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March 1, 2017

**-VIA ELECTRONIC FILING -**

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

**Re: Docket No. 170001-EI**

Dear Ms. Stauffer:

I enclose for electronic filing in the above docket (i) Florida Power & Light Company's ("FPL") Petition for Approval of Fuel Cost Recovery and Capacity Cost Recovery Final True-Ups for the Period Ending December 2016; (ii) the prefiled testimony and exhibits of FPL witnesses Renae B. Deaton and Gerard J. Yupp in support of the final true-up; (iii) FPL's Petition for Approval of Solar Base Rate Adjustments as contemplated by the FPL Rate Settlement (Order No. PSC-16-0560-AS-EI); and (iv) the prefiled testimony and exhibits of FPL witnesses William F. Brannen and Juan E. Enjamio in support of the Solar Base Rate Adjustments.

Exhibit RBD-2 to Ms. Deaton's testimony and Exhibit GJY-2 to Mr. Yupp's testimony contain confidential information. This electronic filing includes only the redacted version of Exhibits RBD-2 and GJY-2. Contemporaneous herewith, FPL will file via hand-delivery a Request for Confidential Classification.

If there are any questions regarding this transmittal, please contact me at (561) 304-5639.

Sincerely,

s/ John T. Butler  
John T. Butler

Enclosures

cc: Counsel for Parties of Record (w/encl.)

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

In re: Fuel and Purchase Power Cost Recovery  
Clause with Generating Performance Incentive  
Factor

Docket No: 170001-EI

Filed: March 1, 2017

**PETITION FOR APPROVAL OF FUEL COST RECOVERY  
AND CAPACITY COST RECOVERY NET FINAL TRUE-UPS FOR THE  
PERIOD ENDING DECEMBER 2016, AND 2016 INCENTIVE MECHANISM RESULTS**

Florida Power & Light Company (“FPL”) hereby petitions this Commission for approval of (1) FPL’s Net Fuel and Purchased Power Cost Recovery (“FCR”) final true-up amount of \$28,780,519 under-recovery, (2) Net Capacity Cost Recovery (“CCR”) final true-up amount of \$7,586,581 over-recovery, both for the period ending December 2016, (3) total gains of \$62,835,808 for the Incentive Mechanism during the period January 2016 through December 2016; and (4) FPL’s retention and recovery of \$10,101,485 as its 60% share of incremental gains above \$46 million in 2016 as provided by the Incentive Mechanism that was approved by Order No. PSC-13-0023-S-EI, dated January 14, 2013 in Docket No. 120015-EI. FPL incorporates the prepared testimony and exhibits of FPL witnesses Renae B. Deaton and Gerard J. Yupp, and states as follows:

1. The \$28,780,519 net FCR final true-up under-recovery for the period January 2016 through December 2016 was calculated in accordance with the methodology set forth in Schedule 1, page 2 of 2, attached to Order No. 10093, dated June 19, 1981. This calculation and the supporting documentation are contained in the prepared testimony and exhibits of Ms. Deaton.

2. By Order No. PSC-16-0547-FOF-EI (“Order 16-0547”), the Commission approved FCR Factors for the period commencing January 2017. These factors reflected an

actual/estimated true-up under-recovery, including interest, for the period January 2016 through December 2016 of \$26,483,684, which was also approved in Order 16-0547. The actual under-recovery, including interest, for the period January 2016 through December 2016 is \$55,264,203. The \$55,264,203 actual under-recovery, less the actual/estimated under-recovery of \$26,483,684, results in a net FCR true-up under-recovery of \$28,780,519 that is to be included in the calculation of the FCR Factors for the period beginning January 2018.

3. The \$7,586,581 net CCR true-up over-recovery for the period January 2016 through December 2016 was calculated in accordance with the methodology set forth in Order No. 25773, dated February 24, 1992. This calculation and the supporting documentation are contained in the prepared testimony and exhibits of Ms. Deaton.

4. By Order 16-0547, the Commission approved CCR Factors for the period commencing January 2017. These factors reflected an actual/estimated true-up over-recovery, including interest, for the period January 2016 through December 2016 of \$9,639,909, which was also approved in Order 16-0547. The actual over-recovery, including interest, for the period January 2016 through December 2016 is \$17,226,490. The \$17,226,490 actual over-recovery, less the actual/estimated over-recovery of \$9,639,909, results in a final net CCR true-up over-recovery of \$7,586,581 that is to be included in the calculation of the CCR Factors for the period beginning January 2018.

5. By Order No. PSC-13-0023-S-EI, issued January 14, 2013, in Docket No. 120015-EI, the Commission ordered that, as part of the fuel cost recovery clause, FPL annually file a final true-up schedule showing its gains in the prior calendar year on short-term wholesale sales, short-term wholesale purchases, and all forms of asset optimization (“Incentive Mechanism”) it undertook in that calendar year. Consistent with that order, the results of its Incentive Mechanism for the period January 2016 through December 2016 are provided in the

testimony and exhibit of Mr. Yupp. The total gains for the Incentive Mechanism during that period were \$62,835,808. This exceeded the sharing threshold of \$46 million. Therefore, the incremental gains above \$46 million will be shared between customers and FPL, 40% and 60%, respectively. FPL's 60% share of the incremental gains above \$46 million is \$10,101,485, which is to be included in the calculation of the FCR Factors for the period beginning January 2018.

WHEREFORE, Florida Power & Light Company respectfully requests the Commission to approve for the period ending December 2016: (1) FPL's final net FCR true-up amount of \$28,780,519 under-recovery and authorize the inclusion of this amount in the calculation of the FCR Factors for the period beginning January 2018, (2) FPL's final net CCR true-up amount of \$7,586,581 over-recovery and authorize the inclusion of this amount in the calculation of the CCR Factors for the period beginning January 2018, (3) total gains of \$62,835,808 for the Incentive Mechanism during the period January 2016 through December 2016, and (4) FPL's retention of \$10,101,485 as its 60% share of the incremental Incentive Mechanism gains above \$46 million in 2016, and authorize the inclusion of this amount in the calculation of the FCR Factors for the period beginning January 2018.

Respectfully submitted,

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By: s/ John T. Butler  
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Fla. Bar No. 283479

**CERTIFICATE OF SERVICE**  
**Docket No. 170001-EI**

**I HEREBY CERTIFY** that a true and correct copy of the foregoing has been furnished by electronic service on this 1st day of March 2017 to the following persons:

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By: s/ John T. Butler  
John T. Butler  
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1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **TESTIMONY OF RENAE B. DEATON**

4 **DOCKET NO. 170001-EI**

5 **MARCH 1, 2017**

6  
7 **Q. Please state your name, business address, employer and position.**

8 A. My name is Renae B. Deaton. My business address is 700 Universe Boulevard,  
9 Juno Beach, Florida 33408. I am employed by Florida Power & Light Company  
10 (“FPL” or “the Company”) as the Director, Cost Recovery Clauses, in the  
11 Regulatory & State Governmental Affairs Department.

12 **Q. Please state your education and business experience.**

13 A. I hold a Bachelor of Science in Business Administration and a Master of Business  
14 Administration from Charleston Southern University. Since joining FPL in 1998,  
15 I have held various positions in the rates and regulatory areas. Prior to my current  
16 position, I held the positions of Senior Manager of Cost of Service and Load  
17 Research and Senior Manager of Rate Design in the Rates and Tariffs  
18 Department. I have previously testified before this Commission in base rate and  
19 clause recovery proceedings. I am a member of the Edison Electric Institute  
20 (“EEI”) Rates and Regulatory Affairs Committee, and I have completed the EEI  
21 Advanced Rate Design Course. I have been a guest speaker at Public Utility  
22 Research Center/World Bank International Training Programs on Utility  
23 Regulation and Strategy. In 2016, I assumed my current position as Director,  
24 Cost Recovery Clauses, where I am responsible for providing direction as to

1           appropriateness of inclusion of costs through a cost recovery clause and the  
2           overall preparation and filing of all cost recovery clause documents including  
3           testimony and discovery.

4   **Q.    What is the purpose of your testimony in this proceeding?**

5    A.    The purpose of my testimony is to present the schedules necessary to support the  
6           actual Fuel Cost Recovery (“FCR”) Clause and Capacity Cost Recovery (“CCR”)  
7           Clause net true-up amounts for the period January 2016 through December 2016.

8  
9           The net true-up for the FCR is an under-recovery, including interest, of  
10          \$28,780,519. FPL is requesting Commission approval to include this FCR true-  
11          up under-recovery of \$28,780,519 in the calculation of the FCR factor for the  
12          period January 2018 through December 2018.

13  
14          The net true-up for the CCR is an over-recovery, including interest, of  
15          \$7,586,581. FPL is requesting Commission approval to include this CCR true-up  
16          over-recovery of \$7,586,581 in the calculation of the CCR factors for the period  
17          January 2018 through December 2018.

18  
19          Finally, FPL is requesting Commission approval to include \$10,101,485 in the  
20          calculation of the FCR factors for the period January 2018 through December  
21          2018, which represents FPL’s share of the 2016 Incentive Mechanism gain  
22          described in the testimony of FPL witness Yupp.

23   **Q.    Have you prepared or caused to be prepared under your direction,**  
24   **supervision or control an exhibit in this proceeding?**



1 A. Yes, I have. It consists of two appendices. Appendix I contains the FCR related  
2 schedules and Appendix II contains the CCR related schedules. In addition, FCR  
3 Schedules A1 through A12 for the January 2016 through December 2016 period  
4 have been filed monthly with the Commission and served on all parties of record  
5 in this docket. Those schedules are incorporated herein by reference.

6 **Q. What is the source of the data you present?**

7 A. Unless otherwise indicated, the data are taken from the books and records of FPL.  
8 The books and records are kept in the regular course of the Company's business  
9 in accordance with generally accepted accounting principles and practices, and  
10 with the applicable provisions of the Uniform System of Accounts as prescribed  
11 by the Commission.

12

13 **FUEL COST RECOVERY CLAUSE**

14

15 **Q. Please explain the calculation of the FCR net true-up amount.**

16 A. Appendix I, page 1, titled "Summary of Net True-Up," shows the calculation of  
17 the net true-up for the period January 2016 through December 2016, an under-  
18 recovery of \$28,780,519.

19

20 The summary of the net true-up amount shows the actual end-of-period true-up  
21 under-recovery for the period January 2016 through December 2016 of  
22 \$55,264,203 on line 1. The actual/estimated true-up under-recovery for the same  
23 period of \$26,483,684 is shown on line 2. Line 1 less line 2 results in the net final  
24 true-up for the period January 2016 through December 2016 of \$28,780,519

1 under-recovery shown on line 3.

2

3 The calculation of the true-up amount for the period follows the procedures  
4 established by this Commission as set forth on Commission Schedule A2  
5 “Calculation of True-Up and Interest Provision.”

6 **Q. Have you provided a schedule showing the calculation of the 2016 FCR  
7 actual true-up by month?**

8 A. Yes. Appendix I, page 2, titled “Calculation of Final True-up Amount,” shows  
9 the calculation of the FCR actual true-up by month for January 2016 through  
10 December 2016.

11 **Q. Have you provided schedules showing the variances between actual and  
12 actual/estimated FCR costs and applicable revenues for 2016?**

13 A. Yes. Appendix I, page 3, compares the actual end-of-period true-up under-  
14 recovery of \$47,690,279 to the actual/estimated end-of-period true-up under-  
15 recovery of \$18,909,760 resulting in a net under-recovery of \$28,780,519.  
16 Appendix I, page 3 lines 42 and 33, shows that the variance consists of an  
17 increase in jurisdictional costs of \$59.3 million partially offset by an increase in  
18 revenues of \$30.5 million.

19 **Q. What was the variance in adjusted total fuel costs and net power  
20 transactions?**

21 A. The variance in adjusted total fuel costs and net power transactions was an  
22 increase of \$61,637,278. This increase was primarily due to a \$69.0 million  
23 increase in Fuel Cost of System Net Generation resulting from an increase in  
24 consumption of \$81.2 million partially offset by a \$12.1 million reduction in fuel

1 price. The remaining variance is due to a \$5.5 million increase in Energy  
 2 Payments to Qualifying Facilities (“QFs”), a \$2.6 million increase in Energy Cost  
 3 of Economy Purchases, and a \$0.5 million increase in Variable Power Plant O&M  
 4 Costs over 514,000 MWh Threshold. These amounts were partially offset by a  
 5 \$5.0 million increase in Gains from Off-System Sales, a \$4.9 million increase in  
 6 Fuel Cost of Power Sold, a \$4.3 million decrease in Non Recoverable Oil/Tank  
 7 Bottoms, a \$1.5 million decrease in Fuel Cost of Purchased Power, and a \$0.2  
 8 million decrease in Scherer Coal Cars Depreciation & Return.

9  
 10 Fuel Cost of System Net Generation - \$69.0 million increase (Appendix I, page 3,  
 11 line 2)

12 The table below provides the detail of this variance.

<b>Fuel Variance</b>	<b>2016 FINAL TRUE-UP</b>	<b>2016 ACTUAL/ ESTIMATED</b>	<b>DIFFERENCE</b>
<b><u>Heavy Oil</u></b>			
Total Dollar	\$69,082,497	\$54,254,515	\$14,827,982
Units (MMBTU)	4,886,936	3,872,764	1,014,171
\$ per Units	14.1362	14.0092	0.1269
Variance Due to Consumption			\$14,207,779
Variance Due to Cost			\$620,203
Total Variance			\$14,827,982
<b><u>Light Oil</u></b>			
Total Dollar	\$35,199,998	\$29,855,078	\$5,344,921
Units (MMBTU)	2,351,473	2,028,887	322,585
\$ per Units	14.9693	14.7150	0.2543
Variance Due to Consumption			\$4,746,845
Variance Due to Cost			\$598,076
Total Variance			\$5,344,921
<b><u>Coal</u></b>			
Total Dollar	\$125,957,742	\$122,755,659	\$3,202,082

<b>Fuel Variance</b>	<b>2016 FINAL TRUE-UP</b>	<b>2016 ACTUAL/ ESTIMATED</b>	<b>DIFFERENCE</b>
Units (MMBTU)	45,628,322	45,192,067	436,255
\$ per Units	2.7605	2.7163	0.0442
Variance Due to Consumption			\$1,185,003
Variance Due to Cost			\$2,017,079
Total Variance			\$3,202,082
<b><u>Gas</u></b>			
Total Dollar	\$2,432,079,359	\$2,380,989,998	\$51,089,361
Units (MMBTU)	624,091,790	607,164,211	16,927,580
\$ per Units	3.8970	3.9215	(0.0245)
Variance Due to Consumption			\$66,381,379
Variance Due to Cost			(\$15,292,019)
Total Variance			\$51,089,361
<b><u>Nuclear</u></b>			
Total Dollar	\$198,341,685	\$203,733,327	(\$5,391,641)
Units (MMBTU)	309,677,643	317,993,383	(8,315,740)
\$ per Units	0.6405	0.6407	(0.0002)
Variance Due to Consumption			(\$5,327,763)
Variance Due to Cost			(\$63,878)
Total Variance			(\$5,391,641)
<b><u>Total</u></b>			
Variance Due to Consumption			\$81,193,243
Variance Due to Cost			(\$12,120,531)
Total Variance			\$69,072,704
Note: Fuel Cost of System Net Generation reflected above does not tie to amounts provided on the 2016 Actual/Estimated or 2016 Final true-up schedules due to various adjustments that occurred in 2016. These adjustments were included and footnoted on the impacted monthly A-Schedule.			

1

2           Energy Payments to Qualifying Facilities - \$5.5 million increase (Appendix I,  
3           page 3, line 8)

4           The variance for Energy Payments to Qualifying Facilities is primarily  
5           attributable to higher than projected purchases and costs from the Indiantown Co-

1           Generation (“ICL”) facility. In total, FPL purchased 60,903 MWh more than  
2           projected from ICL with an average unit fuel cost that was \$7.13/MWh higher  
3           than projected. This combination of higher purchases and fuel costs from ICL  
4           resulted in a variance of \$7.5 million increase. The variance attributable to ICL  
5           was partially offset by lower costs from the Broward South Firm Co-Generation  
6           facility and lower purchases and costs from As-Available Co-Generation  
7           facilities. The total variance from the Firm and As-Available Co-Generation  
8           facilities was \$2.0 million decrease. The combination of the variance related to  
9           ICL and the variance related to the Firm and As-Available Co-Generation  
10          facilities resulted in a total variance for Energy Payments to Qualifying Facilities  
11          of \$5.5 million increase.

12  
13          Energy Cost of Economy Purchases - \$2.6 million increase (Appendix I, page 3,  
14          line 9)

15          The variance for the Energy Cost of Economy Purchases is primarily attributable  
16          to higher than projected costs for economy purchases. The average cost of  
17          economy purchases was \$1.90/MWh higher than projected, resulting in a cost  
18          variance of \$3.7 million increase. This cost variance was partially offset by lower  
19          than projected economy purchases. FPL purchased 32,232 MWh less of economy  
20          power resulting in a volume variance of \$1.1 million decrease. The combination  
21          of higher costs for economy purchases and lower volume of economy purchases  
22          resulted in a net variance of \$2.6 million increase.

23  
24

1           Variable Power Plant O&M Costs over 514,000 MWh Threshold - \$0.5 million  
2           increase (Appendix I, page 3, line 14)

3           The variance for the Variable Power Plant O&M Costs over 514,000 MWh  
4           Threshold is attributable to higher than projected economy sales.

5  
6           Gains from Off-System Sales - \$5.0 million increase (Appendix I, page 3, line 6)

7           The variance for Gains from Off-System Sales is attributable to higher than  
8           projected economy sales coupled with higher than projected margins on economy  
9           sales. FPL sold 390,965 MWh more of economy power than projected, resulting  
10          in a variance of \$2.8 million increase. In addition, the margin on economy sales  
11          averaged \$0.86/MWh more than projected which resulted in a variance of \$2.1  
12          million increase. The combination of higher economy sales coupled with higher  
13          margins on economy sales resulted in a total variance for Gains from Off-System  
14          Sales of \$5.0 million increase.

15  
16          Fuel Cost of Power Sold - \$4.9 million increase (Appendix I, page 3, line 5)

17          The variance for the Fuel Cost of Power Sold is primarily attributable to higher  
18          than projected economy sales. As discussed above, FPL sold 390,965 MWh more  
19          of economy power, resulting in a volume variance on economy sales of \$7.3  
20          million increase. This volume variance was partially offset by lower than  
21          projected fuel costs attributable to economy sales. The average unit fuel cost on  
22          economy power sales was \$0.86/MWh lower than projected, resulting in a cost  
23          variance of \$2.1 million decrease. The combination of higher economy power  
24          sales and lower fuel costs attributable to economy sales resulted in a net variance

1 of \$5.2 million increase, which is partially offset by a variance of \$0.3 million  
2 decrease attributable to the net of lower than projected St. Lucie Plant Reliability  
3 Exchange sales and by lower than projected fuel costs on St. Lucie Plant  
4 Reliability Exchange sales.

5  
6 Non-Recoverable Tank Bottoms - \$4.3 million decrease (Appendix I, page 3, line  
7 22)

8 The variance for Non-Recoverable Tank Bottoms is primarily related to tanks  
9 taken out of service at the Turkey Point Plant, Lauderdale Plant and Port  
10 Everglades Plant.

11  
12 Fuel Cost of Purchased Power - \$1.5 million decrease (Appendix I, page 3, line 7)

13 The variance for the Fuel Cost of Purchased Power is primarily attributable to  
14 lower than projected purchases and costs under FPL's two Solid Waste Authority  
15 ("SWA") contracts. In total, FPL purchased 76,055 MWh less than projected  
16 from SWA. The unit fuel cost under one contract averaged \$6.05/MWh less than  
17 projected and the unit fuel cost under the second contract averaged \$0.53/MWh  
18 less than projected. The combination of lower purchases and lower fuel costs  
19 resulted in a total variance for SWA purchases of \$4.6 million decrease. This  
20 variance was partially offset by higher purchases and slightly higher fuel costs  
21 from St. John's River Power Park ("SJRPP") that resulted in a total variance for  
22 SJRPP of \$2.9 million increase. The remaining variance of \$0.3 million increase  
23 was primarily attributable to higher than projected purchases under the St. Lucie  
24 Reliability Exchange.

1           Scherer Coal Cars Depreciation & Return - \$0.2 million decrease (Appendix I,  
2           page 3, line 3)

3           The variance for Scherer Coal Cars Depreciation & Return is related to insurance  
4           proceeds for damaged cars as a result of an accident.

5       **Q.    What was the variance in retail (jurisdictional) FCR revenues?**

6       A.    As shown on Appendix I, page 3, line 33, actual jurisdictional FCR revenues, net  
7           of revenue taxes, were approximately \$30.5 million higher than the  
8           actual/estimated projection. This was primarily due to jurisdictional sales that  
9           were 1,045,622 MWh higher than the actual/estimated projection.

10      **Q.    FPL witness Yupp calculates in his testimony that FPL is entitled to retain**  
11           **\$10,101,485 as its 60% share of 2016 Incentive Mechanism gains over the \$46**  
12           **million threshold. When is FPL requesting to recover its share of the gains,**  
13           **and how will this be reflected in the FCR schedules?**

14      A.    FPL is requesting recovery of its share of the 2016 Incentive Mechanism gains  
15           through the 2018 FCR factors, consistent with prior years. FPL will include the  
16           approved jurisdictionalized Incentive Mechanism amount in the calculation of the  
17           2018 FCR factors and will reflect recovery of one-twelfth of the approved  
18           amount, net of revenue taxes, in each month's Schedule A2 for the period January  
19           2018 through December 2018 as a reduction to jurisdictional fuel revenues  
20           applicable to each period.

21      **Q.    Does FPL's 2016 FCR net true-up amount include the true-up to the refund**  
22           **for removal of Woodford gas reserve expenses?**

23      A.    Yes. As explained in the testimony of FPL witness Yupp, the true-up of \$126,520  
24           related to the Woodford refund is part of FPL's 2016 FCR net true-up amount and



1 will be included in FPL's 2018 FCR factors. This amount represents the  
2 difference between the actual true-up amount of \$1,631,772 related to Woodford  
3 for July 2016 through December 2016 and the refund amount of \$1,505,252 for  
4 the same time period that was included in FPL's 2016 Actual/Estimated filing.  
5 The calculation of this final true-up amount is shown on Page 3 of Exhibit GJY-1.  
6

### 7 **CAPACITY COST RECOVERY CLAUSE**

8  
9 **Q. Please explain the calculation of the CCR net true-up amount.**

10 A. Appendix II, page 1, titled "Summary of Net True-Up" shows the calculation of  
11 the CCR net true-up for the period January 2016 through December 2016, an  
12 over-recovery of \$7,586,581, which FPL is requesting to be included in the  
13 calculation of the CCR factors for the January 2018 through December 2018  
14 period.  
15

16 The actual end-of-period over-recovery for the period January 2016 through  
17 December 2016 of \$17,226,490 shown on line 1 less the actual/estimated end-of-  
18 period over-recovery for the same period of \$9,639,909 shown on line 2 that was  
19 approved by the Commission in Order No. PSC-16-0547-FOF-EI, results in the  
20 net true-up over-recovery for the period January 2016 through December 2016 of  
21 \$7,586,581 on line 3.

22 **Q. Have you provided a schedule showing the calculation of the CCR actual  
23 true-up by month?**

24 A. Yes. Appendix II, page 2, titled "Calculation of Final True-up" shows the

1 calculation of the CCR end-of-period true-up for the period January 2016 through  
2 December 2016 by month.

3 **Q. Is this true-up calculation consistent with the true-up methodology used for**  
4 **the FCR clause?**

5 A. Yes, it is. The calculation of the true-up amount follows the procedures  
6 established by this Commission set forth on Commission Schedule A2  
7 “Calculation of True-Up and Interest Provision” for the FCR clause.

