	49,447	27,759	2,147,588
2026	1,344	3,759	50,295	27,961	2,185,086

DUKE ENERGY FLORIDA

SCHEDULE 2.3.3
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND
NUMBER OF CUSTOMERS BY CUSTOMER CLASS
LOW CASE

(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
HISTORY:					
2007	5,598	2,753	47,633	24,010	1,632,368
2008	6,619	2,484	47,658	24,738	1,638,935
2009	3,696	2,604	44,124	24,993	1,630,195
2010	3,493	3,742	46,160	25,212	1,640,833
2011	2,712	2,180	42,490	25,228	1,642,161
2012	1,768	3,065	41,214	25,480	1,649,839
2013	1,488	2,668	40,772	25,759	1,682,197
2014	1,333	2,402	40,975	25,800	1,699,091
2015	1,243	2,484	42,280	25,866	1,721,861
2016	1,803	2,277	42,854	26,005	1,743,149
FORECAST:					
2017	1,109	1,900	40,085	26,202	1,753,855
2018	1,113	1,983	39,975	26,391	1,759,896
2019	1,310	2,149	40,148	26,582	1,763,963
2020	1,352	2,070	40,350	26,773	1,768,382
2021	1,340	1,978	40,302	26,968	1,775,085
2022	1,341	1,972	40,207	27,163	1,784,336
2023	1,342	1,964	40,193	27,360	1,795,333
2024	1,344	2,059	40,183	27,559	1,807,175
2025	1,343	1,816	40,090	27,759	1,818,982
2026	1,344	2,057	40,174	27,961	1,830,063

DUKE 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
HISTORY:										
2007	10,931	1544	9,387	334	291	239	45	177	110	9,735
2008	10,592	1512	9,080	500	284	255	66	192	110	9,185
2009	10,853	1618	9,235	262	291	271	84	211	110	9,624
2010	10,242	1272	8,970	271	304	298	96	234	110	8,929
2011	9,972	934	9,038	227	317	329	97	256	110	8,636
2012	9,788	1080	8,708	262	328	358	98	280	124	8,337
2013	9,581	581	9,000	317	341	382	101	298	124	8,017
2014	10,067	814	9,253	232	355	404	108	313	132	8,523
2015	10,058	772	9,286	303	360	435	124	324	80	8,431
2016	10,593	947	9,646	235	366	466	100	333	80	9,014
FORECAST:										
2017	10,537	751	9,785	225	372	499	78	340	80	8,943
2018	10,700	753	9,948	255	378	530	82	346	80	9,030
2019	11,095	1,004	10,092	272	384	554	87	351	80	9,368
2020	11,219	965	10,254	292	390	575	91	354	80	9,436
2021	11,082	715	10,367	314	396	594	95	357	80	9,246
2022	11,191	715	10,476	316	402	610	99	359	80	9,325
2023	11,299	715	10,583	316	408	625	103	360	80	9,407
2024	11,405	715	10,690	303	414	638	108	361	80	9,501
2025	11,482	716	10,766	276	420	653	112	361	80	9,579
2026	11,565	716	10,849	276	426	667	116	362	80	9,637

Historical Values (2007 - 2016):

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

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

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

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

Projected Values (2017 - 2026):

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

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

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

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

DUKE 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
HISTORY:										
2007	10,931	1,544	9,387	334	291	239	45	177	110	9,735
2008	10,592	1,512	9,080	500	284	255	66	192	110	9,185
2009	10,853	1,618	9,235	262	291	271	84	211	110	9,624
2010	10,242	1,272	8,970	271	304	298	96	234	110	8,929
2011	9,972	934	9,038	227	317	329	97	256	110	8,636
2012	9,788	1,080	8,708	262	328	358	98	280	124	8,337
2013	9,581	581	9,000	317	341	382	101	298	124	8,017
2014	10,067	814	9,253	232	355	404	108	313	132	8,523
2015	10,058	772	9,286	303	360	435	124	324	80	8,431
2016	10,525	893	9,632	235	366	466	100	333	80	8,946
FORECAST:										
2017	10,882	751	10,131	225	372	499	78	340	80	9,288
2018	11,133	753	10,381	255	378	530	82	346	80	9,463
2019	11,637	1,004	10,634	272	384	554	87	351	80	9,910
2020	11,877	965	10,912	292	390	575	91	354	80	10,094
2021	11,836	715	11,121	314	396	594	95	357	80	10,001
2022	12,029	715	11,314	316	402	610	99	359	80	10,164
2023	12,218	715	11,503	316	408	625	103	360	80	10,326
2024	12,405	715	11,689	303	414	638	108	361	80	10,501
2025	12,569	716	11,853	276	420	653	112	361	80	10,666
2026	12,742	716	12,026	276	426	667	116	362	80	10,814

Historical Values (2007 - 2016):

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

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

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

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

Projected Values (2017 - 2026):

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

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

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

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

DUKE ENERGY FLORIDA

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

(1) YEAR	(2) TOTAL	(3) WHOLESALE	(4) RETAIL	(5) INTERRUPTIBLE	(6) RESIDENTIAL LOAD MANAGEMENT	(7) RESIDENTIAL CONSERVATION	(8) COMM. / IND. LOAD MANAGEMENT	(9) COMM. / IND. CONSERVATION	(OTH) OTHER DEMAND REDUCTIONS	(10) NET FIRM DEMAND
HISTORY:										
2007	10,931	1,544	9,387	334	291	239	45	177	110	9,735
2008	10,592	1,512	9,080	500	284	255	66	192	110	9,185
2009	10,853	1,618	9,235	262	291	271	84	211	110	9,624
2010	10,242	1,272	8,970	271	304	298	96	234	110	8,929
2011	9,972	934	9,038	227	317	329	97	256	110	8,636
2012	9,788	1,080	8,708	262	328	358	98	280	124	8,337
2013	9,581	581	9,000	317	341	382	101	298	124	8,017
2014	10,067	814	9,253	232	355	404	108	313	132	8,523
2015	10,058	772	9,286	303	360	435	124	324	80	8,431
2016	10,525	893	9,632	235	366	466	100	333	80	8,946
FORECAST:										
2017	10,181	751	9,430	225	372	499	78	340	80	8,587
2018	10,236	753	9,483	255	378	530	82	346	80	8,565
2019	10,534	1,004	9,530	272	384	554	87	351	80	8,806
2020	10,572	965	9,607	292	390	575	91	354	80	8,789
2021	10,352	715	9,638	314	396	594	95	357	80	8,517
2022	10,381	715	9,666	316	402	610	99	359	80	8,515
2023	10,415	715	9,700	316	408	625	103	360	80	8,523
2024	10,448	715	9,733	303	414	638	108	361	80	8,544
2025	10,460	716	9,744	276	420	653	112	361	80	8,557
2026	10,471	716	9,755	276	426	667	116	362	80	8,544

Historical Values (2007 - 2016):

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

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

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

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

Projected Values (2017 - 2026):

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

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

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

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

DUKE ENERGY FLORIDA

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
HISTORY:										
2006/07	9,894	1,576	8,318	304	671	450	26	127	262	8,055
2007/08	10,962	1,828	9,134	234	763	483	34	133	278	9,036
2008/09	12,089	2,229	9,860	268	759	518	71	148	291	10,034
2009/10	13,694	2,189	11,505	246	651	563	80	163	322	11,670
2010/11	11,343	1,625	9,718	271	661	628	94	180	221	9,288
2011/12	9,721	905	8,816	186	643	686	96	203	206	7,701
2012/13	9,109	831	8,278	287	652	747	97	220	213	6,893
2013/14	9,467	658	8,809	257	654	785	101	229	219	7,222
2014/15	10,648	1,035	9,613	273	669	815	109	236	237	8,308
2015/16	9,678	1,275	8,403	224	681	845	113	240	189	7,386
FORECAST:										
2016/17	11,338	1,197	10,141	203	682	879	74	242	193	9,066
2017/18	11,494	1,198	10,296	230	694	909	78	243	194	9,145
2018/19	11,630	1,198	10,432	246	706	934	82	244	196	9,222
2019/20	12,001	1,408	10,592	264	718	955	86	245	197	9,535
2020/21	11,369	659	10,711	284	730	973	91	246	199	8,848
2021/22	11,481	659	10,823	285	742	989	95	246	200	8,924
2022/23	11,590	659	10,931	285	754	1,004	99	247	201	9,000
2023/24	11,701	659	11,042	274	766	1,018	103	247	202	9,091
2024/25	11,775	659	11,116	250	778	1,033	107	247	203	9,158
2025/26	11,858	660	11,198	250	790	1,047	112	247	204	9,209

Historical Values (2007 - 2016):

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

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

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

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

Projected Values (2017 - 2026):

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

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).

DUKE ENERGY FLORIDA

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
HISTORY:										
2006/07	9,894	1,576	8,318	304	671	450	26	127	262	8,055
2007/08	10,962	1,828	9,134	234	763	483	34	133	278	9,036
2008/09	12,089	2,229	9,860	268	759	518	71	148	291	10,034
2009/10	13,694	2,189	11,505	246	651	563	80	163	322	11,670
2010/11	11,343	1,625	9,718	271	661	628	94	180	221	9,288
2011/12	9,721	905	8,816	186	643	686	96	203	206	7,701
2012/13	9,109	831	8,278	287	652	747	97	220	213	6,893
2013/14	9,467	658	8,809	257	654	785	101	229	219	7,222
2014/15	10,648	1,035	9,613	273	669	815	109	236	237	8,308
2015/16	9,678	1,275	8,403	224	681	845	113	240	189	7,386
FORECAST:										
2016/17	12,143	1,197	10,946	203	682	879	74	242	201	9,862
2017/18	12,419	1,198	11,221	230	694	909	78	243	205	10,060
2018/19	12,686	1,198	11,488	246	706	934	82	244	208	10,266
2019/20	13,194	1,408	11,786	264	718	955	86	245	211	10,715
2020/21	12,679	659	12,020	284	730	973	91	246	214	10,142
2021/22	12,892	659	12,233	285	742	989	95	246	216	10,318
2022/23	13,094	659	12,435	285	754	1,004	99	247	218	10,487
2023/24	13,302	659	12,643	274	766	1,018	103	247	221	10,673
2024/25	13,472	659	12,813	250	778	1,033	107	247	223	10,834
2025/26	13,656	660	12,996	250	790	1,047	112	247	225	10,986

Historical Values (2007 - 2016):

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

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

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

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

Projected Values (2017 - 2026):

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

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).

DUKE 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
HISTORY:										
2006/07	9,894	1,576	8,318	304	671	450	26	127	262	8,055
2007/08	10,962	1,828	9,134	234	763	483	34	133	278	9,036
2008/09	12,089	2,229	9,860	268	759	518	71	148	291	10,034
2009/10	13,694	2,189	11,505	246	651	563	80	163	322	11,670
2010/11	11,343	1,625	9,718	271	661	628	94	180	221	9,288
2011/12	9,721	905	8,816	186	643	686	96	203	206	7,701
2012/13	9,109	831	8,278	287	652	747	97	220	213	6,893
2013/14	9,467	658	8,809	257	654	785	101	229	219	7,222
2014/15	10,648	1,035	9,613	273	669	815	109	236	237	8,308
2015/16	9,678	1,275	8,403	224	681	845	113	240	189	7,386
FORECAST:										
2016/17	10,519	1,197	9,322	203	682	879	74	242	181	8,259
2017/18	10,553	1,198	9,355	230	694	909	78	243	181	8,217
2018/19	10,581	1,198	9,383	246	706	934	82	244	181	8,188
2019/20	10,855	1,408	9,446	264	718	955	86	245	182	8,405
2020/21	10,140	659	9,481	284	730	973	91	246	182	7,635
2021/22	10,167	659	9,508	285	742	989	95	246	182	7,627
2022/23	10,197	659	9,538	285	754	1,004	99	247	182	7,625
2023/24	10,229	659	9,570	274	766	1,018	103	247	182	7,638
2024/25	10,238	659	9,579	250	778	1,033	107	247	182	7,641
2025/26	10,249	660	9,589	250	790	1,047	112	247	182	7,621

Historical Values (2007 - 2016):

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

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

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

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

Projected Values (2017 - 2026):

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

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).

