

FPL 2015 Ten Year Site Plan excerpt

Table I.A.1: Capacity Resource by Unit Type (as of December 31, 2014)

Unit Type/ Plant Name	Location	Number of Units	Fuel	Summer MW
<u>Nuclear</u>				
St. Lucie ^{1/}	Hutchinson Island, FL	2	Nuclear	1,821
Turkey Point	Florida City, FL	1	Nuclear	1,632
Total Nuclear:		3		3,453
<u>Coal Steam</u>				
Scherer	Monroe County, Ga	1	Coal	643
St. John's River Power Park ^{2/}	Jacksonville, FL	2	Coal	254
Total Coal Steam:		3		897
<u>Combined-Cycle</u>				
Fort Myers.	Fort Myers, FL	1	Gas	1,436
Manatee	Parrish, FL	1	Gas	1,143
Martin	Indiantown, FL	3	Gas	2,073
Sanford	Lake Monroe, FL	2	Gas	2,010
Cape Canaveral	Cocoa, FL	1	Gas/Oil	1,210
Lauderdale	Dania, FL	2	Gas/Oil	884
Riviera Beach	City of Riviera Beach, FL	1	Gas/Oil	1,212
Turkey Point	Florida City, FL	1	Gas/Oil	1,192
West County	Palm Beach County, FL	3	Gas/Oil	3,657
Total Combined Cycle:		15		14,817
<u>Oil/Gas Steam</u>				
Manatee	Parrish, FL	2	Oil/Gas	1,618
Martin	Indiantown, FL	2	Oil/Gas	1,649
Turkey Point	Florida City, FL	1	Oil/Gas	396
Total Oil/Gas Steam:		5		3,663
<u>Gas Turbines(GT)</u>				
Fort Myers (GT)	Fort Myers, FL	12	Oil	648
Lauderdale (GT)	Dania, FL	24	Gas/Oil	840
Port Everglades (GT)	Port Everglades, FL	12	Gas/Oil	420
Total Gas Turbines/Diesels:		48		1,908
<u>Combustion Turbines</u>				
Fort Myers	Fort Myers, FL	2	Gas/Oil	319
Total Combustion Turbines:		2		319
<u>PV</u>				
DeSoto ^{3/}	DeSoto, FL	1	Solar Energy	25
Space Coast ^{3/}	Brevard County, FL	1	Solar Energy	10
Total PV:		2		35
Total System Generation as of December 31, 2013 =		79		25,092
System Firm Generation as of December 31, 2013 =				25,072

1/ Total capability of St. Lucie 1 is 981/1,003 MW. FPL's share of St. Lucie 2 is 840/860. FPL's ownership share of St. Lucie Units 1 and 2 is 100% and 85%, respectively.
 2/ Capabilities shown represent FPL's output share from each of the units (approx. 92.5% and exclude the Orlando Utilities Commission (OUC) and Florida Municipal Power Agency (FMPA) combined portion of approximately 7.44776% per unit. Represents FPL's ownership share: SJRPP cost: 20% of two units).
 3/ Approximately 45% of the 25 MW of PV at DeSoto, and 32% of the 10 MW of PV at Space Coast, are considered as firm generating capacity for Summer reserve margin purposes.

*= 4 units
75 units in PG&E*

*+ 1 unit at Cedar Bay
- 1 GT retired*

75 units in PG&E ←

**OPC 010086
FPL RC-16**

(KDT P04-L09) # of FPL Fossil units

1 BEFORE THE
2 FLORIDA PUBLIC SERVICE COMMISSION

3 In the Matter of:

4 DOCKET NO. 150196-EI

5 PETITION FOR DETERMINATION OF
6 NEED FOR OKEECHOBEE CLEAN
7 ENERGY CENTER UNIT 1, BY
8 FLORIDA POWER & LIGHT COMPANY.

9
10 VOLUME 1

11 (Pages 1 through 136)

12 PROCEEDINGS: HEARING

13 COMMISSIONERS
14 PARTICIPATING:

CHAIRMAN ART GRAHAM
COMMISSIONER LISA POLAK EDGAR
COMMISSIONER RONALD A. BRISÉ
COMMISSIONER JULIE I. BROWN
COMMISSIONER JIMMY PATRONIS

16 DATE: Tuesday, December 1, 2015

17 TIME: Commenced at 9:35 a.m.
18 Concluded at 12:00 p.m.

19 PLACE: Betty Easley Conference Center
20 Room 148
4075 Esplanade Way
21 Tallahassee, Florida

22 REPORTED BY: LINDA BOLES, CRR, RPR
23 Official FPSC Reporter
24 (850) 413-6734
25

1 Reducing volatility is you just pay a price for it; you
2 know, I paid this price; I know what I have now, right?
3 That reduces volatility?

4 A I wouldn't characterize it quite that way. I
5 would say you're trying to minimize the variation in the
6 cost.

7 MR. MOYLE: You're a mathematician. I'm a
8 history major. We sometimes say things differently
9 and view things differently, but I appreciate your
10 time. And I don't have any further questions.

11 CHAIRMAN GRAHAM: Thank you.

12 Staff?

13 CROSS EXAMINATION

14 BY MS. CORBARI:

15 Q Good afternoon, Dr. Sim.

16 A Good afternoon.

17 Q Thank you for being here. I'll try to keep it
18 short.

19 Staff has two handouts which we'll go ahead
20 and pass out now. One is a courtesy copy of your errata
21 sheet and the other one is Staff Exhibit 59, excerpt.

22 A Has 59 been handed out previously today?

23 Q I do not believe so. I believe it was a
24 different portion of Staff's Composite Exhibit 59.

25 A Okay. Thank you.

1 other related equipment; is that correct?

2 A Yes.

3 Q And beginning at Line 12, you state that FPL
4 would select an enhanced design or model for the
5 proposed unit powertrain components or other related
6 equipment only if the enhanced design or model results
7 in lower -- in a lower projected system cumulative
8 present value of revenue requirement costs to FPL
9 customers, correct?

10 A Yes.

11 Q If future analyses were to demonstrate that
12 the combustion turbines -- combustion turbine self-
13 build option resulted in a lower projected system CPVRR
14 costs to FPL customers, do you believe it would be
15 prudent for FPL to select a combustion turbine self-
16 build option?

17 A Yes, and I wouldn't restrict it just to
18 combustion turbines. If, for example, we found out that
19 photovoltaics price was such that it not only was now
20 the most economic option for 2019, and we had resolved
21 our reliability concerns, I think we might come back to
22 the Commission and say, we're building solar instead.
23 It's all part of our ongoing resource-planning effort.

24 Q Thank you.

25 And is it your testimony that FPL intends to

1 inform the Commission if it were to select such
2 enhancements for the proposed unit should the Commission
3 make a determination of need in this proceeding?

4 A Yes, and I believe to this date, our
5 introduction of the 1633-megawatt version of Okeechobee
6 combined cycle as opposed to the earlier, in our direct
7 testimony, 1622-megawatt is one such -- in informing the
8 Commission that we have found a better, more efficient,
9 lower CPVRR cost combined cycle option. And we will
10 continue to look. If we find yet another enhancement,
11 we would bring that before the Commission as well.

12 Q Do you know how soon after FPL were to select
13 any further enhancements FPL would inform the Commission
14 of the selected enhancements?

15 A I'm sorry. Can you repeat the question,
16 please?

17 Q Sure. Do you have -- do you know how soon
18 after FPL selected any additional enhancements that FPL
19 would inform the Commission of such enhancements?

20 A On a going-forward basis?

21 Q Yes.

22 A I would say as soon as we had satisfied
23 ourself that the analysis was definitive, we would
24 inform the Commission as shortly thereafter as we could.

25 Q Okay. I'm going to have you flip to Page 10

1 led us to sharpen our pencils extensively to try to come
2 up with the most cost-effective next-planned generating
3 unit, something that we have continued to do even after
4 we've issued the RFP as witnessed by our updated
5 combined cycle moving from 1622 megawatts to 1633 with a
6 fairly significant drop in CPVRR costs.

7 So, it has led to the -- the bid rule has led
8 to the most competitive offering by the utility to
9 ensure that it was putting its best offer forward and
10 inviting or soliciting bids from other parties to
11 attempt to compete with it.

12 So, I think it has done its -- or met its
13 overall objective of trying to ensure that only the most
14 cost-effective generation is put in place for a
15 utility's customers.

16 MR. COX: Thank you, Dr. Sim.

17 Chairman Graham, I have no further redirect
18 questions for Dr. Sim.

19 CHAIRMAN GRAHAM: Okay. Exhibits.

20 MR. MARSHALL: ECOSWF would like to move into
21 the record Exhibit 73 through 76.

22 CHAIRMAN GRAHAM: Let's start with Florida
23 Power & Light's exhibits first.

24 MR. MARSHALL: Sorry.

25 CHAIRMAN GRAHAM: That's all right.

1 CHAIRMAN GRAHAM: Okay.

2 MR. WHITLOCK: Mr. Chairman, could I just
3 briefly ask for one more clarification?

4 CHAIRMAN GRAHAM: Sure.

5 MR. WHITLOCK: Thank you.

6 As part of the same questioning that Mr. Moyle
7 was just referencing, staff's questioning of
8 Dr. Sim, I believe -- did he testify there has
9 already been an enhancement to the technology of
10 the Okeechobee unit, itself, and it's now no longer
11 a 1622-megawatt unit, but (it's now a 1633-megawatt
12 unit?