8 **Q. Have you provided a schedule showing the variances between actual and**  
9 **actual/estimated capacity charges and applicable revenues for 2016?**

10 A. Yes. Appendix II, page 3, titled “Calculation of Final True-up Variances,” shows  
11 the actual capacity charges and applicable revenues compared to actual/estimated  
12 capacity charges and applicable revenues for the period January 2016 through  
13 December 2016. Actual jurisdictional capacity charges were \$6.4 million lower  
14 than projected and actual revenues were \$1.2 million higher than expected,  
15 resulting in the net over-recovery of \$7.6 million.

16 **Q. Please describe the major components of the variance in net capacity**  
17 **charges.**

18 A. Appendix II, page 3, line 17 provides the variance in jurisdictional capacity  
19 charges, which is a decrease of \$6,374,208. This \$6.4 million decrease was  
20 primarily due to a \$6.6 million decrease in Incremental Plant Security Costs -  
21 O&M, and a \$1.7 million increase in Transmission Revenues from Capacity  
22 Sales.

23

24 These decreases were partially offset by a \$0.8 million increase in Payments to

1 Non-cogenerators and a \$0.8 million increase in Incremental NRC Compliance  
2 Costs (Fukushima) - O&M.

3

4 Incremental Plant Security Costs - O&M - \$6.6 million decrease (Appendix II,  
5 page 3, line 7)

6 The variance for Incremental Plant Security O&M costs is primarily attributable  
7 to the implementation of cost savings initiatives at St. Lucie and Turkey Point.  
8 Additionally, costs associated with Cyber Security Common Controls were  
9 deferred to 2017 due to prioritization of cyber security required modifications  
10 over program procedure development in 2016. The FPL NERC CIP Low Impact  
11 assessment work was also deferred to 2017 due to delays in the contractor bidding  
12 process. Finally, the Threat Vulnerability Assessment project was postponed.

13

14 Transmission Revenues from Capacity Sales - \$1.7 million increase (Appendix II,  
15 page 3, line 12)

16 The variance for Transmission Revenues from Capacity Sales is attributable to  
17 higher than projected economy sales. FPL sold 390,965 MWh more of economy  
18 power during the period than projected, resulting in higher transmission revenues.

19

20 Payments to Non-Cogenerators - \$0.8 million increase (Appendix II, page 3, line  
21 1)

22 The variance for Payments to Non-Cogenerators (SJRPP, SWA and UPS) is  
23 attributable to higher than projected costs associated with the SJRPP agreement.

24 An increase in costs of approximately \$0.9 million for Cumulative Capital

1 Recovery Amount payments and approximately \$0.4 million for O&M and  
2 Inventory costs was partially offset by slightly lower than projected costs for Debt  
3 Service of \$0.03 million and Property Taxes of \$0.3 million.

4  
5 Incremental Nuclear NRC Compliance Costs (Fukushima) – O&M - \$0.8 million  
6 increase (Appendix II, page 3, line 9)

7 The variance for Incremental NRC Compliance O&M costs is primarily  
8 attributable NRC Flooding protection requirements at Turkey Point being booked  
9 as O&M rather than capital as originally projected.

10 **Q. Please describe the variance in CCR revenues.**

11 A. As shown on page 3, line 18, actual Capacity Cost Recovery Revenues (Net of  
12 Revenue Taxes), were \$1,200,918 higher than the actual/estimated projection.  
13 This was primarily due to higher than projected jurisdictional sales, which were  
14 1,045,622 MWh, higher than the actual/estimated projection.

15 **Q. Have you provided a schedule showing the actual monthly capacity payments**  
16 **by contract?**

17 A. Yes. Schedule A12 consists of two pages that are included in Appendix II as  
18 pages 4 and 5. Page 4 shows the actual capacity payments for FPL's Purchase  
19 Power Agreements for the period January 2016 through December 2016. Page 5  
20 provides the Short Term Capacity Payments for the period January 2016 through  
21 December 2016.

22 **Q. Have you provided a schedule showing the capital structure components and**  
23 **cost rates relied upon by FPL to calculate the rate of return applied to all**  
24 **capital projects recovered through the FCR and CCR clauses?**

1 A. Yes. The capital structure components and cost rates used to calculate the rate of  
2 return on the capital investments for the period January 2016 through December  
3 2016 are included on pages 12 and 13 of Appendix II.

4 **Q. Does this conclude your testimony?**

5 A. Yes, it does.

FLORIDA POWER & LIGHT COMPANY  
 FUEL COST RECOVERY CLAUSE  
 SUMMARY OF NET TRUE-UP

FOR THE PERIOD: JANUARY 2016 THROUGH DECEMBER 2016

	Total
1. End of Period True-up <sup>(1)</sup>	(\$55,264,203)
2. Less: Actual Estimated True-up for the same period <sup>(2)</sup>	(\$26,483,684)
3. Net True-up for the period	<u>(\$28,780,519)</u>

<sup>(1)</sup> Page 2, Column (14) Lines 43 & 44.

<sup>(2)</sup> Approved in FPSC Final Order PSC-16-0547-FOF-EI.

Note: Totals may not add due to rounding.

( ) Reflects Underrecovery

FLORIDA POWER & LIGHT COMPANY  
CALCULATION OF FINAL TRUE-UP AMOUNT

FOR THE PERIOD: JANUARY 2016 THROUGH DECEMBER 2016

Line No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	January Actual	February Actual	March Actual	April Actual	May Actual	June Actual	July Actual	August Actual	September Actual	October Actual	November Actual	December Actual	12 Month Period	
1	<b>Fuel Costs &amp; Net Power Transactions</b>													
2	\$201,632,120	\$185,564,216	\$191,236,901	\$216,398,742	\$220,257,708	\$252,425,555	\$32,151,618	\$305,446,086	\$268,674,602	\$259,101,073	\$195,305,861	\$235,152,049	\$2,866,066,052	
3			\$19,236,901	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$213,600)
4		\$137,632	\$271,278	\$144,435	\$130,857	\$131,751	\$130,914	\$131,084	\$120,202	\$129,590	\$113,090	\$138,908	\$1,733,478	
5		\$10,675,109	\$6,757,682	\$2,453,228	\$4,786,730	\$2,412,788	\$2,003,416	\$1,342,884	\$3,282,780	\$3,569,760	\$3,685,909	\$5,615,070	\$47,869,376	
6		\$3,997,935	\$2,997,935	\$2,997,935	\$2,997,935	\$2,997,935	\$2,997,935	\$2,997,935	\$2,997,935	\$2,997,935	\$2,997,935	\$2,997,935	\$29,979,350	
7		\$2,411,393	\$5,384,644	\$6,690,344	\$6,468,911	\$6,721,636	\$7,054,568	\$6,895,783	\$12,827,683	\$5,570,730	\$5,320,831	\$6,147,750	\$91,393,747	
8		\$386,943	\$1,761,911	\$3,658,916	\$4,056,944	\$4,056,944	\$3,134,762	\$7,674,603	\$7,358,466	\$970,004	\$2,039,633	\$479,081	\$30,022,351	
9		\$143,200	\$9,812	\$66,006	\$6,285,624	\$7,168,522	\$7,168,522	\$7,168,522	\$6,778,688	\$6,778,688	\$19,769	\$74,400	\$703,955,662	
10	\$190,033,948	\$181,672,680	\$197,263,578	\$227,195,975	\$244,111,921	\$287,310,058	\$350,346,989	\$334,765,430	\$290,726,020	\$268,639,789	\$200,764,022	\$233,009,344	\$2,995,060,663	
11														
12		\$39,810	\$36,980	\$41,605	\$39,413	\$40,308	\$41,454	\$37,739	\$44,769	\$38,637	\$40,475	\$43,814	\$484,305	
13		\$1,317	\$68,232	\$270,672	\$518,520	\$201,682	\$118,589	\$50,835	\$72,723	\$174,100	\$212,834	\$289,587	\$317,380	\$2,899,052
14		\$41,226	\$628,213	\$312,277	\$557,934	\$241,670	\$161,043	\$80,037	\$110,462	\$218,870	\$321,082	\$381,194	\$3,293,357	
15														
16														
17		\$375	\$0	\$750	\$0	\$750	\$375	\$375	\$1,257	\$0	\$375	\$750	\$5,382	
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(1) Actuals include various adjustments as noted on the A-Schedules.  
 (2) Prior Period 2015 Actual/Estimated True-Up.  
 (3) Generation Performance Incentive Fuel Price is (\$23,303,114/12) x 99.0200% - See Order No. PSC-15-0586-FOE-I.  
 (4) 2015 Final True-Up.  
 (5) Reflects removal of Woodford Gas Retiree Project expenses as explained in the testimony of FPL witness Yapp.  
 (6) FPL has included a refund of \$832,866 including resulting from the corrected wheeling power plant O&M rate to wholesale economy energy sales for the period January 2013 through April 2016.  
 (7) Per Order No. PSC-16-0298-FOE-I, issued on July 27, 2016, FPL is including a refund of \$7,573,924 in the calculation of its 2016 end-of-period net true-up amount, which represents the jurisdictional amount associated with FPL's vendor settlement of \$8 million.  
 (8) Note: Amounts may not agree to Actual/Estimated Filing or A-Schedules due to rounding.  
 (9) Actuals include various adjustments as noted on the A-Schedules.  
 (10) Prior Period 2015 Actual/Estimated True-Up.  
 (11) Generation Performance Incentive Fuel Price is (\$23,303,114/12) x 99.0200% - See Order No. PSC-15-0586-FOE-I.  
 (12) 2015 Final True-Up.  
 (13) Reflects removal of Woodford Gas Retiree Project expenses as explained in the testimony of FPL witness Yapp.  
 (14) FPL has included a refund of \$832,866 including resulting from the corrected wheeling power plant O&M rate to wholesale economy energy sales for the period January 2013 through April 2016.  
 (15) Per Order No. PSC-16-0298-FOE-I, issued on July 27, 2016, FPL is including a refund of \$7,573,924 in the calculation of its 2016 end-of-period net true-up amount, which represents the jurisdictional amount associated with FPL's vendor settlement of \$8 million.

FLORIDA POWER & LIGHT COMPANY  
CALCULATION OF VARIANCE - FINAL TRUE-UP VS. ACTUAL/ESTIMATED TRUE-UP

FOR THE PERIOD: JANUARY 2016 THROUGH DECEMBER 2016

Line No.	(1)	(2)		(3)		(4)		(5)	
		FCR - 2016 Final True-up	FCR - 2016 Actual/Estimated True-up	FCR - 2016 Actual/Estimated True-up	FCR - 2016 Actual/Estimated True-up	% Diff FCR - 2016 Actual/Estimated True-up	% Diff FCR - 2016 Actual/Estimated True-up		
<b>Fuel Costs &amp; Net Power Transactions</b>									
1		\$2,860,866,052	\$2,791,622,914	\$69,043,138		2.5%			
2	Fuel Cost of System Net Generation (Per A5) <sup>(1)</sup>	(\$213,600)	\$0			0.0%			
3	Scheer Coal Costs Depreciation & Return (Per A2)	\$1,733,478	\$1,693,606	\$39,872		2.4%			
4	Cedar Bay - Rail Coal Cars Leases per Docket No. 150075-EI	(\$47,959,376)	(\$43,101,986)	(\$4,857,390)		11.3%			
5	Fuel Cost of Power Sold (Per A6)	(\$20,137,620)	(\$15,171,021)	(\$4,966,599)		32.7%			
6	Gains from O&M System Sales (Per A6)	\$91,393,747	\$92,843,826	(\$1,450,079)		(1.6%)			
7	Fuel Cost of Purchased Power (Per A7)	\$39,662,331	\$33,962,507	\$5,699,824		16.4%			
8	Energy Payments to Qualifying Facilities (Per A8)	\$70,535,652	\$67,954,405	\$2,581,246		3.8%			
9	Energy Cost of Economy Purchases (Per A8)								
10	Total Fuel Costs & Net Power Transactions	\$2,855,080,663	\$2,929,404,251	(\$65,673,412)		(2.2%)			
<b>Incremental Optimization Costs</b>									
12	Incremental Personnel, Software, and Hardware Costs (Per A2)	\$484,305	\$476,389	\$7,915		1.7%			
13	Variable Power Plant O&M Costs over 514,000 MWh Threshold (Per A6)	\$2,809,052	\$2,277,740	\$531,712		23.3%			
14	Total	\$3,293,357	\$2,753,729	\$539,628		19.6%			
16	Dodd Frank Fees	\$5,382	\$4,500	\$882		19.6%			
<b>Adjustments to Fuel Cost</b>									
18	Energy Imbalance Fuel Revenues	(\$506,000)	\$98,356	(\$604,357)		(411.1%)			
20	Inventory Adjustments	(\$677,379)	(\$789,272)	\$111,892		(14.2%)			
21	Non Recoverable Oil/Frank Subsidies	(\$4,150,615)	(\$150,364)	(\$4,297,160)		(2,847.4%)			
22	Gas Reserve Refund	(\$21,294,315)	\$0	\$0		0.0%			
23	Variable Power Plant O&M Correction <sup>(2)</sup>	(\$832,856)	(\$832,856)	\$0		0.0%			
24	Adjusted Total Fuel Costs & Net Power Transactions	\$2,971,132,216	\$2,909,494,908	\$61,637,278		2.1%			
<b>Jurisdictional MWh Sales</b>									
25	Jurisdictional MWh Sales	109,662,645,602	108,617,023,397	1,045,622,205		1.0%			
27	Sales for Resale	6,622,522,316	6,559,581,822	28,940,494		0.4%			
28	Sub-Total Sales	116,285,167,918	115,256,605,219	1,028,562,699		0.9%			
<b>Jurisdictional % of Total Sales (Line 27/29)</b>									
31	Jurisdictional % of Total Sales	N/A	N/A	N/A		N/A			
<b>True-up Calculation</b>									
32	Jurisdictional Fuel Revenues (Net of Revenue Taxes)	\$2,824,543,954	\$2,794,039,971	\$30,503,983		1.1%			
<b>Fuel Adjustment Revenues Not Applicable to Period</b>									
34	Prior Period True-up (Collected)/Refunded This Period <sup>(3)</sup>	(\$66,818,243)	(\$66,818,243)	\$0		0.0%			
35	GPIF, Net of Revenue Taxes <sup>(3)</sup>	(\$23,286,336)	(\$23,286,336)	\$0		0.0%			
36	Innovative Mechanism Collection	(\$12,340,709)	(\$12,340,709)	\$0		0.0%			
37	Miscellaneous correction - Prior Period True-up (Collected)/Refunded This Period	\$29,767,250	\$29,767,250	\$0		0.0%			
38	Jurisdictional Fuel Revenues Applicable to Period	\$2,551,865,917	\$2,721,381,534	(\$169,515,617)		(6.6%)			
40	Adjusted Total Fuel Costs & Net Power Transactions	\$2,971,132,205	\$2,909,494,908	\$61,637,278		2.1%			
41	Jurisdictional Sales % of Total MWh Sales (Line 31)	N/A	N/A	N/A		N/A			
42	Juris. Total Fuel Costs & Net Power Trans. (Line 40/Line 31 x 100/100)	\$2,807,211,542	\$2,747,944,518	\$59,267,028		2.2%			
43	True-up Provision for the Month - Over/(Under) Recovery (Line 39 - Line 42)	(\$5,345,625)	(\$26,582,283)	(\$20,936,658)		(108.2%)			
44	Interest Provision for the Month	\$81,422	\$96,698	(\$15,277)		(17.5%)			
45	True-up & Interest Provision Bag of Period - Over/(Under) Recovery	(\$66,818,243)	(\$66,818,243)	\$0		0.0%			
46	Deferred True-up Beginning of Period - Over/(Under) Recovery <sup>(4)</sup>	\$29,767,250	\$29,767,250	\$0		0.0%			
47	Vendor Settlement Refund per Order No. PSC-16-0298-FOE-EI <sup>(5)</sup>	\$7,573,924	\$7,573,924	\$0		0.0%			
48	Prior Period True-up Collected/Refunded This Period <sup>(6)</sup>	\$66,818,243	\$66,818,243	\$0		0.0%			
49	Miscellaneous correction - 2015 Final true-up collected/Refunded this period	(\$29,767,250)	(\$29,767,250)	\$0		0.0%			
50	End of Period - Net True-up Amount Over/(Under) Recovery (Line 43 through 49)	(\$27,680,279)	(\$3,809,366)	(\$23,760,913)		(152.2%)			

(1) Actuals include various adjustments as noted on the A-Schedules.  
 (2) Prior Period 2015 Actual/Estimated True-up.  
 (3) Generation Performance Incentive Factor is (832,310,114/12) x 99.9285% - See Order No. PSC-15-0586-FOE-EI.  
 (4) 2015 Final True-up.  
 (5) Reflects removal of Woodford Gas Reserves Project expenses as explained in the testimony of FPL witness Yupp.  
 (6) FPL has included a refund of \$52,856 including resulting from the application of the corrected variable power plant O&M rate to wholesale economy energy sales for the period January 2013 through April 2016.  
 (7) Per Order No. PSC-16-0298-FOE-EI, issued on July 27, 2016, FPL is including a refund of \$7,573,924 in the calculation of its 2016 end-of-period net true-up amount, which represents the jurisdictional amount associated with FPL's vendor settlement of \$8 million.  
 Note: Amounts may not agree to A-Schedules due to rounding.



FLORIDA POWER & LIGHT COMPANY  
 CAPACITY COST RECOVERY CLAUSE  
 SUMMARY OF NET TRUE-UP  
 FOR THE PERIOD: JANUARY 2016 THROUGH DECEMBER 2016

Line No.		Dec-16
1	End of Period True-up for the period <sup>(1)</sup>	\$17,226,490
2	Less - Estimated/Actual True-up for the same period <sup>(2)</sup>	\$9,639,909
3	Net True-up for the period	<u>\$7,586,581</u>

4

5 <sup>(1)</sup> From Page 2, Column (14), Lines 21 & 22.

6 <sup>(2)</sup> Approved in FPSC Final Order PSC-16-0547-FOF-EI.

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8 Note: Totals may not add due to rounding

9

10 ( ) Reflects Under-recovery

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FLORIDA POWER & LIGHT COMPANY  
CAPACITY COST RECOVERY CLAUSE  
CALCULATION OF FINAL TRUE-UP  
FOR THE PERIOD JANUARY 2016 THROUGH DECEMBER 2016

Line No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	January Actual	February Actual	March Actual	April Actual	May Actual	June Actual	July Actual	August Actual	September Actual	October Actual	November Actual	December Actual	Total	
1	\$5,797,708	\$5,882,677	\$6,940,701	\$6,065,010	\$6,320,975	\$6,751,736	\$6,247,636	\$6,581,602	\$6,989,485	\$6,358,312	\$5,858,063	\$6,005,294	\$75,779,189	
2	\$7,865,875	\$7,859,530	\$7,862,703	\$7,163,752	\$8,494,181	\$7,888,135	\$7,840,415	\$7,845,877	\$7,841,883	\$7,841,000	\$7,852,741	\$7,845,545	\$94,141,638	
3	\$9,582,935	\$9,562,678	\$9,522,421	\$9,492,164	\$9,461,907	\$9,431,637	\$9,416,290	\$9,385,886	\$9,365,482	\$9,325,078	\$9,294,675	\$9,254,271	\$113,086,422	
4	(\$116,035)	(\$115,543)	(\$115,052)	(\$114,560)	(\$114,068)	(\$113,577)	(\$113,327)	(\$112,833)	(\$112,339)	(\$112,339)	(\$107,272)	(\$106,796)	(\$1,319,951)	
5	(\$756,990)	(\$756,990)	(\$756,990)	(\$756,990)	(\$756,990)	(\$756,990)	(\$756,990)	(\$756,990)	(\$756,990)	(\$756,990)	(\$756,990)	(\$756,990)	(\$9,083,772)	
6	(\$215,495)	(\$209,605)	(\$203,714)	(\$197,824)	(\$191,933)	(\$186,043)	(\$181,026)	(\$175,107)	(\$169,189)	(\$163,270)	(\$157,351)	(\$151,432)	(\$2,201,989)	
7	\$3,384,335	\$2,770,804	\$3,067,222	\$2,869,562	\$2,644,814	\$2,469,988	\$2,508,789	\$2,474,916	\$2,907,799	\$3,001,473	\$2,649,078	\$3,205,988	\$33,954,777	
8	\$152,222	\$154,484	\$157,074	\$160,110	\$162,740	\$165,515	\$168,895	\$170,412	\$171,155	\$171,564	\$174,207	\$184,362	\$1,992,742	
9	\$39,528	\$284,430	\$215,058	\$242,810	\$287,540	\$183,519	\$245,834	\$121,965	\$1,314,074	\$631,162	\$262,917	\$51,649	\$3,880,487	
10	\$599,108	\$614,544	\$627,540	\$674,337	\$714,494	\$717,277	\$721,708	\$721,515	\$725,030	\$728,766	\$728,650	\$727,982	\$8,300,952	
11	\$1,846,023	\$1,886,685	\$1,827,304	\$2,218,116	\$2,159,231	\$6,113	(\$1,905,037)	\$1,375	\$241	\$142,213	\$9,581	\$16,404	\$8,208,250	
12	(\$1,085,665)	(\$637,884)	(\$991,779)	(\$894,359)	(\$517,100)	(\$384,728)	(\$308,957)	(\$325,111)	(\$583,920)	(\$662,364)	(\$702,263)	(\$679,926)	(\$7,774,066)	
13	\$27,093,650	\$27,285,809	\$28,152,487	\$26,912,126	\$28,665,791	\$26,122,563	\$23,884,230	\$25,913,506	\$27,692,740	\$26,538,423	\$25,106,054	\$25,596,379	\$318,963,689	
14	94.67506%	94.67506%	94.67506%	94.67506%	94.67506%	94.67506%	94.67506%	94.67506%	94.67506%	94.67506%	94.67506%	94.67506%	N/A	
15	\$25,650,835	\$25,832,856	\$26,653,384	\$25,479,072	\$27,139,355	\$24,731,580	\$22,612,409	\$24,533,628	\$26,218,119	\$25,125,288	\$23,789,172	\$24,233,387	\$301,979,064	
16	\$2,086,094	\$3,104,524	\$5,127,776	\$2,295,622	\$2,606,357	\$3,156,370	\$2,027,703	\$2,065,414	\$2,962,031	\$1,959,644	\$1,974,012	\$4,884,073	\$34,249,619	
17	\$27,736,929	\$28,937,381	\$31,781,160	\$27,774,694	\$29,745,711	\$27,887,950	\$24,640,111	\$26,599,042	\$29,180,149	\$27,084,912	\$25,743,184	\$29,117,460	\$336,228,683	
18	\$28,963,403	\$23,724,517	\$25,032,700	\$26,889,453	\$28,090,196	\$31,774,952	\$35,451,122	\$35,047,989	\$33,977,764	\$30,504,945	\$25,716,438	\$25,482,230	\$348,655,719	
19	\$395,679	\$395,679	\$395,679	\$395,679	\$395,679	\$395,679	\$395,679	\$395,679	\$395,679	\$395,679	\$395,679	\$395,679	\$4,748,145	
20	\$27,359,082	\$24,120,196	\$25,428,379	\$27,285,132	\$28,485,875	\$32,170,631	\$35,846,801	\$35,443,677	\$34,373,443	\$30,900,624	\$26,112,116	\$25,877,908	\$353,403,864	
21	(\$377,847)	(\$4,817,185)	(\$6,352,781)	(\$489,562)	(\$1,259,837)	\$4,282,681	\$11,206,690	\$8,844,636	\$5,193,294	\$3,815,712	\$368,933	(\$3,239,551)	\$17,175,181	
22	\$3,433	\$2,498	\$477	(\$807)	(\$1,095)	(\$814)	\$1,589	\$5,019	\$7,775	\$10,034	\$10,716	\$12,485	\$51,309	
23	\$4,748,145	\$3,978,052	(\$1,232,314)	(\$7,980,296)	(\$8,866,344)	(\$10,522,955)	(\$6,636,767)	\$4,175,833	\$12,629,808	\$17,435,198	\$20,865,265	\$20,849,235	\$4,748,145	
24	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	\$5,938,824	
25	(\$395,679)	(\$395,679)	(\$395,679)	(\$395,679)	(\$395,679)	(\$395,679)	(\$395,679)	(\$395,679)	(\$395,679)	(\$395,679)	(\$395,679)	(\$395,679)	(\$4,748,145)	
26	\$9,916,876	\$4,706,510	(\$2,041,472)	(\$2,927,520)	(\$4,584,131)	(\$697,943)	\$10,114,657	\$18,568,632	\$23,374,022	\$26,804,089	\$26,788,059	\$23,165,314	\$23,165,314	
27														

(\*) As approved on Order No. FSC-15-0586-FOF-EI.