DUKE 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 (%) **
HISTORY:									
2007	49,310	511	387	779	39,282	5,598	2,753	47,633	52.3
2008	49,208	543	442	565	38,556	6,619	2,483	47,658	53.1
2009	45,978	583	492	779	37,824	3,696	2,604	44,124	44.5
2010	48,135	638	558	779	38,925	3,493	3,742	46,160	45.3
2011	44,580	687	624	779	37,597	2,712	2,181	42,490	46.7
2012	43,396	733	669	780	36,381	1,768	3,065	41,214	52.0
2013	43,142	772	734	864	36,616	1,488	2,668	40,772	53.0
2014	43,442	812	791	864	37,240	1,333	2,402	40,975	50.7
2015	44,552	848	829	595	38,553	1,243	2,484	42,280	50.9
2016	53,117	891	844	596	38,774	1,803	2,277	42,854	53.0
FORECAST:									
2017	43,859	931	858	595	38,148	1,109	2,218	41,475	52.2
2018	44,312	959	870	595	38,432	1,113	2,343	41,887	52.3
2019	44,981	986	880	595	38,655	1,310	2,556	42,520	52.6
2020	45,620	1,009	888	596	39,275	1,352	2,500	43,127	51.5
2021	45,983	1,031	894	595	39,713	1,340	2,410	43,463	56.1
2022	46,296	1,052	898	595	39,979	1,341	2,431	43,751	56.0
2023	46,658	1,072	902	595	40,302	1,342	2,445	44,089	55.9
2024	47,020	1,092	904	596	40,494	1,344	2,591	44,428	55.6
2025	47,260	1,111	909	595	40,985	1,343	2,317	44,645	55.7
2026	47,704	1,130	913	595	41,101	1,344	2,621	45,066	55.9

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

** Load Factors for historical years are calculated using the actual winter peak demand except the 2004, 2007, 2012 - 2014, 2016 historical load factors which are based on the actual summer peak demand which became the annual peaks for the year.
Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2)

DUKE ENERGY FLORIDA

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

(1) YEAR	(2) TOTAL	(3) RESIDENTIAL CONSERVATION	(4) COMM. / IND. CONSERVATION	(OTH) OTHER ENERGY REDUCTIONS *	(5) RETAIL	(6) WHOLESALE	(7) UTILITY USE & LOSSES	(8) NET ENERGY FOR LOAD	(9) LOAD FACTOR (%) **
HISTORY:									
2007	49,310	511	387	779	39,282	5,598	2,753	47,633	52.3
2008	49,208	543	442	565	38,556	6,619	2,483	47,658	53.1
2009	45,978	583	492	779	37,824	3,696	2,604	44,124	44.5
2010	48,135	638	558	779	38,925	3,493	3,742	46,160	45.3
2011	44,580	687	624	779	37,597	2,712	2,181	42,490	46.7
2012	43,396	733	669	780	36,381	1,768	3,065	41,214	52.0
2013	43,142	772	734	864	36,616	1,488	2,668	40,772	53.0
2014	43,442	812	791	864	37,240	1,333	2,402	40,975	50.7
2015	44,552	848	829	595	38,553	1,243	2,484	42,280	50.9
2016	53,117	891	844	596	38,774	1,803	2,277	42,854	53.0
FORECAST:									
2017	45,144	931	858	595	38,686	1,109	2,965	42,760	49.5
2018	46,019	959	870	595	39,354	1,113	3,128	43,595	49.5
2019	47,205	986	880	595	40,050	1,310	3,384	44,744	49.8
2020	48,384	1,009	888	596	41,163	1,352	3,376	45,891	48.8
2021	49,206	1,031	894	595	42,001	1,340	3,345	46,686	52.5
2022	49,919	1,052	898	595	42,628	1,341	3,406	47,374	52.4
2023	50,663	1,072	902	595	43,294	1,342	3,458	48,094	52.4
2024	51,407	1,092	904	596	43,839	1,344	3,632	48,815	52.1
2025	52,062	1,111	909	595	44,695	1,343	3,409	49,447	52.1
2026	52,932	1,130	913	595	45,192	1,344	3,759	50,295	52.3

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

** Load Factors for historical years are calculated using the actual winter peak demand except the 2004, 2007, 2012 - 2014, 2016 historical load factors which are based on the actual summer peak demand which became the annual peaks for the year.
Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2)

DUKE 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 (%) **
HISTORY:									
2007	49,310	511	387	779	39,282	5,598	2,753	47,633	52.3
2008	49,208	543	442	565	38,556	6,619	2,483	47,658	53.1
2009	45,978	583	492	779	37,824	3,696	2,604	44,124	44.5
2010	48,135	638	558	779	38,925	3,493	3,742	46,160	45.3
2011	44,580	687	624	779	37,597	2,712	2,181	42,490	46.7
2012	43,396	733	669	780	36,381	1,768	3,065	41,214	52.0
2013	43,142	772	734	864	36,616	1,488	2,668	40,772	53.0
2014	43,442	812	791	864	37,240	1,333	2,402	40,975	50.7
2015	44,552	848	829	595	38,553	1,243	2,484	42,280	50.9
2016	53,117	891	844	596	38,774	1,803	2,277	42,854	53.0
FORECAST:									
2017	42,469	931	858	595	37,076	1,109	1,900	40,085	55.4
2018	42,400	959	870	595	36,880	1,113	1,983	39,975	55.5
2019	42,610	986	880	595	36,690	1,310	2,149	40,148	56.0
2020	42,843	1,009	888	596	36,928	1,352	2,070	40,350	54.7
2021	42,822	1,031	894	595	36,984	1,340	1,978	40,302	60.3
2022	42,752	1,052	898	595	36,894	1,341	1,972	40,207	60.2
2023	42,763	1,072	902	595	36,888	1,342	1,964	40,193	60.2
2024	42,776	1,092	904	596	36,781	1,344	2,059	40,183	59.9
2025	42,705	1,111	909	595	36,931	1,343	1,816	40,090	59.9
2026	42,811	1,130	913	595	36,773	1,344	2,057	40,174	60.2

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

** Load Factors for historical years are calculated using the actual winter peak demand except the 2004, 2007, 2012 - 2014, 2016 historical load factors which are based on the actual summer peak demand which became the annual peaks for the year.
Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2)

DUKE ENERGY FLORIDA

SCHEDULE 4.1
PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND
AND NET ENERGY FOR LOAD BY MONTH
BASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ACTUAL		FORECAST		FORECAST	
	2016		2017		2018	
MONTH	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh
JANUARY	8,366	3,183	10,138	3,170	10,261	3,232
FEBRUARY	8,543	2,890	8,124	2,743	8,218	2,771
MARCH	6,751	3,021	6,536	2,957	6,538	2,982
APRIL	8,146	3,187	7,295	3,080	7,378	3,046
MAY	8,349	3,705	8,302	3,656	8,410	3,695
JUNE	9,377	4,234	9,125	3,953	9,275	3,998
JULY	9,688	4,648	9,340	4,240	9,481	4,279
AUGUST	9,569	4,447	9,617	4,257	9,745	4,329
SEPTEMBER	8,769	4,152	8,918	3,970	9,086	4,024
OCTOBER	7,700	3,527	8,270	3,417	8,346	3,445
NOVEMBER	6,587	2,880	6,748	2,878	6,822	2,908
DECEMBER	6,497	2,980	8,323	3,154	8,421	3,178
TOTAL		42,854		41,475		41,887

NOTE: Recorded Net Peak demands and System requirements include off-system wholesale contracts.

DUKE ENERGY FLORIDA

SCHEDULE 4.2
PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND
AND NET ENERGY FOR LOAD BY MONTH
HIGH LOAD FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ACTUAL		FORECAST		FORECAST	
	2016		2017		2018	
MONTH	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh
JANUARY	8,366	3,183	10,942	3,348	11,186	3,446
FEBRUARY	8,543	2,890	9,496	2,798	9,695	2,853
MARCH	6,751	3,021	6,762	3,044	6,826	3,098
APRIL	8,146	3,187	7,642	3,205	7,796	3,201
MAY	8,349	3,705	8,629	3,750	8,816	3,826
JUNE	9,377	4,234	9,445	4,067	9,679	4,152
JULY	9,688	4,648	9,651	4,292	9,877	4,372
AUGUST	9,569	4,447	9,963	4,378	10,178	4,493
SEPTEMBER	8,769	4,152	9,222	4,007	9,473	4,099
OCTOBER	7,700	3,527	8,644	3,529	8,799	3,592
NOVEMBER	6,587	2,880	7,122	2,986	7,272	3,045
DECEMBER	6,497	2,980	8,324	3,355	8,498	3,418
TOTAL		42,854		42,760		43,595

NOTE: Recorded Net Peak demands and System requirements include off-system wholesale contracts.

DUKE ENERGY FLORIDA

SCHEDULE 4.3
PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND
AND NET ENERGY FOR LOAD BY MONTH
LOW LOAD FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ACTUAL		FORECAST		FORECAST	
	2016		2017		2018	
MONTH	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh
JANUARY	8,366	3,183	9,319	3,066	9,320	3,088
FEBRUARY	8,543	2,890	8,069	2,548	8,071	2,542
MARCH	6,751	3,021	6,013	2,816	6,002	2,805
APRIL	8,146	3,187	6,941	2,985	6,941	2,915
MAY	8,349	3,705	7,957	3,560	7,968	3,554
JUNE	9,377	4,234	8,793	3,901	8,838	3,894
JULY	9,688	4,648	9,005	4,118	9,039	4,101
AUGUST	9,569	4,447	9,262	4,194	9,280	4,208
SEPTEMBER	8,769	4,152	8,591	3,835	8,655	3,837
OCTOBER	7,700	3,527	7,887	3,289	7,867	3,275
NOVEMBER	6,587	2,880	6,366	2,751	6,350	2,747
DECEMBER	6,497	2,980	7,000	3,020	6,999	3,008
TOTAL		42,854		40,085		39,975

NOTE: Recorded Net Peak demands and System requirements include off-system wholesale contracts.

FUEL REQUIREMENTS AND ENERGY SOURCES

DEF's actual and projected nuclear, coal, oil, and gas requirements (by fuel unit) are shown in Schedule 5. DEF's two-year actual and ten-year projected energy sources by fuel type are presented in Schedules 6.1 and 6.2, in GWh and percent (%) respectively. Although DEF's fuel mix continues to rely on an increasing amount of natural gas to meet its generation needs, DEF continues to maintain alternate fuel supplies including long term operation of some coal fired facilities, adequate supplies of oil for dual fuel back up and increasing amounts of renewable generation particularly from solar generation. Projections shown in Schedules 5 and 6 reflect the Base Load and Energy Forecasts.

DUKE 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	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
(1)	NUCLEAR		TRILLION BTU	0	0	0	0	0	0	0	0	0	0	0	0
(2)	COAL		1,000 TON	4,425	4,181	5,508	4,254	2,681	3,620	4,854	4,885	5,095	5,070	2,835	3,197
(3)	RESIDUAL	TOTAL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(4)		STEAM	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(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	162	172	69	44	34	40	26	26	20	46	68	60
(9)		STEAM	1,000 BBL	49	65	42	36	31	30	16	16	13	16	35	33
(10)		CC	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(11)		CT	1,000 BBL	113	107	27	9	3	9	10	11	7	30	32	27
(12)		DIESEL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(13)	NATURAL GAS	TOTAL	1,000 MCF	198,101	199,017	181,673	201,973	226,130	212,760	195,052	197,174	194,608	204,388	239,750	238,516
(14)		STEAM	1,000 MCF	37,806	41,919	29,705	27,994	24,284	23,934	23,083	22,205	21,214	21,760	21,783	21,394
(15)		CC	1,000 MCF	154,154	148,656	145,227	167,814	196,896	183,695	167,168	170,073	168,775	175,659	210,537	207,974
(16)		CT	1,000 MCF	6,141	8,441	6,742	6,165	4,950	5,131	4,800	4,896	4,620	6,969	7,430	9,148
	OTHER (SPECIFY)														
(17)	OTHER, DISTILLATE	ANNUAL FIRM INTERCHANGE	1,000 BBL	N/A	N/A	0	0	0	0	0	0	0	0	0	0
(18)	OTHER, NATURAL GAS	ANNUAL FIRM INTERCHANGE, CC	1,000 MCF	N/A	N/A	5,106	4,275	2,856	2,542	379	0	0	0	0	0
(18.1)	OTHER, NATURAL GAS	ANNUAL FIRM INTERCHANGE, CT	1,000 MCF	N/A	N/A	10,051	5,617	2,026	2,219	4,083	4,448	3,558	2,562	2,259	3,078
(19)	OTHER, COAL	ANNUAL FIRM INTERCHANGE, STEAM	1,000 TON	N/A	N/A	0	0	0	0	0	0	0	0	0	0

