DUKE ENERGY.
FLORIDA

Dianne M. Triplett
DEPUTY GENERAL COUNSEL

April 2, 2018

VIA OVERNIGHT DELIVERY

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

Re: Ten-Year Site Plan as of December 31, 2017

Dear Ms. Stauffer:

Pursuant to Staff's partial waiving of the requirements of Rule 25-22.071, F.A.C., please find enclosed for filing five (5) hard copies of Duke Energy Florida, LLC's, 2018 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/cmk
Enclosures

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Duke Energy Florida, LLC
Ten-Year Site Plan

April 2018

2018-2027

Submitted to:
Florida Public Service Commission

DUKE ENERGY.
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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

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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.

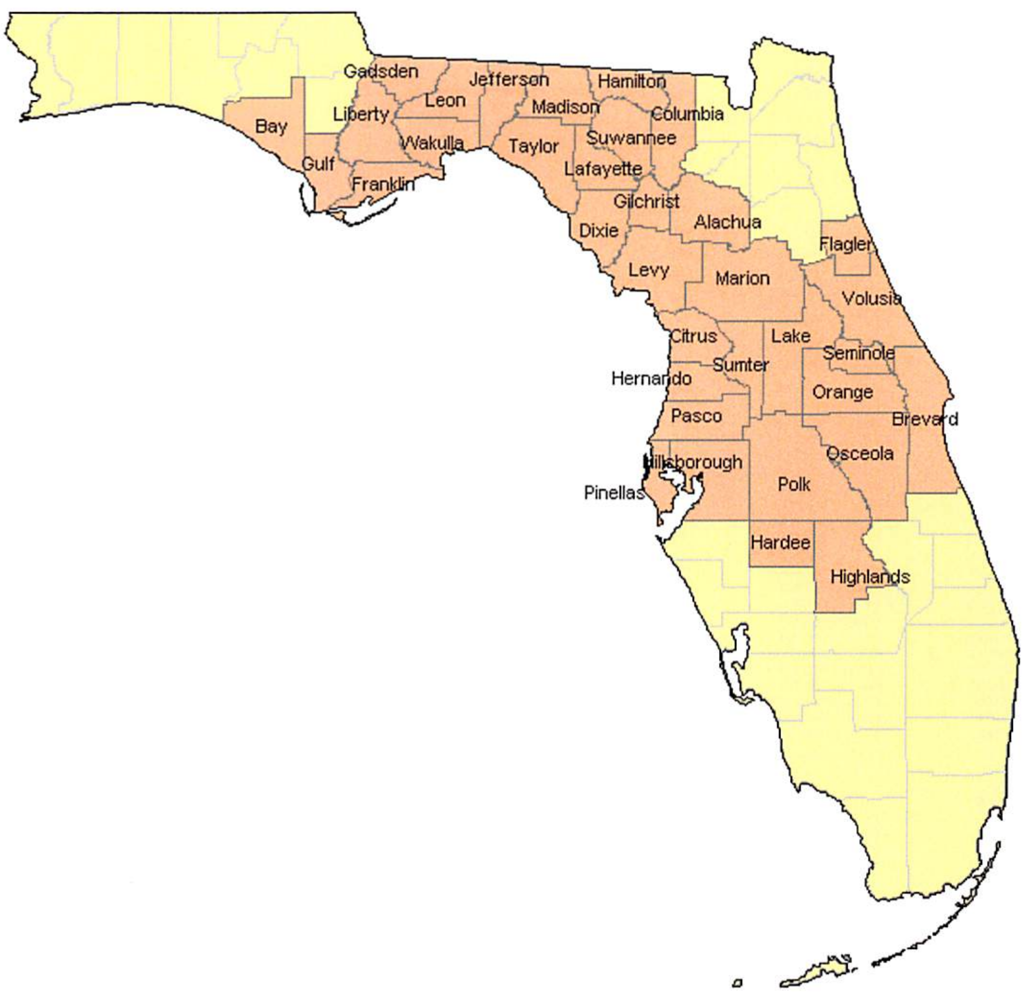
ENERGY MANAGEMENT and ENERGY EFFICIENCY

The Company's residential Energy Management program represents a demand response type of program where participating customers help manage future growth and costs. Approximately 432,000 customers participated in the residential Energy Management program during 2017, contributing about 694 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, 2017, DEF had total summer capacity resources of 10,776 MW consisting of installed capacity of 8,720 MW and 2,056 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, 2017

(1) PLANT NAME	(2) UNIT NO.	(3) LOCATION (COUNTY)	(4) UNIT TYPE	(5) FUEL PRI.	(6) FUEL ALT.	(7) FUEL TRANSPORT PRI.	(8) FUEL TRANSPORT ALT.	(9) ALT. FUEL DAYS USE	(10) COM'L IN-SERVICE MO./YEAR	(11) EXPECTED RETIREMENT MO./YEAR	(12) GEN. MAX. NAMEPLATE KW	(13) NET CAPABILITY SUMMER MW	(14) NET CAPABILITY WINTER 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	9/2018 **	440,550	324	332
CRYSTAL RIVER	2	CITRUS	ST	BIT		RR	WA		11/69	9/2018 **	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
											Steam Total	3,201	3,270
COMBINED-CYCLE													
BARTOW	4	PINELLAS	CC	NG	DFO	PL	TK	*	6/09		1,253,000	1,080	1,187
HINES ENERGY COMPLEX	1	POLK	CC	NG	DFO	PL	TK	*	4/99		546,500	490	528
HINES ENERGY COMPLEX	2	POLK	CC	NG	DFO	PL	TK	*	12/03		548,250	511	563
HINES ENERGY COMPLEX	3	POLK	CC	NG	DFO	PL	TK	*	11/05		561,000	515	564
HINES ENERGY COMPLEX	4	POLK	CC	NG	DFO	PL	TK	*	12/07		610,000	516	544
OSPREY	1	POLK	CC	NG	DFO	PL	TK	*	5/04		644,000	245	245
TIGER BAY	1	POLK	CC	NG		PL	TK		8/97		278,100	200	231
											CC Total	3,557	3,862
COMBUSTION TURBINE													
AVON PARK	P1	HIGHLANDS	GT	NG	DFO	PL	TK	*	12/68	6/2020 **	33,790	24	25
AVON PARK	P2	HIGHLANDS	GT	DFO		TK		*	12/68	6/2020 **	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	61
BAYBORO	P2	PINELLAS	GT	DFO		WA		*	4/73		56,700	41	58
BAYBORO	P3	PINELLAS	GT	DFO		WA		*	4/73		56,700	43	60
BAYBORO	P4	PINELLAS	GT	DFO		WA		*	4/73		56,700	43	59
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	65
DEBARY	P4	VOLUSIA	GT	DFO		TK		*	12/75-4/76		66,870	50	65
DEBARY	P5	VOLUSIA	GT	DFO		TK		*	12/75-4/76		66,870	50	65
DEBARY	P6	VOLUSIA	GT	DFO		TK		*	12/75-4/76		66,870	51	65
DEBARY	P7	VOLUSIA	GT	NG	DFO	PL	TK	*	10/92		115,000	79	99
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	98
DEBARY	P10	VOLUSIA	GT	DFO		TK		*	10/92		115,000	75	95
HIGGINS ***	P1	PINELLAS	GT	NG		PL			3/69	6/2020 **	33,790	0	0
HIGGINS ***	P2	PINELLAS	GT	NG		PL			4/69	6/2020 **	33,790	0	0
HIGGINS ***	P3	PINELLAS	GT	NG		PL			12/70	6/2020 **	42,925	0	0
HIGGINS ***	P4	PINELLAS	GT	NG		PL			1/71	6/2020 **	42,925	0	0
INTERCESSION CITY	P1	OSCEOLA	GT	DFO		PL,TK		*	5/74		56,700	47	64
INTERCESSION CITY	P2	OSCEOLA	GT	DFO		PL,TK		*	5/74		56,700	46	63
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	63
INTERCESSION CITY	P5	OSCEOLA	GT	DFO		PL,TK		*	5/74		56,700	45	62
INTERCESSION CITY	P6	OSCEOLA	GT	DFO		PL,TK		*	5/74		56,700	47	64
INTERCESSION CITY	P7	OSCEOLA	GT	NG	DFO	PL	PL,TK	*	10/93		115,000	78	95
INTERCESSION CITY	P8	OSCEOLA	GT	NG	DFO	PL	PL,TK	*	10/93		115,000	79	96
INTERCESSION CITY	P9	OSCEOLA	GT	NG	DFO	PL	PL,TK	*	10/93		115,000	79	96
INTERCESSION CITY	P10	OSCEOLA	GT	NG	DFO	PL	PL,TK	*	10/93		115,000	78	96
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	94
INTERCESSION CITY	P13	OSCEOLA	GT	NG	DFO	PL	PL,TK	*	12/00		115,000	75	93
INTERCESSION CITY	P14	OSCEOLA	GT	NG	DFO	PL	PL,TK	*	12/00		115,000	72	92
SUWANNEE RIVER	P1	SUWANNEE	GT	NG	DFO	PL	TK	*	10/80		61,200	49	68
SUWANNEE RIVER	P2	SUWANNEE	GT	DFO		TK		*	10/80		61,200	50	67
SUWANNEE RIVER	P3	SUWANNEE	GT	NG	DFO	PL	TK	*	11/80		61,200	50	68
UNIV. OF FLA.	P1	ALACHUA	GT	NG		PL			1/94		43,000	46	47
											CT Total	1,954	2,675
SOLAR													
OSCEOLA	P1	OSCEOLA	PV	SO					5/16		3,800	2	0
PERRY	P1	TAYLOR	PV	SO					8/16		5,000	2	0
SUWANNEE RIVER	P1	SUWANNEE	PV	SO					11/17		8,800	4	0
											SOLAR Total	8	0
											TOTAL RESOURCES (MW)	8,720	9,807

* 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.

CHAPTER 2

FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION

DUKE ENERGY.
FLORIDA

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 forecast. Economic data from 2017 showed a continuation and expansion of the ongoing economic recovery that began in approximately 2012 and has continued to strengthen since. 2017 Economic growth generally offset even the effects of Hurricane Irma, the largest and most costly hurricane to hit DEF's territory. Looking ahead, the projections incorporated in this site plan forecast a continued moderate expansion in population and economic activity within the DEF service territory. DEF continues to provide alternate "high" and "low" forecasts for energy and demand growth, recognizing that the current economic expansion may continue to accelerate as it has in the last year or could unwind, as it is one of the longest expansions on record.

Over the course of the ten years of history in this Site Plan (2008-2017), the nation and the State of Florida have endured the worst economic downturn in eighty years and have emerged to signs of a strong, sustainable recovery. Nearly all economic measures appear to be changing favorably and broadly throughout most sectors of both economies. A strong recovery is in progress for most sectors of the Florida economy and it is projected to continue through the period of this Plan. County population growth rate projections from the University of Florida's Bureau of Economic and Business Research (BEBR) were incorporated into this projection. The DEF service area population has been estimated to have grown at an average ten-year growth of 1.0 percent from 2008 – 2017 (Schedule 2.1.1 Column 2). Demographic conditions going forward look amenable to sustaining this level of growth over the 2018-2027 period. The rate of residential customer growth, which averaged 0.9% per year over the historical ten year period, is expected to improve to an average of 1.4% for the projected ten years. A projected decline in average household size will result in a higher rate of household growth. By looking at Schedule

2.3.1 Column 6, we find that total DEF customers grew from 1.639 million in 2008 to 1.775 million in 2017, an increase of 136,405 or 0.9%. The projected number of total customers between 2018 and 2027 is 246,381 or 1.4%.

From 2008 to 2017 net energy for load (NEL) declined by an annual average -1.2% (Schedule 3.3.1 Column 8), primarily due to terminated contracts in the Sales for Resale or Wholesale jurisdiction (Schedule 3.3 Column 6). The 2017 level of Wholesale NEL fell to only 33% of its 2008 GWH level. The projected share of Wholesale NEL over the ten year forecast will remain below 3.7% of total DEF NEL which is expected to average 1.1% per year. Total DEF customer growth in 2017 reached 1.85%, higher than the previous 5-year average growth of 1.2%. The forecast over the next ten years calls for an average annual customer growth rate of 1.4%. Florida population growth is expected to remain elevated through most of the 2020s as the large baby-boom age cohort retire.

During the 2008 to 2017 historical period the DEF Summer net firm demand (Schedule 3.1 column 10) declined from 9,185 MW to 8,624 MW, an average -0.7% per year. Once again, most of the decline came from the DEF wholesale load sector (Column 3), which dropped from a level of 1,512 MW in 2008 to 808 MW in 2016, a total drop of -46.6%. The projected ten year period total DEF summer net firm demand growth rate of 0.9 percent per year is primarily driven by higher population/customer levels and improved economic activity improving net firm retail demand. The Wholesale summer peak will remain flat.