Total may not add due to rounding

FLORIDA POWER & LIGHT COMPANY  
 CAPACITY COST RECOVERY CLAUSE  
 CALCULATION OF FINAL TRUE-UP VARIANCES  
 FOR THE PERIOD: JANUARY 2016 THROUGH DECEMBER 2016

(1)	(2)	(3)	(4)	(5)
Line No.	CCR - Final True-up Variance	CCR - 2016 Final True-up	CCR - 2016 Actual/Estimated True-up	% Dif. CCR - 2016 Actual/Estimated True-up
1	Payments to Non-cogenerators	\$74,945,939	\$833,250	1.1%
2	Payments to Co-generators	\$94,141,638	(\$151,046)	(0.2%)
3	Cedar Bay Transaction - Regulatory Asset - Amortization and Return	\$113,085,422	\$0	0.0%
4	Cedar Bay Transaction - Regulatory Liability - Amortization and Return	(\$1,319,951)	\$41,437	(3.0%)
5	SJRPP Suspension Accrual	(\$9,083,772)	\$108	(0.0%)
6	Return on SJRPP Suspension Liability	(\$2,201,989)	(\$2)	0.0%
7	Incremental Plant Security Costs O&M	\$33,954,777	(\$6,639,899)	(16.4%)
8	Incremental Plant Security Costs Capital	\$1,992,742	(\$133,734)	(6.3%)
9	Incremental Nuclear NRC Compliance Costs O&M	\$3,880,487	\$816,546	26.7%
10	Incremental Nuclear NRC Compliance Costs Capital	\$8,300,952	\$29,409	0.4%
11	Transmission of Electricity by Others	\$8,208,250	\$169,815	2.1%
12	Transmission Revenues from Capacity Sales	(\$7,774,056)	(\$1,698,610)	28.0%
13	Total (Lines 1 through 12)	\$318,963,689	\$325,696,415	(2.1%)
14	Jurisdictional Separation Factor <sup>(a)</sup>	94.67506%	0.00000%	0.0%
15	Jurisdictional CCR Charges	\$301,979,064	(\$6,374,212)	(2.1%)
16	Nuclear Cost Recovery Costs <sup>(a)</sup>	\$34,249,619	\$4	0.0%
17	Jurisdictional CCR Charges	\$336,228,683	(\$6,374,208)	(1.9%)
18	CCR Revenues (Net of Revenue Taxes)	\$348,655,719	\$1,200,918	0.3%
19	Prior Period True-up Provision	\$4,748,145	\$0	0.0%
20	CCR Revenues Applicable to Current Period (Net of Revenue Taxes)	\$353,403,864	\$1,200,918	0.3%
21	True-up Provision for Month - Over/(Under) Recovery (Line 20 - Line 17)	\$17,175,181	\$7,575,127	78.9%
22	Interest Provision for Month	\$51,309	\$39,854	28.7%
23	True-up & Interest Provision Beginning of Month - Over/(Under) Recovery	\$4,748,145	\$0	0.0%
24	Deferred True-up - Over/(Under) Recovery	\$5,938,824	\$0	0.0%
25	Prior Period True-up Provision - Collected/(Refunded) this Month	(\$4,748,145)	\$0	0.0%
26	End of Period True-up - Over/(Under) Recovery (Sum of Lines 21 through 25)	\$23,165,314	\$7,586,581	48.7%

<sup>(a)</sup> As approved on Order No. PSC-15-0586-FOF-EI.

Columns and rows may not add due to rounding

Florida Power & Light Company  
 Schedule A12 - Capacity Costs  
 Page 1 of 2

For the Month of **Dec-16**

Contract	Capacity MW	Term Start	Term End	Contract Type	January	February	March	April	May	June	July	August	September	October	November	December	Year-to-date
Indiantown	330	12/22/1995	12/1/2025	QF													
Broward South - 1991 Agreement	3.5	1/1/1993	12/31/2026	QF													
QF = Qualifying Facility																	
Cedar Bay										(3,120)							(3,120)
ICL		7,757,865	7,751,520				7,754,693	7,049,721	8,391,004	7,738,920	7,738,920	7,745,222	7,742,071	7,742,071	7,754,696	7,748,384	92,915,088
BS-NEG '91		108,010	108,010		108,010	108,010	108,010	104,031	103,178	102,335	101,495	100,655	99,812	98,929	98,045	97,161	1,229,670
Total		7,865,875	7,859,530		7,862,703	7,153,752	8,494,181	7,838,135	7,840,415	7,845,877	7,841,883	7,841,000	7,852,741	7,845,545	7,845,545	94,141,638	

Florida Power & Light Company  
 Schedule A12 - Capacity Costs  
 Page 2 of 2

For the Month of Dec-16

Contract	Counterparty	Identification	Contract Start Date	Contract End Date
1	Southern Co. - UPS Scherer	Other Entity	June, 2010	December 31, 2015
2	Southern Co. - UPS Harris	Other Entity	June, 2010	December 31, 2015
3	Southern Co. - UPS Franklin	Other Entity	June, 2010	December 31, 2015
4	JEA - SURPP	Other Entity	April, 1982	September 30, 2021
5	Solid Waste Authority - 40 MW	Other Entity	January, 2012	March 31, 2032
6	Solid Waste Authority - 70 MW	Other Entity	July, 2015	May 31, 2034

2016 Capacity in MW

Contract	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	375	375	375	375	375	375	375	375	375	375	375	375
5	40	40	40	40	40	40	40	40	40	40	40	40
6	70	70	70	70	70	70	70	70	70	70	70	70
Total	485	485	485	485	485	485	485	485	485	485	485	485

2016 Capacity in Dollars

Contract	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	5,797,708	5,882,677	6,940,701	6,065,010	6,320,975	6,751,736	6,247,636	6,561,602	6,989,485	6,358,312	6,868,053	6,005,294

Year-to-date Short Term Capacity Payments 75,779,190 <sup>(1)</sup>

Contract	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1												
2												
3												
4												
5												
6												

True ups	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1												
2												
3												
4												
5												
6												

(1) Total capacity costs do not include payments for the Solid Waste Authority - 70 MW unit. Capacity costs for this unit were recovered through the Energy Conservation Cost Recovery Clause in 2014, consistent with Commission Order No. PSC-11-0293-FOF-EU issued in Docket No. 110018-EU on July 6, 2011.

**Florida Power & Light Company**  
 Capacity Cost Recovery Clause  
**For the Period January through June 2016**

Return on Capital Investments, Depreciation and Taxes  
Incremental Security  
 (in Dollars)

Line	Beginning of Period Amount	Jan Actual	Feb Actual	Mar Actual	Apr Actual	May Actual	Jun Actual	Six Month Amount
1. Investments								
a. Expenditures/Additions		\$212,241	\$392,463	\$354,184	\$353,875	(\$76,791)	\$449,511	\$1,685,484
b. Clearings to Plant		\$7,569	\$6,067	\$2,001	\$49,227	\$319,244	\$860	\$384,967
c. Retirements		\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Other		\$0	\$0	\$0	\$0	\$0	\$0	\$0
2. Plant-In-Service/Depreciation Base	\$4,210,542	\$4,218,111	\$4,224,178	\$4,226,178	\$4,275,405	\$4,594,649	\$4,595,509	n/a
3. Less: Accumulated Depreciation	\$105,341	\$125,539	\$145,751	\$165,772	\$186,033	\$206,571	\$227,349	n/a
4. CWIP - Non Interest Bearing	\$12,761,654	\$12,973,895	\$13,366,358	\$13,720,543	\$14,074,418	\$13,997,627	\$14,447,138	n/a
5. Net Investment (Lines 2 - 3 + 4)	\$16,866,855	\$17,066,467	\$17,444,785	\$17,780,949	\$18,163,790	\$18,385,705	\$18,815,298	n/a
10. Average Net Investment		\$16,966,661	\$17,255,626	\$17,612,867	\$17,972,369	\$18,274,748	\$18,600,501	n/a
11. Return on Average Net Investment								
a. Equity Component grossed up for taxes (a)		\$110,951	\$112,841	\$115,177	\$117,528	\$119,505	\$121,635	\$697,637
b. Debt Component (Line 6 x debt rate x 1/12) (b)		\$21,073	\$21,431	\$21,875	\$22,322	\$22,697	\$23,102	\$132,500
12. Investment Expenses								
a. Depreciation		\$20,198	\$20,212	\$20,022	\$20,261	\$20,538	\$20,778	\$122,009
b. Amortization		\$0	\$0	\$0	\$0	\$0	\$0	\$0
c. Other								
13. Total System Recoverable Expenses (Lines 11 & 12)		\$152,222	\$154,484	\$157,074	\$160,110	\$162,740	\$165,515	\$952,145

<sup>(a)</sup> The Gross-up factor for taxes uses 0.61425, which reflects the Federal Income Tax Rate of 35%. The monthly Equity Component is 4.8201%, which is based on the May 2015 ROR Surveillance Report and reflects a 10.5% return on equity, per FPSC Order No. PSC-12-0425-PAA-EU.

<sup>(b)</sup> The Debt Component is 1.4904%, which is based on the May 2015 ROR Surveillance Report, per FPSC Order No. PSC-12-0425-PAA-EU.

Totals may not add due to rounding.

**Florida Power & Light Company**  
 Capacity Cost Recovery Clause  
**For the Period July through December 2016**

Return on Capital Investments, Depreciation and Taxes  
 Incremental Security  
 (in Dollars)

Line	Beginning of Period Amount	July Actual	August Actual	September Actual	October Actual	November Actual	December Actual	Twelve Month Amount
1. Investments								
a. Expenditures/Additions		\$275,123	\$152,177	\$75,543	\$67,211	(\$2,351,420)	(\$4,173,144)	(\$5,954,509)
b. Clearings to Plant		\$743	\$1,116	\$2,202	\$673	\$2,519,570	\$4,566,840	\$7,091,145
c. Retirements		\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Other		\$0	\$0	\$0	\$0	\$0	\$0	\$0
2. Plant-In-Service/Depreciation Base (a)	\$4,595,509	\$4,596,252	\$4,597,369	\$4,599,570	\$4,600,243	\$7,119,814	\$11,686,654	n/a
3. Less: Accumulated Depreciation	\$227,349	\$248,129	\$268,910	\$289,693	\$310,479	\$333,154	\$363,997	n/a
4. CWIP - Non Interest Bearing	\$14,447,138	\$14,722,261	\$14,874,438	\$14,949,981	\$15,017,193	\$12,665,773	\$8,492,629	n/a
5. Net Investment (Lines 2 - 3 + 4)	\$18,815,298	\$19,070,384	\$19,202,897	\$19,259,859	\$19,306,958	\$19,452,432	\$19,815,286	n/a
10. Average Net Investment		\$18,942,841	\$19,136,641	\$19,231,378	\$19,283,408	\$19,379,695	\$19,633,859	n/a
11. Return on Average Net Investment								
a. Equity Component grossed up for taxes (a)		\$126,125	\$127,416	\$128,046	\$128,393	\$129,034	\$130,726	\$1,467,377
b. Debt Component (Line 6 x debt rate x 1/12) (b)		\$21,991	\$22,216	\$22,326	\$22,386	\$22,498	\$22,793	\$266,709
12. Investment Expenses								
a. Depreciation		\$20,779	\$20,781	\$20,783	\$20,785	\$22,676	\$30,843	\$258,656
b. Amortization		\$0	\$0	\$0	\$0	\$0	\$0	\$0
c. Other								
13. Total System Recoverable Expenses (Lines 11 & 12)		\$168,895	\$170,412	\$171,155	\$171,564	\$174,207	\$184,362	\$1,992,742

(a) The Gross-up factor for taxes uses 0.61425, which reflects the Federal Income Tax Rate of 35%. The monthly Equity Component is 4.9078%, which is based on the May 2016 ROR Surveillance Report and reflects a 10.5% return on equity, per FPSC Order No. PSC-12-0425-PAA-EU.

(b) The Debt Component is 1.3931%, which is based on the May 2016 ROR Surveillance Report, per FPSC Order No. PSC-12-0425-PAA-EU.

Totals may not add due to rounding.

**Florida Power & Light Company**  
 Capacity Cost Recovery Clause  
**For the Period January through June 2016**

Return on Capital Investments, Depreciation and Taxes  
 Incremental Nuclear NRC Compliance  
 (in Dollars)

Line	Investments	Beginning of Period Amount	Jan Actual	Feb Actual	Mar Actual	Apr Actual	May Actual	Jun Actual	Six Month Amount
1.	Investments								
a.	Expenditures/Additions		\$1,703,761	\$1,304,227	\$1,592,068	(\$15,688,836)	\$0	\$0	(\$11,088,779)
b.	Clearings to Plant		\$709,947	\$263,841	\$316,247	\$19,570,169	\$360,577	\$505,897	\$21,726,678
c.	Clearings to Plant - Base		\$0	\$0	\$0	\$0	\$0	\$0	\$0
d.	Retirements		\$0	\$0	\$0	\$0	\$0	\$0	\$0
d.	Other		\$0	\$0	\$0	\$0	\$0	(\$2,961)	(\$2,961)
2.	Incremental Plant-in-Service/Depreciation	\$52,069,831	\$52,779,878	\$53,043,719	\$53,359,966	\$72,930,135	\$73,290,712	\$73,796,609	n/a
3.	Less: Accumulated Depreciation	\$554,156	\$657,122	\$760,835	\$864,827	\$993,997	\$1,147,922	\$1,299,486	
4.	CWIP - Non Interest Bearing	\$11,089,331	\$12,793,092	\$14,097,320	\$15,689,388	\$552	\$552	\$552	
5.	Net Investment (Lines 2 - 3 + 4)	\$62,605,106	\$64,915,849	\$66,380,204	\$68,184,528	\$71,936,691	\$72,143,343	\$72,497,675	
6.	Total Estimated Capital Expenditures Included in Base Rates (b)		\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	
7.	Base Rate Capital Expenditures Closed to Plant-in-Service (c)		\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	
8.	Remaining Amount Included in Base Rates (Lines 6 - 7)		\$0	\$0	\$0	\$0	\$0	\$0	
9.	Adjusted Net Investment (Lines 5 - 8)	\$62,605,106	\$64,915,849	\$66,380,204	\$68,184,528	\$71,936,691	\$72,143,343	\$72,497,675	
10.	Average Net Investment		\$63,760,477	\$65,648,027	\$67,282,366	\$70,060,609	\$72,040,017	\$72,320,509	n/a
11.	Return on Average Net Investment								
a.	Equity Component grossed up for taxes (d)		\$416,953	\$429,296	\$439,983	\$458,151	\$471,095	\$472,930	\$2,688,408
b.	Debt Component (Line 6 x debt rate x 1/12) (e)		\$79,191	\$81,535	\$83,565	\$87,015	\$89,474	\$89,822	\$510,601
12.	Investment Expenses								
a.	Depreciation		\$102,965	\$103,714	\$103,991	\$129,170	\$153,925	\$154,525	\$748,291
b.	Amortization		\$0	\$0	\$0	\$0	\$0	\$0	\$0
c.	Other		\$0	\$0	\$0	\$0	\$0	\$0	\$0
13.	Total System Recoverable Expenses (Lines 11 & 12)		\$599,108	\$614,544	\$627,540	\$674,337	\$714,494	\$717,277	\$3,947,300

(a) Represents nuclear NRC compliance plant-in-service in excess of the total estimated capital expenditures included in FPL's 2013 Test Year rate base (Docket No. 120015-EI) on line 6.  
 (b) Represents forecasted nuclear NRC compliance capital expenditures included in FPL's 2013 Test Year rate base (Docket No. 120015-EI).  
 (c) Represents base rate recoverable nuclear NRC compliance capital expenditures closed to plant-in-service.  
 (d) The Gross-up factor for taxes uses 0.61425, which reflects the Federal Income Tax Rate of 35%. The monthly Equity Component is 4.8201%, which is based on the May 2015 ROR Surveillance Report and reflects a 10.5% return on equity, per FPSC Order No. PSC-12-0425-PAA-EU.  
 (e) The Debt Component is 1.4904%, which is based on the May 2015 ROR Surveillance Report, per FPSC Order No. PSC-12-0425-PAA-EU.

Totals may not add due to rounding.



**Florida Power & Light Company**  
 Capacity Cost Recovery Clause  
**For the Period June through December 2016**

Return on Capital Investments, Depreciation and Taxes  
 Incremental Nuclear NRC Compliance  
 (in Dollars)

Line	Beginning of Period Amount	July Actual	August Actual	September Actual	October Actual	November Actual	December Actual	Twelve Month Amount
1. Investments								
a. Expenditures/Additions		\$0	\$0	\$1,050,299	\$7,733	\$6,480	\$2,613	\$1,067,124
b. Clearings to Plant		\$100,109	\$105,298	\$22,625	\$146,151	\$73,066	\$31,751	\$479,000
c. Clearings to Plant - Base		\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Retirements		\$0	\$0	\$0	\$0	\$0	\$0	\$0
e. Other		\$0	\$0	\$0	\$0	\$0	\$0	\$0
2. Incremental Plant-In-Service/Depreciation Base (a)	\$73,796,609	\$73,896,718	\$74,002,016	\$74,024,641	\$74,170,792	\$74,243,858	\$74,275,609	n/a
3. Less: Accumulated Depreciation	\$1,299,486	\$1,454,542	\$1,609,816	\$1,765,213	\$1,920,765	\$2,076,506	\$2,232,351	n/a
4. CWIP - Non Interest Bearing	\$552	\$552	\$552	\$1,050,851	\$1,058,584	\$1,065,064	\$1,067,677	n/a
5. Net Investment (Lines 2 - 3 + 4)	\$72,497,675	\$72,442,728	\$72,392,753	\$73,310,279	\$73,308,611	\$73,232,416	\$73,110,935	n/a
6. Total Estimated Capital Expenditures Included in Base Rates (b)	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
7. Base Rate Capital Expenditures Closed to Plant-In-Service (c)	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
8. Remaining Amount Included in Base Rates (Lines 6 - 7)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9. Adjusted Net Investment (Lines 5 - 8)	\$72,497,675	\$72,442,728	\$72,392,753	\$73,310,279	\$73,308,611	\$73,232,416	\$73,110,935	n/a
10. Average Net Investment		\$72,470,202	\$72,417,740	\$72,851,516	\$73,309,445	\$73,270,514	\$73,171,675	
11. Return on Average Net Investment								
a. Equity Component grossed up for taxes (d)		\$482,521	\$482,172	\$485,060	\$488,109	\$487,850	\$487,192	\$5,601,312
b. Debt Component (Line 6 x debt rate x 1/12) (e)		\$84,131	\$84,070	\$84,573	\$85,105	\$85,060	\$84,945	\$1,018,485
12. Investment Expenses								
a. Depreciation		\$155,056	\$155,274	\$155,397	\$155,552	\$155,741	\$155,845	\$1,681,156
b. Amortization		\$0	\$0	\$0	\$0	\$0	\$0	\$0
c. Other								
13. Total System Recoverable Expenses (Lines 11 & 12)		\$721,708	\$721,515	\$725,030	\$728,766	\$728,650	\$727,982	\$8,300,952

(a) Represents nuclear NRC compliance plant-in-service in excess of the total estimated capital expenditures included in FPL's 2013 Test Year rate base (Docket No. 120015-EI) on line 6.  
 (b) Represents forecasted nuclear NRC compliance capital expenditures included in FPL's 2013 Test Year rate base (Docket No. 120015-EI).  
 (c) Represents base rate recoverable nuclear NRC compliance capital expenditures closed to plant-in-service.  
 (d) The Gross-up factor for taxes uses 0.61425, which reflects the Federal Income Tax Rate of 35%. The monthly Equity Component is 4.9078%, which is based on the May 2016 ROR Surveillance Report and reflects a 10.5% return on equity, per FPSC Order No. PSC-12-0425-PAA-EU.  
 (e) The Debt Component is 1.3931%, which is based on the May 2016 ROR Surveillance Report, per FPSC Order No. PSC-12-0425-PAA-EU.

Totals may not add due to rounding.

FLORIDA POWER & LIGHT COMPANY  
 CEDAR BAY TRANSACTION  
 Regulatory Asset Related to the Loss of the PPA and Income Tax Gross-Up (Amortization and Return Calculation)  
 For the Period January through December 2016

Line No.	Description	Beginning of Period	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	Regulatory Asset - Loss of PPA	\$419,946,428	\$419,946,428	\$416,058,035	\$412,169,642	\$408,281,249	\$404,392,856	\$400,504,463	\$396,616,124	\$392,727,731	\$388,839,338	\$384,950,945	\$381,062,552	\$377,174,159	n/a
2	Regulatory Asset - Loss of PPA Amort	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$3,888,393	\$46,660,862
3	Unamortized Regulatory Asset - Loss of PPA	\$419,946,428	\$416,058,035	\$412,169,642	\$408,281,249	\$404,392,856	\$400,504,463	\$396,616,124	\$392,727,731	\$388,839,338	\$384,950,945	\$381,062,552	\$377,174,159	\$373,285,766	n/a
4	Average Unamortized Regulatory Asset - Loss of PPA	\$418,002,232	\$414,113,839	\$410,225,446	\$406,337,053	\$402,448,660	\$398,560,263	\$394,671,927	\$390,783,534	\$386,895,141	\$383,006,748	\$379,118,355	\$375,229,962	\$371,341,569	n/a
5	Regulatory Asset - Income Tax Gross Up	\$263,727,041	\$263,727,041	\$261,285,124	\$258,843,207	\$256,401,290	\$253,959,373	\$251,517,456	\$249,075,499	\$246,633,582	\$244,191,665	\$241,739,748	\$239,297,831	\$236,855,914	\$29,303,044
6	Regulatory Asset Amortization - Income Tax Gross-Up	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$2,441,917	\$29,303,044
7	Unamortized Regulatory Asset - Income Tax Gross Up	\$261,285,124	\$261,285,124	\$258,843,207	\$256,401,290	\$253,959,373	\$251,517,456	\$249,075,499	\$246,633,582	\$244,191,665	\$241,739,748	\$239,297,831	\$236,855,914	\$234,423,997	
8	Return on Unamortized Regulatory Asset - Loss of PPA only		\$1,679,031	\$1,663,412	\$1,647,794	\$1,632,175	\$1,616,556	\$1,600,937	\$1,614,129	\$1,598,226	\$1,582,324	\$1,566,421	\$1,550,518	\$1,534,615	\$19,286,139
a.	Equity Component <sup>(a)</sup>		\$2,733,466	\$2,708,038	\$2,682,611	\$2,657,183	\$2,631,755	\$2,606,328	\$2,627,805	\$2,601,915	\$2,576,026	\$2,550,136	\$2,524,246	\$2,498,357	\$31,387,866
b.	Equity Comp. grossed up for taxes (Line 8a / 0.61425) <sup>(b)</sup>		\$519,159	\$514,329	\$509,500	\$504,671	\$499,841	\$495,012	\$488,175	\$481,338	\$474,501	\$467,664	\$460,827	\$453,990	\$5,723,849
c.	Debt Component (Line 4 * 1.4904%) <sup>(c)</sup>		\$3,252,625	\$3,222,368	\$3,192,111	\$3,161,854	\$3,131,597	\$3,101,340	\$3,085,980	\$3,055,576	\$3,025,172	\$2,994,768	\$2,964,365	\$2,933,961	\$37,121,715
9	Total Return Requirements (Line 8b + 8c)		\$9,982,935	\$9,852,678	\$9,822,421	\$9,792,164	\$9,761,907	\$9,731,650	\$9,701,393	\$9,671,136	\$9,640,879	\$9,610,622	\$9,580,365	\$9,550,108	\$119,635,422
10	Total Recoverable Expenses (Line 2 + 6 + 9)		\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862	\$46,660,862

<sup>(a)</sup> The monthly Equity Component for the Jan. - Jun. 2016 actual period is 4.9221% based on the May 2015 ROR Earnings Surveillance Report, reflects a 10.5% return on equity. Monthly Equity Component for the Jul. - Dec. 2016 period is 4.9078% based on the May 2016 ROR Earnings Surveillance Report, reflects a 10.5% return on equity, consistent with FPSC Order No. PSC-12-0425-PAA-EU.  
<sup>(b)</sup> Requirement for the payment of income taxes is calculated using a Federal Income Tax rate of 35%.  
<sup>(c)</sup> The Debt Component for the Jan. - Jun. 2016 actual period is 1.4904% based on the May 2015 ROR Earnings Surveillance Report. Debt Component for the Jul. - Dec. 2016 period is 1.3931% based on the May 2016 ROR Earnings Surveillance Report, reflects a 10.5% ROE, consistent with FPSC Order No. PSC-12-0425-PAA-EU.  
<sup>(d)</sup> Recovery of the Cedar Bay Transaction is based on the settlement agreement approved by the FPSC in Docket No. 150075-EI at the special agenda on August 27, 2015.