13 MR. COX: Yeah, the latest improvement that we
14 were working on. And Witness Kingston can speak to
15 that.

16 MR. WHITLOCK: Okay. And is that -- is that
17 something there's been a filing on that -- or
18 is --

19 MR. COX: It's been provided through the
20 discovery of the staff questions.

21 MR. WHITLOCK: Okay. Okay.

22 MR. COX: That's where we provided that
23 information.

24 MR. WHITLOCK: Okay. Thank you.

25 CHAIRMAN GRAHAM: Now, Dr. Sim, thank you very

FPL Fossil Operations

Performance Benchmarking Scorecard

Ten Year Comparison vs. Industry Peer Group*

Metrics	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Safety (OSHA Rate)										
Availability (EAF %)										
Reliability (EFOR %)										
Cost (NF O&M ¢/kWh)										
Cost (NF O&M \$/kW)										
Efficiency (Heat Rate)										

Examples of Top Decile or Best-in-Class Performance



- Best-in-class
- Top decile
- Top quartile
- Better than industry average

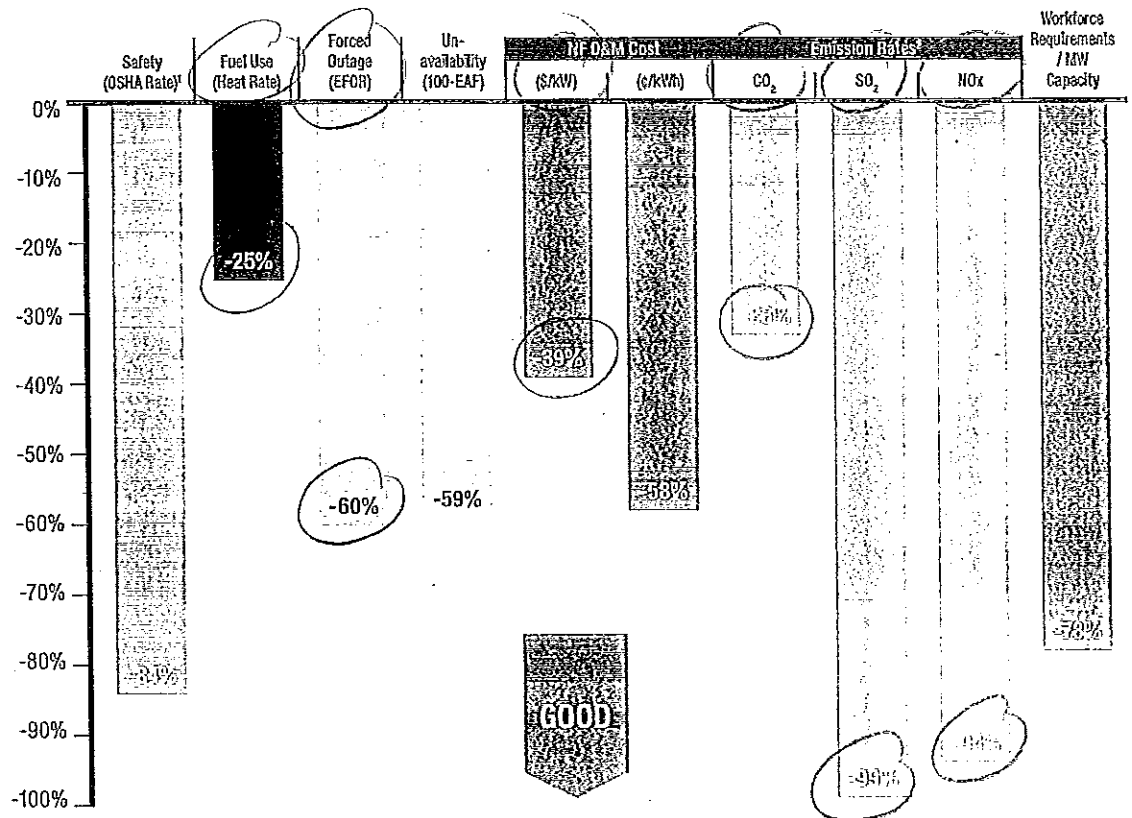
*Industry Peers - typically Large U.S. Utility Fossil fleets reporting to EEI, NERC, & FERC.
 Availability note: FPL's reduced EAF scoring from 2011-2013 reflects emission control installation planned outages at 4 - 800 MW steam units.

(KDT P06 - L01) Top Decile or Best-in-Class



FPL Fossil Performance Improvements (1990-2015)

As FPL transformed the fossil generating fleet, we substantially improved our operating performance across key indicators.



Year	OSHA Rate ¹	BTU/kWh	EFOR%	100-EAF%	\$/kW	¢/kWh	lbs/MWh ²	lbs/MWh ²	lbs/MWh ²	Emp/MWh ³
1990	4.95	10,214	2.77	100-81.7=18.7	18.5	0.64	1,464	6.51	5.24	0.21
2015	0.77	7,617	1.12	100-92.4=7.6	11.3	0.27	974	0.07	0.31	0.05
Results>	Safer	More Efficient	More Reliable	More Available	Lower Cost	Lower Cost	Cleaner	Cleaner	Cleaner	More Productive

FPL's fossil fleet improvements in safety, efficiency, reliability, cost, emissions and productivity are integral to cost-effectively generating electricity for customers

OPC 010094
 FPL RC-16

¹Injuries per 100 employees

²Emission rates include solar contribution

³1,001 Employees / 21,800 MW for '15

(KDT P06-L11-15) Performance Improvements



NextEra Energy, Inc.
Media Line: (561) 694-4442
Jan. 28, 2016

FOR IMMEDIATE RELEASE

NextEra Energy reports 2015 fourth-quarter and full-year financial results

- NextEra Energy achieves strong fourth-quarter results and excellent full-year growth
- Florida Power & Light Company continues to invest in the business to deliver outstanding customer value
- NextEra Energy Resources signs about 2,100 megawatts of new contracted renewables in 2015

JUNO BEACH, Fla. - NextEra Energy, Inc. (NYSE:NEE) today reported 2015 fourth-quarter net income attributable to NextEra Energy on a GAAP basis of \$507 million, or \$1.10 per share, compared to \$884 million, or \$2.00 per share, in the fourth quarter of 2014. On an adjusted basis, NextEra Energy's 2015 fourth-quarter earnings were \$539 million, or \$1.17 per share, compared to \$458 million, or \$1.03 per share, in the fourth quarter of 2014.

For the full year 2015, NextEra Energy reported net income attributable to NextEra Energy on a GAAP basis of \$2.8 billion, or \$6.06 per share, compared to \$2.5 billion, or \$5.60 per share, in 2014. On an adjusted basis, NextEra Energy's full-year 2015 earnings were \$2.6 billion, or \$5.71 per share, compared to \$2.3 billion, or \$5.30 per share, in 2014.

Adjusted earnings for these periods exclude the mark-to-market effects of non-qualifying hedges, as well as the net effect of other than temporary impairments (OTTI) on certain investments and operating results from the Spain solar project. Adjusted earnings also exclude merger-related expenses in 2015 and, for the full year 2014, the gain associated with the Maine fossil assets. All of these items, except for the merger-related expenses, relate primarily to the business of NextEra Energy Resources, LLC and its affiliated entities.

NextEra Energy's management uses adjusted earnings, which is a non-GAAP financial measure, internally for financial planning, analysis of performance, reporting of results to the board of directors, and as an input in determining performance-based compensation under the company's employee incentive compensation plans. NextEra Energy also uses earnings expressed in this fashion when communicating its financial results and earnings outlook to analysts and investors. NextEra Energy's management believes that adjusted earnings provide a more meaningful representation of NextEra Energy's fundamental earnings power. The attachments to this news release include a reconciliation of historical adjusted earnings to net income attributable to NextEra Energy, which is the most directly comparable GAAP measure.

"NextEra Energy delivered strong fourth-quarter results and exceeded its full-year financial expectations, finishing what was an excellent overall year of growth and execution," said NextEra Energy Chairman and Chief Executive Officer Jim Robo. "NextEra Energy Resources had outstanding performance in 2015 for wind and solar development, marking its second most

OPC 010095
FPL RC-16

(KDT P10-L749) (see next page)

successful year ever for renewable origination performance. We continue to believe that NextEra Energy Resources is well-positioned to capitalize on what is one of the most favorable environments for renewables development in recent history. At FPL, we continued to invest in the business and had our best-ever year in terms of reliability. FPL's typical residential customer bill remains among the lowest in the nation and lower than it was a decade ago. Earlier this month, FPL notified the Florida Public Service Commission that it expects to file a formal request in March for a four-year plan for new base rates. The rate plan is being designed to keep costs down for customers over the long term, while supporting continued investments that advance affordable, clean energy and enhance service reliability for customers."

Florida Power & Light Company

NextEra Energy's principal rate-regulated utility subsidiary, Florida Power & Light Company (FPL), reported fourth-quarter 2015 net income of \$365 million, or \$0.79 per share, compared to \$286 million, or \$0.65 per share, for the prior-year quarter. For the full year 2015, net income was \$1.65 billion, or \$3.63 per share, compared to \$1.52 billion, or \$3.45 per share, in 2014.

FPL's fourth-quarter and full-year growth was driven by continued investments in clean, efficient generation and other infrastructure projects. FPL's capital expenditures were approximately \$1 billion in the fourth quarter of 2015, bringing full-year capital investments to approximately \$3.4 billion. Regulatory capital employed in 2015 grew 6.8 percent, compared to the prior year.

During the fourth quarter of 2015, retail sales increased 11.7 percent, compared to the prior-year comparable quarter, driven by continued customer growth and weather-related usage per customer. On a weather-normalized basis, fourth-quarter 2015 retail sales increased 2.1 percent. During the fourth quarter of 2015, FPL averaged approximately 66,000 more customer accounts, compared to the comparable prior-year quarter, representing growth of 1.4 percent. Underlying usage increased 0.7 percent during the fourth quarter of 2015.