DUKE 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	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
(1)	ANNUAL FIRM INTERCHANGE 1/		GWh	2,390	4,072	985	551	198	218	400	436	349	251	221	302
(2)	NUCLEAR		GWh	0	0	0	0	0	0	0	0	0	0	0	0
(3)	COAL		GWh	9,718	8,885	12,502	9,505	5,797	8,036	10,896	10,472	10,933	10,890	5,827	6,657
(4)	RESIDUAL	TOTAL	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(5)		STEAM	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(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	73	77	10	3	1	4	4	4	3	13	14	11
(10)		STEAM	GWh	34	34	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	39	43	10	3	1	4	4	4	3	13	14	11
(13)		DIESEL	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(14)	NATURAL GAS	TOTAL	GWh	25,227	24,807	23,840	27,361	31,772	29,810	27,085	27,541	27,236	28,507	33,819	33,578
(15)		STEAM	GWh	3,422	3,910	2,788	2,630	2,271	2,233	2,142	2,076	1,980	2,022	2,031	1,998
(16)		CC	GWh	21,343	20,269	20,425	24,149	29,010	27,072	24,460	24,976	24,788	25,800	31,051	30,661
(17)		CT	GWh	462	628	628	582	491	505	483	490	468	685	738	919
(18)	OTHER 2/														
	QF PURCHASES		GWh	1,685	1,831	1,986	1,985	1,990	1,997	1,990	1,989	1,989	832	512	2
	RENEWABLES OTHER		GWh	0	0	0	0	0	0	0	0	0	0	0	0
	RENEWABLES MSW		GWh	668	714	1,010	999	1,000	1,003	999	1,000	1,000	1,003	1,000	1,000
	RENEWABLES BIOMASS		GWh	395	512	411	681	889	891	889	889	889	891	889	889
	RENEWABLES SOLAR		GWh	0	5	26	213	480	817	1,149	1,420	1,690	2,042	2,363	2,626
	IMPORT FROM OUT OF STATE		GWh	2,183	1,982	705	590	393	351	52	0	0	0	0	0
	EXPORT TO OUT OF STATE		GWh	-59	-31	0	0	0	0	0	0	0	0	0	0
(19)	NET ENERGY FOR LOAD		GWh	42,280	42,854	41,475	41,887	42,520	43,127	43,463	43,751	44,089	44,428	44,645	45,066

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

DUKE 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	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
(1)	ANNUAL FIRM INTERCHANGE 1/		%	5.7%	9.5%	2.4%	1.3%	0.5%	0.5%	0.9%	1.0%	0.8%	0.6%	0.5%	0.7%
(2)	NUCLEAR		%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(3)	COAL		%	23.0%	20.7%	30.1%	22.7%	13.6%	18.6%	25.1%	23.9%	24.8%	24.5%	13.1%	14.8%
(4)	RESIDUAL	TOTAL	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(5)		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%
(6)		CC	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(7)		CT	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(8)		DIESEL	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(9)	DISTILLATE	TOTAL	%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(10)		STEAM	%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(11)		CC	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(12)		CT	%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(13)		DIESEL	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(14)	NATURAL GAS	TOTAL	%	59.7%	57.9%	57.5%	65.3%	74.7%	69.1%	62.3%	62.9%	61.8%	64.2%	75.8%	74.5%
(15)		STEAM	%	8.1%	9.1%	6.7%	6.3%	5.3%	5.2%	4.9%	4.7%	4.5%	4.6%	4.5%	4.4%
(16)		CC	%	50.5%	47.3%	49.2%	57.7%	68.2%	62.8%	56.3%	57.1%	56.2%	58.1%	69.6%	68.0%
(17)		CT	%	1.1%	1.5%	1.5%	1.4%	1.2%	1.2%	1.1%	1.1%	1.1%	1.5%	1.7%	2.0%
(18)	OTHER 2/														
	QF PURCHASES		%	4.0%	4.3%	4.8%	4.7%	4.7%	4.6%	4.6%	4.5%	4.5%	1.9%	1.1%	0.0%
	RENEWABLES OTHER		%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	RENEWABLES MSW		%	1.6%	1.7%	2.4%	2.4%	2.4%	2.3%	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%
	RENEWABLES BIOMASS		%	0.9%	1.2%	1.0%	1.6%	2.1%	2.1%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
	RENEWABLES SOLAR		%	0.0%	0.0%	0.1%	0.5%	1.1%	1.9%	2.6%	3.2%	3.8%	4.6%	5.3%	5.8%
	IMPORT FROM OUT OF STATE		%	5.2%	4.6%	1.7%	1.4%	0.9%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
	EXPORT TO OUT OF STATE		%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(19)	NET ENERGY FOR LOAD		%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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

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

FORECASTING METHODS AND PROCEDURES

INTRODUCTION

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

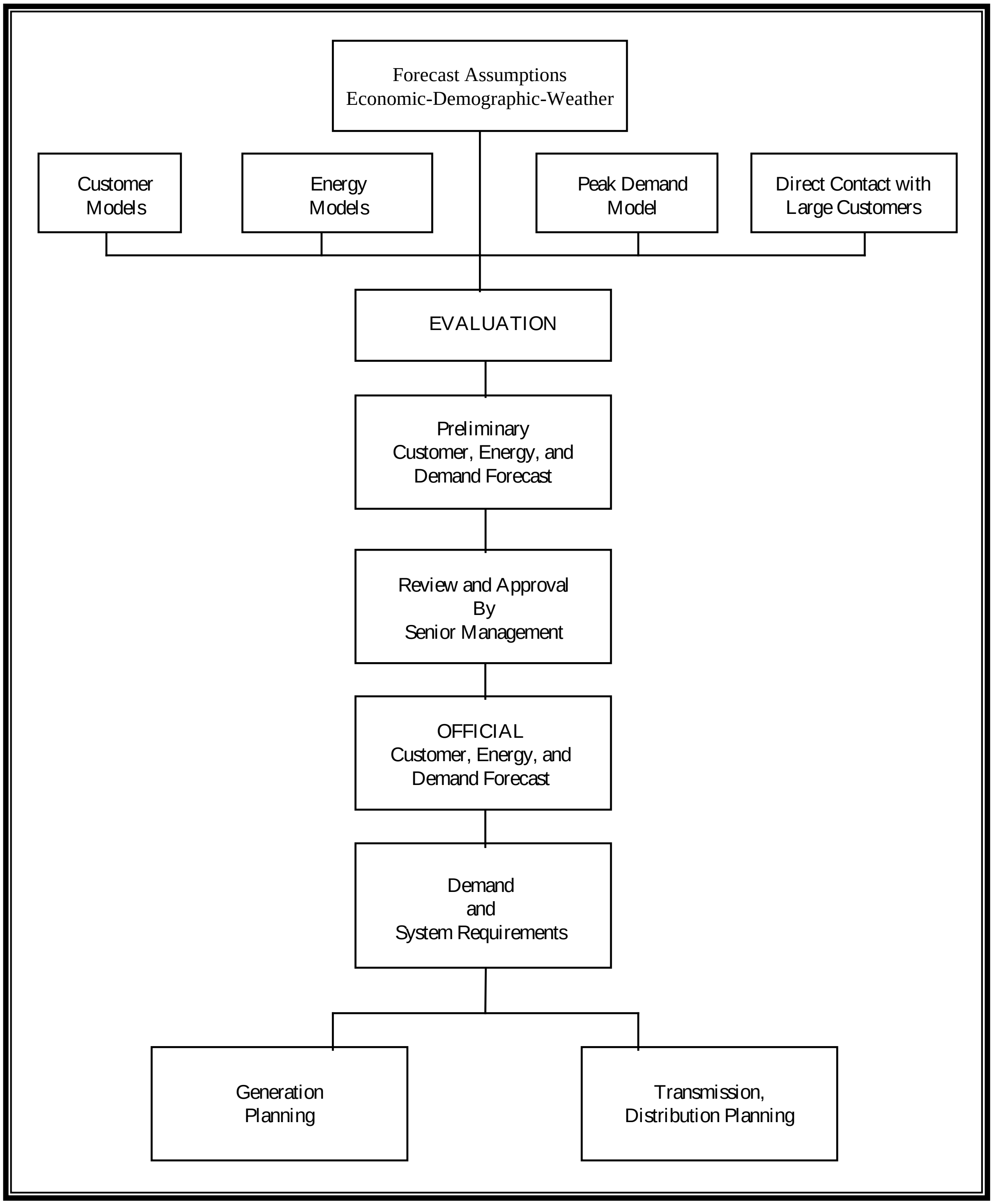
Figure 2.1, entitled "Customer, Energy and Demand Forecast," gives a general description of DEF's forecasting process. Highlighted in the diagram is a disaggregated modeling approach that blends the impacts of average class usage, as well as customer growth, based on a specific set of assumptions for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

FORECAST ASSUMPTIONS

The first step in any forecasting effort is the development of assumptions upon which the forecast is based. A collaborative internal Company effort develops these assumptions including the research efforts of a number of external sources. These assumptions specify major factors that influence the level of customers, energy sales, or peak demand over the forecast horizon. The following set of assumptions forms the basis for the forecast presented in this document.

FIGURE 2.1

Customer, Energy, and Demand Forecast



GENERAL ASSUMPTIONS

1. Normal weather conditions for energy sales are assumed over the forecast horizon using a sales-weighted 30-year average of conditions at the St Petersburg, Orlando, and Tallahassee weather stations. For billed kilowatt-hour (kWh) sales projections, the normal weather calculation begins with a historical 30-year average of calendar and billing cycle weighted monthly heating and cooling degree-days (HDD and CDD). The expected consumption period read dates for each projected billing cycle determines the exact historical dates for developing the thirty year average weather condition each month. Each class displays different weather-sensitive base temperatures from which degree day (DD) values begin to accumulate. Seasonal and monthly peak demand projections are based on a 30-year historical average of system-weighted degree days using the "Itron Rank-Sort Normal" approach which takes annual weather extremes into account as well as the date and hour of occurrence.

2. DEF customer forecast is based upon historical population estimates and produced by the BEBR at the University of Florida (as published in "Florida Population Studies", Bulletin No. 174 January 2016) and provides the basis for the population forecast used in the development of the DEF customer forecast. National and Florida economic projections produced by Moody's Analytics in their July 2015 forecast, along with EIA 2015 surveys of residential appliance saturation and average appliance efficiency levels provided the basis for development of the DEF energy forecast.

3. Within the DEF service area, the phosphate mining industry is the dominant sector in the industrial sales class. Three major customers accounted for nearly 29 percent of the industrial class MWh sales in 2016, the lowest share in 13 years. These energy intensive customers mine and process phosphate-based fertilizer products for the global marketplace. The supply and demand (price) 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. The market price of the raw mined commodity often dictates production levels. Load and energy consumption at the DEF-served mining or chemical processing sites depend heavily on plant operations, which are heavily influenced by these global as well as the local conditions, including environmental regulations.

Going forward, global currency fluctuations and global stockpiles of farm commodities will determine the demand for fertilizers. The DEF forecast calls for another year of lower electric consumption from this sector as the current strength of U.S. Dollar makes all domestic crop-nutrient production less price competitive at home and abroad. Also, an increase in self-service generation will drag down energy requirements from DEF. The U.S. farm sector continues to be hit by sanctions on Russia which imports U.S. farm products. The forecast does account for one customer's intention to open a new mine by 2019 and a major mine shut down by 2024. An upside risk to this projection lies in the price of energy, especially natural gas, which is a major cost in mining and producing phosphoric fertilizers. Once currency issues stabilize and demand for farm products improve, one would expect a favorable environment for this industry.

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

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

6. This forecast incorporates demand and energy reductions expected to be realized through currently FPSC approved DSM goals as stated in Docket No. 130200-EI .

7. This forecasts reflects impacts from both Plug-in Hybrid Electric Vehicle (PHEV) & Photo Voltaic (PV) on energy and peak demand. PHEV customer penetration levels are expected to be in the development phase over the planning horizon and incorporates an EPRI Model view that includes gasoline price expectations. PV customer (behind the meter) penetration levels are

expected to continue to grow over the planning horizon and the forecast incorporates a view on equipment and electric price impacts on customer use.

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

9. This forecast assumes that the regulatory environment and the obligation to serve our retail customers will continue throughout the forecast horizon. Regarding wholesale customers, the forecast does not plan for generation resources unless a long-term contract is in place. FR customers are typically assumed to renew their contracts with DEF except those who have termination provisions and have given their notice to terminate. PR contracts are typically projected to terminate as terms reach their expiration date.

ECONOMIC ASSUMPTIONS

The economic outlook for this forecast was developed in the Summer of 2016 as the nation's economy continued on an upward rebound from the Great Recession. Most economic indicators pointed to significant year-over-year improvements. These included strong employment growth and declining unemployment, minimal home foreclosures, much improved home construction levels and consumer confidence. Nationally, energy prices and interest rates are low and relatively stable. Consumers were spending (and borrowing) again. What has changed of late are signs of marginal improvement in median household incomes (after inflation) and improvement in the rate of homeownership. As the reported rate of national unemployment is now below 5 percent, the tightening of the labor supply typically leads to wage increases. Increased consumer confidence, along with the prolonged period of low mortgage rates has revived the desire to own homes. While the nation's manufacturing sector may have turned the corner off the financial crisis low, it must continue to navigate an environment with a strong U.S. currency and still weak global economy. The U.S. service sector is riding a wave of favorable conditions. Low energy prices have invigorated the American consumer, maybe not as much as initially estimated, but people are spending and outstanding credit is rising. This forecast does not incorporate any new policies that may roll out from the new presidential administration.

In Florida, the State economy continues to improve. The U.S. Census Bureau announced that Florida's population was now at 20.6 million, and had grown at an average of 935 residents per day in the 2015 to 2016 twelve month period ending July 1st. Nationally, reports have stated that baby-boomers are retiring at a rate of 10,000 per day. Duke Energy load forecasts have been expecting for years that Florida will benefit from an on-rush of retirees. After some delay created by the financial crisis, one can safely say this trend has begun. This impact is expected to last 15 years and peak in the mid-2020s.