TOTAL MAY NOT ADD DUE TO ROUNDING

**FLORIDA POWER & LIGHT COMPANY  
 CEDAR BAY TRANSACTION  
 Regulatory Liability - Book/Tax Timing Difference Associated to Plant Asset - Amortization and Return Calculation  
 For the Period January through December 2016**

Line No.	Description	Beginning of Period	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	Regulatory Liability - Book/Tax Timing Difference		(6,823,733)	(6,760,550)	(6,697,367)	(6,634,194)	(6,571,001)	(6,507,818)	(6,444,635)	(6,381,452)	(6,318,269)	(6,249,874)	(6,186,481)	(6,123,088)	na
2	Regulatory Liability Amortization		63,183	63,183	63,183	63,183	63,183	63,183	63,183	63,183	63,183	30,773	60,868	60,868	721,156
3	Unamortized Regulatory Liability - Book/Tax Timing Diff	\$ (6,823,733)	\$ (6,760,550)	\$ (6,697,367)	\$ (6,634,194)	\$ (6,571,001)	\$ (6,507,818)	\$ (6,444,635)	\$ (6,381,452)	\$ (6,318,269)	\$ (6,255,086)	\$ (6,186,481)	\$ (6,123,088)	\$ (6,059,720)	\$ (5,943,365)
4	Average Unamortized Regulatory Liability - Book/Tax Timing Difference		(6,792,142)	(6,728,959)	(6,665,776)	(6,602,593)	(6,539,410)	(6,476,227)	(6,413,044)	(6,349,861)	(6,286,678)	(6,223,495)	(6,160,312)	(6,097,129)	na
5	Return on Unamortized Regulatory Liability - Book/Tax Timing Difference		(27,283)	(27,029)	(26,775)	(26,521)	(26,268)	(26,014)	(25,760)	(25,506)	(25,252)	(25,000)	(24,748)	(24,496)	(24,244)
a.	Equity Component <sup>(a)</sup>		(44,416)	(44,003)	(43,590)	(43,177)	(42,764)	(42,350)	(41,937)	(41,524)	(41,111)	(40,698)	(40,285)	(39,872)	(39,459)
b.	Equity Comp. grossed up for taxes (Line 5a / 0.61425) <sup>(b)</sup>		(8,456)	(8,357)	(8,259)	(8,160)	(8,061)	(7,962)	(7,863)	(7,764)	(7,665)	(7,566)	(7,467)	(7,368)	(7,269)
c.	Debt Component (Line 4 * 1.4904% / 12)		(52,852)	(52,360)	(51,869)	(51,377)	(50,885)	(50,394)	(49,902)	(49,410)	(48,919)	(48,427)	(47,935)	(47,444)	(46,952)
6	Total Return Requirements (Line 5a + 5c)	\$ (116,035)	\$ (115,543)	\$ (115,052)	\$ (114,560)	\$ (114,068)	\$ (113,577)	\$ (113,085)	\$ (112,593)	\$ (112,101)	\$ (111,610)	\$ (111,118)	\$ (110,627)	\$ (110,135)	\$ (109,643)
7	Total Recoverable Expenses (Line 2 + 6)														

<sup>(a)</sup> The monthly Equity Component for the Jan. - Jun. 2016 actual period is 4.8201% based on the May 2015 ROR Earnings Surveillance Report, reflects a 10.5% return on equity. Monthly Equity Component for the Jul. - Dec. 2016 period is 4.9078% based on the May 2016 ROR Earnings Surveillance Report, reflects a 10.5% return on equity, consistent with FPSC Order No. PSC-12-0425-PA-A-EU.  
<sup>(b)</sup> Requirement for the payment of income taxes is calculated using a Federal Income Tax rate of 35%.  
<sup>(c)</sup> The Debt Component for the Jan. - Jun. 2016 actual period is 1.4904% based on the May 2015 ROR Earnings Surveillance Report. Debt Component for the Jul. - Dec. 2016 period is 1.3031% based on the May 2016 ROR Earnings Surveillance Report, reflects a 10.5% ROE, consistent with FPSC Order No. PSC-12-0425-PA-A-EU.  
<sup>(d)</sup> Recovery of the Cedar Bay Transaction is based on the settlement agreement approved by the FPSC in Docket No. 150075-EI at the special agenda on August 27, 2015.

TOTAL MAY NOT ADD DUE TO ROUNDING





1                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2                               **FLORIDA POWER & LIGHT COMPANY**

3                                       **TESTIMONY OF GERARD J. YUPP**

4   **DOCKET NO. 170001-EI**

5   **MARCH 1, 2017**

6   **Q.     Please state your name and address.**

7   A.     My name is Gerard J. Yupp. My business address is 700 Universe  
8           Boulevard, Juno Beach, Florida, 33408.

9   **Q.     By whom are you employed and what is your position?**

10 A.     I am employed by Florida Power and Light Company (FPL) as  
11           Senior Director of Wholesale Operations in the Energy Marketing  
12           and Trading Division.

13 **Q.     Please summarize your educational background and**  
14 **professional experience.**

15 A.     I graduated from Drexel University with a Bachelor of Science  
16           Degree in Electrical Engineering in 1989. I joined the Protection and  
17           Control Department of FPL in 1989 as a Field Engineer where I was  
18           responsible for the installation, maintenance, and troubleshooting of  
19           protective relay equipment for generation, transmission and  
20           distribution facilities. While employed by FPL, I earned a Masters of  
21           Business Administration degree from Florida Atlantic University in  
22           1994. In 1996, I joined the Energy Marketing and Trading Division

1 (“EMT”) of FPL as a real-time power trader. I progressed through  
2 several power trading positions and assumed the lead role for power  
3 trading in 2002. In 2004, I became the Director of Wholesale  
4 Operations and natural gas and fuel oil procurement and operations  
5 were added to my responsibilities. I have been in my current role  
6 since 2008. On the operations side, I am responsible for the  
7 procurement and management of all natural gas and fuel oil for FPL,  
8 as well as all short-term power trading activity. My regulatory  
9 responsibilities include the preparation of testimony for all fossil fuel,  
10 interchange, and hedging-related areas for the Fuel and Capacity  
11 Cost Recovery Clauses, including the preparation of Discovery and  
12 audit responses. Finally, I am responsible for the oversight of FPL’s  
13 optimization activities associated with the Incentive Mechanism.

14 **Q. Have you previously testified in this docket?**

15 A. Yes.

16 **Q. What is the purpose of your testimony?**

17 A. The purpose of my testimony is to (1) present the final true-up  
18 amounts for the July through December 2016 period related to the  
19 removal of the Woodford Gas Reserves Project (“Woodford”)  
20 expenses from the Fuel Clause and (2) present the 2016 results of  
21 FPL’s activities under the Incentive Mechanism that was approved  
22 by Order No. PSC-13-0023-S-EI, dated January 14, 2013, in Docket  
23 No. 120015-EI.

1 **Q. Have you prepared or caused to be prepared under your**  
2 **supervision, direction and control any exhibits in this**  
3 **proceeding?**

4 A. Yes, I am sponsoring the following exhibits:

- 5 • GJY-1, consisting of 3 pages:
  - 6 ▪ Page 1 – Original Woodford Refund Calculation
  - 7 ▪ Page 2 – Updated Woodford Refund Calculation
  - 8 ▪ Page 3 – Woodford Final True-Up Summary
- 9 • GJY-2, consisting of 4 pages:
  - 10 ▪ Page 1 – Total Gains Schedule
  - 11 ▪ Page 2 – Wholesale Power Detail
  - 12 ▪ Page 3 – Asset Optimization Detail (Confidential)
  - 13 ▪ Page 4 – Incremental Optimization Costs

14

15 **WOODFORD FINAL TRUE-UP**

16

17 **Q. Have you previously filed testimony related to FPL's removal of**  
18 **all Woodford expenses from the Fuel Clause?**

19 A. Yes. As part of FPL's August 4, 2016 Actual/Estimated True-Up  
20 filing in Docket No. 160001-EI, I provided detailed testimony  
21 describing the calculations FPL utilized to remove all costs related to  
22 Woodford from the Fuel Clause, based on actual data through June  
23 2016 and projections for the remainder of the year.



1 **Q. Please summarize the approach that FPL utilized to “unwind”**  
2 **all of the Woodford expenses from the Fuel Clause.**

3 A. As described in my previous testimony, the “unwinding” of the  
4 Woodford expenses from the Fuel Clause occurred in two distinct  
5 parts. First, FPL calculated a refund that customers would receive  
6 for the difference between the actual Woodford expenses from  
7 March 2015 through June 2016 and the amount that the volume of  
8 natural gas that FPL received from Woodford would have cost  
9 customers if FPL had procured that volume in the market. FPL  
10 used the Columbia Gulf Mainline Index to determine the market  
11 price of natural gas. This index represented the price FPL would  
12 have paid for natural gas delivered into the Southeast Supply  
13 Header (“SESH”) pipeline, which is the location at which FPL  
14 delivered the Woodford production volume. On a delivered basis to  
15 FPL’s system, Columbia Gulf Mainline Index prices were the lowest  
16 of the indices for the various locations at which FPL purchases  
17 natural gas. The balance of “unwinding” the Woodford expenses  
18 would occur through the normal true-up process in the Fuel Clause.  
19 For reference, the calculations that were utilized for each part  
20 described above and that were provided with my previous testimony  
21 are included with this testimony on Page 1 of Exhibit GJY-1.

22

23

1 **Q. Do FPL's final true-up calculations for 2016 include any**  
2 **updates to the removal of the Woodford expenses from the**  
3 **Fuel Clause?**

4 A. Yes. As I described in my previous testimony (Page 6, Line 14  
5 through Page 7, Line 6), the true-up portion for the July 2016  
6 through December 2016 period was an estimate at the time of FPL's  
7 Actual/Estimated True-Up filing, as actual market prices were not  
8 yet known. At that time, based on the July 5, 2016 forecast for  
9 Columbia Gulf Mainline natural gas prices, FPL estimated that the  
10 difference between the projected Woodford expenses that were  
11 included in FPL's 2016 FCR factors and the market price of natural  
12 gas would result in a true-up for the July 2016 through December  
13 2016 period of \$1,224,061. This calculation is shown on Page 1 of  
14 Exhibit GJY-1 (Table 2, Column J, Rows 7 through 13). FPL now  
15 has actual market prices for the Columbia Gulf Mainline index over  
16 the July 2016 through December 2016 period. As shown on Page 2  
17 of Exhibit GJY-1 (Table 2, Column J, Rows 7 through 13), the total  
18 true-up over that time period, based on actual market prices, was  
19 \$1,631,772.

20 **Q. Did FPL include the estimated true-up amount of \$1,224,061 for**  
21 **the July 2016 through December 2016 in its 2017 FCR factors?**

22 A. Yes, with one modification. At the time of its 2017 FCR Projection  
23 Filing (September 6, 2016), FPL incorporated July "actuals" into its

1 2016 estimated year-end true-up balance. Therefore, the actual  
2 true-up amount of \$389,657 related to Woodford for July 2016  
3 (Page 2 of Exhibit GJY-1, Table 2, Column J, Row 7) was  
4 substituted for the estimated July 2016 true-up of \$108,466 (Page 1  
5 of Exhibit GJY-1, Table 2, Column J, Row 7) and the original  
6 estimated true-up amounts for the August 2016 through December  
7 2016 were incorporated into FPL's 2017 FCR factors. This total of  
8 \$1,505,252 is shown on Page 3 of Exhibit GJY-1 (Table 1, Column  
9 J, Rows 1 through 7).

10 **Q. Is there a portion of the total true-up related to Woodford that**  
11 **will be carried into FPL's 2018 FCR factors?**

12 A. Yes. The final true-up of \$126,520 related to Woodford will be  
13 carried forward and included in FPL's 2018 FCR factors. This  
14 amount represents the difference between the actual true-up  
15 amount of \$1,631,772 related to Woodford for July 2016 through  
16 December 2016 and the amount of \$1,505,252 for the same time  
17 period that was included in FPL's 2017 FCR factors. The  
18 calculation of this final true-up amount is shown on Page 3 of Exhibit  
19 GJY-1 (Table 1, Column K, Rows 1 through 7).

20 **Q. Will incorporation of the final true-up amount of \$126,520 into**  
21 **FPL's 2018 FCR factors complete the removal of all Woodford**  
22 **expenses from the Fuel Clause?**

23 A. Yes. FPL's calculated refunds reflect actual data for all of 2015 and

1 2016, the two years that were impacted by the Woodford project.

2

3

**2016 INCENTIVE MECHANISM RESULTS**

4

5 **Q. Please provide an overview of the Incentive Mechanism under**  
6 **which FPL has operated for the period 2013 through 2016.**

7 A. The Incentive Mechanism is an expanded optimization program that  
8 is designed to create additional value for FPL’s customers while also  
9 providing an incentive to FPL if certain customer-value thresholds  
10 are achieved. It was created by the Stipulation and Settlement that  
11 was approved in FPL’s 2012 rate case by Order No. PSC-13-0023-  
12 S-EI. The Incentive Mechanism includes gains from wholesale  
13 power sales and savings from wholesale power purchases, as well  
14 as gains from other forms of asset optimization. These other forms  
15 of asset optimization include, but are not limited to, natural gas  
16 storage optimization, natural gas sales, capacity releases of natural  
17 gas transportation, capacity releases of electric transmission and  
18 potentially capturing additional value from a third party in the form of  
19 an Asset Management Agreement (“AMA”). Under the Incentive  
20 Mechanism, customers receive 100% of the gains up to \$46 million.  
21 Incremental gains above \$46 million are to be shared between FPL  
22 and customers as follows: customers receive 40% and FPL  
23 receives 60% of the incremental gains between \$46 million and

1           \$100 million; and customers receive 50% and FPL receives 50% of  
2           all incremental gains above \$100 million. FPL is allowed to recover  
3           reasonable and prudent incremental O&M costs incurred in  
4           implementing the expanded optimization program under the  
5           Incentive Mechanism, including incremental personnel, software  
6           and associated hardware costs, as well as variable power plant  
7           O&M costs incurred to make wholesale sales above 514,000 MWh  
8           (the level of wholesale sales that were assumed in forecasting FPL's  
9           2013 test year power plant O&M costs in the MFRs filed in FPL's  
10          2012 rate case).

11   **Q.    Please summarize the activities and results of the Incentive**  
12   **Mechanism for 2016.**

13   **A.**    FPL's activities under the Incentive Mechanism in 2016 delivered  
14          \$62,835,808 in total gains. During 2016, FPL's activities under the  
15          Incentive Mechanism included wholesale power purchases and  
16          sales, natural gas sales in the market and production areas, gas  
17          storage utilization, and the capacity release of firm natural gas  
18          transportation and firm electric transmission. Additionally, FPL  
19          entered into an Asset Management Agreement related to a small  
20          portion of upstream gas transportation during 2016. The total gains  
21          of \$62,835,808 exceeded the sharing threshold of \$46 million.  
22          Therefore, the incremental gains above \$46 million will be shared  
23          between customers and FPL, 40% and 60%, respectively. Exhibit

1 GJY-2, Page 1, shows monthly gain totals, threshold levels and the  
2 final gains allocation for 2016.

3 **Q. Please provide the details of FPL's wholesale power activities**  
4 **under the Incentive Mechanism for 2016.**

5 A. The details of FPL's 2016 wholesale power sales and purchases are  
6 shown separately on Page 2 of Exhibit GJY-2. FPL had gains of  
7 \$18,695,359 on wholesale sales and savings of \$25,493,744 on  
8 wholesale purchases for the year.

9 **Q. Please provide the details of FPL's asset optimization activities**  
10 **under the Incentive Mechanism for 2016.**

11 A. The details of FPL's 2016 asset optimization activities are shown on  
12 Page 3 of Exhibit GJY-2. FPL had a total of \$18,646,705 of gains  
13 that were the result of nine different forms of asset optimization.

14 **Q. Did FPL engage in any new forms of asset optimization during**  
15 **2016?**

16 A. Yes. FPL engaged in two new forms of asset optimization during  
17 2016. First, FPL was able to deliver almost \$657,000 in additional  
18 customer value by moving quickly to sell its banked 2015 Ozone  
19 Season NOx Allowances. In September 2016, the Environmental  
20 Protection Agency ("EPA") published its final Cross-State Air  
21 Pollution Rule ("CSAPR") which removed Florida from the program  
22 beginning in January 2017. This change in the final rule provided  
23 FPL with a limited window of opportunity to sell its banked

1 allowances and deliver incremental value to customers. Second,  
2 FPL was able to reduce the consumption of higher cost fuels across  
3 several peak demand months through the advanced purchase of  
4 delivered natural gas in the Market Area. These delivered natural  
5 gas purchases resulted in customer savings of nearly \$1.98 million.

6 **Q. Did FPL incur incremental O&M expenses related to the**  
7 **operation of the Incentive Mechanism in 2016?**

8 A. Yes. FPL incurred personnel expenses of \$428,815 related to the  
9 costs associated with an additional two and one-half personnel  
10 required to support FPL's expanded activities under the Incentive  
11 Mechanism. FPL also incurred \$55,490 in expenses related to  
12 licensing fees of OATI WebTrader software. In total, FPL incurred  
13 incremental O&M expenses related to the operation of the Incentive  
14 Mechanism of \$484,305 in 2016. Additionally, FPL's actual  
15 wholesale power sales from its own generation resources in 2016  
16 totaled 2,478,700 MWh, or 1,964,700 MWh above the 514,000  
17 MWh threshold, resulting in variable power plant O&M expenses of  
18 \$2,671,992 (reflects the volume above the threshold multiplied by  
19 \$1.36/MWh; the average variable power plant O&M cost per MWh  
20 reflected in the 2013 test year MFRs). Page 4 of Exhibit GJY-2  
21 provides the details of FPL's Incremental Optimization Costs for  
22 2016.

23

1 **Q. Overall, were FPL's activities under the Incentive Mechanism**  
2 **successful in 2016?**

3 A. Yes. FPL's activities under the Incentive Mechanism were highly  
4 successful in 2016. On the wholesale power side, similar to 2015,  
5 suitable market conditions in the first quarter helped drive strong  
6 wholesale power sales and high demand during the summer peak  
7 period provided the opportunity to purchase power from the market  
8 to avoid running more expensive generation. Overall, FPL was able  
9 to consistently take advantage of power market opportunities  
10 throughout the year to deliver slightly more than \$44 million in  
11 customer benefits. Asset optimization activities related to natural  
12 gas that had not taken place prior to the inception of the Incentive  
13 Mechanism generated nearly \$13.9 million in gains, and  
14 optimization of FPL's firm transmission service on the Southern  
15 Company system added another \$4.1 million in gains. In total,  
16 these activities delivered \$62,835,808 of gains, which contrast very  
17 favorably to the total optimization expenses (personnel and variable  
18 power plant O&M) of \$3,156,297.

19 **Q. Does this conclude your testimony?**

20 A. Yes it does.



**TABLE 1**

Row	2015 FUELING PROJECTIONS				2015 ACTUAL DATA				MARKET DATA				TRUE-UP				REFUND CALCULATION			
	Mo-Yr	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O				
	Total Projected Woodford Expenses	Delivered to SESH Volume (MMBtu)	SESH Delivered Price (\$/MMBtu)	Total Reserves Expenses (\$)	Delivered to SESH Volume (MMBtu)	SESH Delivered Price (\$/MMBtu)	Columbia Gulf Mainline Index (\$/MMBtu)	Total Market Cost of Gas (\$)	Monthly True-Up (Included in 2016 MCC) (\$)	Refund (Hedging Activity Report) (\$)	Cumulative Refund Balance (\$)	Average Refund Balance (\$)	Average Monthly Commercial Payer Rate %	Monthly Interest (\$)	Total Refund (\$)					
1	Jan-15	\$0	0	\$0.0000	\$0	0	\$0.0000	\$0	\$0	\$0	\$0	\$0	0.00792%	\$0	\$0					
2	Feb-15	\$0	0	\$0.0000	\$0	0	\$2.8041	\$0	\$0	\$0	\$0	\$0	0.00792%	\$0	\$0					
3	Mar-15	\$0	0	\$0.0000	\$476,186	72,945	\$9,5280	\$198,965	\$476,186	(\$277,220)	(\$277,220)	(\$138,610)	0.00792%	\$0	(\$277,220)					
4	Apr-15	\$0	0	\$0.0000	\$665,756	52,896	\$12,5861	\$133,033	\$665,756	(\$52,721)	(\$209,941)	(\$593,581)	0.00625%	\$34	(\$593,581)					
5	May-15	\$0	0	\$0.0000	\$707,473	57,765	\$12,2468	\$130,289	\$707,473	(\$47,684)	(\$135,712)	(\$1,093,333)	0.00657%	\$21	(\$1,093,333)					
6	Jun-15	\$0	0	\$0.0000	\$1,693,026	245,427	\$6,8953	\$600,483	\$1,693,026	(\$1,032,336)	(\$2,359,661)	(\$1,873,333)	0.00750%	\$141	(\$1,873,333)					
7	Jul-15	\$0	0	\$0.0000	\$1,759,519	499,472	\$3,4971	\$1,267,160	\$1,759,519	(\$715,353)	(\$2,307,959)	(\$2,763,922)	0.00792%	\$240	(\$2,763,922)					
8	Aug-15	\$0	0	\$0.0000	\$1,759,519	499,472	\$3,4971	\$1,267,160	\$1,759,519	(\$715,353)	(\$2,307,959)	(\$2,763,922)	0.00792%	\$240	(\$2,763,922)					
9	Sep-15	\$0	0	\$0.0000	\$4,374,246	904,426	\$4,7938	\$2,321,788	\$4,374,246	(\$1,051,120)	(\$5,658,897)	(\$5,133,112)	0.01000%	\$513	(\$5,133,112)					
10	Oct-15	\$0	0	\$0.0000	\$4,200,246	904,426	\$4,6582	\$2,321,788	\$4,200,246	(\$1,543,226)	(\$7,202,553)	(\$6,130,730)	0.01042%	\$520	(\$6,130,730)					
11	Nov-15	\$0	0	\$0.0000	\$4,680,801	1,305,443	\$3,5723	\$2,619,632	\$4,680,801	(\$2,061,684)	(\$9,264,237)	(\$8,233,175)	0.01125%	\$528	(\$8,233,175)					
12	Dec-15	\$0	0	\$0.0000	\$4,844,491	1,555,219	\$3,0560	\$2,853,077	\$4,844,491	(\$1,991,352)	(\$11,255,109)	(\$10,259,433)	0.02282%	\$527	(\$11,255,109)					
13	Total	\$0	0	\$0.0000	\$26,985,345	6,919,853	\$3,9914	\$15,730,138	\$26,985,345	(\$11,255,109)	(\$11,255,109)	(\$10,259,433)	0.02282%	\$527	(\$11,255,109)					