For the full year 2015, retail sales increased 5.6 percent, compared to the prior year. After adjusting for the effects of weather, full-year 2015 retail sales increased 1.2 percent. Underlying usage for the year decreased 0.3 percent.

FPL's customer metrics are consistent with improving Florida economic indicators that the company tracks. The state's seasonally adjusted unemployment rate in December 2015 was 5.0 percent, down 0.7 percent from a year earlier. The number of jobs in Florida in December 2015 was up 2.9 percent from the prior year and up 15 percent from the low in December 2009, reflecting an increase of more than 1 million jobs.

Over the course of 2015, FPL continued to strengthen and deliver a customer value proposition that includes high reliability, award-winning customer service, a clean emissions profile and a typical residential customer bill that is the lowest in Florida and among the lowest in the nation. FPL ranks best in class among major U.S. utilities based on its operating and maintenance (O&M) costs per kilowatt-hour (kWh) of retail sales, and compared with the average utility's O&M costs, the company's innovative practices and processes save customers nearly \$2 billion a year. In 2015, FPL was recognized as having the best comprehensive reliability performance in the U.S. by PA Consulting Group. According to a survey of utility customers by Market Strategies International, FPL was named a 2015 Customer Champion, ranking second in the nation and first in the southeast region. In addition, FPL was recognized as one of the 2015 Most Trusted Brands in a Market Strategies International study.

In 2015, FPL continued to make solid progress on major capital projects, including the construction of the Port Everglades Clean Energy Center, which remains on budget and on schedule to begin operation in mid-2016. Since 2001, FPL's investments in highly efficient natural gas power plants have prevented more than 95 million tons of carbon emissions and saved customers more than \$8 billion in fuel costs.

FPL 2015 Ten Year Site Plan (excerpt)

Schedule 9 Status Report and Specifications of Proposed Generating Facilities

- (1) Plant Name and Unit Number: Port Everglades Next Generation Clean Energy Center
- (2) Capacity
- | | |
|-----------|----------|
| a. Summer | 1,237 MW |
| b. Winter | 1,429 MW |
- (3) Technology Type: Combined Cycle
- (4) Anticipated Construction Timing
- | | |
|-----------------------------------|------|
| a. Field construction start-date: | 2014 |
| b. Commercial In-service date: | 2016 |
- (5) Fuel
- | | |
|-------------------|-----------------------------|
| a. Primary Fuel | Natural Gas |
| b. Alternate Fuel | Ultra-low sulfur distillate |
- (6) Air Pollution and Control Strategy: Dry Low No_x Burners, SCR, Natural Gas, 0.0015% S. Distillate and Water Injection on Distillate
- (7) Cooling Method: Once-through cooling water
- (8) Total Site Area: Existing Site Acres
- (9) Construction Status: U (Under construction, less than or equal to 50% complete)
- (10) Certification Status: ---
- (11) Status with Federal Agencies: ---
- (12) Projected Unit Performance Data:
- | | |
|--|--|
| Planned Outage Factor (POF): | 3.5% |
| Forced Outage Factor (FOF): | 1.1% |
| Equivalent Availability Factor (EAF): | 95.4% |
| Resulting Capacity Factor (%): | Approx. 90% (First Full Year Base Operation) |
| Average Net Operating Heat Rate (ANOHR): | 6,330 Btu/kWh |
| Base Operation 75F, 100% | |
- (13) Projected Unit Financial Data *,**
- | | |
|------------------------------------|---|
| Book Life (Years): | 30 years |
| Total Installed Cost (2016 \$/kW): | 928 |
| Direct Construction Cost (\$/kW): | 841 |
| AFUDC Amount (\$/kW): | 87 |
| Escalation (\$/kW): | Accounted for in Direct Construction Cost |
| Fixed O&M (\$/kW-Yr): (2016 \$) | 30.00 |
| Variable O&M (\$/MWH): (2016 \$) | 0.10 |
| K Factor: | 1.51 |

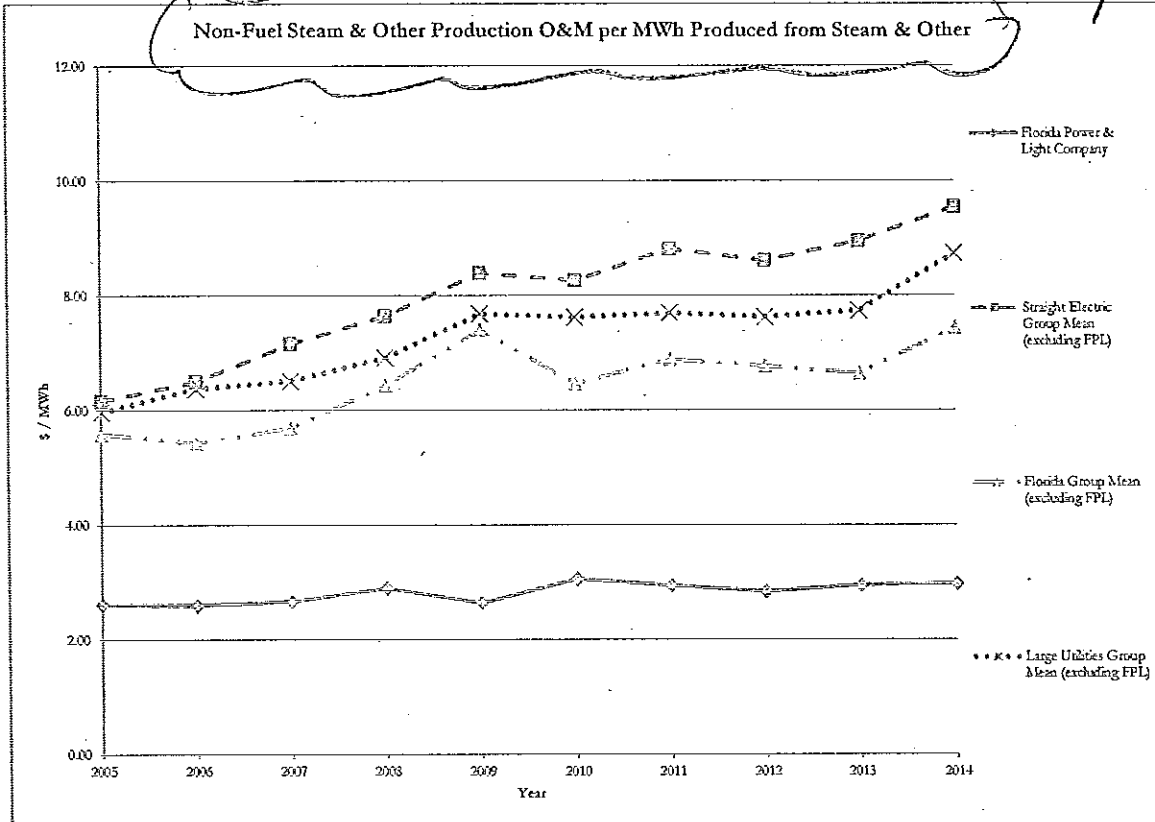
* \$/kW values are based on Summer capacity.

** Fixed O&M cost includes capital replacement.

Note: Total installed cost includes gas expansion, transmission interconnection and integration, escalation, and AFUDC. Demolition costs of existing plant are not included.

Benchmarking Workpapers
 Productive Efficiency

Fossil Fleet Comparisons



Non-Fuel Steam & Other Production O&M per MWh Produced from Steam & Other										
	Annual Values									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Florida Power & Light Company	2.61	2.60	2.66	2.90	2.64	3.06	2.94	2.83	2.95	2.97
Straight Electric Group Mean (excluding FPL)	6.16	6.50	7.16	7.64	8.39	8.26	8.81	8.61	8.95	9.54
Florida Group Mean (excluding FPL)	5.59	5.45	5.70	6.43	7.40	6.47	6.89	6.77	6.64	7.44
Large Utilities Group Mean (excluding FPL)	5.97	6.38	6.51	6.92	7.69	7.62	7.70	7.63	7.74	8.73
	Rankings									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Straight Electric Group:										
Florida Power & Light Company	1	1	1	1	1	1	1	1	1	1
Total Ranked	26	26	26	26	26	26	26	26	26	26
Florida Group:										
Florida Power & Light Company	1	1	1	1	1	1	1	1	1	1
Total Ranked	4	4	4	4	4	4	4	4	4	4
Large Utility Group:										
Florida Power & Light Company	1	1	1	1	1	1	1	1	1	1
Total Ranked	8	8	8	8	8	8	8	8	8	8

Industry peer groups
FPL

Best-in-class

Source: SNL Interactive, FERC Form-1
 Non-Fuel Steam & Other O&M less Fuel Expenses; Steam & Other Generation (MWh)

(KDT P13-L14)

O & M BENCHMARK VARIANCE BY FUNCTION

Schedule C-41

Type of Data Shown:
 Projected Test Year Ended 12/31/17
 Prior Year Ended
 Historical Test Year Ended

Witness: Kim Ousdahi

Provide a schedule of operation and maintenance expense by function for the test year, the benchmark year and the variance. For each functional benchmark variance, provide the reason(s) for the difference.