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:								
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	3,625,558	2.496	19,238	1,452,454	13,245	11,892	162,071	73,374
2012	3,641,179	2.496	18,251	1,458,690	12,512	11,723	163,297	71,792
2013	3,713,013	2.495	18,508	1,488,159	12,437	11,718	165,936	70,617
2014	3,747,160	2.492	19,003	1,503,758	12,637	11,789	167,253	70,485
2015	3,794,138	2.489	19,932	1,524,605	13,074	12,070	169,147	71,359
2016	3,837,436	2.485	20,265	1,543,967	13,126	12,094	170,999	70,724
2017	3,906,975	2.483	19,791	1,573,260	12,579	11,918	173,695	68,612
FORECAST:								
2018	3,952,288	2.470	20,279	1,600,162	12,673	12,164	177,368	68,583
2019	3,996,802	2.457	20,457	1,626,507	12,577	12,217	180,421	67,716
2020	4,042,384	2.446	20,844	1,652,828	12,611	12,410	183,367	67,681
2021	4,087,879	2.435	21,188	1,678,881	12,620	12,578	186,255	67,531
2022	4,131,371	2.424	21,448	1,704,094	12,586	12,707	189,079	67,207
2023	4,174,083	2.414	21,704	1,728,832	12,554	12,839	191,840	66,923
2024	4,215,680	2.405	21,957	1,752,952	12,525	12,958	194,526	66,613
2025	4,253,903	2.395	22,397	1,776,315	12,609	13,190	197,125	66,913
2026	4,289,716	2.385	22,486	1,798,832	12,501	13,215	199,627	66,196
2027	4,324,564	2.375	22,752	1,820,557	12,497	13,353	202,040	66,092

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:								
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	3,625,558	2.496	19,238	1,452,454	13,245	11,892	162,071	73,374
2012	3,641,179	2.496	18,251	1,458,690	12,512	11,723	163,297	71,792
2013	3,713,013	2.495	18,508	1,488,159	12,437	11,718	165,936	70,617
2014	3,747,160	2.492	19,003	1,503,758	12,637	11,789	167,253	70,485
2015	3,794,138	2.489	19,932	1,524,605	13,074	12,070	169,147	71,359
2016	3,837,436	2.485	20,265	1,543,967	13,126	12,094	170,999	70,724
2017	3,906,975	2.483	19,791	1,573,260	12,579	11,918	173,695	68,612
FORECAST:								
2018	3,960,961	2.470	22,318	1,603,674	13,917	12,567	177,758	70,699
2019	4,016,838	2.457	22,714	1,634,661	13,895	12,741	181,326	70,264
2020	4,074,474	2.446	23,288	1,665,949	13,979	13,019	184,824	70,440
2021	4,132,301	2.435	23,845	1,697,125	14,050	13,227	188,280	70,252
2022	4,188,414	2.424	24,327	1,727,623	14,081	13,404	191,690	69,928
2023	4,244,044	2.414	24,832	1,757,808	14,127	13,646	195,056	69,959
2024	4,298,845	2.405	25,343	1,787,533	14,178	13,891	198,364	70,027
2025	4,350,510	2.395	25,981	1,816,656	14,302	14,216	201,602	70,514
2026	4,400,020	2.385	26,349	1,845,087	14,281	14,318	204,760	69,927
2027	4,448,802	2.375	26,864	1,872,859	14,344	14,557	207,844	70,040

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:								
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	3,625,558	2.496	19,238	1,452,454	13,245	11,892	162,071	73,374
2012	3,641,179	2.496	18,251	1,458,690	12,512	11,723	163,297	71,792
2013	3,713,013	2.495	18,508	1,488,159	12,437	11,718	165,936	70,617
2014	3,747,160	2.492	19,003	1,503,758	12,637	11,789	167,253	70,485
2015	3,794,138	2.489	19,932	1,524,605	13,074	12,070	169,147	71,359
2016	3,837,436	2.485	20,265	1,543,967	13,126	12,094	170,999	70,724
2017	3,906,975	2.483	19,791	1,573,260	12,579	11,918	173,695	68,612
FORECAST:								
2018	3,938,930	2.470	17,728	1,594,754	11,116	11,763	176,768	66,544
2019	3,971,412	2.457	17,740	1,616,175	10,977	11,778	179,274	65,699
2020	4,005,129	2.446	17,930	1,637,596	10,949	11,903	181,677	65,515
2021	4,038,513	2.435	18,102	1,658,607	10,914	11,958	184,005	64,989
2022	4,069,683	2.424	18,192	1,678,649	10,837	11,977	186,255	64,305
2023	4,099,879	2.414	18,282	1,698,098	10,766	12,050	188,429	63,952
2024	4,128,780	2.405	18,375	1,716,817	10,703	12,127	190,516	63,652
2025	4,154,201	2.395	18,582	1,734,682	10,712	12,277	192,504	63,773
2026	4,177,127	2.385	18,533	1,751,619	10,581	12,218	194,387	62,856
2027	4,198,945	2.375	18,602	1,767,674	10,524	12,279	196,171	62,596

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:							
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
2017	3,120	2,137	1,459,991	0	24	3,171	38,023
FORECAST:							
2018	3,173	2,110	1,503,998	0	24	3,204	38,845
2019	3,267	2,090	1,563,014	0	24	3,209	39,175
2020	3,405	2,072	1,643,226	0	24	3,220	39,903
2021	3,383	2,056	1,645,287	0	24	3,233	40,405
2022	3,416	2,042	1,672,808	0	24	3,250	40,845
2023	3,406	2,030	1,677,941	0	24	3,265	41,238
2024	3,387	2,019	1,677,703	0	23	3,279	41,604
2025	3,374	2,010	1,678,646	0	23	3,293	42,277
2026	3,350	2,001	1,673,953	0	23	3,306	42,380
2027	3,333	1,994	1,671,538	0	23	3,323	42,785

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:							
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
2017	3,120	2,137	1,459,991	0	24	3,171	38,023
FORECAST:							
2018	3,207	2,110	1,519,866	0	24	3,284	41,401
2019	3,340	2,090	1,598,441	0	24	3,307	42,126
2020	3,505	2,072	1,691,816	0	24	3,331	43,167
2021	3,499	2,056	1,701,723	0	24	3,358	43,952
2022	3,543	2,042	1,735,118	0	24	3,387	44,685
2023	3,558	2,030	1,753,040	0	24	3,418	45,478
2024	3,570	2,019	1,768,283	0	23	3,449	46,277
2025	3,580	2,010	1,781,636	0	23	3,479	47,280
2026	3,576	2,001	1,786,700	0	23	3,511	47,777
2027	3,581	1,994	1,795,872	0	23	3,544	48,569

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:							
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
2017	3,120	2,137	1,459,991	0	24	3,171	38,023
FORECAST:							
2018	3,115	2,110	1,476,099	0	24	3,097	35,727
2019	3,203	2,090	1,532,865	0	24	3,093	35,839
2020	3,324	2,072	1,604,572	0	24	3,089	36,270
2021	3,276	2,056	1,593,597	0	24	3,088	36,449
2022	3,280	2,042	1,606,420	0	24	3,089	36,562
2023	3,254	2,030	1,603,050	0	24	3,091	36,701
2024	3,225	2,019	1,597,218	0	23	3,092	36,842
2025	3,196	2,010	1,590,465	0	23	3,092	37,169
2026	3,154	2,001	1,576,126	0	23	3,092	37,021
2027	3,123	1,994	1,566,018	0	23	3,094	37,122

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:					
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
2017	2,196	2,700	42,919	26,248	1,775,340
FORECAST:					
2018	1,577	2,639	43,060	26,446	1,806,086
2019	1,310	2,847	43,331	26,620	1,835,638
2020	1,352	2,808	44,063	26,790	1,865,057
2021	1,414	2,737	44,555	26,956	1,894,148
2022	1,459	2,785	45,088	27,118	1,922,333
2023	1,459	2,818	45,515	27,278	1,949,980
2024	1,467	2,986	46,057	27,433	1,976,930
2025	1,469	2,729	46,475	27,583	2,003,033
2026	1,473	3,037	46,890	27,732	2,028,192
2027	1,476	3,055	47,316	27,876	2,052,467

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:					
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
2017	2,196	2,700	42,919	26,248	1,775,340
FORECAST:					
2018	1,577	1,936	44,915	26,446	1,809,988
2019	1,310	2,122	45,558	26,620	1,844,697
2020	1,352	2,106	46,625	26,789	1,879,634
2021	1,414	2,056	47,422	26,957	1,914,417
2022	1,459	2,105	48,249	27,119	1,948,474
2023	1,459	2,146	49,083	27,278	1,982,172
2024	1,467	2,306	50,050	27,433	2,015,349
2025	1,469	2,097	50,846	27,584	2,047,851
2026	1,473	2,364	51,614	27,732	2,079,580
2027	1,476	2,390	52,436	27,876	2,110,573

DUKE ENERGY FLORIDA

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

(1) YEAR	(2) SALES FOR RESALE GWh	(3) UTILITY USE & LOSSES GWh	(4) NET ENERGY FOR LOAD GWh	(5) OTHER CUSTOMERS (AVERAGE NO.)	(6) TOTAL NO. OF CUSTOMERS
HISTORY:					
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
2017	2,196	2,700	42,919	26,248	1,775,340
FORECAST:					
2018	1,577	4,027	41,330	26,446	1,800,078
2019	1,310	4,192	41,340	26,620	1,824,159
2020	1,352	4,159	41,781	26,789	1,848,134
2021	1,414	4,091	41,954	26,957	1,871,624
2022	1,459	4,119	42,139	27,119	1,894,065
2023	1,459	4,144	42,303	27,278	1,915,835
2024	1,467	4,277	42,586	27,433	1,936,785
2025	1,469	4,073	42,711	27,584	1,956,780
2026	1,473	4,297	42,791	27,732	1,975,740
2027	1,476	4,308	42,905	27,876	1,993,715

DUKE ENERGY FLORIDA

SCHEDULE 3.1.1
HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW)
BASE CASE 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:										
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	10,530	893	9,637	235	366	466	100	339	80	8,946
2017	10,220	808	9,412	203	372	498	78	349	80	8,640
FORECAST:										
2018	10,461	806	9,655	272	381	529	87	355	80	8,757
2019	10,810	1,004	9,806	296	387	553	91	360	80	9,043
2020	10,890	965	9,925	327	393	575	95	364	80	9,057
2021	10,855	816	10,039	328	399	593	99	366	80	8,990
2022	10,968	817	10,151	338	405	609	103	368	80	9,065
2023	11,079	817	10,262	338	411	624	108	369	80	9,150
2024	11,206	819	10,387	337	417	637	112	370	80	9,254
2025	11,316	821	10,495	338	423	652	116	370	80	9,336
2026	11,423	822	10,601	338	429	666	120	371	80	9,419
2027	11,533	823	10,710	338	435	680	124	371	80	9,505

Historical Values (2008 - 2017):

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 (2018 - 2027):

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 CASE 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:										
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	10,530	893	9,637	235	366	466	100	339	80	8,946
2017	10,220	808	9,412	203	372	498	78	349	80	8,640
FORECAST:										
2018	10,893	806	10,087	272	381	529	87	355	80	9,189
2019	11,323	1,004	10,319	296	387	553	91	360	80	9,556
2020	11,483	965	10,518	327	393	575	95	364	80	9,650
2021	11,515	816	10,699	328	399	593	99	366	80	9,650
2022	11,696	817	10,879	338	405	609	103	368	80	9,793
2023	11,897	817	11,080	338	411	624	108	369	80	9,968
2024	12,122	819	11,303	337	417	637	112	370	80	10,169
2025	12,313	821	11,493	338	423	652	116	370	80	10,334
2026	12,499	822	11,677	338	429	666	120	371	80	10,495
2027	12,698	823	11,875	338	435	680	124	371	80	10,670

Historical Values (2008 - 2017):

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 (2018 - 2027):

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 CASE 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:										
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	10,530	893	9,637	235	366	466	100	339	80	8,946
2017	10,220	808	9,412	203	372	498	78	349	80	8,640
FORECAST:										
2018	10,000	806	9,194	272	381	529	87	355	80	8,296
2019	10,296	1,004	9,292	296	387	553	91	360	80	8,529
2020	10,320	965	9,355	327	393	575	95	364	80	8,486
2021	10,215	816	9,399	328	399	593	99	366	80	8,349
2022	10,254	817	9,437	338	405	609	103	368	80	8,351
2023	10,308	817	9,491	338	411	624	108	369	80	8,379
2024	10,382	819	9,563	337	417	637	112	370	80	8,430
2025	10,424	821	9,604	338	423	652	116	370	80	8,445
2026	10,457	822	9,635	338	429	666	120	371	80	8,453
2027	10,497	823	9,674	338	435	680	124	371	80	8,469

Historical Values (2008 - 2017):

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 (2018 - 2027):

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 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:										
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	207	681	845	113	240	170	7,421
2016/17	8,739	701	8,038	191	687	878	78	243	165	6,497
FORECAST:			9,072							
2017/18	11,469	1,251	10,218	253	699	909	82	245	192	9,089
2018/19	11,574	1,198	10,376	274	711	933	86	246	194	9,131
2019/20	11,900	1,408	10,491	301	723	954	91	247	195	9,390
2020/21	11,453	719	10,735	302	735	972	95	247	198	8,905
2021/22	11,633	809	10,825	310	747	988	99	248	199	9,043
2022/23	11,742	809	10,933	310	759	1,003	103	248	200	9,119
2023/24	11,851	809	11,042	309	771	1,017	107	248	201	9,197
2024/25	11,898	809	11,089	310	783	1,032	112	248	201	9,212
2025/26	12,051	810	11,241	310	795	1,046	116	249	203	9,332
2026/27	12,143	810	11,333	310	807	1,059	120	249	204	9,394

Historical Values (2008 - 2017):

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 (2018 - 2027):

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 CASE 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:										
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	207	681	845	113	240	170	7,421
2016/17	8,739	701	8,038	191	687	878	78	243	165	6,497
FORECAST:										
2017/18	12,525	1,251	11,274	253	699	909	82	245	205	10,132
2018/19	12,721	1,198	11,523	274	711	933	86	246	208	10,264
2019/20	13,138	1,408	11,730	301	723	954	91	247	210	10,613
2020/21	12,782	719	12,064	302	735	972	95	247	214	10,217
2021/22	13,049	809	12,241	310	747	988	99	248	216	10,441
2022/23	13,259	809	12,451	310	759	1,003	103	248	219	10,617
2023/24	13,455	809	12,646	309	771	1,017	107	248	221	10,781
2024/25	13,635	809	12,826	310	783	1,032	112	248	223	10,927
2025/26	13,862	810	13,052	310	795	1,046	116	249	226	11,121
2026/27	14,054	810	13,244	310	807	1,059	120	249	228	11,281

Historical Values (2008 - 2017):

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 (2018 - 2027):