**TABLE 2**

Row	2016 FUELING PROJECTIONS				2016 ACTUAL DATA				MARKET DATA				TRUE-UP				REFUND CALCULATION			
	Mo-Yr	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O				
	Total Reserves Expenses (\$)	Delivered to SESH Volume (MMBtu)	SESH Delivered Price (\$/MMBtu)	Total Reserves Expenses (\$)	Delivered to SESH Volume (MMBtu)	SESH Delivered Price (\$/MMBtu)	*Columbia Gulf Mainline Index (\$/MMBtu)	Total Market Cost of Gas (\$)	Monthly True-Up (January - June) (\$)	Estimated Monthly True-Up (July - December) (\$)	Refund (Hedging Activity Report) (\$)	Cumulative Refund Balance (\$)	Average Refund Balance (\$)	Average Monthly Commercial Payer Rate %	Monthly Interest (\$)	Total Refund (\$)				
1	Jan-16	\$5,905,286	2,204,117	\$2,6792	\$5,135,390	1,505,617	\$3,4104	\$2,2227	\$3,346,979	\$769,896	\$0	(\$1,789,459)	(\$12,149,338)	0.03333%	\$4,049	(\$1,789,459)				
2	Feb-16	\$5,612,581	2,038,350	\$2,7535	\$4,949,496	1,451,405	\$3,4101	\$1,8929	\$2,747,365	\$663,059	\$0	(\$2,202,072)	(\$15,245,639)	0.03417%	\$4,639	(\$2,202,072)				
3	Mar-16	\$5,515,140	1,949,433	\$2,8291	\$5,099,048	1,655,927	\$3,0793	\$1,6326	\$2,703,486	\$416,093	\$0	(\$2,395,630)	(\$17,641,269)	0.03653%	\$5,892	(\$2,395,630)				
4	Apr-16	\$5,232,321	1,821,145	\$2,8731	\$5,614,754	1,733,919	\$3,2382	\$1,8212	\$3,158,333	\$382,433	\$0	(\$2,456,443)	(\$20,097,712)	0.03250%	\$6,133	(\$2,456,443)				
5	May-16	\$5,065,997	1,749,748	\$2,8939	\$5,532,116	1,968,705	\$2,8100	\$3,590,327	\$465,519	\$0	(\$1,941,734)	(\$22,039,446)	0.02917%	\$6,146	(\$22,039,446)					
6	Jun-16	\$4,814,459	1,649,726	\$2,9163	\$3,788,288	1,870,983	\$2,0302	\$2,4493	\$4,582,659	(\$1,016,070)	\$0	(\$21,255,317)	(\$21,255,317)	0.03083%	\$6,674	(\$21,255,317)				
7	Jul-16	\$4,619,748	1,566,526	\$2,9490	\$0	0	\$2,8798	\$4,511,282	\$0	(\$106,466)	\$0	(\$21,361,783)	(\$21,361,783)	0.03125%	\$0	(\$21,361,783)				
8	Aug-16	\$4,492,838	1,520,109	\$2,9556	\$0	0	\$2,7275	\$4,146,097	\$0	(\$346,741)	\$0	(\$21,708,524)	(\$21,708,524)	0.03125%	\$0	(\$21,708,524)				
9	Sep-16	\$4,262,047	1,425,199	\$2,9905	\$0	0	\$2,7274	\$3,878,577	\$0	(\$329,555)	\$0	(\$22,038,879)	(\$22,038,879)	0.03125%	\$0	(\$22,038,879)				
10	Oct-16	\$4,169,419	1,389,795	\$3,0000	\$0	0	\$2,7629	\$3,839,865	\$0	(\$329,555)	\$0	(\$22,368,434)	(\$22,368,434)	0.03125%	\$0	(\$22,368,434)				
11	Nov-16	\$4,005,405	1,325,176	\$3,0225	\$0	0	\$2,9157	\$3,863,816	\$0	(\$141,580)	\$0	(\$22,510,014)	(\$22,510,014)	0.03125%	\$0	(\$22,510,014)				
12	Dec-16	\$3,882,280	1,251,879	\$3,1012	\$0	0	\$3,1697	\$3,868,081	\$0	(\$85,801)	\$0	(\$22,595,815)	(\$22,595,815)	0.03125%	\$0	(\$22,595,815)				
13	Total	\$57,575,101	19,891,203	\$2,8945	\$30,129,193	10,186,756	\$2,9577	\$19,760	\$44,336,746	(\$2,014,171)	(\$1,224,061)	(\$10,000,208)	(\$10,000,208)	0.03125%	\$0	(\$10,000,208)				

**TABLE 3**

Line 1	Total Reserves Recovery	\$84,560,446	TABLE 1 D13 + TABLE 2 A13
Line 2	Total Market Cost of Gas	\$60,066,885	TABLE 1 H13 + TABLE 2 H13
Line 3	Total Amount Owed to Customers	\$24,532,560	Line 1 - Line 2 (+ Interest)
Line 4	Total Market Value Refund (HAR)	(\$21,255,317)	TABLE 1 J13 + TABLE 2 K13
Line 5	Total Interest on Refund	(\$58,999)	TABLE 1 N13 + TABLE 2 O13
Line 6	Total Refund with Interest	(\$21,294,315)	Line 4 + Line 5
Line 7	January- June Total Actual True-Up	(\$2,014,171)	TABLE 2 I13
Line 8	July- December Estimated True-Up	(\$1,224,061)	TABLE 2 J13
Line 9	Rounding Difference	\$13	Line 3 + Line 6 + Line 7 + Line 8

\* Note: July through December prices are estimated based on July 5, 2016 Fuel Forecast.

**TABLE 1**

Mo-Yr	2015 FUEL FILING PROJECTIONS				2015 ACTUAL DATA				MARKET DATA				TRUE-UP				REFUND CALCULATION			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O					
	Total Projected Woodford Expenses	Delivered to SESH Volume (MMBtu)	SESH Delivered Price (\$/MMBtu)	Total Reserves Expenses	Delivered to SESH Volume (MMBtu)	SESH Delivered Price (\$/MMBtu)	Columbia Gulf Mainline Index (\$/MMBtu)	Total Market Cost of Gas	Monthly True-Up (Included in 2016 MCC)	Refund (Hedging Activity Report)	Cumulative Refund Balance	Average Refund Balance	Average Monthly Commercial Paper Rate %	Monthly Interest	Total Refund					
1	Jan-15	\$0	0	\$0.0000	0	\$0.0000	\$2,9189	\$0	\$0	\$0	\$0	\$0	0.00792%	\$0	\$0					
2	Feb-15	\$0	0	\$0.0000	0	\$0.0000	\$2,9041	\$0	\$0	\$0	\$0	\$0	0.00792%	\$0	\$0					
3	Mar-15	\$0	0	\$0.0000	72,945	\$5.5280	\$2,7276	\$198,965	\$476,186	(\$277,220)	(\$277,220)	(\$138,610)	0.00792%	\$0	(\$277,220)					
4	Apr-15	\$0	0	\$0.0000	66,575	\$2.9851	\$2,7150	\$133,033	\$365,756	(\$352,721)	(\$352,721)	(\$343,681)	0.00625%	\$0	(\$352,721)					
5	May-15	\$0	0	\$0.0000	57,769	\$12.2468	\$2,7477	\$10,269	\$707,473	(\$347,184)	(\$1,357,125)	(\$1,093,533)	0.00625%	\$0	(\$347,184)					
6	Jun-15	\$0	0	\$0.0000	2,553,029	\$1.9859	\$2,5912	\$1,983,029	\$1,983,029	(\$1,983,029)	(\$2,369,068)	(\$2,369,068)	0.00750%	\$0	(\$2,369,068)					
7	Jul-15	\$0	0	\$0.0000	1,437,047	\$2.7447	\$2,7134	\$1,437,047	\$1,437,047	(\$1,437,047)	(\$3,806,115)	(\$3,806,115)	0.00817%	\$0	(\$3,806,115)					
8	Aug-15	\$0	0	\$0.0000	904,446	\$3.3744	\$2,6682	\$2,327,582	\$3,374,346	(\$1,046,764)	(\$4,852,879)	(\$5,153,112)	0.01004%	\$0	(\$4,852,879)					
9	Sep-15	\$0	0	\$0.0000	1,216,430	\$3.5272	\$2,2582	\$2,247,078	\$3,290,744	(\$1,043,664)	(\$5,896,483)	(\$6,430,146)	0.01042%	\$0	(\$5,896,483)					
10	Oct-15	\$0	0	\$0.0000	1,305,433	\$3.5666	\$2,0067	\$2,619,832	\$4,680,801	(\$2,061,164)	(\$7,957,647)	(\$8,263,175)	0.01125%	\$0	(\$7,957,647)					
11	Nov-15	\$0	0	\$0.0000	1,959,219	\$3.0560	\$1,7988	\$2,853,077	\$4,844,491	(\$1,981,352)	(\$10,255,109)	(\$10,255,109)	0.02292%	\$0	(\$1,981,352)					
12	Dec-15	\$0	0	\$0.0000	6,916,853	\$3.9014	\$2,2742	\$15,730,138	\$26,985,345	(\$11,255,109)	(\$11,255,109)	(\$11,255,109)	0.02292%	\$0	(\$11,255,109)					
13	<b>Total</b>	<b>\$0</b>	<b>0</b>	<b>\$0.0000</b>	<b>18,665,440</b>	<b>\$2.8945</b>	<b>\$2,2845</b>	<b>\$43,929,035</b>	<b>\$26,985,345</b>	<b>(\$11,255,109)</b>	<b>(\$11,255,109)</b>	<b>(\$11,255,109)</b>	<b>0.02292%</b>	<b>(\$5,272)</b>	<b>(\$11,260,381)</b>					

**TABLE 2**

Mo-Yr	2016 FUEL FILING PROJECTIONS				2016 ACTUAL DATA				MARKET DATA				TRUE-UP				REFUND CALCULATION			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O					
	Total Reserves Expenses	Delivered to SESH Volume (MMBtu)	SESH Delivered Price (\$/MMBtu)	Total Reserves Expenses	Delivered to SESH Volume (MMBtu)	SESH Delivered Price (\$/MMBtu)	*Columbia Gulf Mainline Index (\$/MMBtu)	Total Market Cost of Gas	Actual Monthly True-Up (January - June)	Actual True-Up (July - December)	Refund (Hedging Activity Report)	Cumulative Refund Balance	Average Refund Balance	Average Monthly Commercial Paper Rate %	Monthly Interest	Total Refund				
1	Jan-16	\$5,905,286	2,204,117	\$2,6792	\$5,135,390	1,505,817	\$3,4104	\$2,2227	\$3,346,979	(\$769,896)	(\$1,768,459)	(\$13,043,688)	(\$12,149,338)	0.03333%	\$0	(\$1,768,459)				
2	Feb-16	\$5,612,561	2,038,350	\$2,7535	\$4,949,486	1,451,405	\$1,8929	\$2,747,365	(\$663,065)	\$0	(\$2,202,072)	(\$15,245,639)	(\$14,144,603)	0.03417%	\$0	(\$2,202,072)				
3	Mar-16	\$5,515,140	1,949,433	\$2,8291	\$5,099,048	1,655,927	\$3,0793	\$1,6326	\$2,703,466	(\$416,093)	(\$2,395,630)	(\$17,641,269)	(\$16,443,454)	0.03583%	\$0	(\$2,395,630)				
4	Apr-16	\$5,232,321	1,821,145	\$2,8731	\$5,614,754	1,735,919	\$3,2382	\$1,8215	\$3,156,333	\$382,433	(\$2,456,443)	(\$22,097,712)	(\$18,569,480)	0.03250%	\$0	(\$3,156,333)				
5	May-16	\$5,063,391	1,749,748	\$2,8939	\$5,532,116	1,968,705	\$2,8100	\$1,8237	\$3,590,327	\$488,519	(\$1,941,734)	(\$22,039,446)	(\$21,088,579)	0.02917%	\$0	(\$1,941,734)				
6	Jun-16	\$4,814,459	1,649,726	\$2,9183	\$3,798,389	1,870,983	\$2,0002	\$2,4483	\$4,592,599	\$0	\$784,129	(\$21,255,317)	(\$21,647,381)	0.03083%	\$0	(\$784,129)				
7	Jul-16	\$4,619,748	1,566,526	\$2,9400	\$0	1,566,526	\$2,7003	\$4,230,080	(\$389,657)	\$0	\$0	(\$21,255,317)	(\$21,647,381)	0.03083%	\$0	(\$389,657)				
8	Aug-16	\$4,482,838	1,520,109	\$2,9556	\$0	1,520,109	\$2,6885	\$4,086,813	(\$406,029)	\$0	\$0	(\$21,255,317)	(\$21,647,381)	0.03083%	\$0	(\$406,029)				
9	Sep-16	\$4,262,047	1,435,199	\$2,9505	\$0	1,435,199	\$2,8752	\$4,097,732	(\$166,319)	\$0	\$0	(\$21,255,317)	(\$21,647,381)	0.03083%	\$0	(\$166,319)				
10	Oct-16	\$4,059,419	1,389,795	\$3,0000	\$0	1,389,795	\$3,0000	\$3,919,500	(\$249,919)	\$0	\$0	(\$21,255,317)	(\$21,647,381)	0.03083%	\$0	(\$249,919)				
11	Nov-16	\$4,005,405	1,325,176	\$3,0228	\$0	1,325,176	\$2,3638	\$3,132,451	(\$67,959)	\$0	\$0	(\$21,255,317)	(\$21,647,381)	0.03083%	\$0	(\$67,959)				
12	Dec-16	\$3,862,280	1,251,879	\$3,1012	\$0	1,251,879	\$3,4615	\$4,353,379	(\$357,089)	\$0	\$0	(\$21,255,317)	(\$21,647,381)	0.03083%	\$0	(\$357,089)				
13	<b>Total</b>	<b>\$67,575,101</b>	<b>19,897,203</b>	<b>\$2.8945</b>	<b>\$30,129,193</b>	<b>18,665,440</b>	<b>\$2.9535</b>	<b>\$43,929,035</b>	<b>(\$2,014,171)</b>	<b>(\$7,637,772)</b>	<b>(\$10,000,208)</b>	<b>(\$10,000,208)</b>	<b>0.03083%</b>	<b>(\$3,286)</b>	<b>(\$10,000,208)</b>					

**TABLE 3**

Line 1	Total Reserves Recovery	\$4,560,446	TABLE 1 D13 + TABLE 2 A13
Line 2	Total Market Cost of Gas	\$39,650,173	TABLE 1 H13 + TABLE 2 H13
Line 3	Total Amount Owed to Customers	\$24,940,272	Line 1 - Line 2 (+ Interest)
Line 4	Total Market Value Refund (HAR)	(\$2,255,317)	TABLE 1 J13 + TABLE 2 K13
Line 5	Total Interest on Refund	(\$38,999)	TABLE 1 N13 + TABLE 2 O13
Line 6	Total Refund with Interest	(\$2,294,315)	Line 4 + Line 5
Line 7	Januar-June Total Actual True-Up	(\$2,014,171)	TABLE 2 J13
Line 8	July - December Total Actual True-Up	(\$1,631,772)	TABLE 2 J13
Line 9	Rounding Difference	\$13	Line 3 + Line 6 + Line 7 + Line 8

**TABLE 1**

Row	2016 FUEL FILING PROJECTIONS			ESTIMATED MARKET DATA		ACTUAL MARKET DATA			TRUE-UP		
	A	B	C	D	E	F	G	H	I	J	K
Mo-Yr	Total Reserves Expenses	Delivered to SESH Volume	SESH Delivered Price	Columbia Gulf Mainline Index (7/5/2016 Forecast)	Total Market Cost of Gas	Columbia Gulf Mainline Index	Total Market Cost of Gas	Estimated Monthly True-Up (July - December)	Actual Monthly True-Up (July - December)	True-Up Included in 2017 FCR Factors	True-Up Included in 2018 FCR Factors
	(\$)	(MMBtu)	(\$/MMBtu)	(\$/MMBtu)	(\$)	(\$/MMBtu)	(\$)	(\$)	(\$)	(\$)	(\$)
1	Jul-16	\$4,619,748	1,566,526	\$2.9490	\$2.8798	\$2.7003	\$4,230,090	(\$108,466)	(\$389,657)	(\$389,657)	\$0
2	Aug-16	\$4,492,838	1,520,109	\$2.9556	\$2.7275	\$2.6885	\$4,086,813	(\$346,741)	(\$406,025)	(\$346,741)	(\$59,284)
3	Sep-16	\$4,262,047	1,425,199	\$2.9905	\$2.7214	\$2.8752	\$4,097,732	(\$383,510)	(\$164,315)	(\$383,510)	\$219,196
4	Oct-16	\$4,169,419	1,389,795	\$3.0000	\$2.7629	\$2.8202	\$3,919,500	(\$329,555)	(\$249,919)	(\$329,555)	\$79,635
5	Nov-16	\$4,005,405	1,325,176	\$3.0225	\$2.9157	\$2.3638	\$3,132,451	(\$141,590)	(\$872,954)	(\$141,590)	(\$731,365)
6	Dec-16	\$3,882,280	1,251,879	\$3.1012	\$3.1697	\$3.4615	\$4,333,379	\$85,801	\$451,099	\$85,801	\$365,298
7	<b>Total</b>	<b>\$25,431,737</b>	<b>8,478,684</b>	<b>\$2.9995</b>	<b>\$17,2110</b>	<b>\$2,8164</b>	<b>\$23,799,965</b>	<b>(\$1,224,061)</b>	<b>(\$1,631,772)</b>	<b>(\$1,505,252)</b>	<b>(\$126,520)</b>

**TOTAL GAINS SCHEDULE**  
**Actual for the Period of: January 2016 through December 2016**

**TABLE 1**

(1) Month	(2) Wholesale Sales Gains (\$)	(3) Wholesale Purchases Savings (\$)	(4) Asset Optimization Gains (\$)	(5) Total Monthly Gains (\$) (2)+(3)+(4)	(6) Threshold 1 Gains ≤ \$36M (\$)	(7) Threshold 2 \$36M > Gains ≤ \$46M (\$)	(8) Threshold 3 \$46M > Gains ≤ \$100M (\$)	(9) Threshold 4 Gains > \$100M (\$)
January	3,915,137	133,286	2,089,200	6,137,623	6,137,623	0	0	0
February	2,232,145	3,808	2,170,466	4,406,419	4,406,419	0	0	0
March	518,857	371,273	2,397,346	3,287,476	3,287,476	0	0	0
April	2,541,414	1,062,348	1,460,364	5,064,126	5,064,126	0	0	0
May	901,665	1,683,687	1,647,415	4,232,768	4,232,768	0	0	0
June	833,954	2,631,670	977,805	4,443,429	4,443,429	0	0	0
July	427,255	6,687,872	1,252,890	8,368,017	8,368,017	0	0	0
August	535,613	6,977,378	1,735,230	9,248,222	60,142	9,188,080	0	0
September	1,337,541	2,788,617	918,409	5,044,567	0	811,920	4,232,647	0
October	1,325,348	3,109,850	1,365,228	5,800,426	0	0	5,800,426	0
November	1,077,525	954	1,109,624	2,188,103	0	0	2,188,103	0
December	3,048,906	43,000	1,522,727	4,614,633	0	0	4,614,633	0
<b>Total</b>	<b>18,695,359</b>	<b>25,493,744</b>	<b>18,646,705</b>	<b>62,835,808</b>	<b>36,000,000</b>	<b>10,000,000</b>	<b>16,835,808</b>	<b>0</b>

**TABLE 2**

(1) Month	(2) Threshold 1 Gains ≤ \$36M 100% Customer Benefit (\$)	(3) Threshold 2 \$36M > Gains ≤ \$46M 100% Customer Benefit (\$)	(4) Threshold 3 \$46M > Gains ≤ \$100M 40% Customer Benefit (\$)	(5) Threshold 3 \$46M > Gains ≤ \$100M 60% FPL Benefit (\$)	(6) Threshold 4 Gains > \$100M 50% Customer Benefit (\$)	(7) Threshold 4 Gains > \$100M 50% FPL Benefit (\$)	(8) Total Customer Benefits (\$)	(9) Total FPL Benefits (\$)
January	6,137,623	0	0	0	0	0	6,137,623	0
February	4,406,419	0	0	0	0	0	4,406,419	0
March	3,287,476	0	0	0	0	0	3,287,476	0
April	5,064,126	0	0	0	0	0	5,064,126	0
May	4,232,768	0	0	0	0	0	4,232,768	0
June	4,443,429	0	0	0	0	0	4,443,429	0
July	8,368,017	0	0	0	0	0	8,368,017	0
August	60,142	9,188,080	0	0	0	0	9,248,222	0
September	0	811,920	1,693,059	2,539,588	0	0	2,504,979	2,539,588
October	0	0	2,320,170	3,480,255	0	0	2,320,170	3,480,255
November	0	0	875,241	1,312,862	0	0	875,241	1,312,862
December	0	0	1,845,853	2,768,780	0	0	1,845,853	2,768,780
<b>Total</b>	<b>36,000,000</b>	<b>10,000,000</b>	<b>6,734,323</b>	<b>10,101,485</b>	<b>0</b>	<b>0</b>	<b>52,734,323</b>	<b>10,101,485</b>

**WHOLESALE POWER DETAIL**  
**Actual for the Period of: January 2016 through December 2016**

Wholesale Sales - Table 1										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Month	OS Wholesale Sales (MWh)	FCBBS Wholesale Sales (MWh)	Total Wholesale Sales (MWh)	OS Gross Gains (\$)	FCBBS Gross Gains (\$)	Third-Party Transmission Costs (\$)	Incremental GT O&M Costs (\$)	Variable Power Plant O&M Costs (\$)	Power Option Premiums (\$)	Net Wholesale Sales Gains (\$)
Month	Schedule A6	Schedule A6	(2) + (3)	Schedule A6	Schedule A6	Schedule A6	Schedule A6	Schedule A6	*CCRC	(5)+(6)+(7)+(8)+(9)
January	514,822	50	514,872	3,997,729	105	(81,381)	0	(1,317)	0	3,915,137
February	390,220	0	390,220	2,907,354	0	(85,976)	0	(589,232)	0	2,232,145
March	178,939	314	179,253	793,676	414	(5,857)	(492)	(270,672)	1,788	518,857
April	343,192	199	343,391	3,079,598	325	(20,436)	0	(518,520)	447	2,541,414
May	147,701	286	147,987	951,063	811	(63,946)	0	(201,262)	215,000	901,665
June	87,886	47	87,933	601,318	165	0	0	17,472	215,000	833,954
July	37,325	54	37,379	250,459	172	(374)	0	(50,835)	227,834	427,255
August	53,424	49	53,473	377,315	98	(1,375)	0	(72,723)	232,298	535,613
September	127,966	49	128,015	1,280,057	85	(241)	0	(174,100)	231,740	1,337,541
October	156,041	50	156,091	1,395,961	62	(90,139)	0	(212,834)	232,298	1,325,348
November	206,668	50	206,718	1,135,867	86	(9,581)	0	(280,587)	231,740	1,077,525
December	233,343	25	233,368	3,365,209	183	(16,404)	0	(317,380)	17,298	3,048,906
<b>Total</b>	<b>2,477,527</b>	<b>1,173</b>	<b>2,478,700</b>	<b>20,135,605</b>	<b>2,507</b>	<b>(375,712)</b>	<b>(492)</b>	<b>(2,671,992)</b>	<b>1,605,443</b>	<b>18,695,359</b>

Wholesale Purchases - Table 2										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Month	OS Wholesale Purchases (MWh)	FCBBS Wholesale Purchases (MWh)	Total Wholesale Purchases (MWh)	OS Savings (\$)	FCBBS Savings (\$)	Total Schedule A9 Savings (\$)	Capacity Purchases (MWh)	Net Capacity Purchases Savings (\$)	Wholesale Purchases Savings (\$)	Total Wholesale Purchases Savings (\$)
Month	Schedule A9	Schedule A9	Schedule A9	Schedule A9	Schedule A9	Schedule A9	Schedule A7/A12	Schedule A9	Schedule A7/A12	(7) + (9)
January	5,400	0	5,400	133,286	0	133,286	0	0	0	133,286
February	1,005	0	1,005	3,808	0	3,808	0	0	0	3,808
March	21,693	49	21,742	371,111	163	371,273	0	0	0	371,273
April	191,068	0	191,068	1,062,348	0	1,062,348	0	0	0	1,062,348
May	199,649	0	199,649	1,683,687	0	1,683,687	0	0	0	1,683,687
June	196,925	75	197,000	2,631,056	614	2,631,670	0	0	0	2,631,670
July	442,248	0	442,248	6,687,872	0	6,687,872	0	0	0	6,687,872
August	449,033	0	449,033	6,977,378	0	6,977,378	0	0	0	6,977,378
September	204,920	0	204,920	2,788,617	0	2,788,617	0	0	0	2,788,617
October	228,408	0	228,408	3,109,850	0	3,109,850	0	0	0	3,109,850
November	557	50	607	700	254	954	0	0	0	954
December	2,400	0	2,400	43,000	0	43,000	0	0	0	43,000
<b>Total</b>	<b>1,943,306</b>	<b>174</b>	<b>1,943,480</b>	<b>25,492,713</b>	<b>1,031</b>	<b>25,493,744</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25,493,744</b>

\*Capacity Cost Recovery Clause - Option premium gains are included under Transmission Revenues from Capacity Sales line item.