FLORIDA PUBLIC SERVICE COMMISSION
 COMPANY: FLORIDA POWER & LIGHT COMPANY AND SUBSIDIARIES
 DOCKET NO.: 160021-EI

(\$000)

(1) LINE NO.	(2) FUNCTION	(3) TEST YEAR 2017 TOTAL COMPANY PER BOOKS	(4) 2017 O&M EXPENSE ADJUSTMENTS (A)	(5) 2017 ADJUSTED BENCHMARK	(6) 2017 ADJUSTED BENCHMARK VARIANCE (4)-(5)	(7) REASON FOR VARIANCE (SEE SUPPORTING SCHEDULE)
1	PRODUCTION - STEAM	446,375	377,493	90,778	(21,897)	Not Applicable
2	PRODUCTION - NUCLEAR	628,171	264,376	432,332	(68,537)	Not Applicable
3	PRODUCTION - OTHER	2,652,889	2,487,308	171,360	(5,778)	Not Applicable
4	POWER SUPPLY - OTHER	369,134	362,611	6,699	(175)	Not Applicable
5	TRANSMISSION	71,988	23,679	53,328	(5,019)	Not Applicable
6	DISTRIBUTION	300,385	6,125	323,317	(29,057)	Not Applicable
7	CUSTOMER ACCOUNTS	108,723	107	169,459	(60,843)	Not Applicable
8	CUSTOMER SERVICE & INFORMATION	66,065	52,127	14,523	(585)	Not Applicable
9	SALES EXPENSE	14,242	0	17,143	(2,901)	Not Applicable
10	ADMINISTRATIVE & GENERAL	349,177	37,171	438,818	(126,811)	Not Applicable
11	TOTAL	5,007,149	3,610,997	1,717,756	(321,603)	Not Applicable

Final Fleet Portfolio
 (27,675)
 Below Benchmark

NOTES:
 (A) IN ADDITION TO THE COMMISSION ADJUSTMENTS REFLECTED ON MFR C-3 AND C-38, THE FOLLOWING ITEMS HAVE ALSO BEEN ADJUSTED OUT OF O&M EXPENSES CONSISTENT WITH FPL'S LAST RATE CASE (DOCKET NO. 120015-EI, ORDER NO. PSC-13-0023-S-EI), AND ORDER NOS. 13537, 13948, 13948-A, AND 14005. NON-RECOVERABLE FUEL, AND TRANSMISSION OF ELECTRICITY BY OTHERS.

Recap Schedules:

C-37

OPC 010099
 FPL RC-16

(KDT P14=L09) T.Y.

O & M BENCHMARK VARIANCE BY FUNCTION

Schedule C-41
2018 SUBSEQUENT YEAR ADJUSTMENT

Type of Data Shown:
 Projected Test Year Ended
 Prior Year Ended
 Historical Test Year Ended
 Proj. Subsequent Yr Ended 12/31/18

EXPLANATION:
 Provide a schedule of operation and maintenance expense by function for the test year, the benchmark year and the variance. For each functional benchmark variance, provide the reason(s) for the difference.

FLORIDA PUBLIC SERVICE COMMISSION
 COMPANY: FLORIDA POWER & LIGHT COMPANY
 AND SUBSIDIARIES

Witness: Klm Ousdahl

DOCKET NO. 160021-EI

(1) LINE NO.	(2) FUNCTION	(3) SUBSEQUENT YEAR 2018 TOTAL COMPANY PER BOOKS	(4) 2018 O&M EXPENSE ADJUSTMENTS (A)	(5) 2018 ADJUSTED BENCHMARK	(6) 2018 ADJUSTED BENCHMARK VARIANCE (4)-(5)	(7) REASON FOR VARIANCE (SEE SUPPORTING SCHEDULE)
1	PRODUCTION - STEAM	472,934	389,913	93,167	(10,147)	Not Applicable
2	PRODUCTION - NUCLEAR	606,241	226,744	443,710	(64,212)	Not Applicable
3	PRODUCTION - OTHER	2,804,925	2,645,945	175,869	(16,889)	Not Applicable
4	POWER SUPPLY - OTHER	364,539	357,805	6,734	(141)	Not Applicable
5	TRANSMISSION	73,060	23,863	55,542	(6,345)	Not Applicable
6	DISTRIBUTION	323,214	6,009	317,205	(19,537)	Not Applicable
7	CUSTOMER ACCOUNTS	109,652	106	176,495	(66,950)	Not Applicable
8	CUSTOMER SERVICE & INFORMATION	65,606	52,141	15,126	(1,660)	Not Applicable
9	SALES EXPENSE	15,747	0	17,855	(2,108)	Not Applicable
10	ADMINISTRATIVE & GENERAL	355,021	35,473	457,039	(137,491)	Not Applicable
11	TOTAL	5,190,939	3,737,999	1,778,420	(325,480)	

fossil fleet Portfolio (\$2,735.6) Below Benchmarks

NOTES:
 (A) IN ADDITION TO THE COMMISSION ADJUSTMENTS REFLECTED ON MFR C-3 AND C-38, THE FOLLOWING ITEMS HAVE ALSO BEEN ADJUSTED OUT OF O&M EXPENSES CONSISTENT WITH FPL'S LAST RATE CASE (DOCKET NO. 120015-EI, ORDER NO. 13948, PSC-13-0023-S-EI), AND ORDER NOS. 13537, 13948, 13948-A, AND 14005: NON-RECOVERABLE FUEL, AND TRANSMISSION OF ELECTRICITY BY OTHERS.

Supporting Schedules: C-37

Recap Schedules:

(KDT P14-209) S.Y.A.

DETAIL OF CHANGES IN EXPENSES

Schedule C-8

Type of Data Shown:
 Projected Test Year Ended 12/31/2017
 Prior Year Ended 12/31/2016
 Historical Test Year Ended

Provide the changes in primary accounts that exceed 120th of one percent (0005) of total operating expenses and ten percent from the prior year to the test year. Quantify each reason for the change.

EXPLANATION:

FLORIDA PUBLIC SERVICE COMMISSION
 COMPANY: FLORIDA POWER & LIGHT COMPANY
 AND SUBSIDIARIES
 DOCKET NO.: 160021-EI

Witness: Robert E. Barrett, Jr., Mitchell Goldstein,
 Roxano R. Kennedy, Manuel B. Miranda,
 Kim Quedahl

Line No.	(1) Account Number	(2) Account	(3) Test Year Ended 12/31/2017 (000)	(4) Prior Year Ended 12/31/2016 (000)	(5) Dollars (3)-(4) (000)	(6) Increase / (Decrease) Percent (5)/(4) (%)	(7) Reason(s) for Change
1			275,545	210,692	64,854	30.78%	Reason A
2	404	Amortization of Limited-Term Electric Plant, and amortization and depletion of producing natural gas land and land rights	14,537	(164,042)	178,579	(108.86%)	Reason B
3	407	Amortization of property losses, unrecovered plant and regulatory study costs.	903,065	1,064,046	(160,981)	-10.69%	Reason C
4		Operating income taxes.	20,891	34,692	(13,801)	(39.78%)	Reason D
5	409+ 410 + 411	Miscellaneous steam power expenses (Major only).	23,765	35,537	(11,771)	(33.12%)	Reason E
6	506	Maintenance of boiler plant (Major only).	84,301	102,895	(18,603)	(18.08%)	Reason F
7	512	Maintenance supervision and engineering (Major only).	20,893	9,650	11,333	117.43%	Reason G
8	528	Maintenance of reactor plant equipment (Major only).	18,015	9,887	8,148	82.57%	Reason H
9	530	Maintenance of miscellaneous nuclear plant (Major only).	2,328,244	2,068,015	260,229	12.58%	Reason I
10	532	Fuel - Other Power Generation.	86,849	51,729	35,120	28.23%	Reason J
11	547	Maintenance of generating and electric plant (Major only).	92,833	158,411	(65,578)	(41.40%)	Reason K
12	553	Other expenses.	22,495	28,543	(6,048)	(21.19%)	Reason L
13	557	Transmission of electricity by others (Major only)	37,628	32,278	5,352	16.58%	Reason M
14	565	Miscellaneous distribution expenses.	58,188	38,831	19,557	50.89%	Reason N
15	588	Gas reserves - other expenses	2,253	12,851	(10,698)	(62.80%)	Reason O
16	759	Duplicate charges- Credit.					
17	829						
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							

NOTE 1: Reasons for change exclude variances resulting from alternative cost recovery mechanisms such as the Cost Recovery Clause items.
 NOTE 2: Total may not add due to rounding.

Supporting Schedules: C-7 Recap Schedules

(KDT P15-L08,14, & 20) Pg 1 of 3

DETAIL OF CHANGES IN EXPENSES

Type of Data Shown:
 Projected Test Year Ended 12/31/2017
 Prior Year Ended 12/31/2016
 Historical Test Year Ended / /

Provide the changes in primary accounts that exceed 1/20th of one percent (0.005) of total operating expenses and ten percent from the prior year to the test year. Quantify each reason for the change.

Witness: Robert E. Barrett, Jr., Mitchell Goldstein,
 Roxane R. Kennedy, Manuel B. Miranda,
 Kim Duzdahl

FLORIDA PUBLIC SERVICE COMMISSION
 COMPANY: FLORIDA POWER & LIGHT COMPANY
 AND SUBSIDIARIES
 DOCKET NO.: 180021-EI

(1) Line No.	(2) Account	(3) Test Year Ended 12/31/2017	(4) Prior Year Ended 12/31/2016	(5)		(6)		(7) Reason(s) for Change (%)
				Increase / (Decrease)		Percent		
				Dollars	(3)-(4)	(5)/(4)	(6)/(5)	

Reason A - Account 404:
 The increase is primarily related to \$54.9 million for depletion expenses associated with FPL's gas reserves investment which is recovered through FPL's fuel cost recovery clause and \$10 million associated with an increase in other amortizable investments.