The Florida unemployment rate has dropped to 4.9 percent by December 2016, down from 5.1 percent a year earlier. The State's employment picture has been impressive as well, but the discussion must be limited to the "private service-producing" sectors of the State economy. The construction and manufacturing employment sectors are now well off their recession lows. Industries supporting the home and road construction sector have improved significantly. More impressively, however, it is the non-manufacturing, non-governmental employment sectors that are growing the fastest. These are exactly the sectors that benefit from a growing population. Helping to fuel this growth is the major drop in oil prices which only further boosts the Florida tourism industry. Whether it is driving by car or arriving by plane, lower energy prices help the state economy. This forecast assumes a phased-in impact upon DEF electric prices from the U.S. EPA proposed Clean Power Plan (CPP) beginning in 2022. It is safe to assume that if efforts to thwart the proposal are successful, a lower electric price projection may occur.

Throughout the ten year forecast horizon, risks and uncertainties are always recognized and handled on a "highest probability of outcome" basis. General rules of economic theory, namely, supply and demand equilibrium are maintained in the long run. This notion is applied to energy/commodity prices, currency levels, the housing market, wage rates, birth rates, inflation and interest rates. Uncertainty surrounding specific weather anomalies (hurricanes or earthquakes), international crises, such as wars or terrorist acts, are not explicitly designed into this projection. Thus, any situations of this variety will force a deviation from the forecast.

FORECAST METHODOLOGY

The DEF forecast of customers, energy sales, and peak demand applies both an econometric and end-use methodology. The residential and commercial energy projections incorporate Itron's SAE approach while other classes use customer-class specific econometric models. These models are expressly designed to capture class-specific variation over time. 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, demand response, interruptible service and changes in self-service generation capacity.

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 customer models. Sales are regressed against "driver" variables that best explain monthly fluctuations over the historical sample period. Forecasts of these input variables are either derived internally or come from a review of the latest projections made by several independent forecasting concerns. The external sources of data include Moody's Analytics and the University of Florida's BEBR. Internal company forecasts are used for projections of electricity price, weather conditions, and the length of the billing month. The incorporation of residential and commercial "end-use" energy have been modeled as well. Surveys of residential appliance saturation and average efficiency performed by the company's Market Research department and the Energy Information Agency (EIA), along with trended projections of both by Itron capture a significant piece of the changing future environment for electric energy consumption. Specific sectors are modeled as follows:

Residential Sector

Residential kWh usage per customer is modeled using the SAE framework. This approach explicitly introduces trends in appliance saturation and efficiency, dwelling size and thermal efficiency. It allows for an easier explanation of usage levels and changes in weather-sensitivity over time. The "bundling" of 19 residential appliances into "heating", "cooling" and "other" end uses form the basis of equipment-oriented drivers that interact with typical exogenous factors such as real median household income, average household size, 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 structure captures significant variation in residential usage caused by changing appliance efficiency and saturation levels, economic cycles, weather fluctuations, electric price, 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 monthly residential customers with county level population projections for counties in which DEF serves residential customers are provided by the BEBR.

Commercial Sector

Commercial MWh energy sales are forecast based on commercial sector (non-agricultural, non-manufacturing and non-governmental) employment, the real price of electricity to the commercial class, the average number of billing days in each sales month and heating and cooling degree-days. As in the residential sector, these variables are interacted with the commercial end-use equipment (listed below) after trends in equipment efficiency and saturation rates have been projected.

- Heating
- Cooling
- Ventilation
- Water heating
- Cooking
- Refrigeration
- Outdoor Lighting
- Indoor Lighting
- Office Equipment (PCs)
- Miscellaneous

The SAE model contains indices that are based on end-use energy intensity projections developed from EIA's commercial end-use forecast database. Commercial energy intensity is measured in terms of end-use energy use per square foot. End-use energy intensity projections are based on end-use efficiency and saturation estimates that are in turn driven by assumptions in available technology and costs, energy prices, and economic conditions. Energy intensities are calculated from the EIA's Annual Energy Outlook (AEO) commercial database. End-use intensity projections are derived for eleven building types. The energy intensity (EI) is derived by dividing end-use electricity consumption projections by square footage:

$$EI_{bet} = Energy_{bet} / sqft_{bt}$$

Where:

$Energy_{bet}$ = energy consumption for building type b, end-use e, year t

$Sqft_{bt}$ = square footage for building type b in year t

Commercial customers are modeled using the projected level of residential customers.

Industrial Sector

Energy sales to this sector are separated into two sub-sectors. A significant portion of industrial energy use is consumed by the phosphate mining industry. Because this one industry is such a large share of the total industrial class, it is separated and modeled apart from the rest of the class. The term "non-phosphate industrial" is used to refer to those customers who comprise the remaining portion of total industrial class sales. Both groups are impacted significantly by changes in economic activity. However, adequately explaining sales levels requires separate explanatory variables. Non-phosphate industrial energy sales are modeled using Florida manufacturing employment interacted with the Florida industrial production index, 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 three customers, the forecast is dependent upon information received from direct customer contact. DEF industrial customer representatives provide specific phosphate customer information regarding customer production schedules, inventory levels, area mine-out and start-up predictions, and changes in self-service generation or energy supply situations over the forecast horizon. The projection of industrial accounts are expected to continue its historic decline. The decline in manufacturing nationwide, the increased competitiveness between the states, mergers between companies within the state, all have resulted in a continued decline in customer growth for this class.

Street Lighting

Electricity sales to the street and highway lighting class have now declined for several years. A continued decline is expected as improvements in lighting efficiency are projected. The number of accounts, which has dropped by more than one-third since 1995 due to most transferring to public authority ownership, is expected to decline further before leveling off in the intermediate term. A simple time-trend was used to project energy consumption and customer growth in this class.

Public Authorities

Energy sales to public authorities (SPA), comprised of federal, state and local government operated services, is also projected to grow within the DEF's service area. The level of government services, and thus energy, can be tied to the population base, as well as the amount of tax revenue collected to pay for these services. Factors affecting population growth will affect the need for additional governmental services (i.e. public schools, city services, etc.) thereby increasing SPA energy consumption. Government employment has been determined to be the best indicator of the level of government services provided. This variable, along with cooling degree-days and the sales month billing days, results in a significant level of explained variation over the historical sample period. Adjustments are also included in this model to account for the large change in school-related energy use throughout the year. The SPA customer forecast is projected linearly as a function of a time-trend. Recent budget issues have also had an impact on the near-term pace of growth.

Sales for Resale Sector

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

SECI is a wholesale, or sales for resale, customer of DEF that contracts for both seasonal and stratified loads over the forecast horizon. 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. Three customers in this class, Chattahoochee, Mt. Dora, and Williston, are municipalities whose full energy requirements are supplied by DEF. Energy projections for full requirement customers grow at a rate that approximates their historical trend with additional information coming from the respective city officials. DEF serves partial requirement service (PR) to municipalities such as New Smyrna Beach, Homestead, and another power provider, RCID. In each case, these customers contract with DEF for a specific level and type of stratified capacity needed to provide their particular electrical system with an appropriate level of reliability. The energy forecast for each contract is derived using its historical load factors where enough history exists, or typical load factors for a given type of contracted stratified load and expected fuel prices.

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, DEF's coincident system peak is separated into five major components. These components consist of total retail load, interruptible and curtailable tariff non-firm load, conservation and demand response program capability, wholesale demand, and company use demand.

Total retail load refers to projections of DEF retail monthly net peak demand before any activation of DEF's General Load Reduction Plan. The historical values of this series are constructed to show the size of DEF's retail net peak demand assuming no utility activated load control or energy efficiency reductions had 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 retail customer levels and coincident weather conditions at the time of the peak and the amounts of Base-Heating-Cooling load estimated by the monthly Itron models without the impacts of year-to-year variation in utility-sponsored DSM programs. Seasonal peaks are projected using the Itron SAE generated use patterns for both weather sensitive (cooling & heating) appliances and base load appliances calculated by class in the energy models. Daily and hourly models of class-of-business (applying actual surveyed DEF load research results) lead to class and total retail hourly load profiles when a 30 year normal weather template replaces actual weather. The projections of monthly retail peak are the result of this historical weather pattern-driven load profile. The projection for the months of January (winter) and August (summer) are typically when the seasonal peaks occur. Energy conservation and direct load control estimates consistent with DEF's DSM goals that have been established by the FPSC are applied to the MW forecast. Projections of dispatchable and cumulative non-dispatchable DSM impacts are subtracted from the projection of potential firm retail demand resulting in a projected series of firm retail monthly peak demand figures. The Interruptible and Curtailable service (IS and CS) tariff load projection is developed from historic monthly trends, as well as the incorporation of specific projected information obtained from DEF's large industrial accounts on these tariffs by account executives. Developing this piece of the demand forecast allows for appropriate firm retail demand results in the total retail coincident peak demand projection.

Sales for Resale demand projections represent load supplied by DEF to other electric suppliers such as SECI, RCID, and other electric transmission and distribution entities. For Partial Requirement demand projections, contracted MW levels dictate the level of seasonal demands. The Full Requirement municipal demand forecast is estimated for individual cities using historically trended growth rates adjusted for current economic conditions.

DEF "company use" at the time of system peak is estimated using load research metering studies similar to potential firm retail. It is assumed to remain stable over the forecast horizon as it has historically.

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

HIGH & LOW SCENARIOS

DEF has developed high and low scenarios around the base case customer, energy sales and peak demand projections. The overall results reflect a one standard deviation probability of outcome, or 67 percent of all possible outcomes between the high case and low case. Of course, the base case represents the 50/50 probability of all expected outcomes.

Both scenarios incorporate variation in three areas. First, high and low cases were developed for the service area population growth. These were developed using the University of Florida BEBR high and low County Population Studies for the 29 county DEF service area. Second, a measurement of twenty-year historical variation for economic driver variables deemed best to correlate with DEF class energy sales, was developed to apply a one standard deviation projection around each respective base case economic projection for each class. Third, a one standard deviation probability was determined for the energy and peak weather variables (HDDs, CDDs, and monthly peak DDs) using actual 30 year weather conditions.

This procedure captures the most influential variables around customer growth, energy sales and peak demand by estimating high and low cases for demographics, economics and weather conditions.

CONSERVATION

On August 20, 2015, the PSC issued Order No. PSC-15-0332-PAA-EG, approving the DEF's Demand Side Management Plan for 2015 through 2024.

DEF's currently approved DSM programs consist of five residential programs, six commercial and industrial programs and one research and development program that will continue to be offered through 2024. DEF also offers a Qualifying Facilities Program as discussed in Chapter 3. The programs are subject to periodic monitoring and evaluation for the purpose of ensuring that all demand-side resources are acquired in a cost-effective manner and that the program savings are durable. A brief description of each of the currently offered DSM programs is provided below.

RESIDENTIAL CONSERVATION PROGRAMS

Table 2.1 depicts the expected residential DSM savings for 2015 through 2024. The 2015 and 2016 savings reflect the actual achievements as reported on DEF's 2016 Annual DSM Report to the FPSC and the savings for 2017 - 2024 reflect the impacts of the residential goals as approved in the 2014 Goals Proceeding (Order PSC 14-0696-FOF-EU).

TABLE 2.1

Residential DSM MW and GWH Savings

Year	Annual Summer MW	Cumulative Summer MW	Annual Winter MW	Cumulative Winter MW	Annual GWH	Cumulative GWH
2015	25.3	25.3	41.5	41.5	39.4	39.4
2016	30.0	55.4	52.4	93.9	47.3	86.7
2017	22.2	77.6	48.7	142.6	20.8	107.5
2018	20.0	97.6	43.2	185.8	17.0	124.5
2019	17.7	115.3	37.5	223.3	13.0	137.5
2020	15.5	130.8	32.2	255.5	9.3	146.8
2021	13.7	144.5	27.8	283.3	6.2	153.0
2022	12.2	156.7	24.5	307.8	3.8	156.8
2023	11.3	168.0	22.3	330.1	2.2	159.0
2024	10.7	178.7	20.9	351.0	1.2	160.2

The following provides an overview of each Residential Program:

Home Energy Check – This is DEF's home energy audit program as required by Rule 25-17.003(3) (b). DEF offers a variety of options to customers for home energy audits including walk-through audits, phone assisted audits, and web enabled on-line audits. At the completion of the audit, DEF also provides kits that contain energy saving measures that may be easily installed by the customer.

Residential Incentive Program – This program provides incentives on a variety of cost-effective measures designed to provide energy savings. DEF is expects to provide incentives to customers for the installation of approximately 90,000 energy saving measures over the ten year period. These measures primarily include heating and cooling, duct repair, insulation, and energy efficient windows. The measures and incentive levels included in this program have been updated to reflect the impacts of new codes and standards.