ASSET OPTIMIZATION DETAIL  
 Actual for the Period of: January 2016 through December 2016

(1) Month	(2) Natural Gas Delivered City-Gate Sales (\$)	(3) Natural Gas Production Area Sales (\$)	(4) Natural Gas Capacity Release Firm Transport (\$)	(5) Natural Gas Option Premiums (\$)	(6) Delivered Natural Gas Savings (\$)	(7) Natural Gas Storage Optimization (\$)	(8) Natural Gas AMA Gains (\$)	(9) Electric Transmission Capacity Release Firm Transmission (\$)	(10) NOX Emissions Sales (\$)	(11) Total Asset Optimization Gains (\$)
January										2,089,200
February										2,170,466
March										2,397,346
April										1,460,364
May										1,647,415
June										977,805
July										1,252,890
August										1,735,230
September										918,409
October										1,365,228
November										1,109,624
December										1,522,727
<b>Total</b>	<b>2,553,001</b>	<b>465,746</b>	<b>264,299</b>	<b>6,731,475</b>	<b>1,976,565</b>	<b>1,083,371</b>	<b>816,138</b>	<b>4,099,574</b>	<b>656,538</b>	<b>18,646,705</b>

**INCREMENTAL OPTIMIZATION COSTS**  
**Actual for the Period of: January 2016 through December 2016**

(1) Month	(2) Personnel Expenses (\$)	(3) Other Expenses* (\$)	(4) Wholesale Sales (MWh)	(5) Cumulative Wholesale Sales (MWh)	(6) Wholesale Sales Threshold (MWh)	(7) Wholesale Sales Above Threshold (MWh)	Schedule A2		(9) Total Incremental O&M Expenses (\$)
							(8) Incremental Variable O&M (\$)	(2) + (3) + (8)	
January	35,300	4,610	514,872	514,872	514,000	872	1,317	41,226	
February	32,370	4,610	390,220	905,092	514,000	390,220	589,232	626,213	
March	36,995	4,610	179,253	1,084,345	514,000	179,253	270,672	312,277	
April	34,803	4,610	343,391	1,427,736	514,000	343,391	518,520	557,934	
May	35,698	4,610	147,987	1,575,723	514,000	147,987	201,262	241,570	
June	36,844	4,610	87,933	1,663,656	514,000	87,933	(17,472)	23,982	
July	33,592	4,610	37,379	1,701,035	514,000	37,379	50,835	89,037	
August	37,739	0	53,473	1,754,508	514,000	53,473	72,723	110,462	
September	35,549	9,220	128,015	1,882,523	514,000	128,015	174,100	218,870	
October	35,027	4,610	156,091	2,038,614	514,000	156,091	212,834	252,470	
November	35,865	4,610	206,718	2,245,332	514,000	206,718	280,587	321,062	
December	39,034	4,780	233,368	2,478,700	514,000	233,368	317,380	361,194	
<b>Total</b>	<b>428,815</b>	<b>55,490</b>	<b>2,478,700</b>			<b>1,964,700</b>	<b>2,671,992</b>	<b>3,156,297</b>	

\*Includes software and hardware expenses

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

In re: Fuel and purchase power cost recovery  
clause with generating performance incentive  
factor

Docket No: 170001-EI

Date: March 1, 2017

**FLORIDA POWER & LIGHT COMPANY'S PETITION  
FOR APPROVAL OF SOLAR BASE RATE ADJUSTMENTS**

Florida Power & Light Company (“FPL” or the “Company”), pursuant to the Stipulation and Settlement approved by this Commission in Order No. PSC-16-0560-AS-EI, dated December 15, 2016 (the “FPL Rate Settlement” or “Settlement”), hereby requests that the Florida Public Service Commission (“Commission”) find that the proposed new solar generation described herein satisfies the requirements for solar base rate adjustments (“SoBRA”). The proposed solar generation, which consists of four universal solar energy centers scheduled to be placed in service in late 2017 and another four centers scheduled to be placed in service in early 2018, meets the cost requirements established in the FPL Rate Settlement and is cost-effective. FPL further requests that the Commission authorize FPL to implement the SoBRAs upon the commercial operation date of the proposed centers.

In support of the Petition, FPL states as follows:

1. The name and address of the Petitioner is:

Florida Power & Light Company  
700 Universe Boulevard  
Juno Beach, Florida 33408

Any pleading, motion, notice, order or other document required to be served upon the petitioner or filed by any party to this proceeding should be served upon the following individuals:



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2. The Commission has jurisdiction pursuant to Sections 366.04, 366.05 and 366.06, Florida Statutes.

3. FPL is a corporation organized and existing under the laws of the State of Florida and is an electric utility as defined in section 366.02(2), Florida Statutes.

4. This Petition is being filed consistent with Rule 28-106.201, Florida Administrative Code. The agency affected is the Florida Public Service Commission, located at 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399. This case does not involve reversal or modification of an agency decision or an agency's proposed action. Therefore, subparagraph (c) and portions of subparagraphs (b), (e), (f) and (g) of subsection (2) of that rule are not applicable to this Petition. In compliance with subparagraph (d), FPL states that it is not known which, if any, of the issues of material fact set forth in the body of this Petition may be disputed by any others who may plan to participate in this proceeding. The discussion below demonstrates how the petitioner's substantial interests will be affected by the agency determination.

5. The FPL Rate Settlement resolved all of the issues in the consolidated proceeding that included Docket Nos. 160021-EI, 160061-EI, 160062-EI and 160088-EI. Pursuant to the Settlement, FPL may construct up to 300 megawatts ("MW") of solar photovoltaic ("PV")

generation annually through 2021. To the extent that FPL receives approval for less than 300 MW in a year, the surplus capacity can be carried over to the succeeding years. FPL is authorized to recover the costs of the solar generation through a SoBRA upon each unit's commercial operation date if it is determined to be cost-effective and the costs do not exceed \$1,750 per kilowatt alternating current ("kW<sub>ac</sub>"). Pursuant to the FPL Rate Settlement, the issues for determination are limited to (i) the cost effectiveness of the solar generation, (ii) the amount of revenue requirements and (iii) the appropriate percentage increase in base rates needed to collect the estimated revenue requirements.

6. As contemplated by the FPL Rate Settlement, the Company is undertaking construction of solar energy centers that will be placed into commercial operation in 2017 and 2018, each one generating enough energy to serve about 15,000 homes. Accordingly, FPL files this Petition, along with the testimony and exhibits of William Brannen and Juan Enjamio, to demonstrate that the costs of proposed solar generation fall well below \$1,750 per kW<sub>ac</sub> and that adding this solar generation to FPL's system is cost-effective. FPL will include in its projection filing in this docket testimony (scheduled to be filed August 24, 2017) to support the amount of revenue requirements and appropriate percentage increase in base rates needed to collect the estimated revenue requirements.

### **The Universal Solar Energy Centers**

#### *Technology and Equipment*

7. The solar energy centers will be located at eight sites, each with a separate point of interconnection. The eight centers are sized to generate a total of 596 MW<sub>ac</sub> (nameplate capacity). At each center, FPL will install highly efficient PV panels that use a semiconductor material to convert sunlight to direct current ("DC") electricity. In total, more than 2.6 million PV panels will be installed.

8. The panels will be tied together electrically in groups and connected to an electronic device called a power conversion unit (“PCU”) which includes inverters that transform the DC electricity produced by the PV panels into alternating current (“AC”) electricity at an efficiency rating projected to be greater than 98.4%. The long-term availability of the proposed solar generation is expected to be 99.5%. The PCU, along with a series of other transformers, increases the voltage of the AC electricity to match the transmission interconnection voltage. The use of higher efficiency panels and inverters reduces the size of each center’s footprint.

9. FPL selected the most cost-effective transmission interconnection designs available for each center. FPL will expand existing or construct new transmission substations for each center, and new collection substations with power step-up transformers will be constructed for each of the centers. The power step-up transformers increase the AC voltage from 34.5 kV to the voltages at the transmission point of interconnect. Each of the new collection substations will be connected to the bulk transmission system at the corresponding point of interconnection by generation tie lines that vary in length from five hundred feet to five miles. No upgrades to the existing FPL transmission system are required to accommodate the proposed solar generation.

#### *Capital Costs*

10. The cost for each center falls below the \$1,750 per kW<sub>ac</sub> cap. FPL estimates the cost of the centers scheduled to enter service in 2017 will be \$435 million, and the cost of those scheduled to enter service in 2018 will be \$457 million.

11. FPL undertook a competitive bidding process for equipment, engineering and construction for the solar energy centers. The Company solicited proposals for the supply of the

PV panels, PCUs and power step-up transformers and was able to secure this equipment for all of the centers from the lowest cost suppliers.

12. FPL also solicited proposals for the construction of the solar centers from thirteen industry-recognized engineering and construction firms and selected the lowest cost bids. For the transmission interconnection facilities, FPL solicited proposals and is in the process of finalizing its decision.

13. The four solar energy centers scheduled to enter commercial operation by December 31, 2017 are:

<b>2017 Solar Energy Centers</b>	<b>County Location</b>	<b>Capital Cost (\$M)</b>	<b>Capital Cost (\$/kW)</b>
Coral Farms	Florahome, Putnam County	\$107	\$1,438
Horizon	Hawthorne, Putnam & Alachua Counties	\$109	\$1,470
Wildflower	Arcadia, DeSoto County	\$104	\$1,397
Indian River	Vero Beach, Indian River County	\$115	\$1,541
	<b>Total Capital Cost (\$M)</b>	<b>\$435</b>	

14. The four solar energy centers scheduled to enter commercial operation by March 1, 2018 are:

<b>2018 Solar Energy Centers</b>	<b>County Location</b>	<b>Capital Cost (\$M)</b>	<b>Capital Cost (\$/kW)</b>
Loggerhead	St. Lucie, St. Lucie County	\$113	\$1,513
Barefoot Bay	Micco, Brevard County	\$116	\$1,551
Hammock	LaBelle, Hendry County	\$113	\$1,521
Blue Cypress	Vero Beach, Indian River County	\$115	\$1,549
	<b>Total Capital Cost (\$M)</b>	<b>\$457</b>	

**The Universal Solar Energy Centers are Cost-Effective**

15. The FPL Rate Settlement provides that the SoBRA-eligible projects are cost-effective if they lower the projected system cumulative present value revenue requirement

(“CPVRR”) as compared to the system CPVRR without them. As explained more fully by FPL witness Enjamio, adding the proposed 596 MW<sub>ac</sub> of solar PV generation to FPL’s fleet is cost-effective.

16. To evaluate cost-effectiveness, FPL compared resource plans that exclude and include the proposed solar generation: the “No Solar Plan” and the “2017-2018 Solar Plan,” respectively. Both plans use the same major system assumptions, including the Company’s most recent load, fuel price, and carbon dioxide (“CO<sub>2</sub>”) price forecasts, which will be used in FPL’s 2017 Ten Year Site Plan. As its name indicates, the No Solar Plan does not include any new solar generation beyond that already in service as of the end of 2016, and it assumes that future resource needs are met by combined cycle units, short-term power purchase agreements, and FPL’s proposed new nuclear units. The second resource plan adds the eight solar energy centers. And, because all solar PV installations – existing and future – are assumed to provide firm capacity, adding the centers defers the timing and reduces the size of future combined cycle additions.

17. Based on the assumptions for each Plan, FPL determined the variable system costs, consisting primarily of fuel, variable operations & maintenance (“O&M”), and emissions, using the hourly production costing model, UPLAN. The output of each UPLAN modeling run is imported into FPL’s Fixed Cost Spreadsheet (“FCSS”) Model, which adds fixed costs such as capital, capital replacements, and fixed O&M. The FCSS model is used to calculate the CPVRR for each resource plan. Next, to determine the cost impact of the proposed solar generation, FPL subtracted the CPVRR of the No Solar Plan from the CPVRR of the 2017-2018 Solar Plan.

18. Based on the economic analysis, the solar energy centers are projected to be cost-effective. FPL customers are projected to save \$39 million CPVRR.

### **Additional Benefits of the Universal Solar Energy Centers**

19. The addition of the solar energy centers also provide non-economic advantages in the form of system, environmental, and community benefits.

20. *System and environmental benefits.* The solar energy from the centers will displace fossil fuel generation at a level that is equivalent to removing approximately 102,000 cars from the road annually. More specifically, on an average annual basis, the centers are projected to reduce the use of natural gas by 8,400 million cubic feet, the use of oil by 14,600 barrels and the use of coal by 3,600 tons. The reduced use of fossil fuel will, in turn, reduce CO<sub>2</sub> emissions by an average of 526,000 tons annually. Sulfur dioxide (“SO<sub>2</sub>”) and nitrogen oxide (“NO<sub>x</sub>”) emissions, too, are projected to decline by an annual average of 46 tons and 64 tons, respectively.

21. *Community benefits.* Construction of the solar energy centers will create about 1,600 jobs in total, which, in turn, will provide an economic boost to local businesses. This construction in Florida will increase annual tax revenue for the counties where the sites are situated, thus contributing to the funding of public services that benefit the entire community.

### **Conclusion**

22. The proposed solar generation satisfies the SoBRA cost requirements established in the FPL Rate Settlement and is projected to generate customer savings as well as system and environmental benefits. The cost of the eight universal solar energy centers falls below \$1,750 per kW<sub>ac</sub> and is reasonable, with FPL having solicited bids for the major equipment components, as well as the engineering and construction for the centers. Further, as demonstrated through the resource plan comparisons, adding the proposed solar generation to FPL’s system is projected to save customers approximately \$39 million CPVRR and will improve FPL’s fuel diversity.

Finally, it will also reduce CO<sub>2</sub>, SO<sub>2</sub> and NO<sub>x</sub> emissions, providing cleaner air for all Florida residents to enjoy for years to come.

23. Accordingly, the Commission should enter an order finding that FPL's proposed solar generation satisfies the cost requirements for SoBRAs set forth in the FPL Rate Settlement and authorizing FPL to recover the annualized revenue requirements for each center when it enters commercial operation. The amount of revenue requirements and the appropriate percentage increase in base rates needed to collect the estimated revenue requirements will be presented in FPL's projection filing in this docket.

**WHEREFORE**, for the foregoing reasons and as more fully set forth in the supporting testimony and exhibits filed with and incorporated in this Petition, Florida Power & Light Company requests that the Commission authorize FPL to implement solar base rate adjustments in 2017 and 2018.

Respectfully submitted,

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By: s/ Maria J. Moncada  
Maria J. Moncada  
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**CERTIFICATE OF SERVICE**  
**Docket No. 170001-EI**

**I HEREBY CERTIFY** that a true and correct copy of the foregoing has been furnished

by electronic service on this 1st day of March 2017 to the following:

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*s/ Maria J. Moncada*  
\_\_\_\_\_  
Maria J. Moncada

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**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**  
**FLORIDA POWER & LIGHT COMPANY**  
**TESTIMONY OF WILLIAM F. BRANNEN**  
**DOCKET NO. 170001-EI**  
**MARCH 1, 2017**

**Q. Please state your name and business address.**

A. My name is William F. Brannen. My business address is NextEra Energy Resources, LLC (“NEER”), 700 Universe Boulevard, Juno Beach, Florida, 33408.

**Q. By whom are you employed and what is your position?**

A. I am employed by NEER as a Senior Director for Project Engineering and Due Diligence.

**Q. Please describe your duties and responsibilities in that position.**

A. I manage the development and implementation of engineering, technology selection, and execution strategies for universal solar and distributed generation projects for NextEra Energy, Inc., the parent of Florida Power & Light Company (“FPL”) and NEER. I am responsible for coordinating the activities of project team members to optimize the value of projects by leveraging technology advances, market dynamics, and supplier relationships during the early stage due diligence, permitting, engineering, and execution phases of solar projects. My goal is to ensure that development projects meet

1 or exceed reliability and performance requirements while maintaining  
2 reasonable costs.

3 **Q. Please describe your education and professional experience.**

4 A. I earned both a Bachelor and Master of Science in Civil Engineering from the  
5 University of New Hampshire. Additionally, I hold a Master of Business  
6 Administration from Nova Southeastern University. I have been a licensed  
7 professional engineer in the State of Florida since 1981. I have worked for  
8 FPL and NEER since 1979. During that time, I have worked in a variety of  
9 technical, operational, commercial, and management positions in areas related  
10 to power generation, engineering, and construction. I have experience in a  
11 wide range of power generation technologies including nuclear, combined  
12 cycle, wind, photovoltaic (“PV”), and concentrated solar thermal. Since 2009,  
13 I have been responsible for key aspects of the design and construction of all  
14 six of FPL’s universal solar energy centers. The total capacity of these centers  
15 is approximately 333 MW, which is made up of a 74.5 MW solar thermal  
16 facility and just over 258 MW of PV facilities. In addition, I have served the  
17 same function for 350 MW of universal solar thermal projects in California  
18 and Spain, as well as more than 1,900 MW of universal solar PV projects  
19 throughout North America outside of Florida.

20 **Q. What is the purpose of your testimony?**

21 A. The purpose of my direct testimony is three-fold. First, I discuss FPL’s  
22 experience designing, building, and operating universal solar generating units.  
23 Second, I describe the universal solar energy centers being constructed by

1 FPL, which are expected to begin commercial operation by December 31,  
2 2017, and March 1, 2018. I provide a description of the centers, the  
3 technology, engineering design parameters, construction, operating  
4 characteristics, and overall costs and schedules. Third, I demonstrate that the  
5 cost of the components, engineering, and construction estimated for the  
6 proposed solar generation is reasonable and does not exceed \$1,750 per  
7 kilowatt alternating current (“kW<sub>ac</sub>”), the cost cap reflected in the Stipulation  
8 and Settlement approved by the Commission in Order No. PSC-16-0560-AS-  
9 EI.

10 **Q. Please summarize your testimony.**

11 A. My testimony demonstrates that the estimated cost to build the proposed solar  
12 generation is reasonable and is less than \$1,750 per kW<sub>ac</sub>. Additionally, I  
13 testify that the solar energy centers will deliver high levels of efficiency and  
14 reliability to serve FPL customers.

15 **Q. Are you sponsoring any exhibits in this case?**

16 A. Yes. I am sponsoring Exhibits WFB-1 through WFB-7. The titles to each  
17 exhibit are shown below, and they are all attached to my direct testimony.

18 Exhibit WFB-1 Typical Solar Facility Block Diagram

19 Exhibit WFB-2 List of FPL Universal Solar Energy Centers in Service

20 Exhibit WFB-3 Maps, Property Delineations, and Aerial Photos of  
21 Proposed Solar Energy Centers

22 Exhibit WFB-4 Renderings of Proposed Solar Energy Centers

23 Exhibit WFB-5 Specifications for Proposed Solar Energy Centers

1 Exhibit WFB-6 Construction Schedule for Proposed Solar Energy  
2 Centers

3 Exhibit WFB-7 Construction Cost Components for Proposed Solar  
4 Energy Centers

5 **Q. Please describe the solar PV generation technology that will be used.**

6 A. The proposed solar generation will utilize solar PV panels that use a  
7 semiconductor material to convert sunlight to direct current (“DC”) electricity.  
8 These panels will be tied together electrically in groups and connected to an  
9 electronic device called an inverter that transforms the DC electricity  
10 produced by the PV panels into alternating current (“AC”) electricity. The  
11 voltage of AC electricity coming out of the inverter is increased by a series of  
12 transformers to match the transmission interconnection voltage. It should be  
13 noted that the inverters will be mounted in pairs with a medium voltage  
14 transformer on an equipment skid called a Power Conversion Unit (“PCU”).  
15 Exhibit WFB-1 provides a typical block diagram depicting the basic layout of  
16 major equipment components that will be used.

17 **Q. What level of operating efficiency is anticipated for the proposed solar  
18 generation?**

19 A. The panels utilized at the solar energy centers will convert sunlight into DC  
20 electricity at a conversion efficiency greater than 17.3%. Due to recent  
21 technology and manufacturing advances, this conversion efficiency is  
22 significantly higher than the 16% conversion efficiency of panels more  
23 commonly available in the U.S. market for universal solar applications. Also,

1 the inverters convert DC to AC electricity at a high efficiency. The average  
2 California Energy Commission efficiency rating (the industry recognized  
3 standard applied to solar inverters) for the proposed inverters is greater than  
4 98.4%. The expected long-term availability will be 99.5%. Due to inverter  
5 design improvements and upgrades to control systems hardware, the number  
6 of PCUs required for each center has been reduced from 40 to 35. This  
7 reduction is an improvement over the number of PCUs installed in FPL's  
8 2016 solar energy centers. These improvements help lower cost and reduce  
9 the footprint of the solar facilities. The combination of quality equipment and  
10 high availability from these state of the art solar energy centers will benefit  
11 customers.

12 **Q. Are there other operational advantages for the solar energy centers?**

13 A. In addition to the operating efficiencies I have discussed, there are a number  
14 of other operational advantages such as (i) the use of highly efficient panels  
15 and inverters reduces the size of the facility footprint thus minimizing land  
16 disturbances and lowering construction costs, (ii) generating electricity using  
17 PV technology does not require any fuel other than sunlight and thereby  
18 eliminates any air emissions, and (iii) the PV equipment used in universal  
19 solar facilities does not require any plant outages to perform maintenance,  
20 which contributes to the high availability of the proposed solar generation.  
21 Later in my testimony, I discuss a number of other benefits that will result  
22 from the construction of these centers.

1 **Q. Does FPL have experience in designing and building universal solar**  
2 **facilities?**

3 A. Yes. FPL has extensive experience in designing and building universal solar  
4 generation facilities. FPL has completed universal solar generation facilities at  
5 six centers totaling approximately 333 MW<sub>ac</sub> since 2009. The existing FPL  
6 universal solar facilities range in size from 10 MW<sub>ac</sub> to 74.5 MW<sub>ac</sub>. Exhibit  
7 WFB-2 provides a list of the FPL universal solar centers in service.

8 **Q. Please describe the history of FPL operating universal solar facilities.**

9 A. FPL has been operating universal solar generation facilities since 2009. The  
10 FPL operations team has successfully handled the challenges presented by a  
11 wide range of environmental conditions, such as high-wind forces from  
12 hurricanes, extended periods of high temperatures and humidity, and  
13 significant potential for lightning and extreme rain. The FPL team has  
14 leveraged this broad range of experiences to develop cost-effective designs  
15 and a very robust and industry-leading operations plan.

16 **Q. Please describe FPL's track record in building and operating universal**  
17 **solar PV.**

18 A. FPL has completed five universal solar PV facilities at five centers since  
19 2009. These facilities were completed an average of 28 days early, at a total  
20 cost of \$660 million - 5.2% below the cumulative budget. In addition, each  
21 center was completed below budget. The universal solar PV centers built and  
22 operated by FPL are meeting or exceeding performance expectations.