Reason B - Account 407:
 The increase in amortization expense is primarily due to the expiration of FPL's reserve feedback expense credits at the end of 2016 resulting from FPL's 2012 Stipulation and Settlement Agreement (\$202.0 million in 2016 versus \$0 in 2017), which was approved by the FPSC in Order No. PSC-13-0023-S-EI, Docket No. 120015-EI. In addition, there is an increase of \$4.4 million due to the termination of the amortization related to the nuclear reserve as approved by the FPSC in Order No. PSC-02-0055-PA-A-EI, Docket No. 960324-EI. These variances were offset by a \$7.4 million decrease in storm securitization amortization, \$8.9 million decrease in the recovery of costs associated with the Turkey 6 & 7 Project at FPL's Turkey Point Nuclear Plant (which is recovered through the capacity clause), and \$4.3 million decrease in Asset Retirement Obligation regulatory amortization credits.

Reason C - Account 409-410 + 411:
 The decrease in operating income taxes of approximately \$181 million is primarily due to the reduction in net operating income before taxes of \$417 million which caused a decrease in income tax expense of \$161 million; a decrease in permanent differences which caused a decrease of \$17 million in income tax expense and an increase in the amortization of ITC caused a decrease of \$3 million in income tax expense.

Reason D - Account 506:
 The \$13.8 million decrease is primarily attributable to reductions in Cedar Bay. Cedar Bay is an operating plant in 2016 projected to be dismantled in early 2017 and this is approximately \$10.9 million of the variance. Approximately \$0.8 million of the reduction is associated with Turkey Point Unit 1 is being converted to a synchronous condenser in the 4th quarter of 2016. Approximately \$1.2 million of the variance is attributed to reductions in capacity clause is associated with NERC CIP rating reductions across the fleet in 2017. Site ratings from Medium to Low occurred in the 1st quarter of 2016. The remainder of the variance is associated with daily work reductions across the fleet \$0.9 million.

Reason E - Account 512:
 The \$11.8 million decrease is primarily attributable to boiler work at Plant Scherer in 2016 that is not being performed in 2017. Scherer Unit 4 boiler overhauls are typically scheduled in even years and approximately \$10.0 million. \$1.4 million of the decrease is driven by a major overhaul for High Pressure, Intermediate Pressure and Low Pressure Turbine Valves on Martin Unit 1 that is not being performed in 2017. \$0.7 million of the decrease is associated with a decrease in expenditures at Cedar Bay. \$0.8 million of the decrease is associated with the conversion of Unit 1 at Turkey Point to a synchronous condenser in 2016 and maintenance expenses that are higher in 2016 versus 2017 \$0.2 million. These decreases are offset by an increase of \$1.1 million for Manatee Unit 1 attributable to a Minor Boiler and Generator minor outage in 2017.

Reason F - Account 528:
 The decrease of approximately \$18.6 million is primarily attributable to changes in the maintenance reserve associated with expected outages, which was established in FPSC Order No. PSC-98-1421-FOF-EI. The Order allows FPL to accrue the estimated cost of a refueling outage over the 18-month period prior to the outage in an effort to levelize the cost between refueling outages. Included in this decrease are changes in the reserve accruals, reversals and estimated costs associated with differences in the number and scope of refueling outages for St. Lucie and Turkey Point nuclear units in the two comparison years (i.e. 2016 and 2017).

Reason G - Account 530:
 The increase of approximately \$11.3 million is primarily attributable to estimated costs associated with differences in the timing and scope of refueling outages for St. Lucie and Turkey Point nuclear units in the two comparison years (i.e. 2016 and 2017).

Reason H - Account 532:
 The increase of approximately \$8.1 million is primarily attributable to estimated costs associated with differences in the timing and scope of refueling outages for St. Lucie and Turkey Point nuclear units in the two comparison years (i.e. 2016 and 2017).

Reason I - Account 547:
 Entire increase relates to fuel expenses recovered through FPL's fuel cost recovery clause.

Reason J - Account 553:
 The \$15.1 million increase is attributable to an increase in periodic maintenance requirements for the combined cycle units in the fleet in 2017. Specifically, at Ft Myers Unit 2 in 2017, a Steam Turbine major outage and generator minor outage is scheduled for this unit and this approximates \$3.4 million. At Manatee Unit 3 in 2017, a steam turbine major and generator major outage that includes a DOT 05 compressor upgrade is being performed and this approximates \$4.7 million. Similarly, a generator major outage at Martin Unit 8 is being performed in 2017 and this approximates \$2.7 million. At West County Unit 3, a Combustion Turbine Major outage is being performed and this approximates \$3.0 million. At Martin Unit 4 in 2017 a generator minor and steam turbine outage is being performed for approximately \$2.0 million. These increases are offset by work reductions at the Ft Myers Simple Cycle Unit 3 \$0.5 million and the Ft Myers Gas Turbines \$0.2 million.

Supporting Schedules: Recap Schedules:

C-7

(KDT P15-LOF, 14, & 20) pg 2 of 3

DETAIL OF CHANGES IN EXPENSES

Schedule C-8

FLORIDA PUBLIC SERVICE COMMISSION
 COMPANY: FLORIDA POWER & LIGHT COMPANY
 AND SUBSIDIARIES

DOCKET NO.: 160021-EI

EXPLANATION: Provide the changes in primary accounts that exceed 1/20th of one percent (.005) of total operating expenses and ten percent from the prior year to the last year. Quantify each reason for the change.

Type of Data Shown:
 Projected Test Year Ended 12/31/2017
 Prior Year Ended 12/31/2016
 Historical Test Year Ended / /

Witness: Robert E. Barrett, Jr., Mitchell Goldstein,
 Roxene R. Kennedy, Manuel B. Miranda,
 Kim Ouedraoui

Line No.	(1) Account Number	(2) Account	(3) Test Year Ended 12/31/2017	(4) Prior Year Ended 12/31/2016	(5) Increase / (Decrease)		(6) Percent (5)/(4) (%)	(7) Reason(s) for Change
					Dollars (3)-(4) (000)			

1 Reason K - Account 557:
 2 The decrease of approximately \$85.6 million is primarily attributable to estimated costs associated with FPL's cost recovery clauses.
 3
 4 Reason L - Account 565:
 5 The decrease is primarily attributable to two FPL agreements (the Cedar Bay Wheeling Agreement and the Purchase Power Agreement Contract with Southern Company Services, Inc.) that terminate in 2016.
 6
 7 Reason M - Account 588:
 8 The increase in test year expenses for Account 588 is primarily attributed to the cost of buying and blending bio-diesel fuel for resale. Test year revenues associated with the resale of the bio-diesel fuel, which are reflected in Account 456, essentially offset the cost of the bio-diesel fuel in Account 588.
 9
 10 Reason N - Account 759:
 11 Entire increase relates to operating expenses associated with FPL's gas reserves investment which is recovered through FPL's fuel cost recovery clause.
 12
 13 Reason O - Account 929:
 14 Entire variance relates to deferred expenses associated with FPL's energy conservation cost recovery clause, which is recovered through that clause.

Supporting Schedules: Recap Schedules:

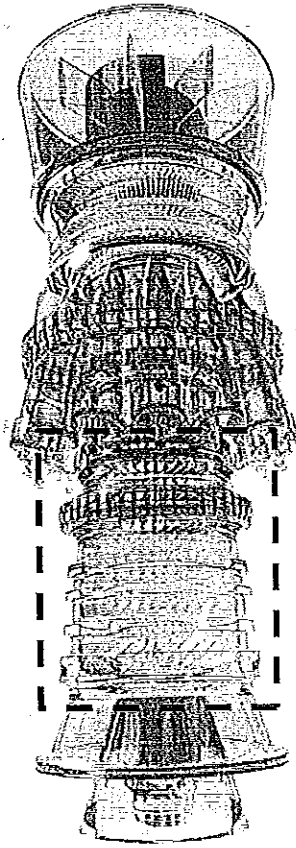
C-7

(KDT PIS - L08, 14, 20) pg 3 of 3

The GE 7FA.05 compressor upgrade will provide customer benefits across the FPL operational portfolio

GE 7FA .05 Compressor Upgrade Benefits

- **Deliver greater output and efficiency**
 - Significant increase in unit airflow
 - Significant compressor efficiency improvement
 - Increased combined cycle power output
 - Decreased combined cycle heat rate



New 14 stage compressor

- **Improve operational flexibility**
 - Greater compressor performance through the operability range with the use of variable stationary vanes
- **Enhanced maintainability**
 - Field replacement of compressor blades
 - Improved routine maintenance capability



Witness Barrett Testimony Extract

1 maintaining the reliability of FPL's critical peaking units given equipment
2 parts availability issues. FPL projects that these new combustion turbines will
3 provide approximately 35% to 40% heat rate efficiency improvement
4 resulting in lower fuel usage and better air emission rates. The new units will
5 also alleviate the replacement parts availability issue on the existing 45 year
6 old equipment. This project is expected to provide a CPVRR benefit to
7 customers of \$203 million over the operating life of the units (See Exhibit
8 REB-9) and accounts for about \$92 million of the total requested base revenue
9 increase in 2017.

10

11 Second, from 2015 to 2017, FPL will have invested more than \$450 million to
12 upgrade the compressors on 26 combustion turbines in FPL's highly efficient
13 combined cycle fleet. As described in further detail by FPL witness Kennedy,
14 these upgrades will provide operational benefits such as greater generating
15 efficiency (i.e., lower heat rate) and power output (i.e., more megawatts),
16 thereby generating overall fuel savings. As reflected on Exhibit REB-10, the
17 compressor upgrades are expected to provide customers with a CPVRR
18 benefit of approximately \$57 million over their operating life. This project
19 represents about \$46 million of the base revenue increase in 2017.