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 CASE 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:										
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	207	681	845	113	240	170	7,421
2016/17	8,739	701	8,038	191	687	878	78	243	165	6,497
FORECAST:										
2017/18	10,482	1,251	9,231	253	699	909	82	245	180	8,115
2018/19	10,496	1,198	9,298	274	711	933	86	246	180	8,067
2019/20	10,751	1,408	9,343	301	723	954	91	247	180	8,256
2020/21	10,278	719	9,559	302	735	972	95	247	183	7,744
2021/22	10,388	809	9,579	310	747	988	99	248	183	7,813
2022/23	10,433	809	9,625	310	759	1,003	103	248	183	7,827
2023/24	10,463	809	9,653	309	771	1,017	107	248	184	7,827
2024/25	10,446	809	9,637	310	783	1,032	112	248	183	7,778
2025/26	10,543	810	9,733	310	795	1,046	116	249	184	7,843
2026/27	10,565	810	9,756	310	807	1,059	120	249	184	7,836

Historical Values (2008 - 2017):

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 (2018 - 2027):

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 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:									
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	45,199	892	857	596	38,774	1,803	2,277	42,854	50.6
2017	45,318	933	871	595	38,024	2,196	2,699	42,919	50.8
FORECAST:									
2018	45,499	961	883	595	38,845	1,577	2,639	43,060	54.1
2019	45,807	988	893	595	39,175	1,310	2,847	43,331	54.2
2020	46,571	1,011	901	596	39,903	1,352	2,808	44,063	53.4
2021	47,090	1,032	907	595	40,405	1,414	2,737	44,555	57.1
2022	47,647	1,053	911	595	40,845	1,459	2,785	45,088	56.9
2023	48,099	1,074	915	595	41,238	1,459	2,818	45,515	57.0
2024	48,665	1,094	918	596	41,604	1,467	2,986	46,057	57.0
2025	49,105	1,113	922	595	42,277	1,469	2,729	46,475	57.6
2026	49,542	1,131	926	595	42,380	1,473	3,037	46,890	57.4
2027	49,989	1,149	929	595	42,785	1,476	3,055	47,316	57.5

* 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)	(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:									
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	45,199	892	857	596	38,774	1,803	2,277	42,854	50.6
2017	45,318	933	871	595	38,024	2,196	2,699	42,919	50.8
FORECAST:									
2018	47,354	961	883	595	41,401	1,577	1,936	44,915	50.6
2019	48,033	988	893	595	42,126	1,310	2,122	45,558	50.7
2020	49,132	1,011	901	596	43,167	1,352	2,106	46,625	50.0
2021	49,956	1,032	907	595	43,952	1,414	2,056	47,422	53.0
2022	50,808	1,053	911	595	44,685	1,459	2,105	48,249	52.8
2023	51,666	1,074	915	595	45,478	1,459	2,146	49,083	52.8
2024	52,657	1,094	918	596	46,277	1,467	2,306	50,050	52.8
2025	53,476	1,113	922	595	47,280	1,469	2,097	50,846	53.1
2026	54,266	1,131	926	595	47,777	1,473	2,364	51,614	53.0
2027	55,109	1,149	929	595	48,569	1,476	2,390	52,436	53.1

* 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:									
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	45,199	892	857	596	38,774	1,803	2,277	42,854	50.6
2017	45,318	933	871	595	38,024	2,196	2,699	42,919	50.8
FORECAST:									
2018	43,769	961	883	595	35,727	1,577	4,027	41,330	58.1
2019	43,816	988	893	595	35,839	1,310	4,192	41,340	58.5
2020	44,289	1,011	901	596	36,270	1,352	4,159	41,781	57.6
2021	44,488	1,032	907	595	36,449	1,414	4,091	41,954	61.8
2022	44,698	1,053	911	595	36,562	1,459	4,119	42,139	61.6
2023	44,887	1,074	915	595	36,701	1,459	4,144	42,303	61.7
2024	45,194	1,094	918	596	36,842	1,467	4,277	42,586	61.9
2025	45,341	1,113	922	595	37,169	1,469	4,073	42,711	62.7
2026	45,443	1,131	926	595	37,021	1,473	4,297	42,791	62.3
2027	45,578	1,149	929	595	37,122	1,476	4,308	42,905	62.5

* 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 CASE FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ACTUAL		FORECAST		FORECAST	
	2017		2018		2019	
MONTH	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh
JANUARY	7,538	3,054	10,236	3,263	10,316	3,281
FEBRUARY	6,199	2,670	9,296	2,856	9,315	2,856
MARCH	6,969	3,080	7,963	3,155	7,978	3,102
APRIL	8,521	3,426	7,345	3,221	7,365	3,197
MAY	8,724	3,978	8,505	3,878	8,542	3,871
JUNE	8,809	3,949	9,224	4,125	9,513	4,160
JULY	9,293	4,451	9,160	4,377	9,517	4,392
AUGUST	9,139	4,617	9,497	4,397	9,817	4,403
SEPTEMBER	8,795	3,864	8,972	4,094	9,297	4,125
OCTOBER	8,353	3,755	8,423	3,500	8,723	3,616
NOVEMBER	6,509	2,945	6,789	3,021	7,074	3,039
DECEMBER	7,248	3,130	8,182	3,173	8,523	3,289
TOTAL		42,919		43,060		43,331

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 CASE FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ACTUAL		FORECAST		FORECAST	
	2017		2018		2019	
MONTH	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh	PEAK DEMAND MW	NEL GWh
JANUARY	7,538	3,054	11,292	3,608	11,463	3,652
FEBRUARY	6,199	2,670	10,178	3,107	10,276	3,129
MARCH	6,969	3,080	7,963	3,395	8,032	3,367
APRIL	8,521	3,426	7,748	3,337	7,835	3,336
MAY	8,724	3,978	8,922	3,942	9,034	3,963
JUNE	8,809	3,949	9,641	4,082	10,011	4,148
JULY	9,293	4,451	9,572	4,429	10,013	4,481
AUGUST	9,139	4,617	9,929	4,451	10,330	4,495
SEPTEMBER	8,795	3,864	9,422	4,147	9,828	4,214
OCTOBER	8,353	3,755	8,900	3,600	9,276	3,749
NOVEMBER	6,509	2,945	7,448	3,225	7,804	3,276
DECEMBER	7,248	3,130	9,085	3,591	9,506	3,747
TOTAL		42,919		44,915		45,558

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

SCHEDULE 4.3
PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND
AND NET ENERGY FOR LOAD BY MONTH
LOW CASE 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	7,538	3,054	9,249	2,934	9,238	2,924
FEBRUARY	6,199	2,670	8,438	2,642	8,396	2,619
MARCH	6,969	3,080	7,246	2,962	7,216	2,886
APRIL	8,521	3,426	6,928	3,123	6,906	3,076
MAY	8,724	3,978	8,083	3,811	8,072	3,778
JUNE	8,809	3,949	8,755	4,065	8,991	4,074
JULY	9,293	4,451	8,720	4,318	9,030	4,308
AUGUST	9,139	4,617	9,036	4,333	9,303	4,316
SEPTEMBER	8,795	3,864	8,520	4,035	8,797	4,045
OCTOBER	8,353	3,755	7,976	3,408	8,231	3,507
NOVEMBER	6,509	2,945	6,152	2,854	6,395	2,859
DECEMBER	7,248	3,130	7,359	2,846	7,651	2,947
TOTAL		42,919		41,330		41,340

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	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
(1)	NUCLEAR		TRILLION BTU	0	0	0	0	0	0	0	0	0	0	0	0
(2)	COAL		1,000 TON	4,181	4,023	5,118	4,075	3,767	3,760	3,075	2,512	2,710	2,079	2,056	1,984
(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	172	136	212	108	60	83	92	100	192	229	304	317
(9)		STEAM	1,000 BBL	65	62	31	22	20	22	23	31	39	51	41	51
(10)		CC	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(11)		CT	1,000 BBL	107	74	181	85	40	61	68	69	154	179	263	266
(12)		DIESEL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(13)	NATURAL GAS	TOTAL	1,000 MCF	199,017	212,681	185,466	201,815	201,840	202,809	212,243	221,684	232,972	245,867	249,489	261,079
(14)		STEAM	1,000 MCF	41,919	30,663	18,405	11,260	8,835	9,023	9,965	10,510	10,767	11,962	11,934	13,088
(15)		CC	1,000 MCF	148,656	175,869	160,149	185,638	188,341	188,508	196,984	205,153	214,478	226,276	227,771	228,900
(16)		CT	1,000 MCF	8,441	6,147	6,912	4,917	4,664	5,278	5,295	6,021	7,726	7,629	9,785	19,090
	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	9,601	5,500	5,477	898	0	0	0	0	0	0
(18.1)	OTHER, NATURAL GAS	ANNUAL FIRM INTERCHANGE, CT	1,000 MCF	N/A	N/A	15,554	8,170	9,152	11,368	12,996	16,704	9,219	9,846	11,825	2,381
(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	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
(1)	ANNUAL FIRM INTERCHANGE 1/		GWh	4,072	2,037	1,542	804	900	1,119	1,280	1,644	911	984	1,181	248
(2)	NUCLEAR		GWh	0	0	0	0	0	0	0	0	0	0	0	0
(3)	COAL		GWh	8,885	8,722	11,428	9,108	8,372	8,323	6,668	5,095	5,572	4,108	4,064	3,908
(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	77	62	62	19	14	24	27	26	58	70	101	102
(10)		STEAM	GWh	34	33	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	43	29	62	19	14	24	27	26	58	70	101	102
(13)		DIESEL	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(14)	NATURAL GAS	TOTAL	GWh	24,807	27,307	25,213	28,775	28,948	29,015	30,347	31,646	33,180	34,972	35,367	36,552
(15)		STEAM	GWh	3,910	2,869	1,623	905	685	706	782	824	860	947	950	1,050
(16)		CC	GWh	20,269	23,974	22,961	27,396	27,800	27,794	29,057	30,260	31,620	33,349	33,562	33,717
(17)		CT	GWh	628	464	629	473	463	515	508	562	699	675	855	1,785
(18)	OTHER 2/														
	QF PURCHASES		GWh	1,831	1,754	1,920	1,920	1,927	1,921	1,922	1,923	806	496	2	2
	RENEWABLES OTHER		GWh	0	0	0	0	0	0	0	0	0	0	0	0
	RENEWABLES MSW		GWh	714	896	1,072	1,072	1,077	1,074	1,074	1,074	1,077	1,074	1,074	1,074
	RENEWABLES BIOMASS		GWh	512	584	431	464	823	821	821	821	823	821	821	821
	RENEWABLES SOLAR		GWh	5	16	47	403	1,241	2,137	2,950	3,286	3,630	3,951	4,281	4,609
	IMPORT FROM OUT OF STATE		GWh	1,982	1,545	1,345	766	761	122	0	0	0	0	0	0
	EXPORT TO OUT OF STATE		GWh	-31	-4	0	0	0	0	0	0	0	0	0	0
(19)	NET ENERGY FOR LOAD		GWh	42,854	42,919	43,060	43,331	44,063	44,555	45,088	45,515	46,057	46,475	46,890	47,316

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	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
(1)	ANNUAL FIRM INTERCHANGE 1/		%	9.5%	4.7%	3.6%	1.9%	2.0%	2.5%	2.8%	3.6%	2.0%	2.1%	2.5%	0.5%
(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		%	20.7%	20.3%	26.5%	21.0%	19.0%	18.7%	14.8%	11.2%	12.1%	8.8%	8.7%	8.3%
(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%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%
(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%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%
(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	%	57.9%	63.6%	58.6%	66.4%	65.7%	65.1%	67.3%	69.5%	72.0%	75.2%	75.4%	77.3%
(15)		STEAM	%	9.1%	6.7%	3.8%	2.1%	1.6%	1.6%	1.7%	1.8%	1.9%	2.0%	2.0%	2.2%
(16)		CC	%	47.3%	55.9%	53.3%	63.2%	63.1%	62.4%	64.4%	66.5%	68.7%	71.8%	71.6%	71.3%
(17)		CT	%	1.5%	1.1%	1.5%	1.1%	1.1%	1.2%	1.1%	1.2%	1.5%	1.5%	1.8%	3.8%
(18)	OTHER 2/														
	QF PURCHASES		%	4.3%	4.1%	4.5%	4.4%	4.4%	4.3%	4.3%	4.2%	1.7%	1.1%	0.0%	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		%	1.7%	2.1%	2.5%	2.5%	2.4%	2.4%	2.4%	2.4%	2.3%	2.3%	2.3%	2.3%
	RENEWABLES BIOMASS		%	1.2%	1.4%	1.0%	1.1%	1.9%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.7%
	RENEWABLES SOLAR		%	0.0%	0.0%	0.1%	0.9%	2.8%	4.8%	6.5%	7.2%	7.9%	8.5%	9.1%	9.7%
	IMPORT FROM OUT OF STATE		%	4.6%	3.6%	3.1%	1.8%	1.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	EXPORT TO OUT OF STATE		%	-0.1%	0.0%	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.