1 **Q. Please describe how FPL monitors the operational performance and**  
2 **reliability of its power plants.**

3 A. FPL uses advanced monitoring technology and performance analysis tools to  
4 optimize plant operations, gain process efficiencies, and deploy technical  
5 skills as demand for services increases. For example, the Company's Fleet  
6 Performance and Diagnostics Center ("FPDC") in Juno Beach, Florida,  
7 provides FPL with the capability to monitor every plant in its system. The  
8 FPDC uses advanced technology to identify problems, often before they arise,  
9 and allows the operating teams the opportunity to prevent or mitigate the  
10 effects of failures. FPL compares the performance of like components on  
11 similar generating units and determines how to make improvements, which  
12 often avoids problems before they occur and improves service reliability for  
13 FPL customers. Live video links can be established between the FPDC and  
14 plant control centers to immediately discuss challenges that may arise, thus  
15 enabling FPL to prevent, mitigate, or solve problems.

16 **Q. Please identify the solar energy centers that will be placed in service by**  
17 **the end of 2017.**

18 A. Four centers are scheduled to be placed into service by December 31, 2017.  
19 These are Coral Farms in Putnam County, Wildflower in DeSoto County,  
20 Horizon, which spans Putnam and Alachua Counties, and Indian River in  
21 Indian River County. Each center is more fully detailed in Exhibits WFB-1,  
22 WFB-3, WFB-4, and WFB-5.



1 **Q. Please identify the solar energy centers that will be placed in service in**  
2 **2018.**

3 A. Another four solar centers will be placed in service by March 1, 2018. These  
4 are Loggerhead in St. Lucie County, Barefoot Bay in Brevard County,  
5 Hammock in Hendry County, and Blue Cypress in Indian River County. Each  
6 center is more fully described in Exhibits WFB-1, WFB-3, WFB-4, and WFB-  
7 5.

8 **Q. Please describe the design of the proposed solar generation.**

9 A. The proposed solar energy centers will each have a nameplate capacity of 74.5  
10 MW<sub>ac</sub>, and each will have a separate point of interconnection. The proposed  
11 solar generation will require the installation of 280 PCUs and more than  
12 2,600,000 PV panels. The panels will be supported by a fixed-tilt structural  
13 system. Exhibit WFB-5 provides more details regarding the design  
14 specifications.

15 **Q. How will the solar energy centers be interconnected to FPL's**  
16 **transmission network?**

17 A. As noted earlier, each of the eight centers has an individual point of  
18 interconnection to the FPL transmission system. The transmission  
19 interconnection schemes to be implemented at each center are similar.  
20 Options were considered and the most cost-effective alternatives were  
21 selected. New collection substations with step-up power transformers will be  
22 constructed for each of the centers. The step-up power transformers increase  
23 the AC voltage from 34.5 kV to the voltages at the transmission point of

1 interconnect. Interconnection voltages range from 115 kV to 230 kV  
2 depending on the center. Each of the new collection substations will be  
3 connected to the bulk transmission system at the corresponding point of  
4 interconnection by generation tie lines that vary in length from 500 feet to five  
5 miles. Seven of the tie lines are less than three-quarters of a mile in length.  
6 Each center will require a different scheme to facilitate its connection to the  
7 bulk transmission system. These range from expanding existing substations to  
8 accommodate the interconnection to the construction of new transmission  
9 substations. The estimated capital construction cost for each of the centers  
10 includes the cost for its individual interconnection configuration. It is  
11 important to note that no upgrades to the existing FPL transmission system are  
12 required to accommodate the proposed solar energy centers.

13 **Q. What is the proposed construction schedule?**

14 A. As I mentioned earlier in my testimony, four of the centers will be placed in  
15 service in late 2017 and another four will be placed in service by early 2018.  
16 Engineering, permitting, procuring equipment, engaging contractors,  
17 construction and commissioning will exceed twelve months. This  
18 construction period includes the time necessary to prepare the sites for each of  
19 the centers, construct roads and drainage systems, install solar generating  
20 equipment and fencing, and build the interconnection facilities. The  
21 construction schedules support the proposed commercial in-service dates.  
22 Exhibit WFB-6 provides more details regarding the construction schedules.

23

1 **Q. As of March 1, 2017, what is the status of the certifications and permits**  
2 **required to begin construction for the centers that will be placed in**  
3 **service in 2017?**

4 A. Applications for the required environmental permits have been submitted, and  
5 all four required environmental permits have been issued. Also, applications  
6 for the required zoning and special exceptions have been submitted. Three of  
7 the four zoning changes and special exceptions have been granted, and the  
8 remaining one is expected to be granted well in advance of the date required  
9 to support the construction schedule.

10 **Q. As of March 1, 2017, what is the status of the certifications and permits**  
11 **required to begin construction for the centers that will be placed in**  
12 **service in 2018?**

13 A. Applications for the required environmental permits have been submitted.  
14 Three of the four required environmental permits have been issued, and the  
15 remaining permit is expected to be issued well in advance of the date required  
16 to support the construction schedule. Also, applications for the required  
17 zoning, special exceptions, and comprehensive plan amendments, which are  
18 required for two of the centers, have been submitted.

19 **Q. What is FPL's estimated cost for the proposed solar generation?**

20 A. As shown in Exhibit WFB-7, FPL estimates the cost of the centers that will be  
21 placed in service in 2017 will be \$435 million, or \$1,461/kW<sub>ac</sub>, and the cost of  
22 the centers that will be placed in service in 2018 will be \$457 million, or  
23 \$1,534/kW<sub>ac</sub>. FPL has already secured fixed pricing for the supply of all the

1 required equipment and materials, as well as fixed pricing for engineering and  
2 construction of the solar facilities and is in the final stages of securing fixed  
3 pricing for the interconnection facilities.

4 **Q. Can you explain why the capital costs to construct the centers scheduled**  
5 **to be placed in service in 2018 are higher than the capital costs for those**  
6 **that will be placed in service in 2017?**

7 A. Yes. There are two major factors that contribute to higher capital costs. The  
8 first is that the land costs are higher. The second is that there are higher  
9 engineering and construction costs due to site specific development and  
10 construction requirements.

11 **Q. Are the costs for equipment, engineering, and construction for the**  
12 **proposed solar generation reasonable and prudent?**

13 A. Yes.

14 **Q. What is the basis for your conclusion?**

15 A. In late 2016, FPL solicited proposals for the supply of the PV panels, PCUs,  
16 and step-up power transformers as well as the engineering, procurement, and  
17 construction services required to complete the proposed solar energy centers.  
18 The scope of services for the engineering, procurement, and construction  
19 solicitations included the supply of the balance of equipment and materials.

20

21 For panel supply, FPL requested proposals from eight large, industry-leading  
22 suppliers. All of the bids that were submitted satisfied the requirements of the  
23 request for proposals, and accordingly, all were evaluated. FPL was able to

1 secure all of the panels from the lowest cost evaluated bidder. In addition to  
2 offering the lowest cost and highest efficiency, this supplier demonstrated that  
3 it has among the highest product quality programs in the industry and an  
4 extremely strong financial security package offering in the form of letters of  
5 credit supplemented with a parent guarantee from a highly rated entity.

6  
7 FPL solicited proposals from nine PCU suppliers. All but one of the  
8 proposals met the requirements of the request for proposals. This bid was  
9 eliminated from further evaluation, and the eight remaining bids were  
10 evaluated. FPL was able to secure the supply of all required PCUs from the  
11 lowest cost evaluated bidder.

12  
13 FPL solicited proposals from ten industry-leading manufacturers of step-up  
14 power transformers. One of the bids did not satisfy the requirements of the  
15 request for proposals. The nine remaining proposals were evaluated. FPL  
16 secured the supply of all the required transformers with the lowest cost  
17 evaluated bidder.

18  
19 Engineering, procurement, and construction (“EPC”) proposals for the centers  
20 were solicited from thirteen industry-recognized contractors. Three of the  
21 bids did not meet the requirements of the request for proposals. Accordingly,  
22 the remaining ten proposals were evaluated. Based on the results of the bid  
23 evaluation, one contractor was selected for the generation with a 2017 in-

1 service date, and a second contractor was selected for those with a 2018 in-  
2 service date. Each contractor was determined to be the lowest cost evaluated  
3 bidder. Competitive solicitations for the construction of the interconnection  
4 facilities are in process and will be finalized in the near future.

5  
6 The bids from the PV panel, PCU, and step-up power transformer suppliers,  
7 as well as those received from the EPC contractors, were high quality and  
8 extremely competitive. The competitive bidding process has provided  
9 assurance that costs for equipment, engineering, and construction for the  
10 proposed solar generation are reasonable.

11 **Q. What other benefits are associated with the solar energy centers?**

12 A. There are a number of other benefits associated with the solar energy centers.  
13 For example, building the centers will create about 1,600 construction-related  
14 jobs, which will in turn provide an economic boost to local businesses. The  
15 contractors building the solar energy centers are required to exercise  
16 reasonable efforts to use local labor and resources. The PV equipment does  
17 not create any emissions and does not consume any water, and the site  
18 configurations create minimal, if any, visual impacts. Lastly, the only source  
19 of noise during the course of operation is from the inverters and transformers.  
20 These pieces of equipment produce a minimal level of sound, all of which is  
21 well within the limits of applicable regulations.

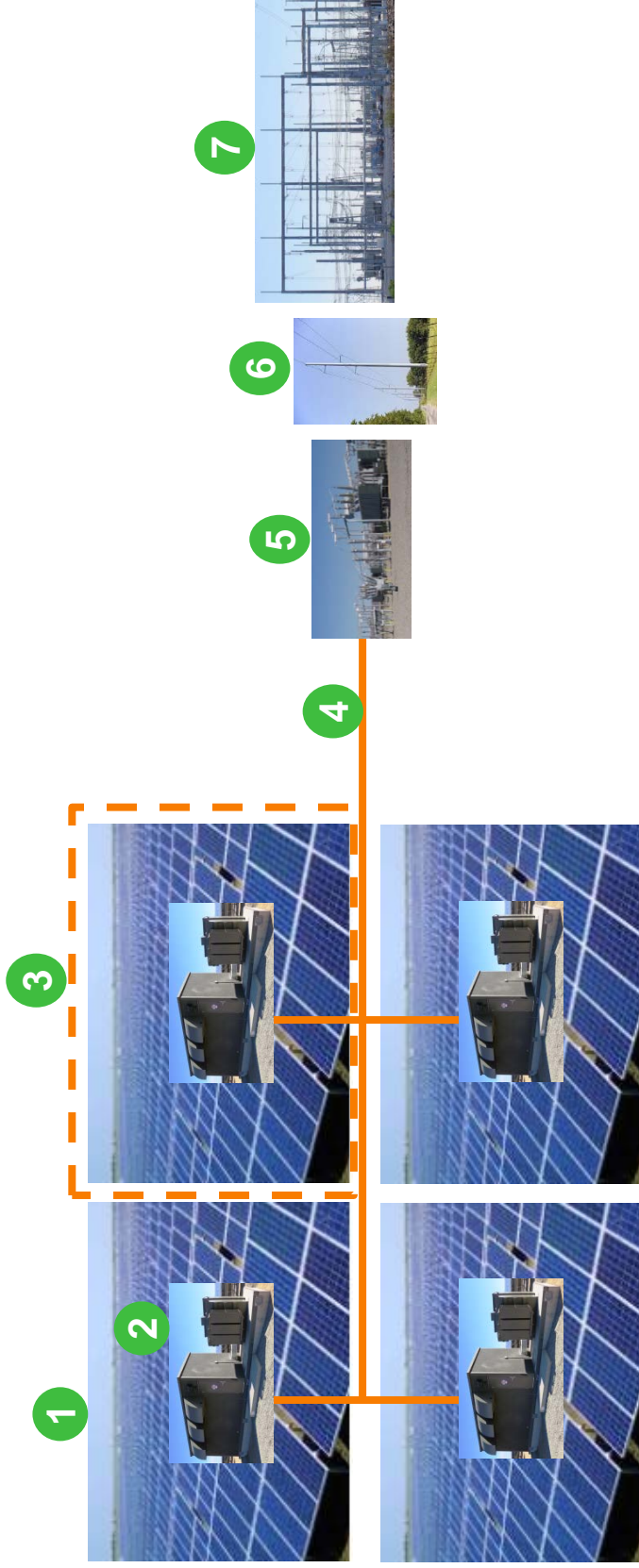
1 **Q. Are FPL's projected costs and construction schedules reasonable and**  
2 **below the cost cap of \$1,750/kW<sub>ac</sub>?**

3 A. Yes. The projected costs and construction schedules are reasonable, and the  
4 projected costs for each center are below the prescribed cost cap.

5 **Q. Does this conclude your testimony?**

6 A. Yes.

# Typical Solar Energy Center Block Diagram



- 1** Array of PV Panels
- 2** Power Conversion Unit (PCU)<sup>1</sup>
- 3** PCU Block
- 4** AC Collection System<sup>2</sup>
- 5** Collection Substation and Step-up Power Transformer
- 6** Generation Tie Line
- 7** Interconnection Substation

<sup>1</sup>Each PCU includes 2 inverters in enclosures with a medium voltage transformer mounted on a common equipment skid  
<sup>2</sup>AC collection system cabling may be both below and above ground

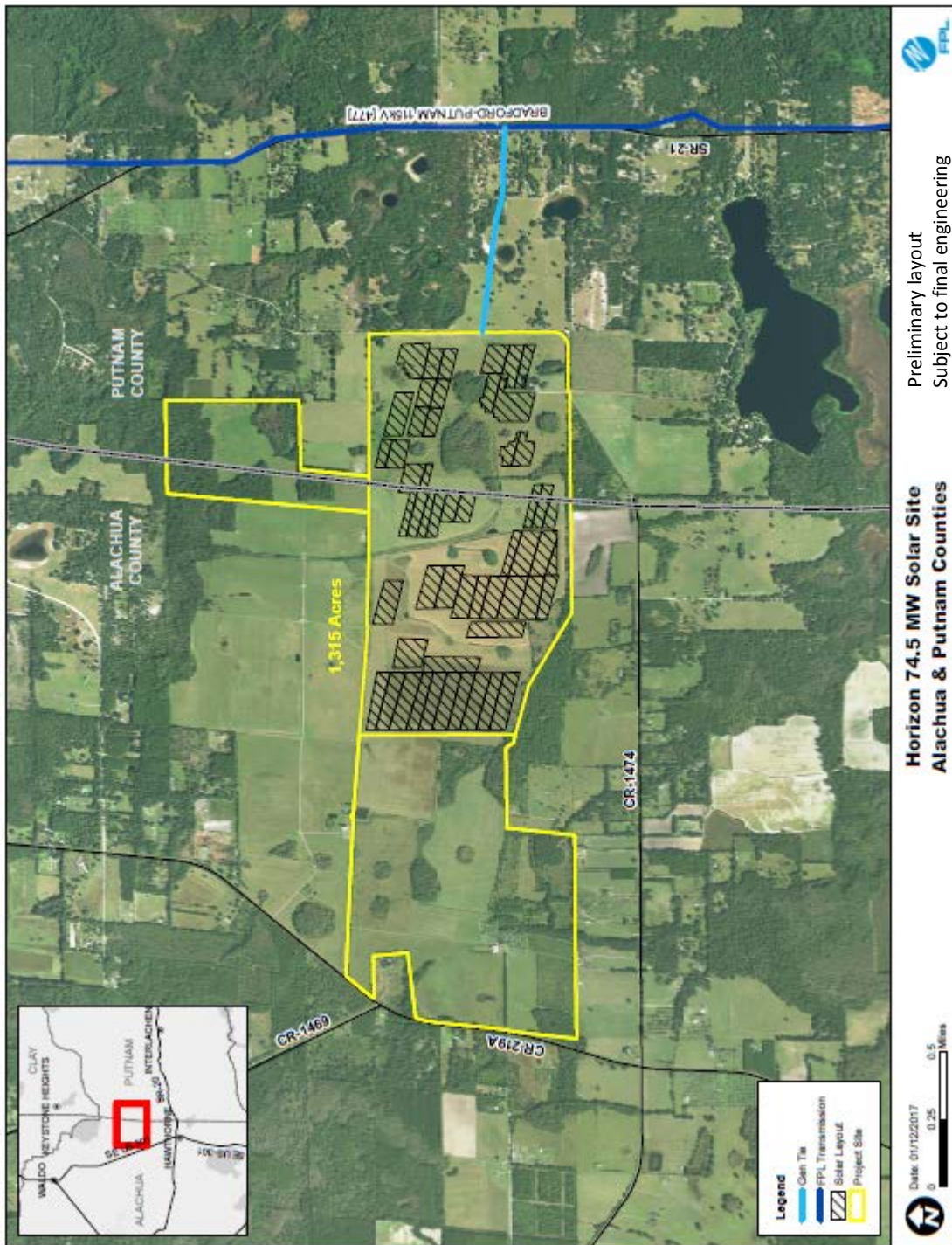


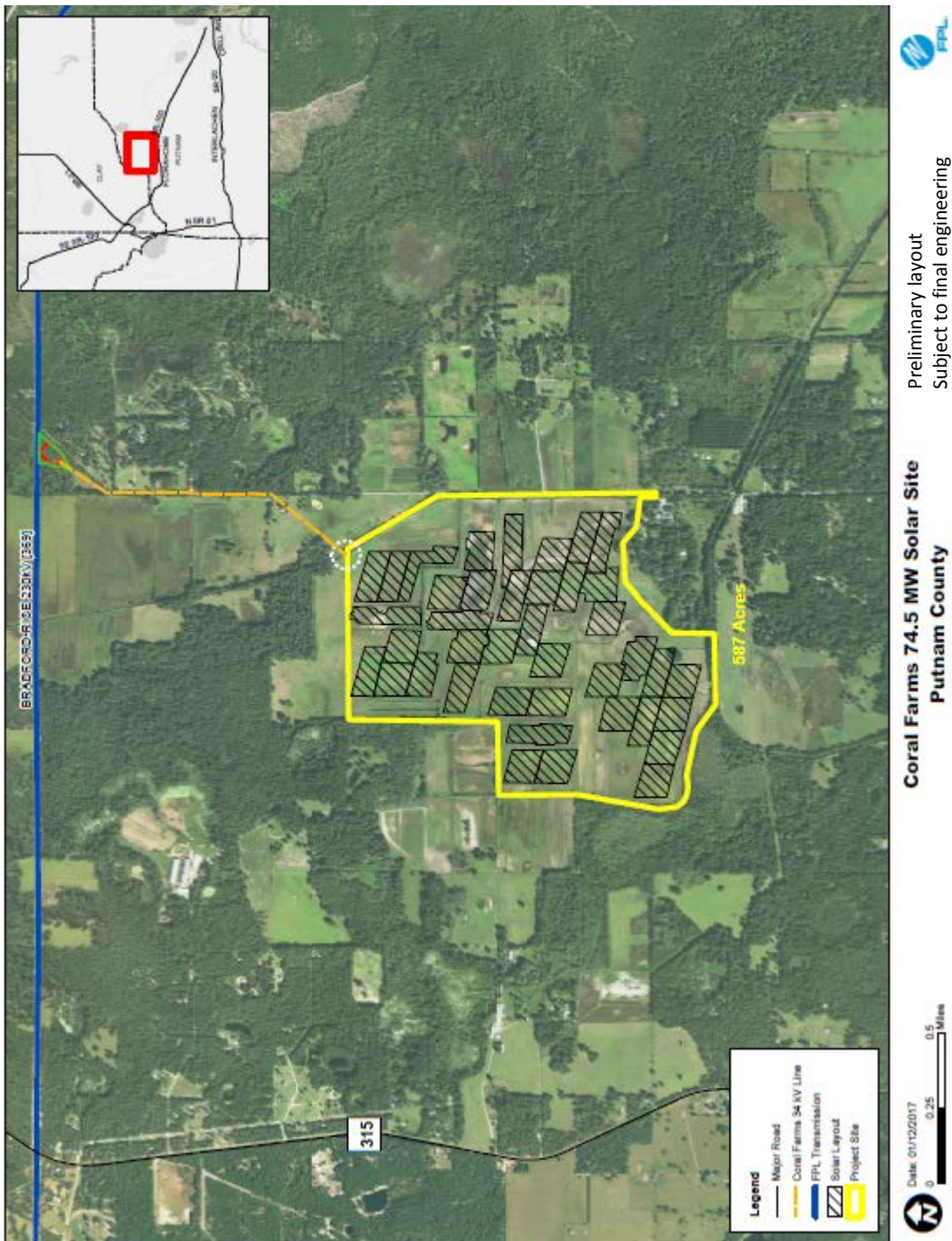
**List of Florida Power & Light Universal Solar Energy Centers in Service**

<b><u>Solar Energy Center</u></b>	<b><u>Technology</u></b>	<b><u>Capacity (MW)</u></b>	<b><u>In-Service Date</u></b>
DeSoto	Photovoltaic	25.0	October 27, 2009
Space Coast	Photovoltaic	10.0	April 16, 2010
Martin	Solar Thermal	74.5	December 10, 2010
Babcock Ranch	Photovoltaic	74.5	December 31, 2016
Citrus	Photovoltaic	74.5	December 31, 2016
Manatee	Photovoltaic	74.5	December 31, 2016
Photovoltaic Sub-total		258.5	
Solar Thermal Sub-total		74.5	
FPL Universal Solar total		333.0	

# Maps, Property Delineations, and Aerial Photos of Proposed Solar Energy Centers

Note: Information included in this exhibit is based on preliminary designs and subject to change when final designs are completed.