20

21 Third, FPL is investing approximately \$400 million in three large scale solar
22 projects during 2015 to 2016 that will continue its strategy of advancing clean
23 energy while keeping customers' bills low. When complete, these projects

FPL 2015 Ten Year Site Plan excerpt

Table ES-1: Projected Capacity & Firm Purchase Power Changes

Year *	Projected Capacity & Firm Purchase Power Changes	Summer MW	Date	Summer Reserve Margin **
2015	Turkey Point	(22)	January-15	
	Fort Myers	(5)	January-15	
	Lauderdale GT	(8)	January-15	
	Lauderdale GT	(8)	January-15	
	Port Everglades GT	(8)	January-15	
	Palm Beach SWA - additional firm capacity	70	June-15	
	Martin	(3)	June-15	
	Scherer	(9)	June-15	
Total of MW changes to Summer firm capacity:		6		-26.7%
2016	Cedar Bay -PPA retirement	(250)	October-15	
	Cedar Bay -FPL Ownership	250	October-15	
	UPS Replacement	(928)	December-15	
	Fort Myers 2	37	June-16	
	Fort Myers GTs 1 -10	(540)	June-16	
	Lauderdale GTs 1- 12	(412)	June-16	
	Martin	2	June-16	
	Port Everglades Next Generation Clean Energy Center	1,237	June-16	
Sanford	3	June-16		
Total of MW changes to Summer firm capacity:		(601)		21.3%
2017	Babcock Solar Energy Center (Charlotte) ***	38	September-16	
	Citrus Solar Energy Center (DeSoto) ***	38	September-16	
	Manatee Solar Energy Center ***	38	September-16	
	Lauderdale GTs 13- 22	(343)	October-16	
	Turkey Point Unit 1 synchronous condenser	(396)	October-16	
	Port Everglades GTs	(412)	December-16	
	Cedar Bay	(250)	December-16	
	Lauderdale GTs - 5 CT	1,155	December-16	
	Fort Myers GTs - 2 CT	462	December-16	
	Fort Myers 3A&B - upgraded	50	December-16	
	Martin	2	January-17	
	Sanford	1	January-17	
	Sanford	4	January-17	
Turkey Point #5	23	June-17		
Manatee	4	June-17		
Total of MW changes to Summer firm capacity:		415		20.9%
2018	Unspecified Short-Term Purchase	207	May-18	
	Turkey Point Nuclear Unit #3	20	June-18	
	Turkey Point Nuclear Unit #5	3	June-18	
Total of MW changes to Summer firm capacity:		227		20.0%
2019	Unspecified Short-Term Purchase	(207)	September-18	
	SJRPP suspension of energy	(382)	2 nd Quarter	
	Turkey Point Nuclear Unit #4	20	June-19	
	Okeechobee Next Generation Clean Energy Center ****	1,622	June-19	
Total of MW changes to Summer firm capacity:		1,053		22.8%
2020	---			
Total of MW changes to Summer firm capacity:		0		21.3%
2021	Eco-Gen PPA firm capacity	180	January-21	
	Cape Next Generation Clean Energy Center	88	June-21	
Total of MW changes to Summer firm capacity:		268		22.0%
2022	Rivera Beach Next Generation Clean Energy Center	86	June-22	
Total of MW changes to Summer firm capacity:		86		20.9%
2023	Unsitd CC	1,317	June-23	
Total of MW changes to Summer firm capacity:		1,317		24.4%
2024	---			
Total of MW changes to Summer firm capacity:		0		-22.2%

1,667 = 1,800
 MW

* Year shown reflects when the MW change begins to be accounted for in Summer reserve margin calculations.
 ** Winter Reserve Margins are typically high than Summer Reserve Margin. Winter Reserve Margin are shown on Schedule 7.2 in Chapter II.
 *** MW values shown represent the firm capacity assumption for each 74.5 MW nameplate (AC) PV facility.
 **** The Okeechobee generating is FPL's best self-bu'd option for 2019. During 2015 it will be evaluated versus

(KBT P17-L20) Peaker MWs

FPL 2015 Ten Year Site Plan excerpt

of FPL's existing Cape Canaveral and Riviera Beach plant sites were completed in 2013 and 2014, respectively. The last of the previously approved modernization projects, the modernization of FPL's existing Port Everglades plant site, is underway and projected to be completed in 2016.

Similarity # 2: Specific generating units are projected to be retired and/or converted to synchronous condenser operation.

In the last several years, FPL has retired a number of older, less efficient generating units including: Sanford Unit 3, Cutler Units 5 & 6, Cape Canaveral Units 1 & 2, Riviera Beach Units 3 & 4, and Port Everglades Units 1 - 4. In addition, Turkey Point Unit 2 has been converted to operate in synchronous condenser mode to provide voltage support for the transmission system in Southeastern Florida.

This trend is projected to continue. As discussed in FPL's 2014 Site Plan, Putnam Units 1 & 2 were retired at the end of 2014. In addition, similar to the earlier conversion of Turkey Point Unit 2, FPL projects that Turkey Point Unit 1 will be converted to run in synchronous condenser mode starting in 2016.

Similarity # 3: A number of older gas turbine peaking units are projected to be retired and replaced with modern combustion turbine peaking units.

In FPL's 2014 Site Plan, FPL projected that it would retire all of its existing gas turbine (GT) units in Broward County at its Lauderdale and Port Everglades sites (a decrease in peaking generating capacity of 1,260 MW) and partially replace this peaking capacity with the installation of 5 new combustion turbine (CT) units at the Lauderdale site (an increase of 1,005 MW). These changes were projected to be completed in 2019. These changes to FPL's generating system were based on concerns regarding whether the older, existing GTs would allow FPL to be able to meet the new EPA 1-hour standards for nitrogen dioxide and sulfur dioxide. Economic analyses now indicate that it is cost-effective to retire and replace a number of the existing GTs at an earlier date. Based on these analyses, FPL currently projects the retirement of a number of its existing GTs, including: 22 of 24 GTs at the Lauderdale site, all 12 GTs at the Port Everglades site, and 10 of 12 GTs at the Fort Myers plant site. Two of the existing GTs at the Lauderdale site, and two of the existing GTs at the Ft. Myers site, will be retained for black start capability. In conjunction with the retirement of these peaking units, FPL is adding a number of new, larger, and more efficient CTs: 5 at the Lauderdale site and 2 at the Fort Myers site. Also, the two existing CTs at the Fort Myers site will undergo capacity upgrades. In total, the net effect of the GT retirements, plus new/upgraded CTs, is a net reduction of approximately 40 MW in net peaking capability. All of these changes are projected to be completed by the end of 2016.

Witness Barrett Testimony Extract

1 maintaining the reliability of FPL's critical peaking units given equipment
2 parts availability issues. FPL projects that these new combustion turbines will
3 provide approximately 35% to 40% heat rate efficiency improvement
4 resulting in lower fuel usage and better air emission rates. The new units will
5 also alleviate the replacement parts availability issue on the existing 45 year
6 old equipment. This project is expected to provide a CPVRR benefit to
7 customers of \$203 million over the operating life of the units (See Exhibit
8 REB-9) and accounts for about \$92 million of the total requested base revenue
9 increase in 2017.

10
11 Second, from 2015 to 2017, FPL will have invested more than \$450 million to
12 upgrade the compressors on 26 combustion turbines in FPL's highly efficient
13 combined cycle fleet. As described in further detail by FPL witness Kennedy,
14 these upgrades will provide operational benefits such as greater generating
15 efficiency (i.e., lower heat rate) and power output (i.e., more megawatts),
16 thereby generating overall fuel savings. As reflected on Exhibit REB-10, the
17 compressor upgrades are expected to provide customers with a CPVRR
18 benefit of approximately \$57 million over their operating life. This project
19 represents about \$46 million of the base revenue increase in 2017.

20
21 Third, FPL is investing approximately \$400 million in three large scale solar
22 projects during 2015 to 2016 that will continue its strategy of advancing clean
23 energy while keeping customers' bills low. When complete, these projects

Witness Purrett Testimony Extract

1 will provide up to 224 megawatts (nameplate) of zero-emissions generation
2 while also providing significant fuel savings for our customers. The
3 evaluation of these large scale solar projects followed FPL's process of
4 assessing the system benefits and performing economic modeling to ensure
5 there is an expected net benefit to customers. The three sites have inherent
6 advantages, including land that was already owned or under option and
7 locations that are near existing transmission and substation infrastructure. In
8 addition, these projects qualify for a 30% investment tax credit. FPL has
9 competitively bid components of the projects, including the panel supply
10 contract and the engineering, procurement and construction contract. As
11 reflected on Exhibit REB-11, all of these advantages provide customer
12 savings and lead to an expected customer CPVRR benefit of \$26 million.
13 This project represents about \$50 million of the base revenue increase in
14 2017, which is expected to be partially offset in 2017 with \$26 million in fuel
15 savings and environmental benefits. Note that the base revenue requirements
16 will decline over time while the fuel savings are expected to increase over
17 time.
18
19 It is expected that the impact on 2017 base revenue requirements for these
20 generation upgrades will be partially mitigated by reductions in 2017 fuel
21 revenue requirements of about \$66 million. Those fuel savings are expected to
22 grow over time while the base revenue requirements will decrease over time
23 providing net savings to customers.

FPL 2015 Ten Year Site Plan excerpt

the remaining upgrades is continuing and the project is projected to be completed in early 2016.

3) Modernization of the Port Everglades plant site:

The work to modernize the existing Port Everglades site by adding new combined cycle (CC) capacity continues. The new generating unit, called the Port Everglades Next Generation Clean Energy Center (PEEC), is projected to be in-service in mid-2016 and is projected to have a peak Summer output of 1,237 MW. The FPSC issued the final need order for this modernization project in April 2012 in Order No. PSC-12-0187-FOF-EI. The site certification order for the project, DOAH Case No. 12-0422EPP, was received for the Port Everglades project in October 2012.