Neighborhood Energy Saver – This program is designed to provide energy saving education and assistance to low income customers. This program targets neighborhoods that meet certain income eligibility requirements. DEF installs energy saving measures in approximately 4500 homes and provides home energy reports to approximately 15,000 customers annually through this program. These home energy reports provide information about energy efficiency and remind customers about low cost energy saving measures.

Low Income Weatherization Assistance Program – DEF partners with local agencies to provide funding for energy efficiency and weatherization measures to low income customers through this program. DEF expects to provide assistance to approximately 500 customers annually through this program.

EnergyWise – EnergyWise is a voluntary residential demand response program that provides monthly bill credits to customers who allow DEF to reduce peak demand by controlling service to selected electric equipment through various devices and communication options installed on the customer's premises. These interruptions are at DEF's option, during specified time periods, and coincident with hours of peak demand. Customers must have a minimum average monthly usage of 600 kwh's to be eligible to participate in this program.

COMMERCIAL/INDUSTRIAL CONSERVATION PROGRAMS

Table 2.2 depicts the expected commercial/industrial DSM savings for 2015 through 2024. The 2015 and 2016 savings reflect the actual achievements as reported on DEF's 2016 Annual DSM Report to the FPSC and the projected savings for 2017 - 2024 reflect the impacts of the commercial/industrial goals as approved in the 2014 Goals Proceeding (Order PSC 14-0696-FOF-EU).

TABLE 2.2

Commercial/Industrial DSM MW and GWH Savings

Year	Annual Summer MW	Cumulative Summer MW	Annual Winter MW	Cumulative Winter MW	Annual GWH	Cumulative GWH
2015	34.9	34.9	27.6	27.6	36.3	36.3
2016	85.3	120.2	71.9	99.5	27.6	63.9
2017	11.0	131.2	5.6	105.1	12.0	75.9
2018	10.0	141.2	5.1	110.2	10.0	85.9
2019	9.1	150.3	5.0	115.2	8.0	93.9
2020	8.2	158.5	5.2	120.4	5.9	99.8
2021	6.9	165.4	4.8	125.2	3.9	103.7
2022	6.0	171.4	4.7	129.9	2.4	106.1
2023	5.6	177.0	5.0	134.9	1.4	107.5
2024	5.0	182.0	4.6	139.5	0.8	108.3

The following provides a list of the Commercial programs along with a brief overview of each program:

Business Energy Check – This is a commercial energy audit program that provides commercial customers with an analysis of their energy usage and information about energy-saving practices and cost-effective measures that they can implement at their facilities.

Better Business – This program provides incentives to commercial customers on a variety of cost-effective energy efficiency measures. These measures include chillers, cool roof, insulation, and DX systems.

Florida Custom Incentive – The objective of this program is to encourage customers to make capital investments for the installation of energy efficiency measures which reduce energy and peak demand. This program provides incentives for customized energy efficiency projects and measures that are cost effective and are not otherwise included in DEF's prescriptive commercial programs.

Interruptible Service – This program is available to non-residential customers with a minimum billing demand of 500 KW or more who are willing to have their power interrupted. DEF has remote control access to the switch providing power to the customer's equipment. Customers participating in the Interruptible Service program receive a monthly interruptible demand credit based on their billing demand and billing load factor.

Curtailable Service - This program is an indirect load control program that reduces DEF's energy demand at times of capacity shortage during peak or emergency conditions.

Standby Generation - This program is a demand control program that reduces DEF's demand based upon the control of the customer equipment. The program is a voluntary program available to all commercial and industrial customers who have on-site generation capability and are willing to reduce their DEF demand when deemed necessary.

OTHER DSM PROGRAMS

The following provides an overview of other DSM programs:

Technology Development – This program is used to fund research and development of new energy efficiency and demand response opportunities. DEF will use this program to investigate new technologies and support the development of new energy efficiency and demand response programs.

Qualifying Facilities – This program supports the administration and management of interconnection and purchased power agreements from potential and current DEF portfolio of qualifying cogeneration and small power production facilities, including renewables. The program supports meetings with interested parties or potential Qualified Facility (QF) developers interested in providing renewable capacity or energy deliveries within our service territory. Project, interconnection, and avoided cost discussions with renewable (solar) and combined heat and power developers who are also exploring distributed generation options have increased dramatically. The majority of interest is coming from solar photovoltaic developers as the price of photovoltaic panels has decreased. The cost of this technology continues to decrease and subsidies remain in place. This increase in solar activity is evident in the number of interconnection requests which now total over 2,100 MW of solar PV projects alone. As the technologies advance and the market evolves, the Company's policies will continue to be refined and compliant.

CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

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FLORIDA

CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

RESOURCE PLANNING FORECAST

OVERVIEW OF CURRENT FORECAST

Supply-Side Resources

As of December 31, 2016 DEF had a summer total capacity resource of 10,614 MW (see Table 3.1). This capacity resource includes fossil steam generators (3,201 MW), combined cycle plants (3,167 MW), combustion turbines (1,955 MW), utility purchased power (424 MW), independent power purchases (1,356 MW), and non-utility purchased power (511 MW). Table 3.2 presents DEF's firm capacity contracts with Renewable and Cogeneration Facilities.

Demand-Side Programs

Total DSM resources are presented in Schedules 3.1 and 3.2 of Chapter 2. These programs include Non-Dispatchable DSM, Interruptible Load, and Dispatchable Load Control resources.

Capacity and Demand Forecast

DEF's forecasts of capacity and demand for the projected summer and winter peaks can been found in Schedules 7.1 and 7.2, respectively. Demand forecasts shown in these schedules are based on Schedules 3.1.1 and 3.2.1, the base summer and winter forecasts. DEF'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 DEF. In its planning process, DEF 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.

Base Expansion Plan

DEF's planned supply resource additions and changes are shown in Schedule 8 and are referred to as DEF's Base Expansion Plan. This plan includes summer capacity uprates at the Hines Energy Center through the installation of Inlet Chilling, provision of firm transmission for the summer capacity from Intercession City P11, a combined cycle facility in 2018 in Citrus County, acquisition of the Calpine Osprey Energy Combined Cycle Unit in Auburndale and three planned combustion turbine units (years 2024, 2025 and 2026) at undesignated sites. DEF continues to seek market supply-side resource alternatives to enhance DEF's resource plan and DEF extended a purchase power agreement with Southern Power Company beginning in 2016. In addition to the existing and planned capacity resources listed above, DEF is planning to install over 750 MW of solar PV over the next 10 year period as an energy resource.

The promulgation of the Mercury and Air Toxics Standards (MATS) by the EPA in April of 2012 presented new environmental requirements for the DEF units at Anclote, Suwannee and Crystal River. As noted below, DEF has implemented the compliance strategy discussed in previous TYSPs and in recent updates to the Integrated Clean Air Compliance Plan.

- Two steam units at Anclote have switched to natural-gas-only operations in order to comply with the MATS rule. Residual Fuel Oil is no longer available.
- The three Suwannee Steam units were retired from service in December 2016 after more than 60 years of operation.
- In April 2016, DEF began burning MATS compliance coals in Crystal River Units 1 and 2. Although specific dates have not been finalized, DEF anticipates retiring Crystal River Units 1 and 2 in 2018 in coordination with the 2018 Citrus Combined Cycle operations.
- DEF received a one-year extension of the deadline to comply with MATS for Crystal River Units 4 and 5 from the Florida Department of Environmental Protection. This extension provided DEF sufficient time to complete projects necessary to enable long term operation of these units in compliance with the MATS.
- Additional details regarding DEF's compliance strategies in response to the MATS rule are provided in DEF's annual update to the Integrated Clean Air Compliance Plan filed in Docket No. 160007-EI.

On August 3, 2015, the EPA released the final New Source Performance Standards (NSPS) for CO_2 emissions from existing fossil fuel-fired Electric Generating Units or EGUs (also known as the Clean Power Plan or CPP). The final CPP establishes state-specific emission goals and has been challenged in the D.C. Circuit by 27 states and a number of industry groups. Oral arguments were held in September 2016. In addition, on February 9, 2016 the U.S. Supreme Court placed a stay on the CPP until such time that all litigation is completed. Although the ongoing litigation and the subsequent change in administration results in considerable uncertainty around the CPP itself, DEF continues to expect that CO_2 emissions limitations in one form or another will be part of the regulatory future and has postulated a CO_2 emission price forecast as a placeholder for the impacts of this regulation. DEF continues to plan to meet all regulatory requirements of the CPP that are placed into law.

DEF continues to modernize its generation resources with the retirement and projected retirements of several of the older units in the fleet, particularly combustion turbines at Higgins, Avon Park, Turner, and Rio Pinar, as well as the three steam units at Suwannee. Turner Unit P3 was retired July 2015. The Rio Pinar and Turner Units P1, P2 and P4 were retired in March 2016. The Suwannee steam units 1, 2 and 3, and Debary P1 were retired in December 2016. Continued operations of the peaking units at Higgins and Avon Park are planned until the year 2020. There are many factors which may impact these retirements including environmental regulations and permitting, the unit's age and maintenance requirements, local operational needs, their relatively small capacity size and system requirement needs.

DEF's Base Expansion Plan projects the need for additional capacity with proposed in-service dates during the ten-year period from 2017 through 2026. The planned capacity additions, together with purchases from Qualifying Facilities (QF), Investor Owned Utilities, and Independent Power Producers help the DEF system meet the energy requirements of its customer base. The capacity needs identified in this plan may be impacted by DEF's ability to extend or replace existing purchase power, cogeneration and QF contracts and to secure new renewable purchased power resources in their respective projected timeframes. The additions in the Base Expansion Plan depend, in part, on projected load growth, and obtaining all necessary state and federal permits under current schedules. Changes in these or other factors could impact DEF's Base Expansion Plan. DEF has examined the high and low load scenarios presented in Schedules 3.1 and 3.2. As discussed in Chapter 2, these scenarios were developed to present and test a range of likely outcomes in peak load and energy demand. DEF found that the Base Expansion Plan was robust under the range of conditions examined. Current planned capacity is sufficient to meet the demand including reserve margin in these cases through 2021 allowing DEF sufficient time to plan additional generation capacity either through power purchase or new generation construction as needed if higher than baseline conditions emerge. If lower than baseline conditions emerge, DEF can defer future generation alternatives.

Status reports and specifications for the planned new generation facilities are included in Schedule 9. The planned transmission lines associated with DEF Bulk Electric System (BES) are shown in Schedule 10.

TABLE 3.1

DUKE ENERGY FLORIDA

TOTAL CAPACITY RESOURCES OF
POWER PLANTS AND PURCHASED POWER CONTRACTS

AS OF DECEMBER 31, 2016

PLANTS	SUMMER NET DEPENDABLE CAPABILITY (MW)
Fossil Steam	3,201
Combined Cycle	3,167
Combustion Turbine	1,955
Total Net Dependable Generating Capability	**8,323**
Dependable Purchased Power	2,291
Firm Qualifying Facility Contracts (511 MW)	
Investor Owned Utilities (424 MW)	
Independent Power Producers (1,356 MW)	
TOTAL DEPENDABLE CAPACITY RESOURCES	**10,614**

TABLE 3.2

DUKE ENERGY FLORIDA
FIRM RENEWABLES
AND COGENERATION CONTRACTS

AS OF DECEMBER 31, 2016

Facility Name	Firm Capacity (MW)
Mulberry	115
Orange Cogen (CFR-Biogen)	104
Orlando Cogen	115
Pasco County Resource Recovery	23
Pinellas County Resource Recovery 1	40
Pinellas County Resource Recovery 2	14.8
Ridge Generating Station	39.6
Florida Power Development	60
TOTAL	**511.4**

DUKE ENERGY FLORIDA

SCHEDULE 7.1
FORECAST OF CAPACITY, DEMAND AND SCHEDULED MAINTENANCE
AT TIME OF SUMMER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	TOTAL[a] INSTALLED CAPACITY	FIRM[b] CAPACITY IMPORT	FIRM CAPACITY EXPORT	QF[c]	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
2017	8,801	1,869	0	177	10,847	8,943	1,905	21%	0	1,905	21%
2018	8,995	1,869	0	237	11,101	9,030	2,072	23%	0	2,072	23%
2019	9,815	1,869	0	237	11,921	9,368	2,554	27%	0	2,554	27%
2020	9,767	1,869	0	237	11,873	9,436	2,437	26%	0	2,437	26%
2021	9,767	1,445	0	237	11,449	9,246	2,203	24%	0	2,203	24%
2022	9,767	1,445	0	237	11,449	9,325	2,124	23%	0	2,124	23%
2023	10,080	1,445	0	237	11,762	9,407	2,355	25%	0	2,355	25%
2024	10,308	854	0	237	11,399	9,501	1,898	20%	0	1,898	20%
2025	10,537	739	0	237	11,513	9,579	1,934	20%	0	1,934	20%
2026	10,765	635	0	237	11,637	9,637	2,000	21%	0	2,000	21%

Notes:

a. Total Installed Capacity does not include 140 MWs from Intercession City P11 in year 2017 due to transmission limitations. The 140 MWs will be available once transmission upgrades go in service in 2018.