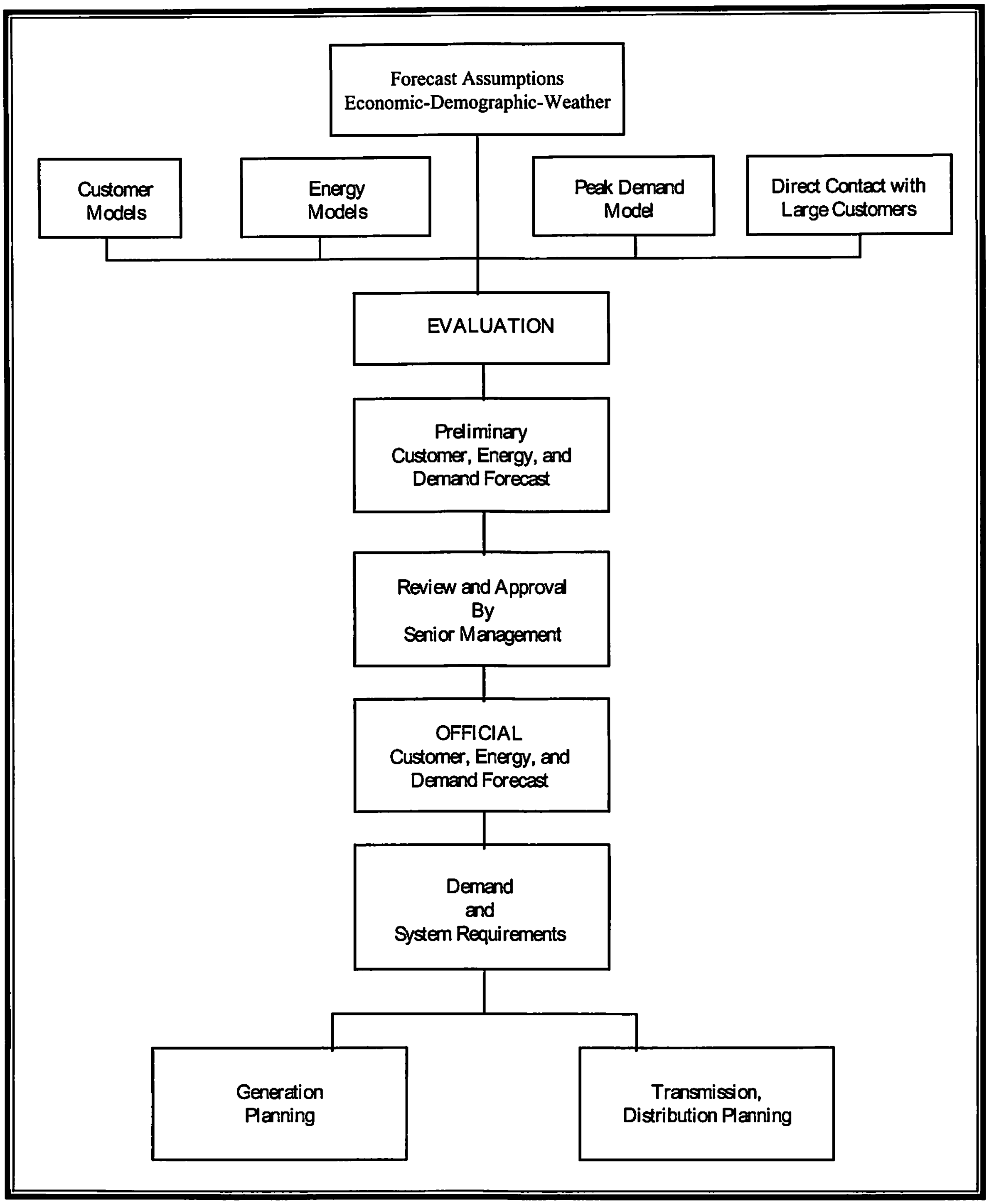
Figure 2.1, entitled "Customer, Energy and Demand Forecast," gives a general description of DEF's forecasting process. Highlighted in the diagram is a disaggregated modeling approach that blends the impacts of average class usage, as well as customer growth, based on a specific set of assumptions for 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. 176 April 2017) 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 January 2018 forecast, along with EIA 2017 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 more than 28 percent of the industrial class MWh sales in 2017, just slightly less than 2016. These energy intensive "crop nutrient" producers 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 in phases between the years 2019 and 2022. 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. 20130200-EI .

7. This forecast reflects impacts from both Plug-in Hybrid Electric Vehicle (PHEV) and behind the meter (customer owned) Photo Voltaic (PV) units on energy and peak demand. PHEV customer penetration levels are expected to be a small share of the total DEF area vehicle stock over the planning horizon and incorporates an EPRI Model view that includes gasoline price

expectations. DEF customer PV 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.

ECONOMIC ASSUMPTIONS

The economic outlook for this forecast was developed in the Summer of 2017 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 well 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 is enjoying a favorable environment, it must continue to navigate an environment with uncertain trade policy and stronger global competition. The U.S. service sector is also riding a wave of favorable conditions also. Low consumer interest rates and energy prices have invigorated the American consumer, now being reflected in higher consumer sentiment surveys. This forecast does consider policies laid out in the first six months of the Trump administration, but this does not include the recently passed tax reduction plan.

The Florida economy continues to expand at a more rapid rate. The U.S. Census Bureau announced that Florida's population surpassed 21 million, and had grown at an average of 900 residents per day in the 2016 to 2017 twelve month period ending July 1st. Nationally, the U.S. census Bureau has reported 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 12 years and peak in the mid-2020s.

The Florida unemployment rate dropped to 4.1 percent by December 2017, down from 4.9 percent a year earlier. The State's employment picture has been impressive again, as every employment classification grew over 2% except for the government sector. The construction and manufacturing employment sectors grew by 9.5% and 4.5%, respectively. Industries supporting the home and road construction sector continued to improve significantly. More impressively, the private service producing employment sectors added nearly 60% of the nonfarm job growth in Florida between December 2016 and 2017. These are exactly the sectors that benefit from a growing population. Continuing to fuel this growth are low energy prices which helps boost the Florida tourism industry by lowering travel expense. Whether it is driving by car or arriving by plane, lower energy prices help stimulate the state economy. DEF continues to plan for the eventual regulation of GHG emissions. In this forecast, DEF has delayed the projected onset of these regulations until 2025.

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. These Florida mining companies compete globally into a global market where farming conditions dictate the need for "crop nutrients". 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 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 DR 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 retail peak are the result of a monthly model driven by the summation of class base, heating and cooling energy interpolated 30-year normal 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 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 historical variation in weather and economic conditions. First, a calculation of twenty-eight years of historical variation for economic driver variables selected in the base case energy sales models. High & Low case series were developed by determining the one standard deviation level of outcome - both high and Low - around each respective base case economic variable for each class. Similarly, 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 energy sales and peak demand by estimating high and low cases for 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, 2016 and 2017 savings reflect the actual achievements as reported on DEF's 2017 Annual DSM Report to the FPSC and the savings for 2018 - 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	30.6	86.0	54.3	148.2	46.4	133.1
2018	20.0	106.0	43.2	191.4	17.0	150.1
2019	17.7	123.7	37.5	228.9	13.0	163.1
2020	15.5	139.2	32.2	261.1	9.3	172.4
2021	13.7	152.9	27.8	288.9	6.2	178.6
2022	12.2	165.1	24.5	313.4	3.8	182.4
2023	11.3	176.4	22.3	335.7	2.2	184.6
2024	10.7	187.1	20.9	356.6	1.2	185.8

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 FEECA goal 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, 2016 and 2017 savings reflect the actual achievements as reported on DEF's 2017 Annual DSM Report to the FPSC and the projected savings for 2018 - 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	51.8	172.0	26.3	125.8	35.4	99.3
2018	10.0	182.0	5.1	130.9	10.0	109.3
2019	9.1	191.1	5.0	135.9	8.0	117.3
2020	8.2	199.3	5.2	141.1	5.9	123.2
2021	6.9	206.2	4.8	145.9	3.9	127.1
2022	6.0	212.2	4.7	150.6	2.4	129.5
2023	5.6	217.8	5.0	155.6	1.4	130.9
2024	5.0	222.8	4.6	160.2	0.8	131.7

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 over time. 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 7,800 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

DUKE ENERGY.
FLORIDA

CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

RESOURCE PLANNING FORECAST

OVERVIEW OF CURRENT FORECAST

Supply-Side Resources

As of December 31, 2017 DEF had a summer total capacity resource of 10,776 MW (see Table 3.1). This capacity resource includes fossil steam generators (3,201 MW), combined cycle plants (3,557 MW), combustion turbines (1,954 MW), solar power plants (8 MW), utility purchased power (424 MW), independent power purchases (1,121 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 a combined cycle facility in 2018 in Citrus County, incorporation of the summer capacity from the simple cycle unit (P11) at Intercession

City purchased from Georgia Power in 2016 and of the full firm capacity of the Osprey Energy Center acquired from Calpine in 2017 as well as three planned combustion turbine units in year 2027 at undesignated sites. DEF continues to seek market supply-side resource alternatives to enhance DEF's resource plan. In addition to the existing and planned capacity resources listed above, DEF will have 700 MW of solar PV under development over the next 4 year period. In this plan, DEF has assigned this DEF owned solar PV generation an equivalent summer capacity value equal to 57% of the nameplate capacity of the planned installations. This assignment is based on the assumption that the projects developed over the period of this plan will be of equivalent design to the Hamilton Solar Energy Center for which information is provided in Schedule 9 and Chapter 4 below. Given the small amount of PV solar currently present on the DEF system, DEF plans to evaluate this assignment over time and may revise this value in future Site Plans based on changes in project designs and the data received from actual operation of these facilities once they are installed.

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. DEF anticipates retiring Crystal River Units 1 and 2 in 2018 in coordination with the 2018 Citrus Combined Cycle operations.
- DEF has completed projects necessary to enable long term operation of Crystal River Units 4 and 5 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. 170007-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. The USEPA has announced plans to repeal the current rule and replace it with a new regulation. Although the ongoing litigation and the change in administration policy 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 such regulation.

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 and Avon Park. 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 2018 through 2027. 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 2026 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.

TOTAL CAPACITY RESOURCES OF
POWER PLANTS AND PURCHASED POWER CONTRACTS

AS OF DECEMBER 31, 2017

PLANTS	SUMMER NET DEPENDABLE CAPABILITY (MW)
Fossil Steam	3,201
Combined Cycle	3,557
Combustion Turbine	1,954
Total Net Dependable Generating Capability	**8,712**
Solar Power	8
Dependable Purchased Power	2,056
Firm Qualifying Facility Contracts (511 MW)	
Investor Owned Utilities (424 MW)	
Independent Power Producers (1,121 MW)	
TOTAL DEPENDABLE CAPACITY RESOURCES	**10,776**

TABLE 3.2 DUKE ENERGY FLORIDA FIRM RENEWABLES AND COGENERATION CONTRACTS AS OF DECEMBER 31, 2017	
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 INSTALLED CAPACITY	FIRM[a] CAPACITY IMPORT	FIRM CAPACITY EXPORT	QF[b]	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
2018	8,860	1,878	0	177	10,916	8,757	2,159	25%	0	2,159	25%
2019	9,777	1,878	0	177	11,833	9,043	2,789	31%	0	2,789	31%
2020	9,840	1,878	0	237	11,955	9,057	2,898	32%	0	2,898	32%
2021	9,964	1,454	0	237	11,656	8,990	2,666	30%	0	2,666	30%
2022	10,083	1,454	0	237	11,774	9,065	2,709	30%	0	2,709	30%
2023	10,123	1,454	0	237	11,815	9,150	2,665	29%	0	2,665	29%
2024	10,500	859	0	237	11,597	9,254	2,343	25%	0	2,343	25%
2025	10,541	744	0	237	11,522	9,336	2,186	23%	0	2,186	23%
2026	10,581	640	0	237	11,458	9,419	2,039	22%	0	2,039	22%
2027	11,300	0	0	237	11,537	9,505	2,032	21%	0	2,032	21%

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 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
2017/18	9,807	1,961	0	177	11,946	9,089	2,857	31%	0	2,857	31%
2018/19	10,847	1,961	0	177	12,986	9,131	3,855	42%	0	3,855	42%
2019/20	10,847	1,961	0	237	13,046	9,390	3,656	39%	0	3,656	39%
2020/21	10,797	1,961	0	237	12,996	8,905	4,091	46%	0	4,091	46%
2021/22	10,797	1,537	0	237	12,572	9,043	3,529	39%	0	3,529	39%
2022/23	10,797	1,537	0	237	12,572	9,119	3,453	38%	0	3,453	38%
2023/24	10,797	1,422	0	237	12,457	9,197	3,260	35%	0	3,260	35%
2024/25	11,152	785	0	237	12,175	9,212	2,962	32%	0	2,962	32%
2025/26	11,152	681	0	237	12,071	9,332	2,738	29%	0	2,738	29%
2026/27	11,152	681	0	237	12,071	9,394	2,676	28%	0	2,676	28%

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, 2018 THROUGH DECEMBER 31, 2027

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
												FIRM			
								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]
INTERCESSION CITY	P11	OSCEOLA	GT	DFO		PL, TK			06/2018			140		P	(1) and (2)
CRYSTAL RIVER	1	CITRUS	ST	BIT		RR	WA		10/1966	09/2018		(324)	(332)	RT	(1)
CRYSTAL RIVER	2	CITRUS	ST	BIT		RR	WA		11/1969	09/2018		(442)	(448)	RT	(1)
CITRUS	1	CITRUS	CC	NG		PL		11/2015	12/2018			1640	1820	P	(1) and (3)
ST PETERSBURG PIER	1	PINELLAS	PV	SO				06/2018	12/2018		350	0	0	P	(1) and (4)
HAMILTON	1	HAMILTON	PV	SO				09/2018	03/2019		74,900	43	0	P	(1)
UNKNOWN	1	UNKNOWN	PV	SO				04/2019	12/2019		74,900	43	0	P	(1)
UNKNOWN	1	UNKNOWN	PV	SO				04/2019	12/2019		45,000	26	0	P	(1)
UNKNOWN	1	UNKNOWN	PV	SO				09/2019	03/2020		74,900	43	0	P	(1)
UNKNOWN	1	UNKNOWN	PV	SO				04/2020	12/2020		74,900	43	0	P	(1)
UNKNOWN	1	UNKNOWN	PV	SO				04/2020	12/2020		74,900	43	0	P	(1)
UNKNOWN	1	UNKNOWN	PV	SO				04/2020	12/2020		70,000	40	0	P	(1)
AVON PARK	P1	HIGHLANDS	GT	NG	DFO	PL	TK			06/2020		(24)	(25)	RT	(1)
AVON PARK	P2	HIGHLANDS	GT	DFO		TK				06/2020		(24)	(25)	RT	(1)
HIGGINS	P1-4	PINELLAS	GT	NG	DFO	PL	TK			06/2020		(107)	(116)	RT	(1)
UNKNOWN	1	UNKNOWN	PV	SO				04/2021	12/2021		74,900	43	0	P	(1)
UNKNOWN	1	UNKNOWN	PV	SO				04/2021	12/2021		74,900	43	0	P	(1)
UNKNOWN	1	UNKNOWN	PV	SO				04/2021	12/2021		60,000	34	0	P	(1)
SOLAR DEGRADATION	N/A	N/A	N/A	N/A		N/A		N/A	N/A	N/A	N/A	(1)			(5)
UNKNOWN	1	UNKNOWN	PV	SO				04/2022	12/2022		74,900	43	0	P	(1)
SOLAR DEGRADATION	N/A	N/A	N/A	N/A		N/A		N/A	N/A	N/A	N/A	(1)			(5)
UNKNOWN	1	UNKNOWN	PV	SO				04/2023	12/2023		74,900	43	0	P	(1)
SOLAR DEGRADATION	N/A	N/A	N/A	N/A		N/A		N/A	N/A	N/A	N/A	(2)			(5)
OSPREY CC	1	POLK	CC	NG		PL			06/2024			337	355	P	(6)
UNKNOWN	1	UNKNOWN	PV	SO				04/2024	12/2024		74,900	43	0	P	(1)
SOLAR DEGRADATION	N/A	N/A	N/A	N/A		N/A		N/A	N/A	N/A	N/A	(2)			(5)
UNKNOWN	1	UNKNOWN	PV	SO				04/2025	12/2025		74,900	43	0	P	(1)
SOLAR DEGRADATION	N/A	N/A	N/A	N/A		N/A		N/A	N/A	N/A	N/A	(2)			(5)
UNKNOWN	1	UNKNOWN	PV	SO				04/2026	12/2026		74,900	43	0	P	(1)
SOLAR DEGRADATION	N/A	N/A	N/A	N/A		N/A		N/A	N/A	N/A	N/A	(3)			(5)
UNKNOWN	P1	UNKNOWN	GT	NG				01/2025	06/2027		243,700	226	240	P	(1)
UNKNOWN	P2	UNKNOWN	GT	NG				01/2025	06/2027		243,700	226	240	P	(1)
UNKNOWN	P3	UNKNOWN	GT	NG				01/2025	06/2027		243,700	226	240	P	(1)
UNKNOWN	1	UNKNOWN	PV	SO				04/2027	12/2027		74,900	43	0	P	(1)
SOLAR DEGRADATION	N/A	N/A	N/A	N/A		N/A		N/A	N/A	N/A	N/A	(3)			(5)