4) New Solar Facilities:

LSS Project

FPL currently projects that it will add new photovoltaic (PV) facilities by the end of 2016 at three sites. These sites are FPL's existing Manatee plant site in Manatee County, the Citrus site in DeSoto County, and the Babcock Ranch site in Charlotte County. Each of the PV facilities is projected to have a nameplate rating of approximately 74.5 MW (AC). Therefore, the three PV facilities will have a combined total nameplate (AC) rating of approximately 223 MW. FPL's analyses of these three specific projects have led to a conclusion that approximately 52% of their nameplate (AC) rating can be accounted for as firm Summer capacity, and 0% for firm Winter capacity, in FPL's reliability analyses.

5) GT Replacement:

FPL plans, for economic reasons, to retire a number of its older gas turbine (GT) peaking units at its three GT sites (Lauderdale, Port Everglades, and Fort Myers) and partially replace this peaking capacity with new combustion turbine (CT) capacity at the Lauderdale and Fort Myers sites. In addition, the two existing CTs at the Fort Myers site will be upgraded, which will increase their capacity. These changes are projected to be completed by the end of 2016. The MW impact of these changes to FPL's peaking capacity is a net decrease of approximately 40 MW.

6) New Combined Cycle Capacity:

FPL currently projects a need for a significant capacity addition in 2019. FPL's best self-build option to meet this need is a new combined cycle (CC) unit that would be built in Okeechobee County. In order to ensure that the best generation option for FPL's customers is chosen to meet this need, and in keeping with the FPSC's Bid Rule, FPL issued a Request for Proposals (RFP) in March 2015 that invited generation proposals from outside parties. These proposals are scheduled to be received in May 2015. Once

FPL 2015 Ten Year Site Plan Excerpt

(CTs) are projected to be added at the Lauderdale site by the end of 2016 to partially replace the retired peaking capacity at these sites. These actions, taken to lower FPL's long-term costs, will also aid in addressing compliance with new air emissions standards.

Similarly, and as part of this GT replacement effort, all but two of the existing GTs at the Ft. Myers site will be retired and two new CTs will be added. In addition, the two existing CTs at the Ft. Myers site will be upgraded to increase their capacity. All of the Ft. Myers work is scheduled to be completed by the end of 2016.

The Okeechobee County site has been identified as a Preferred Site for new natural gas CC technology. As discussed in the Executive Summary, the new natural gas CC at this site represents FPL's best self-build generation option in 2019, and it will compete with proposals received in response to a capacity request for proposals (RFP) that was issued in March 2015.

The Okeechobee County site is also under consideration for future new photovoltaic (PV) facilities. In regard to PV, Charlotte, DeSoto, and Manatee Counties have been identified as the locations for new PV facilities that are expected to go in-service by the end of 2016.

Finally, the Turkey Point site is the location at which FPL plans to construct two new nuclear units, Turkey Point Units 6 & 7. The Nuclear Regulatory Commission recently announced a several year delay in their schedule to make a decision on FPL's pending Turkey Point Units 6 & 7 Combined Operating License Application (COLA). Due to this delay in the COLA schedule, and to changes in Florida's nuclear cost recovery rule, the earliest practical date for bringing the Turkey Point 6 & 7 units in-service is now beyond the 2015 through 2024 time period addressed in this Site Plan. Despite this change in timing of the two new nuclear units, this Site Plan continues to present the Turkey Point site as a Preferred Site for the new units.

Preferred Site # 1: Port Everglades Plant, Broward County

FPL is in the process of modernizing the Port Everglades Plant located within the City of Hollywood in Broward County with construction anticipated to be completed in 2016. Previously the site consisted of two 200 MW (approximate) and two 400 MW (approximate) steam generating units. The four units were taken out of service, dismantled, and removed from the site as part of the modernization project. The modernized site, named the Port Everglades Next Generation Clean Energy Center (PEEC), will consist of a single new Combined Cycle unit that replaces the original four steam units. The modernized unit will be highly efficient and have a lower-emission rate and will use less water than the original units at the site.

PEEC
Benefits

FPL 2011 PEEC Need Petition excerpts (pg 1 of 4)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Florida Power & Light Company's
Petition To Determine Need for Modernization
of Port Everglades Plant

Docket No.

Dated: November 21, 2011

PETITION

Pursuant to Sections 366.04 and 403.519, Florida Statutes, and Rules 25-22.080, 25-22.081, 25-22.082 and 28-106.201, Florida Administrative Code, Florida Power & Light Company ("FPL" or the "Company") petitions this Commission for an affirmative determination of need for the modernization of FPL's existing Port Everglades plant in Broward County, Florida.

Florida Power & Light is recognized nationally for its clean generating operations. In recent years, FPL has taken major steps to modernize its power plant fleet to make it even cleaner and more fuel efficient. Modernizations of two of its oldest facilities in Cape Canaveral and Riviera Beach, similar to what is being proposed for the Port Everglades power plant, are already well on their way. By installing state-of-the-art, combined-cycle natural gas turbines at several FPL plants, the company has cut fuel costs by \$5 billion since 2001 and passed those savings on to customers. This has contributed to a typical FPL residential customer bill continuing to be the lowest bill out of all 55 utilities in Florida and more than 20 percent below the national average.

FPL proposes to build, at the existing Port Everglades plant site, a modern, highly efficient, state-of-the-art combined cycle ("CC") natural gas unit with about 1,277 MW (summer) of generation for commercial operation beginning in June 2016. This generation addition will allow FPL to meet a projected need for additional generation resources that begins in 2016 and increases each year thereafter. The modernized facility will be referred to in this

OPC 010112
FPL RC-16

(KDT P 19 L03-10) PEEC 35% Improvement
pg 1 of 4

FPL 2011 PEEC Next Petition excerpt (pg 2 of 4)

petition as the Port Everglades Next Generation Clean Energy Center ("PEEC"). In conjunction with this new addition, FPL will dismantle the four 1960s-era oil and natural gas fueled steam electric generating units that are currently in Inactive Reserve status.

PEEC will take advantage of an existing strategically located plant site, and will provide reliable base load generating capacity to serve the most concentrated area of FPL's customer base, which lies in Miami-Dade and Broward Counties. The modernized facility will benefit customers in many ways. PEEC will improve the fuel efficiency of generation at the Port Everglades site by approximately 35 percent, while reducing customers' electricity costs. FPL projects that a resource plan that includes PEEC (the "PEEC Resource Plan") will provide significant savings to customers, as much as \$838 million of cumulative present value revenue requirements in 2011 dollars ("CPVRR")¹ over alternate resource plans.

PEEC will also improve the environmental profile of FPL's system. In particular, PEEC will reduce FPL's electric system carbon dioxide ("CO₂") emissions by millions of tons over its operating life. This is in addition to other important air emission reductions. Thus, PEEC will contribute significantly toward satisfying, if not exceeding, all applicable local, state and federal environmental requirements. PEEC will achieve all of these benefits without using new land or water resources dedicated to plant use. PEEC will also preserve use of existing infrastructure, including electric transmission facilities and rights of way, thereby saving customers millions of dollars.

The forecasted cumulative fuel cost savings and emission reduction benefits for customers are based on placing the modernized plant into service by June of 2016. In order to secure these benefits for its customers and Florida residents, FPL requests that the Commission

¹ All CPVRR values provided in this Petition are reported in 2011 dollars.

FPL 2011 PEEC Need Petition excerpt (pg 3 of 4)

- o The PEEC Resource Plan is also projected to yield substantial customer savings compared to any other resource plan that would include a capacity purchase from a third party due to several additional types of costs the third party would incur, such as the cost of land, water rights acquisition and transmission facilities and gas pipeline system expansion. Thus, even if the third party could build the generating unit itself at the same cost as PEEC, FPL estimates that a new third party generator's incremental capital costs likely would be at least \$900 million higher than PEEC and could potentially exceed \$1.1 billion (both amounts reflect overnight capital cost to build in 2016 dollars).² These higher costs are exclusive of water costs, which also are likely to be higher for third party projects than for PEEC.
- o Second, PEEC is projected to provide significant environmental benefits. Compared to the Return to Service Resource Plan, PEEC will reduce CO₂ emissions by about 22 million tons, SO₂ emissions by 41,000 tons and NO_x emissions by 33,000 tons over the thirty-year analysis period. Moreover, the resulting air emission reductions will contribute significantly toward achieving whatever emission limits might be imposed in the future. Lower system emissions translate into lower environmental compliance costs for FPL's customers, and all Florida residents will enjoy the environmental benefits of cleaner air and lower greenhouse gas emissions.
- o Third, PEEC will enable FPL to reduce fuel use. The average heat rate will improve by approximately 35 percent over the existing Port Everglades units that

² All capital construction costs hereinafter reflected in this Petition are reported in 2016 dollars.

GFCT Resource Plan. Each of these resource plans reflects the removal of Turkey Point Unit 1 from generation service by 2016 because FPL's economic analyses demonstrate that doing so substantially reduces costs to customers under all resource plans. FPL also evaluated possible power purchases from third parties. As set forth in greater detail below, FPL's analyses projected that the PEEC Resource Plan will have the lowest CPVRR and is best-suited to address FPL's system considerations.

A. PEEC Resource Plan vs. Return to Service Resource Plan

39. The Return to Service Resource Plan and PEEC are mutually exclusive, and are the only currently available alternatives that would enable FPL to address the load-generation imbalance in Miami-Dade and Broward Counties without the need for significant transmission upgrades. FPL's economic analysis revealed that the PEEC Resource Plan will result in system savings of \$469 million CPVRR compared to the Return to Service Resource Plan, and FPL customers will enjoy average bill impact savings of \$0.38 per 1000 kWh over the period 2016 to 2047.