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

c. QF includes Firm Renewables

DUKE 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[a] CAPACITY IMPORT	FIRM CAPACITY EXPORT	QF[b]	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
2016/17	9,692	1,953	0	177	11,823	9,066	2,757	30%	0	2,757	30%
2017/18	9,692	1,953	0	177	11,823	9,145	2,678	29%	0	2,678	29%
2018/19	10,732	1,953	0	237	12,923	9,222	3,701	40%	0	3,701	40%
2019/20	10,732	1,953	0	237	12,923	9,535	3,387	36%	0	3,387	36%
2020/21	10,682	1,953	0	237	12,873	8,848	4,025	45%	0	4,025	45%
2021/22	10,682	1,529	0	237	12,448	8,924	3,524	39%	0	3,524	39%
2022/23	10,682	1,529	0	237	12,448	9,000	3,448	38%	0	3,448	38%
2023/24	11,037	1,414	0	237	12,688	9,091	3,597	40%	0	3,597	40%
2024/25	11,276	781	0	237	12,295	9,158	3,137	34%	0	3,137	34%
2025/26	11,515	677	0	237	12,430	9,209	3,221	35%	0	3,221	35%

Notes:

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

b. QF includes Firm Renewables

DUKE ENERGY FLORIDA

SCHEDULE 8

PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

AS OF JANUARY 1, 2017 THROUGH DECEMBER 31, 2026

(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[a]	NOTES[b]
HINES	1-4	POLK	CC	NG		PL			04/2017			233	0	RP	(1)
OSPREY CC	1	POLK	CC	NG		PL			01/2017			245	245	P	(2)
INTERCESSION CITY	P11	OSCEOLA	GT	NG	DFO	PL, TK			06/2016			140		P	(1) and (3)
CRYSTAL RIVER	1	CITRUS	ST	BIT		RR	WA		10/1966	04/2018		(324)	(332)	RT	(1)
CRYSTAL RIVER	2	CITRUS	ST	BIT		RR	WA		11/1969	04/2018		(442)	(448)	RT	(1)
CITRUS	1	CITRUS	CC					11/2015	05/2018			1640	1820	P	(1) and (4)
AVON PARK	P1	HIGHLANDS	GT	NG	DFO	PL	TK			05/2020		(24)	(25)	RT	(1)
AVON PARK	P2	HIGHLANDS	GT	DFO		TK				05/2020		(24)	(25)	RT	(1)
HIGGINS	P1-4	PINELLAS	GT	NG	DFO	PL	TK			05/2020		(107)	(121)	RT	(1)
OSPREY CC	1	POLK	CC	NG		PL			05/2023			313	355	P	(5)
UNKNOWN	P1	UNKNOWN	GT					01/2022	06/2024			228	239	P	(1)
UNKNOWN	P2	UNKNOWN	GT					01/2023	06/2025			228	239	P	(1)
UNKNOWN	P3	UNKNOWN	GT					01/2024	06/2026			228	239	P	(1)

a. See page v. for Code Legend of Future Generating Unit Status.

b. NOTES

(1) Planned, Prospective, or Committed project.

(2) Firm power delivery from the Osprey Unit is constrained due to transmission limitations

(3) Intercession City 11 will have firm capacity starting on 6/2018 once the Transmission Upgrades are in service

(4) Approximately 50% of plant capacity is planned in service 5/2018 with the balance in service 11/2018

(5) Osprey CC Acquisition total capacity is available once Transmission Upgrades are in service, total Summer capacity goes up to 558MW and total Winter capacity goes up to 600MW

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2017

(1)	Plant Name and Unit Number:		**Citrus Combined Cycle**
(2)	Capacity		
	a. Summer (MWs):		1640
	b. Winter (MWs):		1820
(3)	Technology Type:		COMBINED CYCLE
(4)	Anticipated Construction Timing		
	a. Field construction start date:		11/2015
	b. Commercial in-service date:		5/2018 - 11/2018 (EXPECTED)
(5)	Fuel		
	a. Primary fuel:		NATURAL GAS
	b. Alternate fuel:		N/A
(6)	Air Pollution Control Strategy:		SCR and CO Catalyst
(7)	Cooling Method:		Cooling Tower
(8)	Total Site Area:		410 ACRES
(9)	Construction Status:		IN PROGRESS
(10)	Certification Status:		IN PROGRESS
(11)	Status with Federal Agencies:		ALL FEDERAL PERMITS RECEIVED
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):		6.66 %
	b. Forced Outage Factor (FOF):		6.36 %
	c. Equivalent Availability Factor (EAF):		87.40 %
	d. Resulting Capacity Factor (%):		79.4 %
	e. Average Net Operating Heat Rate (ANOHR):		6,525 BTU/kWh
(13)	Projected Unit Financial Data		
	a. Book Life (Years):		35
	b. Total Installed Cost (In-service year $/kW):		924.19
	c. Direct Construction Cost ($/kW):	($2017)	821.67
	d. AFUDC Amount ($/kW):		99.90
	e. Escalation ($/kW):		2.62
	f. Fixed O&M ($/kW-yr):	($2017)	6.36
	g. Variable O&M ($/MWh):	($2017)	2.19
	h. K Factor:		NO CALCULATION

NOTES

Total Installed Cost includes gas expansion, transmission interconnection and integration
$/kW values are based on Summer capacity
Fixed O&M cost does not include firm gas transportation costs

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2017

(1)	Plant Name and Unit Number:		**Undesignated CT P1**	
(2)	Capacity			
	a. Summer (MWs):		228	
	b. Winter (MWs):		239	
(3)	Technology Type:		COMBUSTION TURBINE	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		1/2022	
	b. Commercial in-service date:		6/2024	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		NATURAL GAS	
	b. Alternate fuel:		DISTILLATE FUEL OIL	
(6)	Air Pollution Control Strategy:		Dry Low Nox Combustion	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		UNKNOWN	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:		PLANNED	
(11)	Status with Federal Agencies:		PLANNED	
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):		3.00 %	
	b. Forced Outage Factor (FOF):		2.00 %	
	c. Equivalent Availability Factor (EAF):		95.06 %	
	d. Resulting Capacity Factor (%):		7.6 %	
	e. Average Net Operating Heat Rate (ANOHR):		10,672 BTU/kWh	
(13)	Projected Unit Financial Data			
	a. Book Life (Years):		35	
	b. Total Installed Cost (In-service year $/kW):		697.27	
	c. Direct Construction Cost ($/kW):	($2017)	569.14	
	d. AFUDC Amount ($/kW):		30.60	
	e. Escalation ($/kW):		97.53	
	f. Fixed O&M ($/kW-yr):	($2017)	3.08	
	g. Variable O&M ($/MWh):	($2017)	9.51	
	h. K Factor:		NO CALCULATION	

NOTES
Total Installed Cost includes gas expansion, transmission interconnection and integration
$/kW values are based on Summer capacity
Fixed O&M cost does not include firm gas transportation costs

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2017

(1)	Plant Name and Unit Number:		**Undesignated CT P2**
(2)	Capacity		
	a. Summer (MWs):		228
	b. Winter (MWs):		239
(3)	Technology Type:		COMBUSTION TURBINE
(4)	Anticipated Construction Timing		
	a. Field construction start date:		1/2023
	b. Commercial in-service date:		6/2025 (EXPECTED)
(5)	Fuel		
	a. Primary fuel:		NATURAL GAS
	b. Alternate fuel:		DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:		Dry Low Nox Combustion
(7)	Cooling Method:		N/A
(8)	Total Site Area:		UNKNOWN
(9)	Construction Status:		PLANNED
(10)	Certification Status:		PLANNED
(11)	Status with Federal Agencies:		PLANNED
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):		3.00 %
	b. Forced Outage Factor (FOF):		2.00 %
	c. Equivalent Availability Factor (EAF):		95.06 %
	d. Resulting Capacity Factor (%):		7.6 %
	e. Average Net Operating Heat Rate (ANOHR):		10,672 BTU/kWh
(13)	Projected Unit Financial Data		
	a. Book Life (Years):		35
	b. Total Installed Cost (In-service year $/kW):		714.70
	c. Direct Construction Cost ($/kW):	($2017)	569.14
	d. AFUDC Amount ($/kW):		31.36
	e. Escalation ($/kW):		114.20
	f. Fixed O&M ($/kW-yr):	($2017)	3.08
	g. Variable O&M ($/MWh):	($2017)	9.51
	h. K Factor:		NO CALCULATION

NOTES
Total Installed Cost includes gas expansion, transmission interconnection and integration
$/kW values are based on Summer capacity
Fixed O&M cost does not include firm gas transportation costs

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2017

(1)	Plant Name and Unit Number:		**Undesignated CT P3**	
(2)	Capacity			
	a. Summer (MWs):		228	
	b. Winter (MWs):		239	
(3)	Technology Type:		COMBUSTION TURBINE	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		1/2024	
	b. Commercial in-service date:		6/2026	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		NATURAL GAS	
	b. Alternate fuel:		DISTILLATE FUEL OIL	
(6)	Air Pollution Control Strategy:		Dry Low Nox Combustion	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		UNKNOWN	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:		PLANNED	
(11)	Status with Federal Agencies:		PLANNED	
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):		3.00 %	
	b. Forced Outage Factor (FOF):		2.00 %	
	c. Equivalent Availability Factor (EAF):		95.06 %	
	d. Resulting Capacity Factor (%):		7.6 %	
	e. Average Net Operating Heat Rate (ANOHR):		10,672 BTU/kWh	
(13)	Projected Unit Financial Data			
	a. Book Life (Years):		35	
	b. Total Installed Cost (In-service year $/kW):		732.57	
	c. Direct Construction Cost ($/kW):	($2017)	569.14	
	d. AFUDC Amount ($/kW):		32.15	
	e. Escalation ($/kW):		131.28	
	f. Fixed O&M ($/kW-yr):	($2017)	3.08	
	g. Variable O&M ($/MWh):	($2017)	9.51	
	h. K Factor:		NO CALCULATION	

NOTES
Total Installed Cost includes gas expansion, transmission interconnection and integration
$/kW values are based on Summer capacity
Fixed O&M cost does not include firm gas transportation costs

DUKE ENERGY FLORIDA

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

OSPREY

(1) POINT OF ORIGIN AND TERMINATION:	Kathleen - Osprey - Haines City East
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	New transmission line right-of-way
(4) LINE LENGTH:	50 miles
(5) VOLTAGE:	230 kV
(6) ANTICIPATED CONSTRUCTION TIMING:	6/1/2023
(7) ANTICIPATED CAPITAL INVESTMENT:	$150,000,000
(8) SUBSTATIONS:	Kathleen, Osprey, Haines City East
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

INTEGRATED RESOURCE PLANNING OVERVIEW

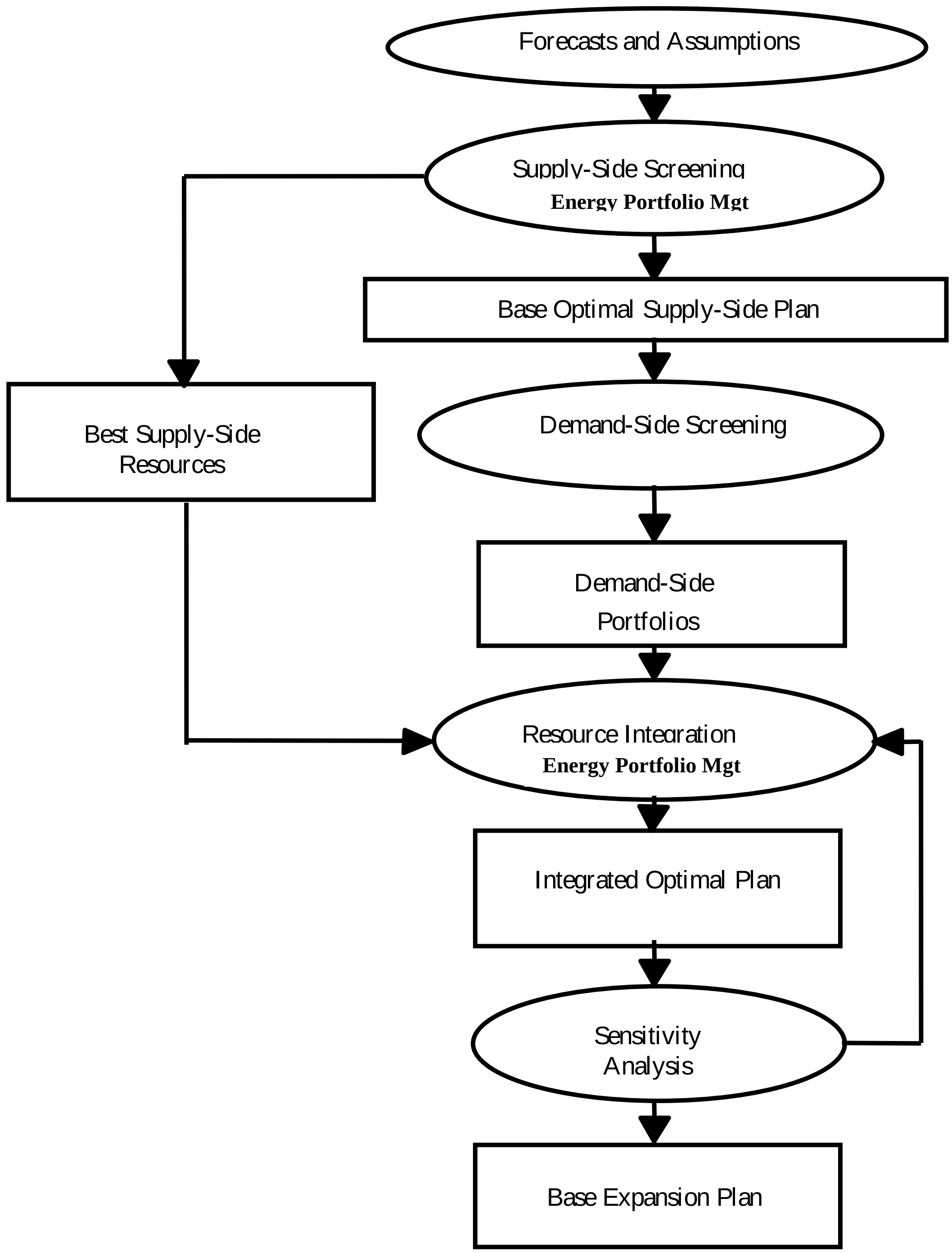
DEF employs an Integrated Resource Planning (IRP) process to determine the most cost-effective mix of supply- and demand-side alternatives that will reliably satisfy our customers' future demand and energy needs. DEF's IRP process incorporates state-of-the-art computer models used to evaluate a wide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