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

b. NOTES

- (1) Planned, Prospective, or Committed project.
- (2) Intercession City 11 will have firm capacity starting on 6/2018 once the Transmission Upgrades are in service
- (3) Approximately 50% of plant capacity is planned in service 9/2018 with the balance in service 12/2018
- (4) St Petersburg Pier Firm Capacity is 0.16 Mw for the Summer and 0 for the Winter
- (5) Solar capacity degrades by 0.5% every year
- (6) Osprey CC Acquisition total capacity is available once Transmission Upgrades are in service, total Summer capacity goes up to 582MW 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, 2018

(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:		9/2018 - 12/2018	(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):		6.58 %	
	b. Forced Outage Factor (FOF):		4.74 %	
	c. Equivalent Availability Factor (EAF):		88.99 %	
	d. Resulting Capacity Factor (%):		79.8 %	
	e. Average Net Operating Heat Rate (ANOHR):		6,515 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):	($2018)	824.03	
	d. AFUDC Amount ($/kW):		99.90	
	e. Escalation ($/kW):		0.26	
	f. Fixed O&M ($/kW-yr):	($2018)	5.13	
	g. Variable O&M ($/MWh):	($2018)	2.24	
	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, 2018

(1)	Plant Name and Unit Number:	**St Petersburg Pier**	
(2)	Capacity		
	a. Nameplate (MWac):	0.4	
	b. Summer Firm (MWac):	0.2	
	c. Winter Firm (MWac):	-	
(3)	Technology Type:	PHOTOVOLTAIC	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	6/2018	
	b. Commercial in-service date:	12/2018	(EXPECTED)
(5)	Fuel		
	a. Primary fuel:	SOLAR	
	b. Alternate fuel:	N/A	
(6)	Air Pollution Control Strategy:	N/A	
(7)	Cooling Method:	N/A	
(8)	Total Site Area:	3 ACRES	
(9)	Construction Status:	PLANNED	
(10)	Certification Status:		
(11)	Status with Federal Agencies:		
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):	N/A %	
	b. Forced Outage Factor (FOF):	N/A %	
	c. Equivalent Availability Factor (EAF):	N/A %	
	d. Resulting Capacity Factor (%):	22.0 %	
	e. Average Net Operating Heat Rate (ANOHR):	N/A BTU/kWh	
(13)	Projected Unit Financial Data		
	a. Book Life (Years):	30	
	b. Total Installed Cost (In-service year $/kW):	Less than $1,650/Kw (1)	
	c. Direct Construction Cost ($/kWac): ($2018)		
	d. AFUDC Amount ($/kW):		
	e. Escalation ($/kW):		
	f. Fixed O&M ($/kWdc-yr): ($2018)	Less than $8/Kw	
	g. Variable O&M ($/MWh): ($2018)	0.00	
	h. K Factor:	NO CALCULATION	

NOTES

(1) Average cost of projects to be filed together as specified in DEF's 2017 Second Revised and Restated Settlement Agreement

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:		**Hamilton Solar Power Plant**	
(2)	Capacity			
	a. Nameplate (MWac):		74.9	
	b. Summer Firm (MWac):		42.7	
	c. Winter Firm (MWac):		-	
(3)	Technology Type:		PHOTOVOLTAIC	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		9/2018	
	b. Commercial in-service date:		3/2019	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		SOLAR	
	b. Alternate fuel:		N/A	
(6)	Air Pollution Control Strategy:		N/A	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		~550 ACRES	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):			N/A %
	b. Forced Outage Factor (FOF):			N/A %
	c. Equivalent Availability Factor (EAF):			N/A %
	d. Resulting Capacity Factor (%):			~30 %
	e. Average Net Operating Heat Rate (ANOHR):			N/A BTU/kWh
(13)	Projected Unit Financial Data			
	a. Book Life (Years):		30	
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw [1]	
	c. Direct Construction Cost ($/kWac):	($2018)		
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr):	($2018)	Less than $8/Kw	
	g. Variable O&M ($/MWh):	($2018)	0.00	
	h. K Factor:		NO CALCULATION	

NOTES

[1] Average cost of projects to be filed together as specified in DEF's 2017 Second Revised and Restated Settlement Agreement

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:		**TBD**	
(2)	Capacity			
	a. Nameplate (MWac):		74.9	
	b. Summer Firm (MWac):		42.7	
	c. Winter Firm (MWac):		-	
(3)	Technology Type:		PHOTOVOLTAIC	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		4/2019	
	b. Commercial in-service date:		12/2019	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		SOLAR	
	b. Alternate fuel:		N/A	
(6)	Air Pollution Control Strategy:		N/A	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		~500-600 ACRES	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):			N/A %
	b. Forced Outage Factor (FOF):			N/A %
	c. Equivalent Availability Factor (EAF):			N/A %
	d. Resulting Capacity Factor (%):			~30 %
	e. Average Net Operating Heat Rate (ANOHR):			N/A BTU/kWh
(13)	Projected Unit Financial Data			
	a. Book Life (Years):		30	
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw	
	c. Direct Construction Cost ($/kWac):	($2018)		
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr):	($2018)	Less than $8/Kw	
	g. Variable O&M ($/MWh):	($2018)	0.00	
	h. K Factor:		NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:		**TBD**	
(2)	Capacity			
	a. Nameplate (MWac):		45.0	
	b. Summer Firm (MWac):		25.7	
	c. Winter Firm (MWac):		-	
(3)	Technology Type:		PHOTOVOLTAIC	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		4/2019	
	b. Commercial in-service date:		12/2019	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		SOLAR	
	b. Alternate fuel:		N/A	
(6)	Air Pollution Control Strategy:		N/A	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		~400-450 ACRES	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):		N/A %	
	b. Forced Outage Factor (FOF):		N/A %	
	c. Equivalent Availability Factor (EAF):		N/A %	
	d. Resulting Capacity Factor (%):		~30 %	
	e. Average Net Operating Heat Rate (ANOHR):		N/A BTU/kWh	
(13)	Projected Unit Financial Data			
	a. Book Life (Years):		30	
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw	
	c. Direct Construction Cost ($/kWac):	($2018)		
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr):	($2018)	Less than $8/Kw	
	g. Variable O&M ($/MWh):	($2018)	0.00	
	h. K Factor:		NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:	**TBD**	
(2)	Capacity		
	a. Nameplate (MWac):	74.9	
	b. Summer Firm (MWac):	42.7	
	c. Winter Firm (MWac):	-	
(3)	Technology Type:	PHOTOVOLTAIC	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	9/2019	
	b. Commercial in-service date:	3/2020	(EXPECTED)
(5)	Fuel		
	a. Primary fuel:	SOLAR	
	b. Alternate fuel:	N/A	
(6)	Air Pollution Control Strategy:	N/A	
(7)	Cooling Method:	N/A	
(8)	Total Site Area:	~500-600 ACRES	
(9)	Construction Status:	PLANNED	
(10)	Certification Status:		
(11)	Status with Federal Agencies:		
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):		N/A %
	b. Forced Outage Factor (FOF):		N/A %
	c. Equivalent Availability Factor (EAF):		N/A %
	d. Resulting Capacity Factor (%):		~30 %
	e. Average Net Operating Heat Rate (ANOHR):		N/A BTU/kWh
(13)	Projected Unit Financial Data		
	a. Book Life (Years):		30
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw
	c. Direct Construction Cost ($/kWac): ($2018)		
	d. AFUDC Amount ($/kW):		
	e. Escalation ($/kW):		
	f. Fixed O&M ($/kWdc-yr): ($2018)		Less than $8/Kw
	g. Variable O&M ($/MWh): ($2018)		0.00
	h. K Factor:	NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:	TBD	
(2)	Capacity		
	a. Nameplate (MWac):	74.9	
	b. Summer Firm (MWac):	42.7	
	c. Winter Firm (MWac):	-	
(3)	Technology Type:	PHOTOVOLTAIC	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	4/2020	
	b. Commercial in-service date:	12/2020	(EXPECTED)
(5)	Fuel		
	a. Primary fuel:	SOLAR	
	b. Alternate fuel:	N/A	
(6)	Air Pollution Control Strategy:	N/A	
(7)	Cooling Method:	N/A	
(8)	Total Site Area:	~500-600 ACRES	
(9)	Construction Status:	PLANNED	
(10)	Certification Status:		
(11)	Status with Federal Agencies:		
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):		N/A %
	b. Forced Outage Factor (FOF):		N/A %
	c. Equivalent Availability Factor (EAF):		N/A %
	d. Resulting Capacity Factor (%):		~30 %
	e. Average Net Operating Heat Rate (ANOHR):		N/A BTU/kWh
(13)	Projected Unit Financial Data		
	a. Book Life (Years):		30
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw
	c. Direct Construction Cost ($/kWac): ($2018)		
	d. AFUDC Amount ($/kW):		
	e. Escalation ($/kW):		
	f. Fixed O&M ($/kWdc-yr): ($2018)		Less than $8/Kw
	g. Variable O&M ($/MWh): ($2018)		0.00
	h. K Factor:	NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:		TBD	
(2)	Capacity			
	a. Nameplate (MWac):		74.9	
	b. Summer Firm (MWac):		42.7	
	c. Winter Firm (MWac):		-	
(3)	Technology Type:		PHOTOVOLTAIC	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		4/2020	
	b. Commercial in-service date:		12/2020	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		SOLAR	
	b. Alternate fuel:		N/A	
(6)	Air Pollution Control Strategy:		N/A	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		~500-600 ACRES	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):		N/A %	
	b. Forced Outage Factor (FOF):		N/A %	
	c. Equivalent Availability Factor (EAF):		N/A %	
	d. Resulting Capacity Factor (%):		~30 %	
	e. Average Net Operating Heat Rate (ANOHR):		N/A BTU/kWh	
(13)	Projected Unit Financial Data			
	a. Book Life (Years):		30	
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw	
	c. Direct Construction Cost ($/kWac):	($2018)		
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr):	($2018)	Less than $8/Kw	
	g. Variable O&M ($/MWh):	($2018)	0.00	
	h. K Factor:		NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:		**TBD**	
(2)	Capacity			
	a. Nameplate (MWac):		70.0	
	b. Summer Firm (MWac):		39.9	
	c. Winter Firm (MWac):		-	
(3)	Technology Type:		PHOTOVOLTAIC	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		4/2020	
	b. Commercial in-service date:		12/2020	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		SOLAR	
	b. Alternate fuel:		N/A	
(6)	Air Pollution Control Strategy:		N/A	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		~500-600 ACRES	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):			N/A %
	b. Forced Outage Factor (FOF):			N/A %
	c. Equivalent Availability Factor (EAF):			N/A %
	d. Resulting Capacity Factor (%):			~30 %
	e. Average Net Operating Heat Rate (ANOHR):			N/A BTU/kWh
(13)	Projected Unit Financial Data			
	a. Book Life (Years):		30	
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw	
	c. Direct Construction Cost ($/kWac):	($2018)		
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr):	($2018)	Less than $8/Kw	
	g. Variable O&M ($/MWh):	($2018)	0.00	
	h. K Factor:		NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:		**TBD**	
(2)	Capacity			
	a. Nameplate (MWac):		74.9	
	b. Summer Firm (MWac):		42.7	
	c. Winter Firm (MWac):		-	
(3)	Technology Type:		PHOTOVOLTAIC	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		4/2021	
	b. Commercial in-service date:		12/2021	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		SOLAR	
	b. Alternate fuel:		N/A	
(6)	Air Pollution Control Strategy:		N/A	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		~500-600 ACRES	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):			N/A %
	b. Forced Outage Factor (FOF):			N/A %
	c. Equivalent Availability Factor (EAF):			N/A %
	d. Resulting Capacity Factor (%):			~30 %
	e. Average Net Operating Heat Rate (ANOHR):			N/A BTU/kWh
(13)	Projected Unit Financial Data			
	a. Book Life (Years):		30	
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw	
	c. Direct Construction Cost ($/kWac):	($2018)		
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr):	($2018)	Less than $8/Kw	
	g. Variable O&M ($/MWh):	($2018)	0.00	
	h. K Factor:		NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:	**TBD**	
(2)	Capacity		
	a. Nameplate (MWac):	74.9	
	b. Summer Firm (MWac):	42.7	
	c. Winter Firm (MWac):	-	
(3)	Technology Type:	PHOTOVOLTAIC	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	4/2021	
	b. Commercial in-service date:	12/2021	(EXPECTED)
(5)	Fuel		
	a. Primary fuel:	SOLAR	
	b. Alternate fuel:	N/A	
(6)	Air Pollution Control Strategy:	N/A	
(7)	Cooling Method:	N/A	
(8)	Total Site Area:	~500-600 ACRES	
(9)	Construction Status:	PLANNED	
(10)	Certification Status:		
(11)	Status with Federal Agencies:		
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):		N/A %
	b. Forced Outage Factor (FOF):		N/A %
	c. Equivalent Availability Factor (EAF):		N/A %
	d. Resulting Capacity Factor (%):		~30 %
	e. Average Net Operating Heat Rate (ANOHR):		N/A BTU/kWh
(13)	Projected Unit Financial Data		
	a. Book Life (Years):		30
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw
	c. Direct Construction Cost ($/kWac): ($2018)		
	d. AFUDC Amount ($/kW):		
	e. Escalation ($/kW):		
	f. Fixed O&M ($/kWdc-yr): ($2018)		Less than $8/Kw
	g. Variable O&M ($/MWh): ($2018)		0.00
	h. K Factor:	NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:		TBD	
(2)	Capacity			
	a. Nameplate (MWac):		60.0	
	b. Summer Firm (MWac):		34.2	
	c. Winter Firm (MWac):		-	
(3)	Technology Type:		PHOTOVOLTAIC	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		4/2021	
	b. Commercial in-service date:		12/2021	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		SOLAR	
	b. Alternate fuel:		N/A	
(6)	Air Pollution Control Strategy:		N/A	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		~450-550 ACRES	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):			N/A %
	b. Forced Outage Factor (FOF):			N/A %
	c. Equivalent Availability Factor (EAF):			N/A %
	d. Resulting Capacity Factor (%):			~30 %
	e. Average Net Operating Heat Rate (ANOHR):			N/A BTU/kWh
(13)	Projected Unit Financial Data			
	a. Book Life (Years):			30
	b. Total Installed Cost (In-service year $/kW):		Less than $1,650/Kw	
	c. Direct Construction Cost ($/kWac):	($2018)		
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr):	($2018)	Less than $8/Kw	
	g. Variable O&M ($/MWh):	($2018)	0.00	
	h. K Factor:		NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:	TBD	
(2)	Capacity		
	a. Nameplate (MWac):	74.9	
	b. Summer Firm (MWac):	42.7	
	c. Winter Firm (MWac):	-	
(3)	Technology Type:	PHOTOVOLTAIC	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	4/2022	
	b. Commercial in-service date:	12/2022	(EXPECTED)
(5)	Fuel		
	a. Primary fuel:	SOLAR	
	b. Alternate fuel:	N/A	
(6)	Air Pollution Control Strategy:	N/A	
(7)	Cooling Method:	N/A	
(8)	Total Site Area:	~500-600 ACRES	
(9)	Construction Status:	PLANNED	
(10)	Certification Status:		
(11)	Status with Federal Agencies:		
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):		N/A %
	b. Forced Outage Factor (FOF):		N/A %
	c. Equivalent Availability Factor (EAF):		N/A %
	d. Resulting Capacity Factor (%):		~30 %
	e. Average Net Operating Heat Rate (ANOHR):		N/A BTU/kWh
(13)	Projected Unit Financial Data		
	a. Book Life (Years):		30
	b. Total Installed Cost (In-service year $/kW):		
	c. Direct Construction Cost ($/kWac): ($2018)		
	d. AFUDC Amount ($/kW):		
	e. Escalation ($/kW):		
	f. Fixed O&M ($/kWdc-yr): ($2018)		
	g. Variable O&M ($/MWh): ($2018)		0.00
	h. K Factor:	NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:		**TBD**	
(2)	Capacity			
	a. Nameplate (MWac):		74.9	
	b. Summer Firm (MWac):		42.7	
	c. Winter Firm (MWac):		-	
(3)	Technology Type:		PHOTOVOLTAIC	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		4/2023	
	b. Commercial in-service date:		12/2023	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		SOLAR	
	b. Alternate fuel:		N/A	
(6)	Air Pollution Control Strategy:		N/A	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		~500-600 ACRES	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):			N/A %
	b. Forced Outage Factor (FOF):			N/A %
	c. Equivalent Availability Factor (EAF):			N/A %
	d. Resulting Capacity Factor (%):			~30 %
	e. Average Net Operating Heat Rate (ANOHR):			N/A BTU/kWh
(13)	Projected Unit Financial Data			
	a. Book Life (Years):			30
	b. Total Installed Cost (In-service year $/kW):			
	c. Direct Construction Cost ($/kWac):	($2018)		
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr):	($2018)		
	g. Variable O&M ($/MWh):	($2018)		0.00
	h. K Factor:		NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:	**TBD**		
(2)	Capacity			
	a. Nameplate (MWac):	74.9		
	b. Summer Firm (MWac):	42.7		
	c. Winter Firm (MWac):	-		
(3)	Technology Type:	PHOTOVOLTAIC		
(4)	Anticipated Construction Timing			
	a. Field construction start date:	4/2024		
	b. Commercial in-service date:	12/2024	(EXPECTED)	
(5)	Fuel			
	a. Primary fuel:	SOLAR		
	b. Alternate fuel:	N/A		
(6)	Air Pollution Control Strategy:	N/A		
(7)	Cooling Method:	N/A		
(8)	Total Site Area:	~500-600 ACRES		
(9)	Construction Status:	PLANNED		
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):		N/A %	
	b. Forced Outage Factor (FOF):		N/A %	
	c. Equivalent Availability Factor (EAF):		N/A %	
	d. Resulting Capacity Factor (%):		~30 %	
	e. Average Net Operating Heat Rate (ANOHR):		N/A BTU/kWh	
(13)	Projected Unit Financial Data			
	a. Book Life (Years):		30	
	b. Total Installed Cost (In-service year $/kW):			
	c. Direct Construction Cost ($/kWac): ($2018)			
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr): ($2018)			
	g. Variable O&M ($/MWh): ($2018)		0.00	
	h. K Factor:	NO CALCULATION		