40. The four 1960's units that comprise the Return to Service Resource Plan have a cumulative rating of 1,187 MW (summer) and an average heat rate of about 9,800 Btu/kWh. By contrast, the PEEC Resource Plan will place in service the higher efficiency CC generating units with a summer peak rating of about 1,277 MW and a base heat rate of about 6,330 Btu/kWh, approximately 35 percent better than that of the old steam units. FPL's overall system heat rate also improves by 1.3 percent under the PEEC Resource Plan to 8,042 Btu/kWh, compared to 8,145 Btu/kWh under the Return to Service Resource Plan. As described below, this substantial improvement in heat rate will yield several important benefits.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

DOCKET NO. 150196-EI

PETITION FOR DETERMINATION OF
NEED FOR OKEECHOBEE CLEAN
ENERGY CENTER UNIT 1, BY
FLORIDA POWER & LIGHT COMPANY.

VOLUME 1

(Pages 1 through 136)

PROCEEDINGS: HEARING

COMMISSIONERS
PARTICIPATING:

CHAIRMAN ART GRAHAM
COMMISSIONER LISA POLAK EDGAR
COMMISSIONER RONALD A. BRISÉ
COMMISSIONER JULIE I. BROWN
COMMISSIONER JIMMY PATRONIS

DATE:

Tuesday, December 1, 2015

TIME:

Commenced at 9:35 a.m.
Concluded at 12:00 p.m.

PLACE:

Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY:

LINDA BOLES, CRR, RPR
Official FPSC Reporter
(850) 413-6734

(Summarized by FPL at Need Hearing)

000019

1 information, FPL has enhanced the design of the
2 Okeechobee unit and updated its reliability need and
3 economic analyses.

4 Our updated analyses continue to show a
5 significant need for capacity in 2019 at 904 megawatts
6 which increases in subsequent years. The refreshed
7 analysis also shows that enhanced and more efficient
8 unit design will increase summer capacity from 1,622
9 megawatts to 1,633 megawatts. Now this 11-megawatt

10 increase in output will mean real savings for our
11 customers. Specifically while the costs of Okeechobee
12 have increased by \$36 million to a total of

13 \$1.232 billion, the unit's heat rate actually has
14 declined from 6,304 Btu per kilowatt hours to 6,249 Btu
15 kilowatt hours, which is significant because what it
16 results in is increased CPVRR savings to our customers
17 by \$35 million. FPL has provided all of this updated
18 information to the Commission and all parties to the
19 proceeding and it's shown in staff's stipulated
20 exhibits. FPL witnesses are available to answer any
21 questions on these exhibits.

22 So, Commissioners, while some of the estimates
23 in the analyses have modestly changed through this
24 process, the ultimate conclusion has not. Okeechobee is
25 needed and it will produce significant reliability

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

DOCKET NO. 150196-EI

PETITION FOR DETERMINATION OF
NEED FOR OKEECHOBEE CLEAN
ENERGY CENTER UNIT 1, BY
FLORIDA POWER & LIGHT COMPANY.

VOLUME 1

(Pages 1 through 136)

PROCEEDINGS: HEARING

COMMISSIONERS
PARTICIPATING:

CHAIRMAN ART GRAHAM
COMMISSIONER LISA POLAK EDGAR
COMMISSIONER RONALD A. BRISÉ
COMMISSIONER JULIE I. BROWN
COMMISSIONER JIMMY PATRONIS

DATE:

Tuesday, December 1, 2015

TIME:

Commenced at 9:35 a.m.
Concluded at 12:00 p.m.

PLACE:

Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY:

LINDA BOLES, CRR, RPR
Official FPSC Reporter
(850) 413-6734

1 The recovery of waste heat from the CTs for utilization in an STG improves
2 the overall plant efficiency beyond that of just CTs or conventional steam
3 electric generating units, because additional power is produced without
4 burning additional fuel.

5
6 Each CT/HRSG combination is called a "train." The number of CT/HRSG
7 trains used establishes the general size of the STG. For the proposed OCEC
8 Unit 1 Project, three CT/HRSG trains will be connected to one STG, giving
9 rise to the characterization of the Project as a 3x1 CC unit.

10

11 **B. Operating Advantages**

12 **Q. What level of operating efficiency is anticipated for the OCEC Unit 1**
13 **Project?**

14 **A.** In general, modern CC plants can be expected to achieve a fuel to electrical
15 energy conversion rate (heat rate) of less than 7,000 British thermal units
16 (Btu) per kilowatt hour (kWh), as opposed to values in the 10,000 Btu/kWh
17 range for conventional steam-electric generating units or typical simple cycle
18 units. FPL anticipates that OCEC Unit 1 will have an average base heat rate
19 as low as 6,304 Btu/kWh (based on an average ambient air temperature of
20 75°F) over the life of this Project. The proposed 3x1 CC unit will therefore
21 produce the same amount of energy as a similarly sized conventional steam
22 plant using approximately 35% less fuel. The addition of this highly efficient
23 unit to the FPL system is projected to improve the overall system heat rate.

(KDT P25- L19 & 21) - Steam vs CC Heat Rates

pg 2 of 2

OPC 010119
FPL RC-16

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for determination of need for
Okeechobee Clean Energy Center Unit 1, by
Florida Power & Light Company.

DOCKET NO. 150196-EI
ORDER NO. PSC-16-0032-FOF-EI
ISSUED: January 19, 2016

The following Commissioners participated in the disposition of this matter:

JULIE I. BROWN, Chairman
LISA POLAK EDGAR
ART GRAHAM
RONALD A. BRISÉ
JIMMY PATRONIS

FINAL ORDER GRANTING FLORIDA POWER & LIGHT COMPANY'S
PETITION FOR DETERMINATION OF NEED FOR
ELECTRICAL POWER PLANT IN OKEECHOBEE COUNTY

APPEARANCES:

WILLIAM P. COX, ESQUIRE, Florida Power & Light Company,
700 Universe Blvd. Juno Beach, FL 33408; and
CHARLES A. GUYTON, ESQUIRE, Gunster Law Firm, 215 South Monroe Street, Suite
601, Tallahassee, Florida 32301
On behalf of Florida Power & Light Company (FPL)

BRADLEY MARSHALL, ALISA COE, DAVID GUEST, ESQUIRES, Earthjustice,
111 S. Martin Luther King Jr. Blvd., Tallahassee, Florida 32301
On behalf of Environmental Confederation of Southwest Florida (ECOSWF)

JAMES S. WHITLOCK and GARY A. DAVIS, ESQUIRES, Davis & Whitlock, PC,
21 Battery Park Avenue, Suite 206, Asheville, NC 28801; and
GEORGE CAVROS, ESQUIRE, Southern Alliance for Clean Energy, 120 E. Oakland
Park Blvd., Suite 105, Fort Lauderdale, FL 33334
On behalf of Southern Alliance For Clean Energy (SACE)

JON C. MOYLE, JR. and KAREN PUTNAL, ESQUIRES, The Moyle Law Firm, PA,
118 North Gadsden Street, Tallahassee, FL, 32312
On behalf of Florida Industrial Power Users Group (FIPUG)

(KDT P26-L04) \$1,232.8 cost - pg 1 of 2

Our analysis of the assumptions used by FPL to evaluate the proposed OCEC Unit 1 is discussed as follows: (1) a review of FPL's financial assumptions; (2) a review of FPL's generation cost estimates and projected performance assumptions; (3) a review of FPL's fuel cost assumptions; and (4) a review of FPL's environmental cost assumptions.

1. Financial Assumptions

FPL used a capital structure consisting of 59.62 percent equity at a cost rate of 10.50 percent and 40.38 percent debt at a cost rate of 5.14 percent. FPL applied an after-tax discount rate of 7.54 percent based on the effective income tax rate of 38.58 percent. Upon review, we find that the financial assumptions used by FPL for its evaluation are reasonable.

2. Generation Cost Estimates and Projected Performance

The installed cost of the proposed OCEC Unit 1 is projected to be approximately \$1.232 billion. FPL presented testimony and exhibits regarding cost estimates and performance projections of the proposed plant. OCEC Unit 1 is projected to have a heat rate of 6,249 Btu/kWh at full capacity and is expected to have an availability factor of 95.5 percent. The cost estimates, heat rate, and equivalent availability parameters for OCEC Unit 1 are comparable with similar projects we have approved. Upon review, we find that the generation cost estimates and projected performance assumptions used by FPL for its evaluation are reasonable.

3. Fuel Costs

FPL relies upon leading industry fuel forecasting experts for its fuel price forecasts used in its evaluation of OCEC Unit 1. FPL used its November 3, 2014, and October 7, 2013, long-term fuel price forecasts in its evaluation. FPL testified that its fuel price forecasts reflect the projected commodity and transportation costs for fuel oil, natural gas, and coal.

FPL's methodology for developing its natural gas and fuel oil forecasts is structured according to the time period of the forecast. For years 1 and 2, the methodology is based on the Henry Hub forward curve. Years 3 and 4 are based on a 50/50 blend of the forward curve and the most current projections from the PIRA Energy Group. Years 5 through 20 are based on the annual projections of the PIRA Energy Group. Years 21 through 35 are based on the real rate of escalation from the U.S. Energy Information Administration (EIA). FPL's fuel oil forecast is based on the same methodology, except years 1 and 2 are based on the New York Harbor 0.7 percent sulfur heavy oil and ultra low diesel fuel oil. Natural gas and fuel oil transportation forecasts are added to these commodity forecasts to arrive at delivered fuel forecasts. Coal prices are based on cost information provided by JD Energy, Inc., for both commodity and transportation. FPL testified that this basic fuel forecasting methodology has not changed since at least 2008.