An overview of DEF'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 DEF to pursue over the next ten years to meet the Company's reliability criteria. The resulting ten-year plan, the Integrated Optimal Plan, is then tested under different relevant sensitivity scenarios to identify variances, if any, which would warrant reconsideration of any of the base plan assumptions. If the plan is judged robust and works within the corporate framework, it evolves as the Base Expansion Plan. This process is discussed in more detail in the following section titled "The Integrated Resource Planning (IRP) Process".

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

FIGURE 3.1

Integrated Resource Planning (IRP) Process Overview



THE INTEGRATED RESOURCE PLANNING (IRP) PROCESS

Forecasts and Assumptions

The evaluation of possible supply- and demand-side alternatives, and development of the optimal plan, is an integral part of the IRP process. These steps together comprise the integration process that begins with the development of forecasts and collection of input data. Base forecasts that reflect DEF's view of the most likely future scenario are developed. Additional future scenarios along with high and low forecasts may also be developed. 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 DEF's existing generating units. This establishes a consistent starting point for all further analysis.

Reliability Criteria

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

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

Loss of Load Probability (LOLP) is a probabilistic criterion that measures the probability that a company will be unable to meet its load throughout the year. While Reserve Margin considers the peak load and amount of installed resources, LOLP takes into account generating unit sizes, capacity mix, maintenance scheduling, unit availabilities, and capacity assistance available from other utilities. A standard probabilistic reliability threshold commonly used in the electric utility industry, and the criterion employed by DEF, is a maximum of one day in ten years loss of load probability.

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

Supply-Side Screening

Potential supply-side resources are screened to determine those that are the most cost-effective. Data used for the screening analysis is compiled from various industry sources and DEF'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 (e.g. possible climate legislation), and overall resource feasibility.

Economic evaluation of generation alternatives is performed using the System Optimizer optimization program, a module of the Energy Portfolio Management software. This optimization tool evaluates revenue requirements for specific resource plans generated from multiple combinations of future resource additions that meet system reliability criteria and other system constraints. All resource plans are then ranked by system revenue requirements.

Demand-Side Screening

Like supply-side resources, the impacts of potential demand-side resources are also factored into the integrated resource plan. The projected MW and MWH impacts for demand-side management resources are based on the energy efficiency measures and load management programs included in

DEF’s 2015 DSM Plan and meet the goals established by the Florida Public Service Commission (FPSC) in December 2014 (Docket 130200-EI).

Resource Integration and the Integrated Optimal Plan

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

Developing the Base Expansion Plan

The integrated optimized plan that provides the lowest revenue requirements may then be further tested using sensitivity analysis, including High and Low Demand and Energy Forecasts (see Schedules 2 and 3). The economics of the plan may be evaluated under high and low forecast scenarios for fuel, load and financial assumptions, or any other sensitivities which the planner deems relevant. From the sensitivity assessment, the plan that is identified as achieving the best balance of flexibility and cost is then reviewed within the corporate framework to determine how the plan potentially impacts or is impacted by many other factors. If the plan is judged robust under this review, it would then be considered the Base Expansion Plan.

KEY CORPORATE FORECASTS

Load Forecast

The assumptions and methodology used to develop the base case load and energy forecast are described in Chapter 2 of this TYSP. The High and Low forecasts of load and energy were provided to Resource Planning to test the robustness of the base plan.

Fuel Forecast

The base case fuel price forecast was developed using short-term and long-term spot market price projections from industry-recognized sources. The base cost for coal is based on the existing contracts and spot market coal prices and transportation arrangements between DEF and its various suppliers. For the longer term, the prices are based on spot market forecasts reflective of expected market conditions. Oil and natural gas prices are estimated based on current and expected contracts and spot purchase arrangements as well as near-term and long-term market forecasts. Oil and natural gas commodity prices are driven primarily by open market forces of supply and demand. Natural gas firm transportation cost is determined primarily by pipeline tariff rates.

Financial Forecast

The key financial assumptions used in DEF's most recent planning studies were 47 percent debt and 53 percent equity capital structure, projected cost of debt of 4.20 percent, and an equity return of 10.5 percent. The assumptions resulted on a weighted average cost of capital of 7.55 percent and an after-tax discount rate of 6.85 percent.

TEN-YEAR SITE PLAN (TYSP) RESOURCE ADDITIONS

DEF's planned supply resource additions and changes are shown in Schedule 8 and are referred to as DEF's Base Expansion Plan. This plan includes summer capacity uprates at the Hines Energy Center through the installation of Inlet Chilling, provision of firm transmission for the summer capacity from Intercession City P11, a combined cycle facility in 2018 in Citrus County, acquisition of the Calpine Osprey Energy Combined Cycle Unit in Auburndale and three planned combustion turbine units (years 2024, 2025 and 2026) at undesignated sites. DEF continues to seek market supply-side resource alternatives to enhance its resource plan. DEF also extended a purchase power agreement with Southern Power Company beginning in 2016. In addition to the existing and planned capacity resources listed above, DEF is planning to install over 750 MW of solar PV over the next 10-year period as an energy resource.

DEF's Base Expansion Plan projects the need for additional capacity with proposed in-service dates during the ten-year period from 2017 through 2026. The planned capacity additions, together with purchases from Qualifying Facilities (QF), Investor Owned Utilities, and Independent Power Producers help the DEF system meet the energy requirements of its customer base. The capacity needs identified in this plan may be impacted by DEF's ability to extend or replace existing purchase power and QF contracts and to secure new renewable purchased power resources in their respective projected timeframes. The additions in the Base Expansion Plan depend, in part, on projected load growth, and obtaining all necessary state and federal permits under current schedules. Changes in these or other factors could impact DEF's Base Expansion Plan.

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

RENEWABLE ENERGY

DEF continues to secure renewable energy from the following facilities listed by fuel type:

Purchases from Municipal Solid Waste Facilities:

Pasco County Resource Recovery (23 MW)

Pinellas County Resource Recovery (54.8 MW)

Dade County Resource Recovery (As Available)

Lake County Resource Recovery (As Available)

Lee County Resource Recovery (As Available)

Purchases from Waste Heat from Exothermic Processes:

PCS Phosphate (As Available)

Citrus World (As Available)

Purchases from Waste Wood, Tires, and Landfill Gas:

Ridge Generating Station (39.6 MW)

Purchases from Woody Biomass:

Florida Power Development (60 MW)

Photovoltaics

DEF-owned Solar Facilities (8.9 MW)

Customer-owned renewable generation under DEF’s Net Metering Tariff (28 MW as of 12/31/16)

In addition, DEF has a biomass contract with U.S. EcoGen (60 MW) which will utilize an energy crop as its fuel source.

DEF also has several As-Available contracts utilizing solar PV technologies. As-Available energy purchases are made on an hour by hour basis for which contractual commitments to the quantity, time or reliability of delivery are not required. At this time, the solar developers are projecting in-service dates beyond 2017. As of December 31, 2016, DEF had over 2,100 MW of solar projects in the various grid interconnection queues in Florida. While some of those projects anticipate selling to entities other than DEF, the Company continues to have the obligation to purchase uncommitted energy from those certified QF facilities at As-Available energy rates. As a result, DEF has assumed the future presence of some 750 MW of QF solar projects over the 10-year period. In total, DEF is reasonably projecting over 1,500 MW of solar PV projects to be installed in the DEF territory over the 10-year period. Project ownership proportions may change over time based on specific project economics, development details, renewable energy incentives and other factors.

DEF continues to field inquiries from renewable suppliers and explore whether these potential QF suppliers can provide project commitments and reliable capacity or energy consistent with FERC Rules and the FPSC Rules, 25-17.080 through 25-17.310. DEF will continue to submit renewable contracts in compliance with all rules as appropriate.

Depending upon the mix of generators operating at any given time, the purchase of renewable energy may reduce DEF’s use of fossil fuels. Renewable energy sources making firm commitments to the company can also defer or eliminate the need to construct more conventional generators. As part of DEF’s integrated resource planning process, we are continually evaluating cost-effective alternatives to meet our customer’s needs. DEF knows that renewable and distributed energy resources are an important part of Florida’s energy future and we are committed to advancing these resources in an affordable and sustainable way. We are encouraged to see solar PV technology continue to reduce in price. As a result of the forecasts around solar PV technology, DEF has incorporated this clean energy source as a supply-side resource in both DEF's near-term and long-term generation plans.

The development, construction, commissioning and initial operation of the solar demonstration projects at Perry and Osceola have provided DEF with valuable experience in siting, contracting, constructing, operating, and integrating solar photovoltaic technology facilities on the power grid. DEF has worked with the contractors and drawn experience from Duke's North Carolina jurisdiction to establish necessary standards for the construction and upkeep of utility grade facilities and to develop standards necessary to ensure the reliability of local distribution systems. In addition, operating data from these facilities will begin to provide DEF with a location specific understanding of solar energy production, potential fuel diversity contributions and how these will interact with the existing resource portfolio. Adding these near-term scaled solar facilities is a natural evolution of integrating new generation technology, and supplements the solar PV research and demonstration pilots operated under DEF's conservation programs. As the costs of solar generation continues to decline, DEF will continue to seek and build projects, like the recently completed projects at Osceola and Perry (shown in Figures 3.2 and 3.3), that will provide long term benefits to our customers and the environment.

FIGURE 3.2
Osceola Solar Site

FIGURE 3.3
Perry Solar Site

DEF's current forecast, supporting the Base Expansion Plan includes over 750 MW of DEF-owned solar PV to be installed over the 10-year planning horizon. As with all forecasts included here, the forecast relies heavily on the forward looking price for this technology, the value rendered by this technology, and considerations to other emerging and conventional cost-effective alternatives, including the use of emerging battery storage technology.

PLAN CONSIDERATIONS

Load Forecast

In general, higher-than-projected load growth would shift the need for new capacity to an earlier year and lower-than-projected load growth would delay the need for new resources. The Company's resource plan provides the flexibility to shift certain resources to earlier or later in-service dates should a significant change in projected customer demand begin to materialize. A specific discussion of DEF's review of load growth forecasts higher and lower than the base forecast can be found in the previous sections.

TRANSMISSION PLANNING

DEF's transmission planning assessment practices are developed to test the ability of the planned system to meet the reliability criteria as outlined in the FERC Form No. 715 filing, and to assure the system meets DEF, Florida Reliability Coordinating Council, Inc. (FRCC), and North American Electric Reliability Corporation (NERC) criteria. This involves the use of load flow and transient stability programs to model various contingency situations that may occur, and in determining if the system response meets the reliability criteria. In general, this involves running simulations for the loss of any single line, generator, or transformer. DEF runs this analysis for contingencies that may occur at system peak and off-peak load levels, under both summer and winter conditions. Additional studies are performed to determine the system response to credible, but less probable criteria. These studies include the loss of multiple generators, transmission lines, or combinations of each (some load loss is permissible under the more severe disturbances). These credible, but less probable scenarios are also evaluated at various load levels, since some of the more severe situations occur at average or minimum load conditions. In particular, critical fault clearing times are typically the shortest (most severe) at minimum load conditions, with just a few large base load units supplying the system needs. As noted in the DEF reliability criteria, some remedial actions are allowed to reduce system loadings; in particular, sectionalizing is allowed to reduce loading on lower voltage lines for bulk system contingencies, but the risk to load on the sectionalized system must be reasonable (it would not be considered prudent to operate for long periods with a sectionalized system). In addition, the number of remedial action steps and the overall complexity of the scheme are evaluated to determine overall acceptability.