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:		**TBD**	
(2)	Capacity			
	a. Nameplate (MWac):		74.9	
	b. Summer Firm (MWac):		42.7	
	c. Winter Firm (MWac):		-	
(3)	Technology Type:		PHOTOVOLTAIC	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		4/2025	
	b. Commercial in-service date:		12/2025	(EXPECTED)
(5)	Fuel			
	a. Primary fuel:		SOLAR	
	b. Alternate fuel:		N/A	
(6)	Air Pollution Control Strategy:		N/A	
(7)	Cooling Method:		N/A	
(8)	Total Site Area:		~500-600 ACRES	
(9)	Construction Status:		PLANNED	
(10)	Certification Status:			
(11)	Status with Federal Agencies:			
(12)	Projected Unit Performance Data			
	a. Planned Outage Factor (POF):			N/A %
	b. Forced Outage Factor (FOF):			N/A %
	c. Equivalent Availability Factor (EAF):			N/A %
	d. Resulting Capacity Factor (%):			~30 %
	e. Average Net Operating Heat Rate (ANOHR):			N/A BTU/kWh
(13)	Projected Unit Financial Data			
	a. Book Life (Years):			30
	b. Total Installed Cost (In-service year $/kW):			
	c. Direct Construction Cost ($/kWac):	($2018)		
	d. AFUDC Amount ($/kW):			
	e. Escalation ($/kW):			
	f. Fixed O&M ($/kWdc-yr):	($2018)		
	g. Variable O&M ($/MWh):	($2018)		0.00
	h. K Factor:		NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:	**TBD**	
(2)	Capacity		
	a. Nameplate (MWac):	74.9	
	b. Summer Firm (MWac):	42.7	
	c. Winter Firm (MWac):	-	
(3)	Technology Type:	PHOTOVOLTAIC	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	4/2026	
	b. Commercial in-service date:	12/2026	(EXPECTED)
(5)	Fuel		
	a. Primary fuel:	SOLAR	
	b. Alternate fuel:	N/A	
(6)	Air Pollution Control Strategy:	N/A	
(7)	Cooling Method:	N/A	
(8)	Total Site Area:	~500-600 ACRES	
(9)	Construction Status:	PLANNED	
(10)	Certification Status:		
(11)	Status with Federal Agencies:		
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):		N/A %
	b. Forced Outage Factor (FOF):		N/A %
	c. Equivalent Availability Factor (EAF):		N/A %
	d. Resulting Capacity Factor (%):		~30 %
	e. Average Net Operating Heat Rate (ANOHR):		N/A BTU/kWh
(13)	Projected Unit Financial Data		
	a. Book Life (Years):		30
	b. Total Installed Cost (In-service year $/kW):		
	c. Direct Construction Cost ($/kWac): ($2018)		
	d. AFUDC Amount ($/kW):		
	e. Escalation ($/kW):		
	f. Fixed O&M ($/kWdc-yr): ($2018)		
	g. Variable O&M ($/MWh): ($2018)		0.00
	h. K Factor:	NO CALCULATION	

DUKE ENERGY FLORIDA

SCHEDULE 9
STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES
AS OF JANUARY 1, 2018

(1)	Plant Name and Unit Number:	**Undesignated CT P1**	
(2)	Capacity		
	a. Summer (MWs):	226	
	b. Winter (MWs):	240	
(3)	Technology Type:	COMBUSTION TURBINE	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	1/2025	
	b. Commercial in-service date:	6/2027	(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 (%):	15.1 %	
	e. Average Net Operating Heat Rate (ANOHR):	10,905 BTU/kWh	
(13)	Projected Unit Financial Data		
	a. Book Life (Years):	35	
	b. Total Installed Cost (In-service year $/kW):	767.9	
	c. Direct Construction Cost ($/kW): ($2018)	595.5	
	d. AFUDC Amount ($/kW):	35.1	
	e. Escalation ($/kW):	137.4	
	f. Fixed O&M ($/kW-yr): ($2018)	3.08	
	g. Variable O&M ($/MWh): ($2018)	9.31	
	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, 2018

(1)	Plant Name and Unit Number:	**Undesignated CT P2**	
(2)	Capacity		
	a. Summer (MWs):	226	
	b. Winter (MWs):	240	
(3)	Technology Type:	COMBUSTION TURBINE	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	1/2025	
	b. Commercial in-service date:	6/2027	(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 (%):	15.1 %	
	e. Average Net Operating Heat Rate (ANOHR):	10,905 BTU/kWh	
(13)	Projected Unit Financial Data		
	a. Book Life (Years):	35	
	b. Total Installed Cost (In-service year $/kW):	767.9	
	c. Direct Construction Cost ($/kW): ($2018)	595.5	
	d. AFUDC Amount ($/kW):	35.1	
	e. Escalation ($/kW):	137.4	
	f. Fixed O&M ($/kW-yr): ($2018)	3.08	
	g. Variable O&M ($/MWh): ($2018)	9.31	
	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, 2018

(1)	Plant Name and Unit Number:		**Undesignated CT P3**	
(2)	Capacity			
	a. Summer (MWs):		226	
	b. Winter (MWs):		240	
(3)	Technology Type:		COMBUSTION TURBINE	
(4)	Anticipated Construction Timing			
	a. Field construction start date:		1/2025	
	b. Commercial in-service date:		6/2027	(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 (%):			15.1 %
	e. Average Net Operating Heat Rate (ANOHR):			10,905 BTU/kWh
(13)	Projected Unit Financial Data			
	a. Book Life (Years):			35
	b. Total Installed Cost (In-service year $/kW):			767.9
	c. Direct Construction Cost ($/kW):	($2018)		595.5
	d. AFUDC Amount ($/kW):			35.1
	e. Escalation ($/kW):			137.4
	f. Fixed O&M ($/kW-yr):	($2018)		3.08
	g. Variable O&M ($/MWh):	($2018)		9.31
	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, 2018

(1)	Plant Name and Unit Number:	**TBD**	
(2)	Capacity		
	a. Nameplate (MWac):	74.9	
	b. Summer Firm (MWac):	42.7	
	c. Winter Firm (MWac):	-	
(3)	Technology Type:	PHOTOVOLTAIC	
(4)	Anticipated Construction Timing		
	a. Field construction start date:	4/2027	
	b. Commercial in-service date:	12/2027	(EXPECTED)
(5)	Fuel		
	a. Primary fuel:	SOLAR	
	b. Alternate fuel:	N/A	
(6)	Air Pollution Control Strategy:	N/A	
(7)	Cooling Method:	N/A	
(8)	Total Site Area:	~500-600 ACRES	
(9)	Construction Status:	PLANNED	
(10)	Certification Status:		
(11)	Status with Federal Agencies:		
(12)	Projected Unit Performance Data		
	a. Planned Outage Factor (POF):		N/A %
	b. Forced Outage Factor (FOF):		N/A %
	c. Equivalent Availability Factor (EAF):		N/A %
	d. Resulting Capacity Factor (%):		~30 %
	e. Average Net Operating Heat Rate (ANOHR):		N/A BTU/kWh
(13)	Projected Unit Financial Data		
	a. Book Life (Years):		30
	b. Total Installed Cost (In-service year $/kW):		
	c. Direct Construction Cost ($/kWac): ($2018)		
	d. AFUDC Amount ($/kW):		
	e. Escalation ($/kW):		
	f. Fixed O&M ($/kWdc-yr): ($2018)		
	g. Variable O&M ($/MWh): ($2018)		0.00
	h. K Factor:	NO CALCULATION	