DEF presently uses the following reference documents to calculate and manage Available Transfer Capability (ATC), Total Transfer Capability (TTC) and Transmission Reliability Margin (TRM) for required transmission path postings on the Florida Open Access Same Time Information System (OASIS):

- http://www.oatioasis.com/FPC/FPCdocs/ATCID_Posted_Rev3.docx
- http://www.oatioasis.com/FPC/FPCdocs/TRMID_4.docx

DEF uses the following reference document to calculate and manage Capacity Benefit Margin (CBM):

- http://www.oatioasis.com/FPC/FPCdocs/CBMID_rev3.docx

DEF proposed bulk transmission line additions are summarized in the following Table 3.3. DEF has listed new line projects at 230 kV or greater. These projects may change depending upon the outcome of DEF's final corridor and specific route selection process.

TABLE 3.3
DUKE ENERGY FLORIDA
LIST OF PROPOSED BULK TRANSMISSION LINE ADDITIONS
2017 – 2026

MVA RATING WINTER	LINE OWNERSHIP	TERMINALS		LINE LENGTH (CKT-MILES)	COMMERCIAL IN-SERVICE DATE (MO./YEAR)	NOMINAL VOLTAGE (kV)
1370	DEF	WILLISTON NORTH	BRONSON	14	11/2020	230

CHAPTER 4

ENVIRONMENTAL AND LAND USE INFORMATION

CHAPTER 4

ENVIRONMENTAL AND LAND USE INFORMATION

PREFERRED SITES

DEF's 2017 TYSP Preferred Sites include the Osprey Energy Center site and Citrus County (adjacent to the DEF Crystal River Site) for combined cycle natural gas generation, and Suwannee County for natural gas generation and/or solar generation. DEF's expansion plan beyond this TYSP planning horizon includes potential nuclear power at the Levy County greenfield. These Preferred Sites are discussed below.

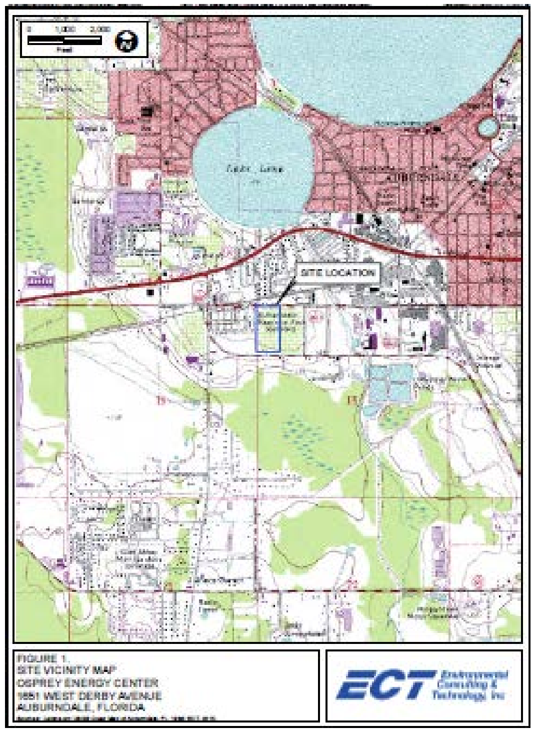
OSPREY SITE

The Osprey Energy Center is currently in operation and holds all the environmental permits required. DEF closed on the purchase of the Osprey Energy Center on January 3, 2017. It is a 537 MW natural gas fired, combined cycle generating facility (see Figure 4.1.a below) located in Auburndale, Florida. The Osprey Site consists of approximately 18.5 acres situated approximately 1.5 miles south of downtown Auburndale. The Osprey Site was formerly a citrus grove and was unused until construction of the Osprey Project began. Land uses adjacent to the Osprey Site include the Tampa Electric Company (TECO) Recker Substation and existing TECO 230 kV transmission line, a 120 MW combustion turbine power plant, and the City of Auburndale cemetery.

The Plant commenced commercial operation in May 2004 with a nominal base load power output of 537 MW and peaking output of 599 MW. DEF has purchased power from the Osprey facility under a power purchase agreement since 2014. DEF purchased the facility in its entirety on January 3, 2017.

FIGURE 4.1.a

Existing Osprey Site Location



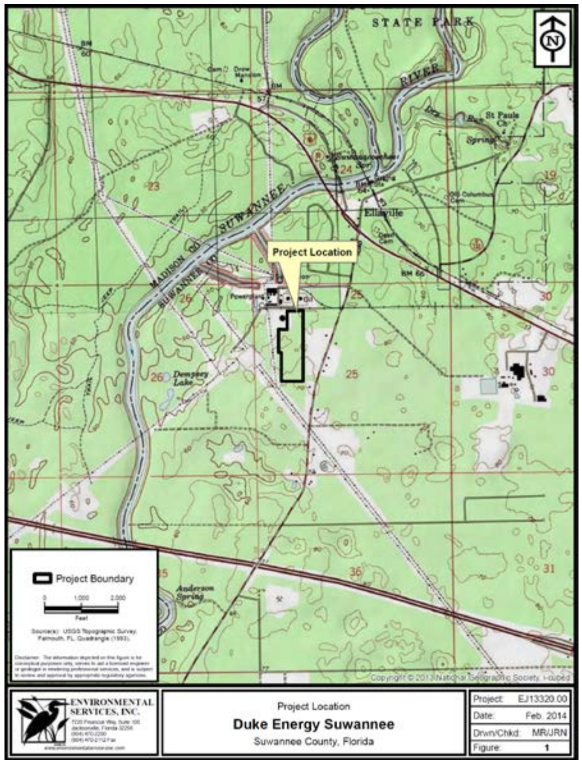
SUWANNEE COUNTY

DEF identified the existing Suwannee River Energy Center site in Suwannee County for additional simple cycle combustion turbines, combined cycle and/or solar technology development (see Figure 4.1.b below). DEF's current plan for the site includes preparations to build, own and operate an 8.8 MW (ac) solar facility. This facility is expected to be in operation during 2017. The project area totals approximately 68 acres and is located east of River Road, south of U.S. 90. The site is bisected by a railroad, a 115 kV transmission line, a 12.47 kV distribution line and natural gas pipelines. The project area consists of open areas and naturally occurring pine and oak canopy, primarily composed of longleaf and slash pine as well as turkey and laurel oak. DEF performed an environmental and cultural assessment of the Suwannee site. The site contains no jurisdictional wetlands. In addition, there is no evidence of listed species utilizing the site for nesting or foraging, except for the gopher tortoise. A gopher tortoise survey has been conducted to ensure no gopher tortoise impacts. A cultural resources survey was completed and approved by the State determining no archaeological or cultural resources will be adversely impacted by the project.

Development of the project site will require an Environmental Resource Permit from the Florida Department of Environmental Protection. Suwannee County requires a special exception approval to construct the project. Permitting began in the fourth quarter of 2016. Site mobilization began late in the first quarter of 2017 and construction will be completed in the fourth quarter of 2017.

FIGURE 4.1.b

Suwannee County Preferred Site Location



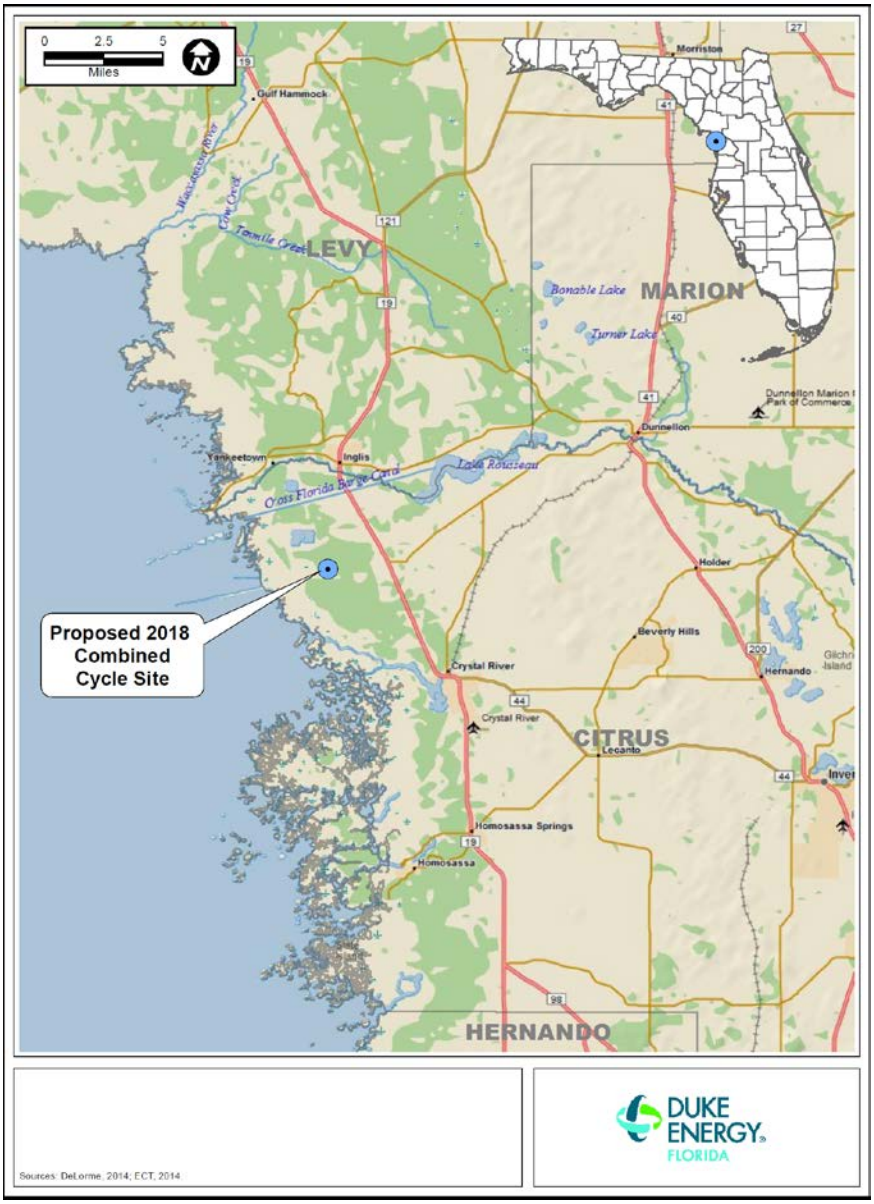
CITRUS COUNTY

DEF has identified a site in Citrus County as a preferred site for new combined cycle generation (see Figure 4.1.c below). The Company has begun construction of a new combined cycle facility on the property with the first unit coming on line during 2018. The Citrus site consists of approximately 400 acres of property located immediately north of the Crystal River Energy Center (CREC) transmission line right-of-way and east of the Crystal River Units 4 and 5 coal ash storage area and north of the DEF Crystal River to Central Florida 500/230 kV transmission line right-of-way. The property consists of regenerating timber lands, forested wetlands, and range land bounded to the south by the CREC North Access Road. The site was previously part of the Holcim mine. A new natural gas pipeline will be brought to the project site by the natural gas supplier (Sabal Trail) on right-of-way provided by the supplier. The water pipelines and transmission lines will use existing DEF rights-of-way. No new rail spur is proposed and site access will be via existing roadways.

DEF's assessment of the Citrus site addressed whether any threatened and endangered species or archeological and cultural resources would be adversely impacted by the development of the site the facilities. No significant issues were identified in DEF's evaluations of the property. A certification has been issued by the State of Florida under the Power Plant Siting Act. Federal permits include a National Pollution Discharge Elimination System (NPDES) permit, Title V Air Operating Permit and a Clean Water Act Section 404 Permit. The site has received Land Use Approval from Citrus County. The new project is proposing to use the existing Crystal River Unit 3 intake structure and a new discharge structure in the existing discharge canal.

FIGURE 4.1.c

Citrus County Preferred Site Location



LEVY COUNTY NUCLEAR POWER PLANT – LEVY COUNTY

Although the proposed Levy Nuclear Project is no longer an option for meeting energy needs within the originally scheduled time frame, DEF continues to regard the Levy site as a viable option for future nuclear generation and understands the importance of fuel diversity in creating a sustainable energy future. The combined operating licenses for Levy Units 1 and 2 were issued on October 26, 2016. The Company continues to monitor developments that could affect the future viability of new nuclear development in Florida, including the recently proposed U.S. EPA Clean Power Plan which could place a premium on carbon free generation. The Company will make a final decision on new nuclear generation in Florida in the future based on, among other factors, energy needs, project costs, carbon regulation, natural gas prices, existing or future legislative provisions for cost recovery, and the requirements of the Nuclear Regulatory Commission's combined operating license. The Levy County site is shown in Figure 4.1.d below.

FIGURE 4.1.d

Levy County Nuclear Power Plant (Levy County)