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

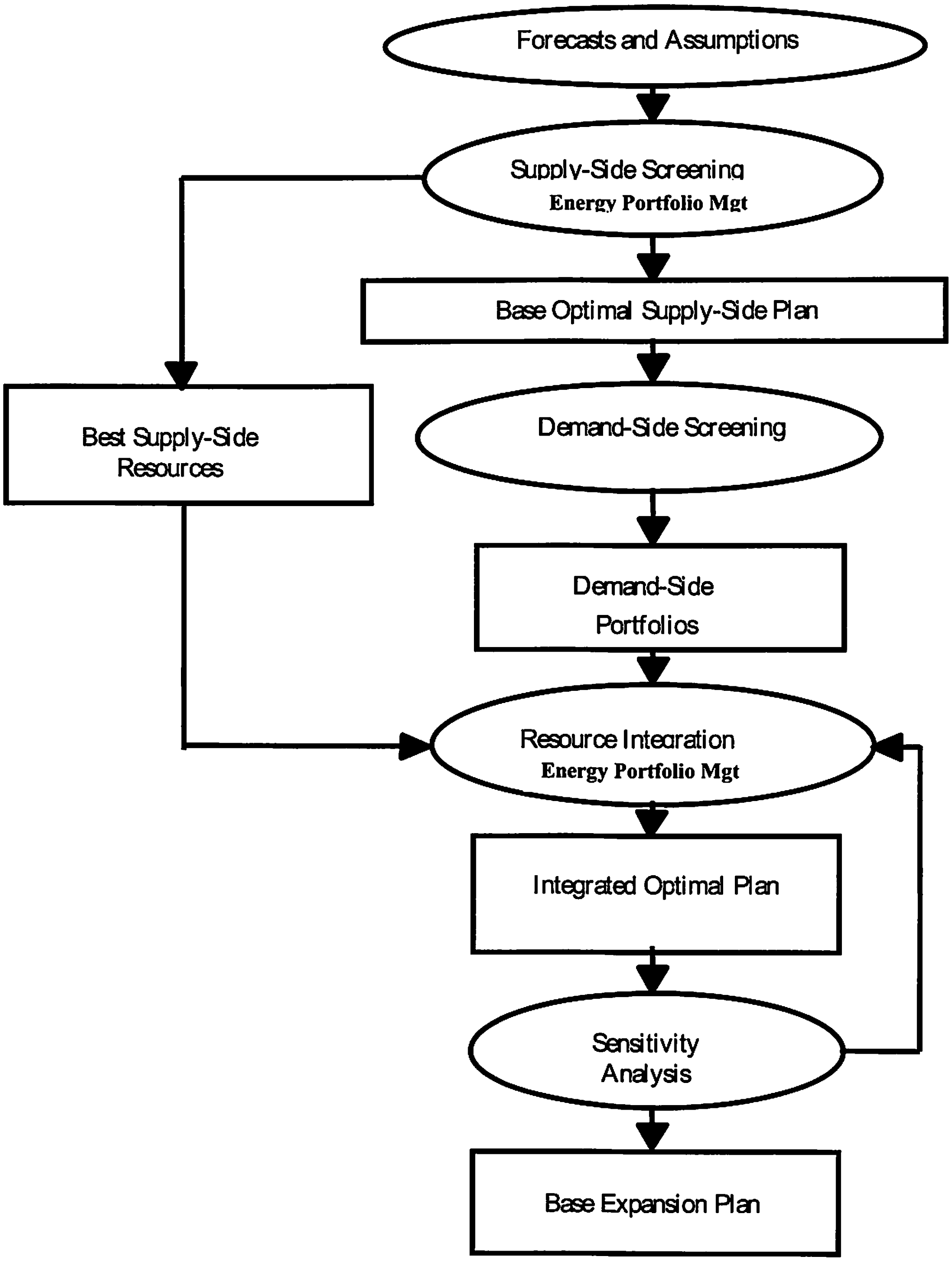
DEF employs an Integrated Resource Planning (IRP) process to determine the most cost-effective mix of supply- and demand-side alternatives that will reliably satisfy our customers' future demand and energy needs. DEF's IRP process incorporates state-of-the-art computer models used to evaluate a wide 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 4.50 percent, and an equity return of 10.5 percent. The assumptions resulted on a weighted average cost of capital of 7.68 percent and an after-tax discount rate of 7.15 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 a combined cycle facility in 2018 in Citrus County, incorporation of the summer capacity from the simple cycle unit (P11) at Intercession City purchased from Georgia Power in 2016 and of the full firm capacity of the Osprey Energy Center acquired from Calpine in 2017 as well as three planned combustion turbine units in year 2027 at undesignated sites. DEF continues to seek market supply-side resource alternatives to enhance DEF's resource plan. In addition to the existing and planned capacity resources listed above, DEF will have 700 MW of solar PV under development over the next 4 year period. In this plan, DEF has assigned this DEF owned solar PV generation an equivalent summer capacity value equal to 57% of the nameplate capacity of the planned installations. This assignment is based on the assumption that the projects developed over the period of this plan will be of equivalent design to the Hamilton Solar Energy Center for which information is provided in Schedule 9 and Chapter 4 below. Given the small amount of PV solar currently present on the DEF system, DEF plans to evaluate this assignment over time and may revise this value in future Site Plans based on changes in project designs and the data received from actual operation of these facilities once they are installed.

DEF's Base Expansion Plan projects the need for additional capacity with proposed in-service dates during the ten-year period from 2018 through 2027. 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 (18 MW)

Customer-owned renewable generation under DEF's Net Metering Tariff (62 MW as of 12/31/17)

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 2018. As of December 31, 2017, DEF had over 7,800 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 500 MW of QF solar projects over a 4-year period. In total, DEF is reasonably projecting over 1,000 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, Osceola and Suwannee 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. The Osceola, Perry and Suwannee are shown in Figures 3.2, 3.3 and 3.4 below.

FIGURE 3.2
Osceola Solar Site

FIGURE 3.3
Perry Solar Site

FIGURE 3.4
Suwannee Solar Site

DEF's current forecast, supporting the Base Expansion Plan includes over 700 MW of DEF-owned solar PV to be under development over the next four years and over 1,000 MW 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

CHAPTER 4

ENVIRONMENTAL AND LAND USE INFORMATION

DUKE ENERGY.
FLORIDA

CHAPTER 4

ENVIRONMENTAL AND LAND USE INFORMATION

PREFERRED SITES

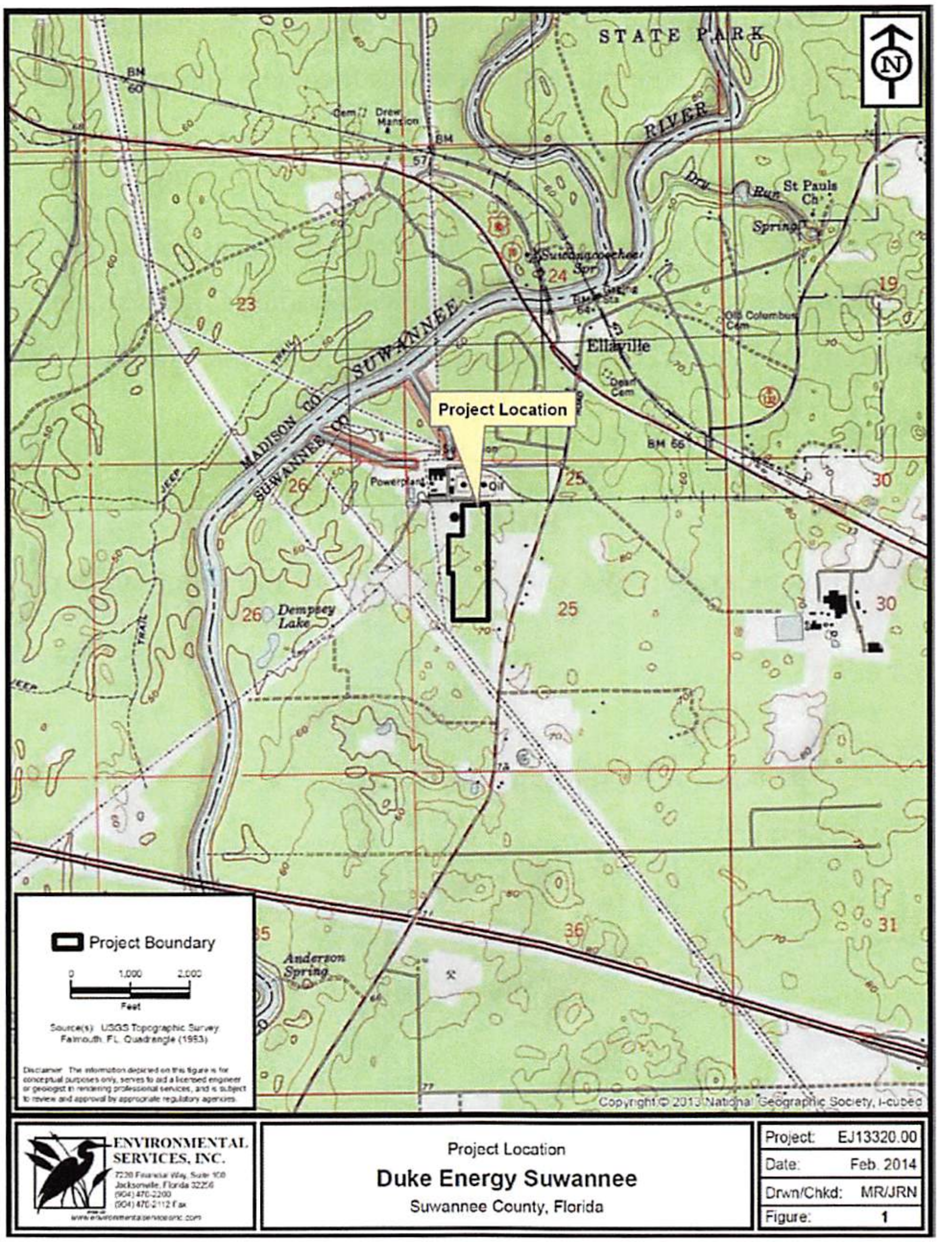
DEF's 2018 TYSP Preferred Sites include the Citrus County site for combined cycle natural gas generation, and the Suwannee County and Debary (Volusia County) sites for natural gas generation and/or solar generation and a site in Hamilton County dedicated to solar generation. These Preferred Sites are discussed below.

SUWANNEE ENERGY CENTER

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 completed construction of an 8.8 MW (ac) solar facility in November 2017 and it is now in operation. The solar facility area is built on approximately 68 acres of the existing Suwannee River Energy Center site which 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, no listed species utilize the site for nesting or foraging, except for the gopher tortoise. A gopher tortoise survey was 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 solar facility.

FIGURE 4.1

Suwannee Energy Center



HAMILTON SOLAR ENERGY CENTER

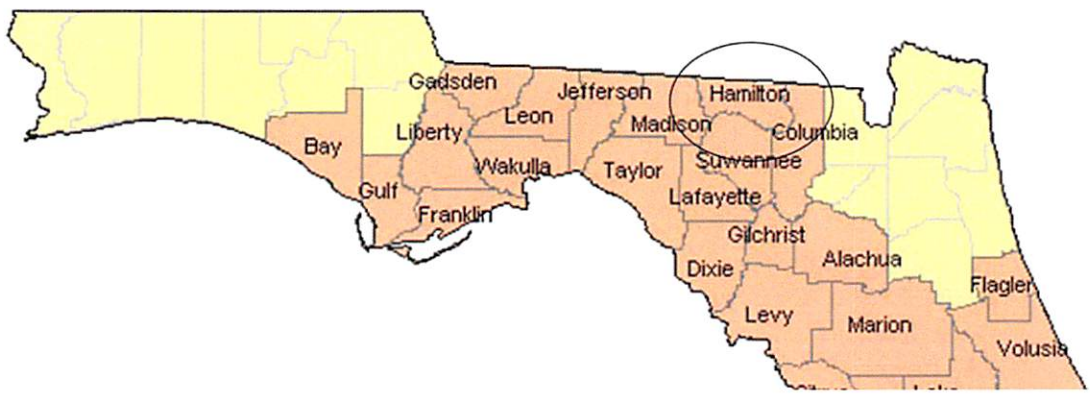
The Hamilton Solar project site consists of approximately 550 acres in southwestern Hamilton County, and is planned to generate about 74.9 megawatts of electricity from approximately 300,000 solar panels. The site is currently in agricultural operations. There are no wetlands or listed species found on the site. Duke requested a modification to the County's comprehensive plan and land development regulations to allow solar development to occur in agricultural land usage with a Special Permit approval. This request was approved by Hamilton County on January 16, 2018. A Special Use Permit application was filed with the county in November and was approved on February 6, 2018.

A cultural resources study was completed on the site and no resources noted. This report will be submitted to the State for review and approval. Duke will be filing for an Environmental Resource Permit from the Florida Department of Environmental Protection once final design is completed.

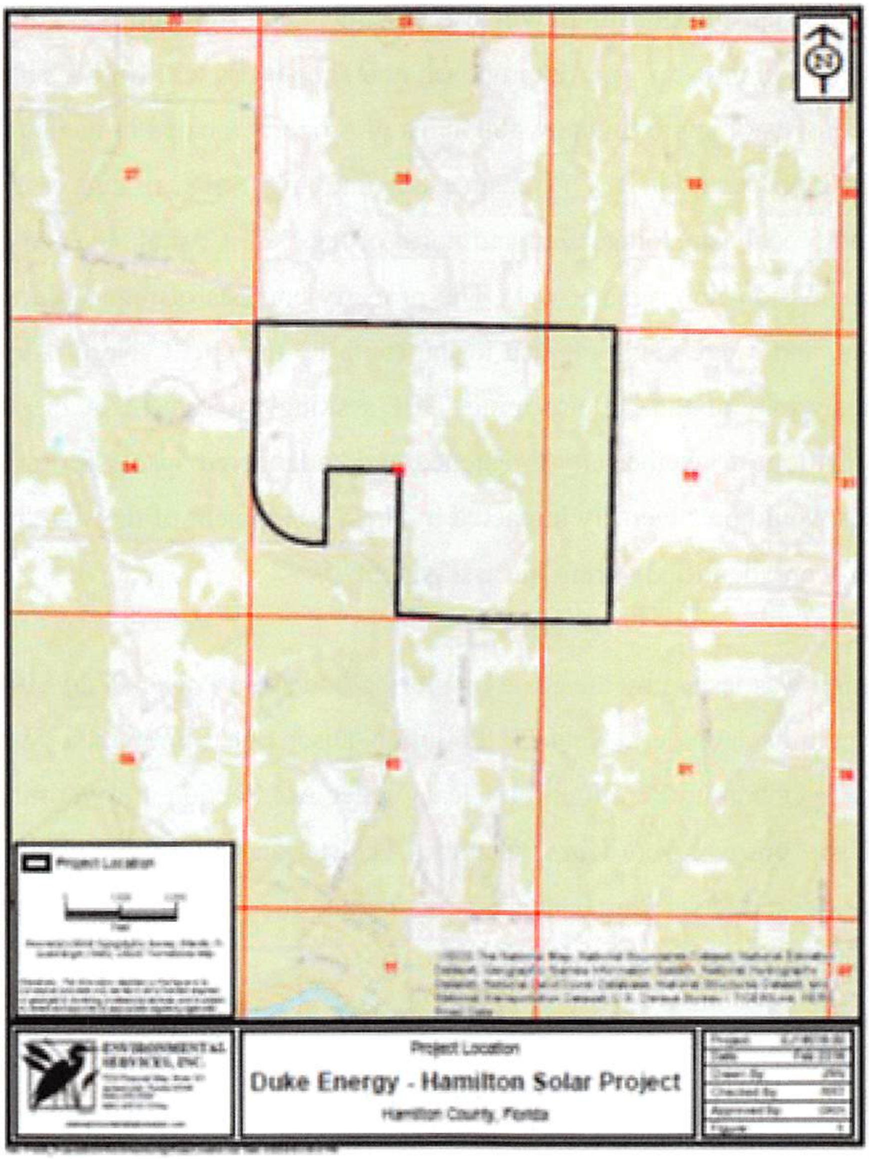
FIGURE 4.2

Hamilton Solar Energy Center Location Map and Site Boundary

Hamilton Location Map



Hamilton Site Boundary Map



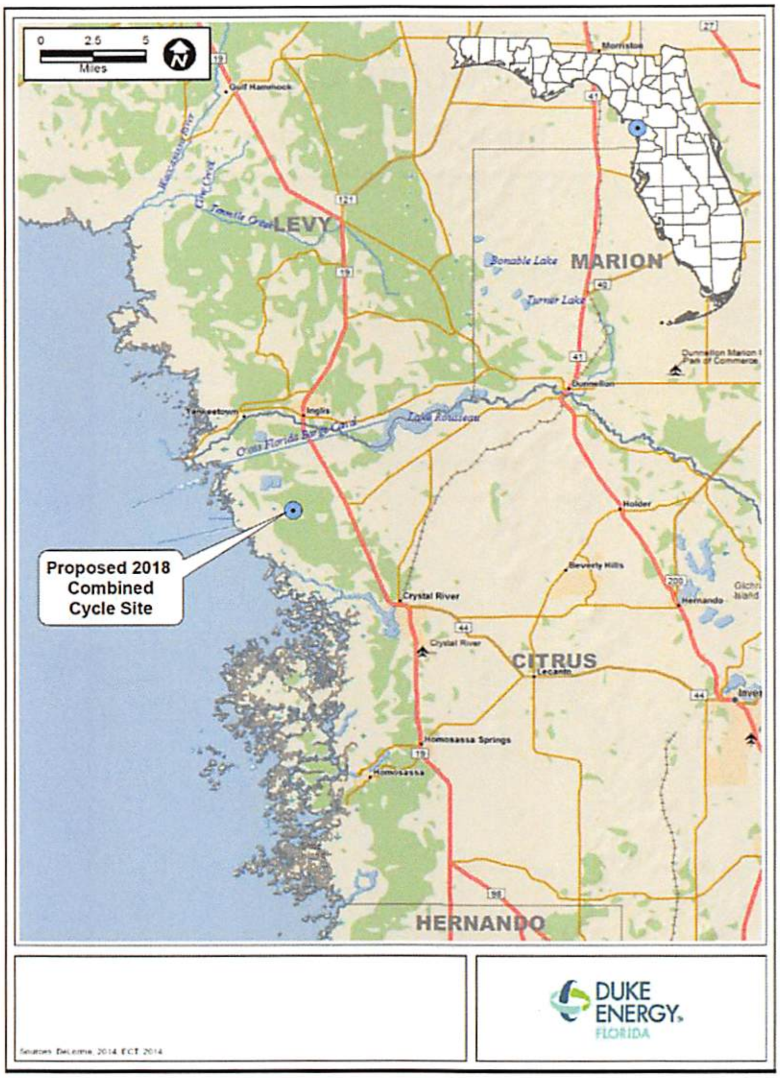
CITRUS COUNTY COMBINED CYCLE

DEF identified a site in Citrus County as a preferred site for new combined cycle generation station (see Figure 4.3 below). Construction of the Citrus Combined Cycle station is underway, and operation of the units is expected by the end of 2018. Natural gas is supplied via a new natural gas pipeline by the supplier (Sabal Trail) on a right-of-way provided by the supplier. The water pipelines and transmission lines will use existing DEF rights-of-way, and are currently under construction. No new rail spur is proposed and site access will be via existing roadways. 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. DEF's siting assessment of the Citrus property included determination of 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 during the assessment.

A Site Certification was issued by the State of Florida under the Power Plant Siting Act in May 2015. 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 also received Land Use Approval from Citrus County. The station will use the obtain cooling water from the existing Crystal River Unit 3 intake structure and the wastewater discharge will tie into the water systems of Crystal River Units 4 and 5.

FIGURE 4.3

Citrus County Combined Cycle



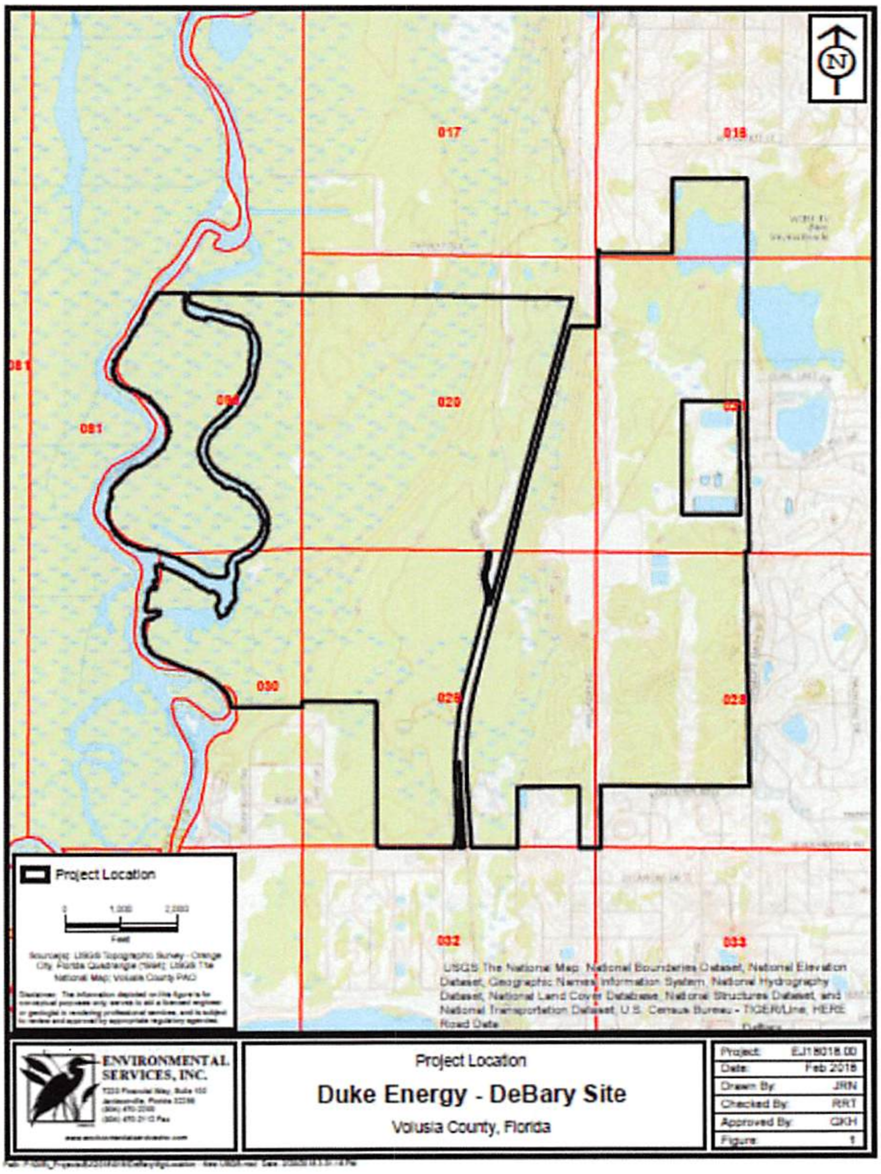
Construction of the Citrus Combined Cycle station is underway, and operation of the units is expected by the end of 2018. Natural gas is supplied via a new natural gas pipeline by the supplier (Sabal Trail) on a right-of-way provided by the supplier. The water pipelines and transmission lines will use existing DEF rights-of-way, and are currently under construction. No new rail spur is proposed and site access will be via existing roadways.

DEBARY ENERGY CENTER

DEF has identified the existing Debary Energy Center site as a preferred site for future solar and/or natural gas fired simple cycle generation. The Debary site currently houses 9 simple cycle peaking units, an oil storage facility, transmission and distribution substations and is connected by both 115 kV and 230 kV transmission lines. Natural gas to the site is provide through a lateral from the Florida Gas Transmission system.

FIGURE 4.4

Debary Energy Center

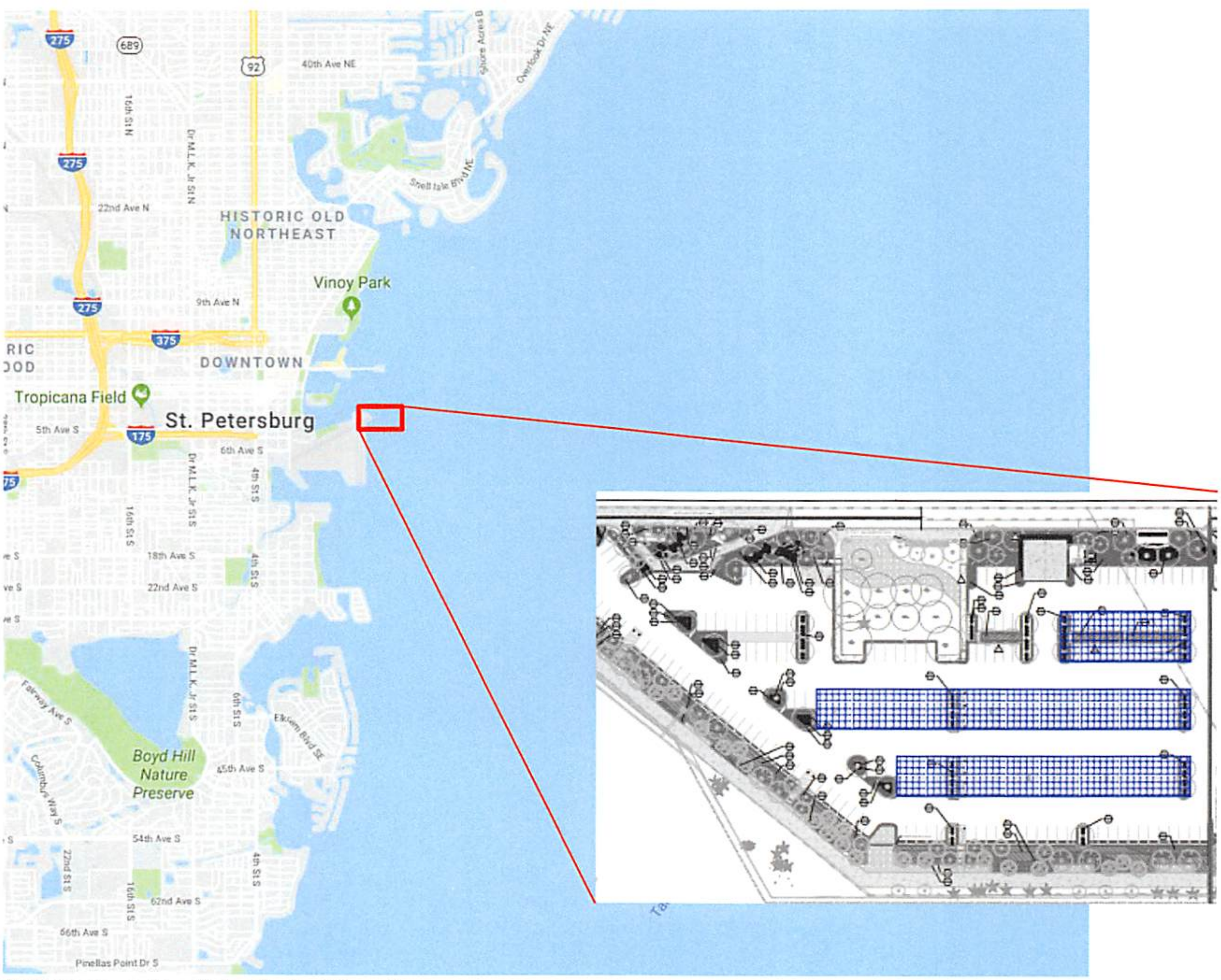


ST. PETERSBURG PIER SOLAR ENERGY CENTER

The St Petersburg Pier solar project will be constructed midway between St Petersburg Museum of History and the end of the pier. The approximately 2 acre site currently consists of paved areas used for parking and some open space. The area will be renovated and an enhanced parking area will be built. The grid tied solar arrays will be installed on canopies covering parking spaces and will provide shade while generating energy. The site is already zoned for the proposed use and no additional environmental permits will be required.

FIGURE 4.5

St Petersburg Pier Solar Energy Center



St Petersburg Pier Solar Project Location