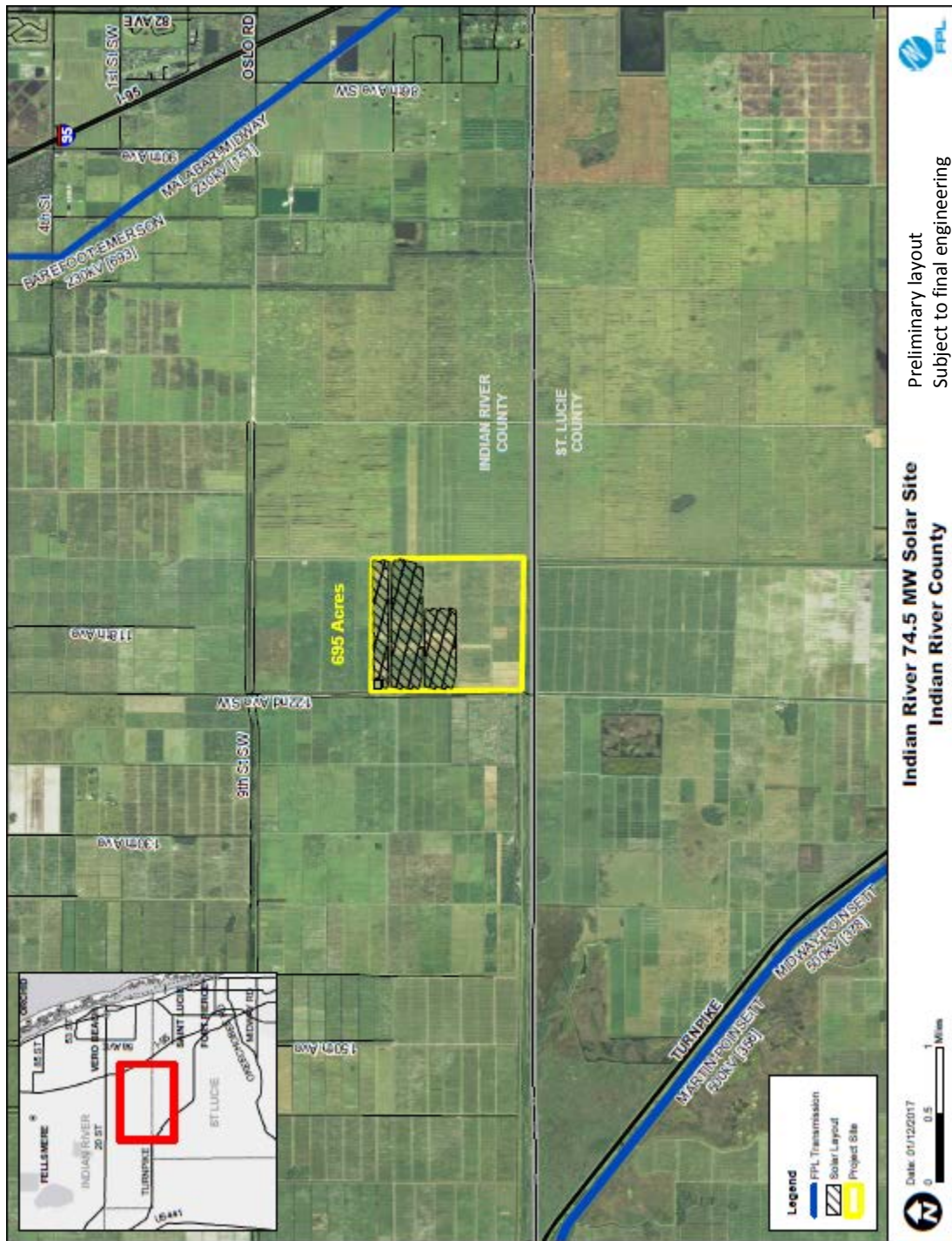
Preliminary layout  
Subject to final engineering

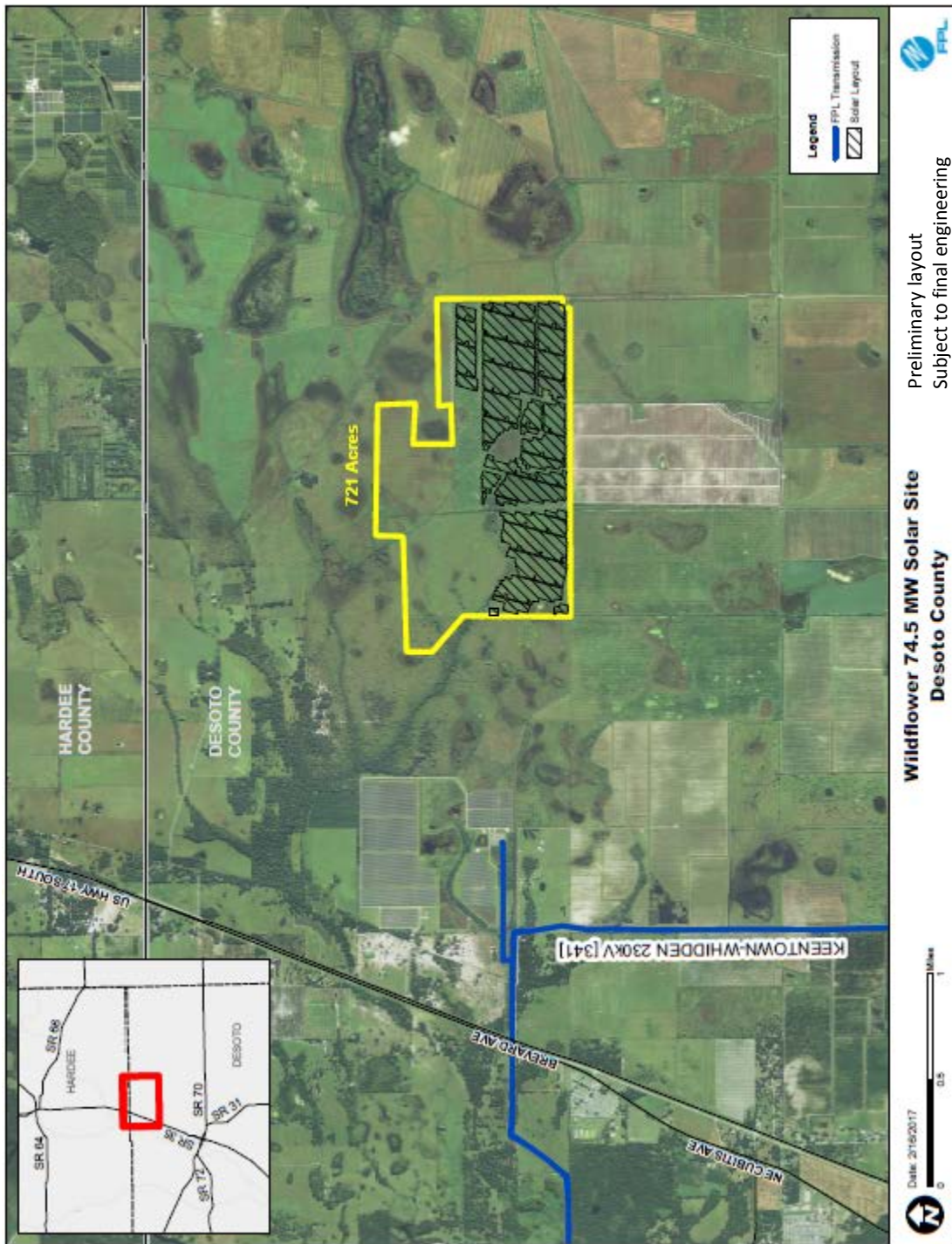
**Coral Farms 74.5 MW Solar Site**  
**Putnam County**

Date: 01/12/2017  
0 0.25 0.5 Miles

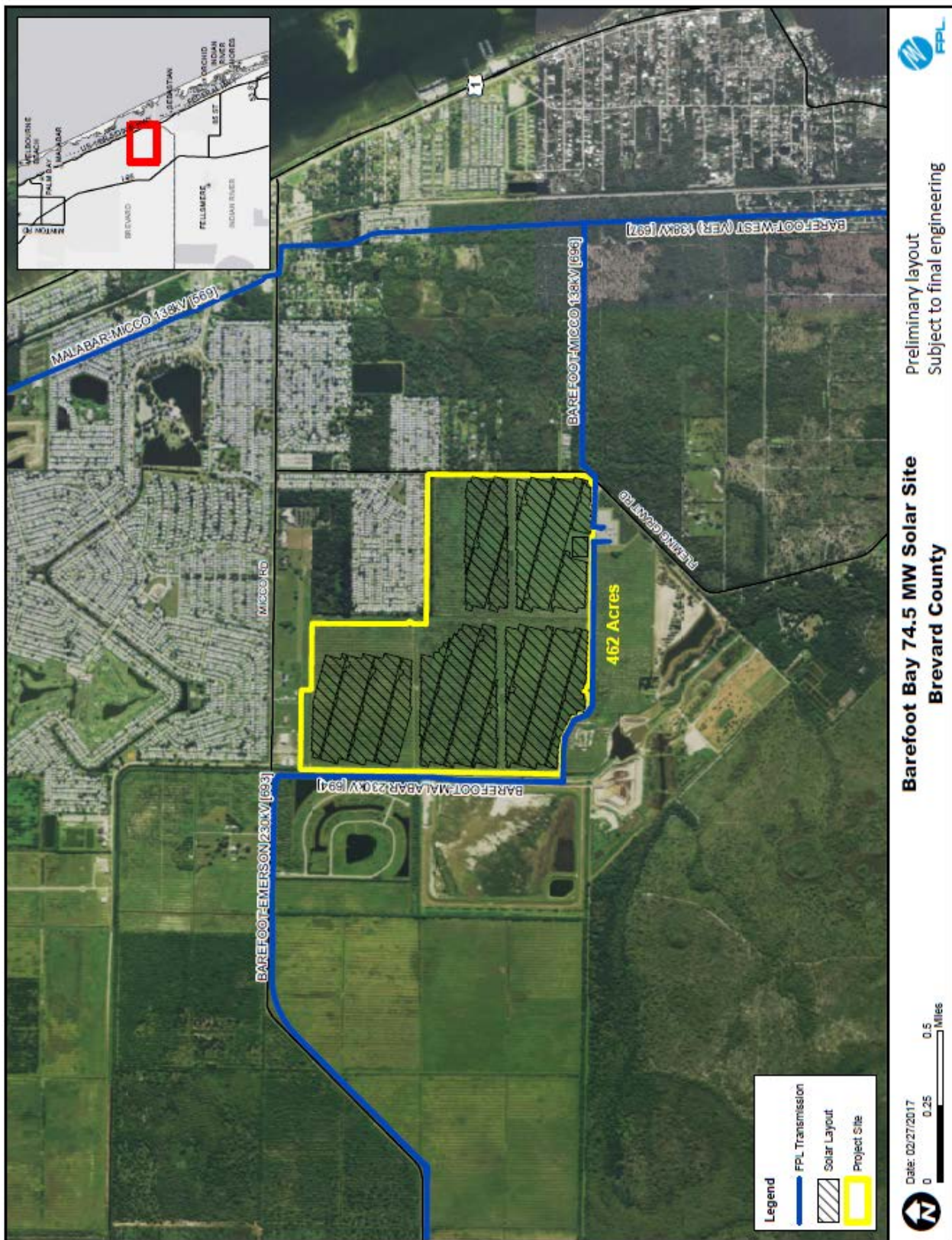




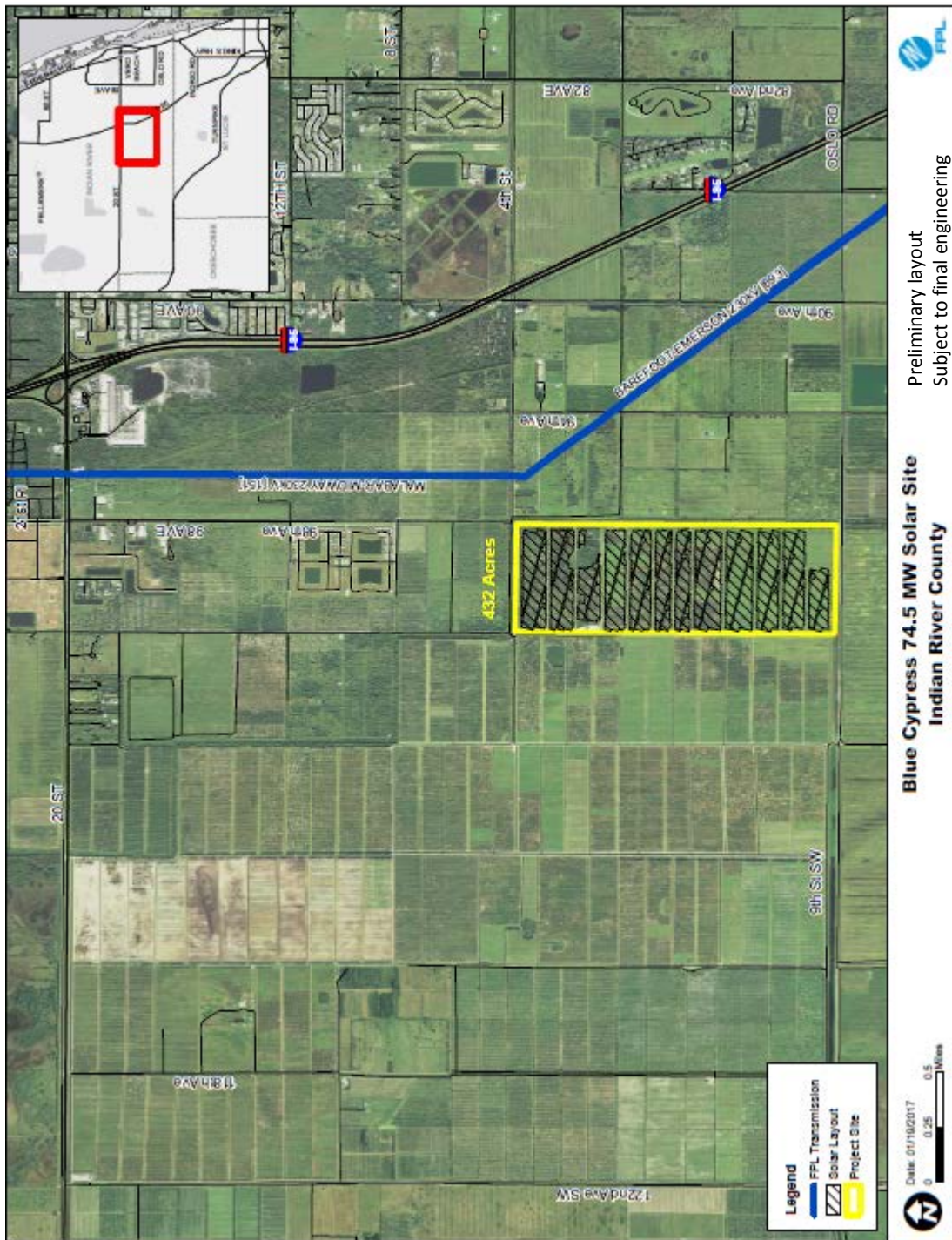




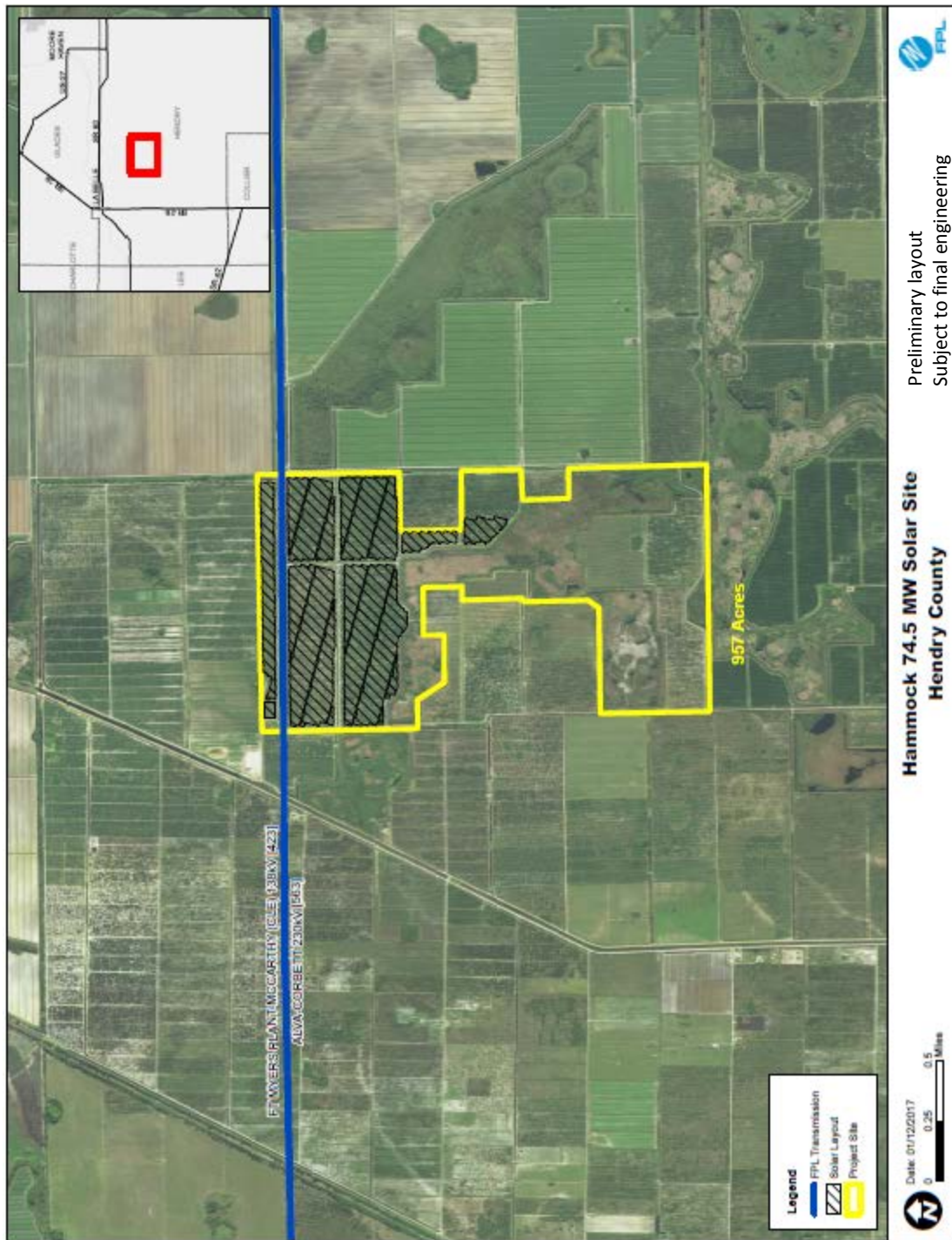


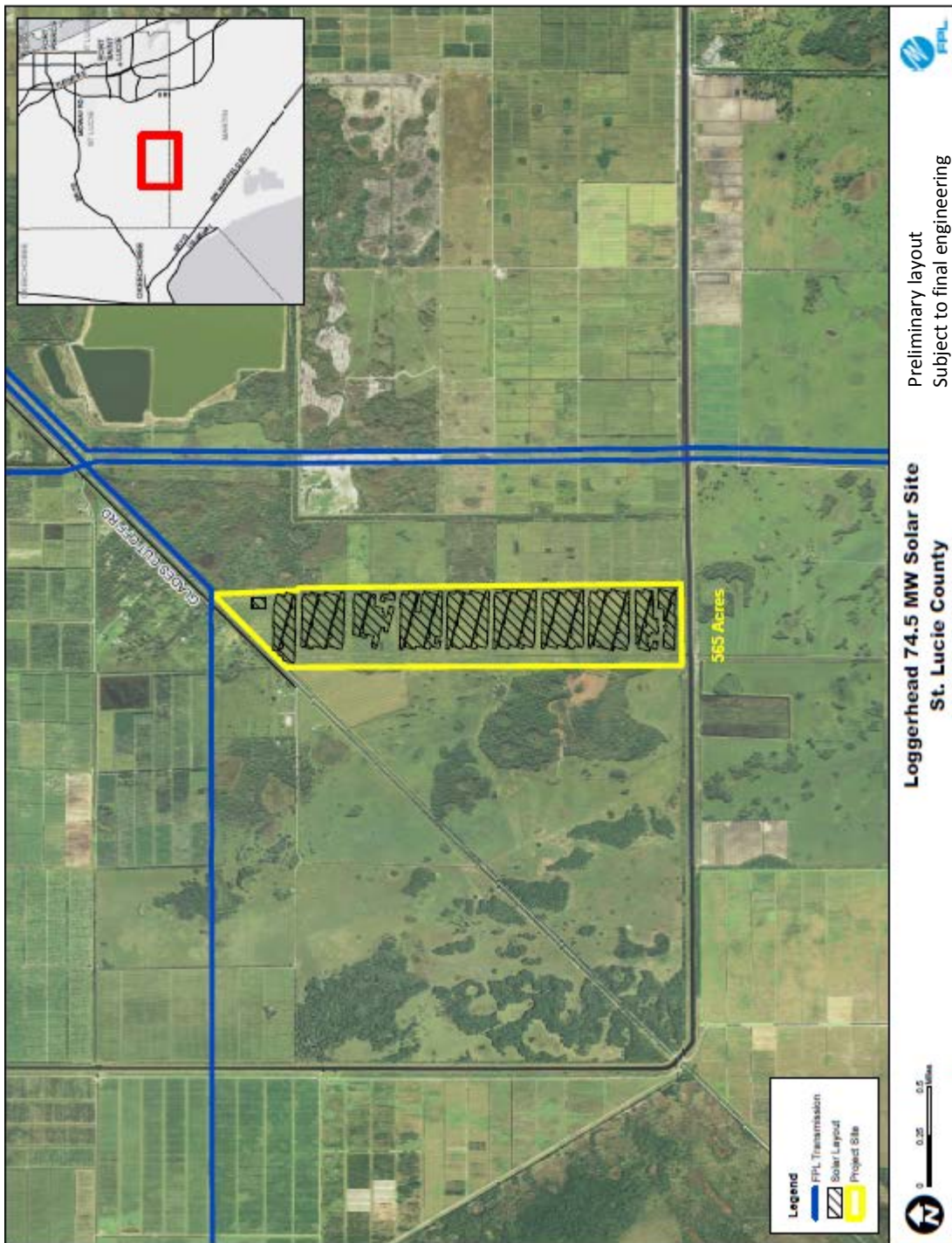












## Renderings of Proposed Centers

Note: Renderings based on preliminary designs and are subject to change when final designs are completed.





# FPL Horizon Solar Energy Center

Alachua and Putnam Counties, Florida

Artists impression only  
Subject to final engineering

Truescape®





**FPL Coral Farms Solar Energy Center**  
Putnam County, Florida



Artists impression only  
Subject to final engineering

Truescape®





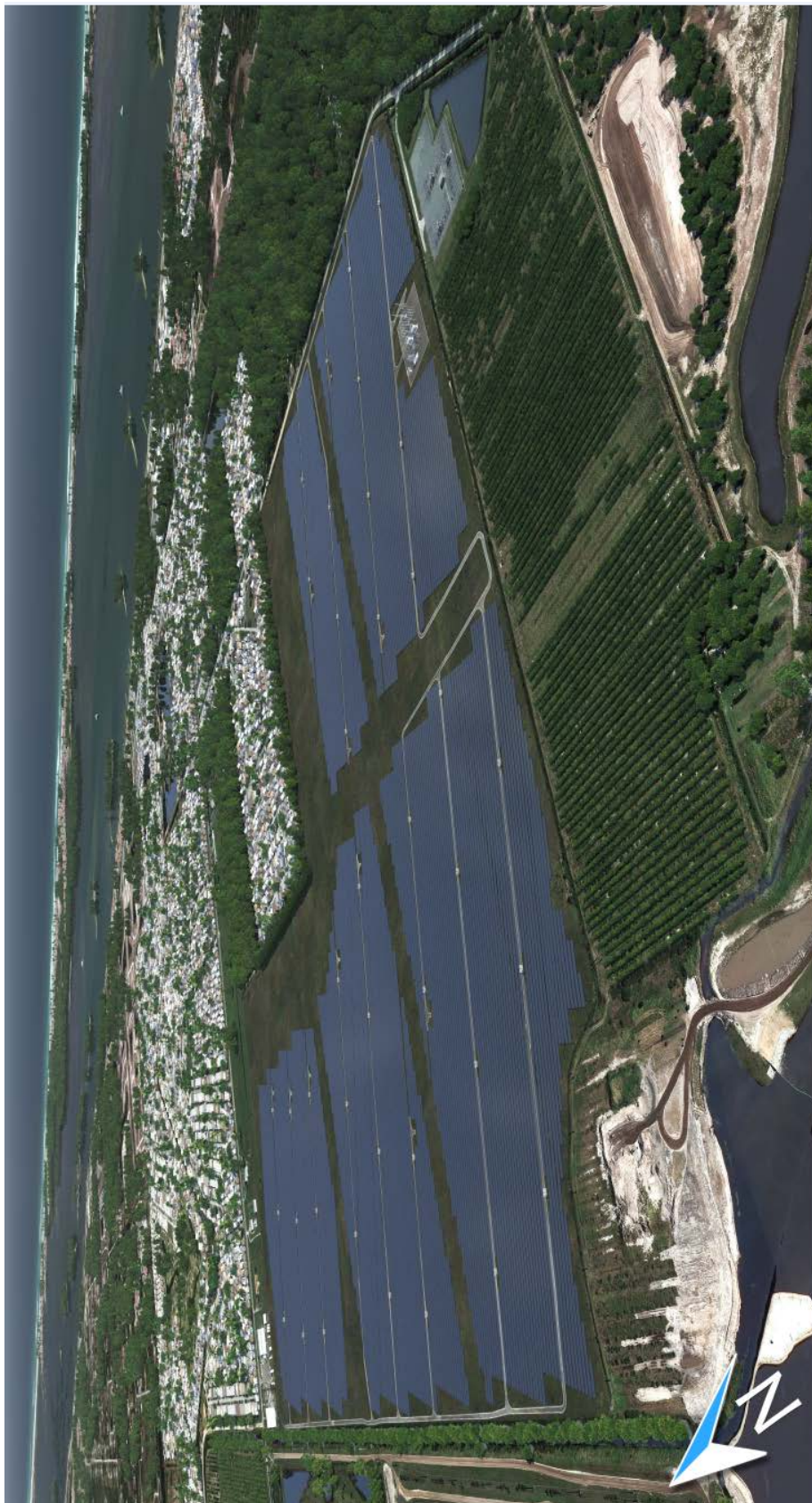
**FPL Indian River Solar Energy Center**  
Indian River County, Florida



Artists impression only  
Subject to final engineering

Truescape®



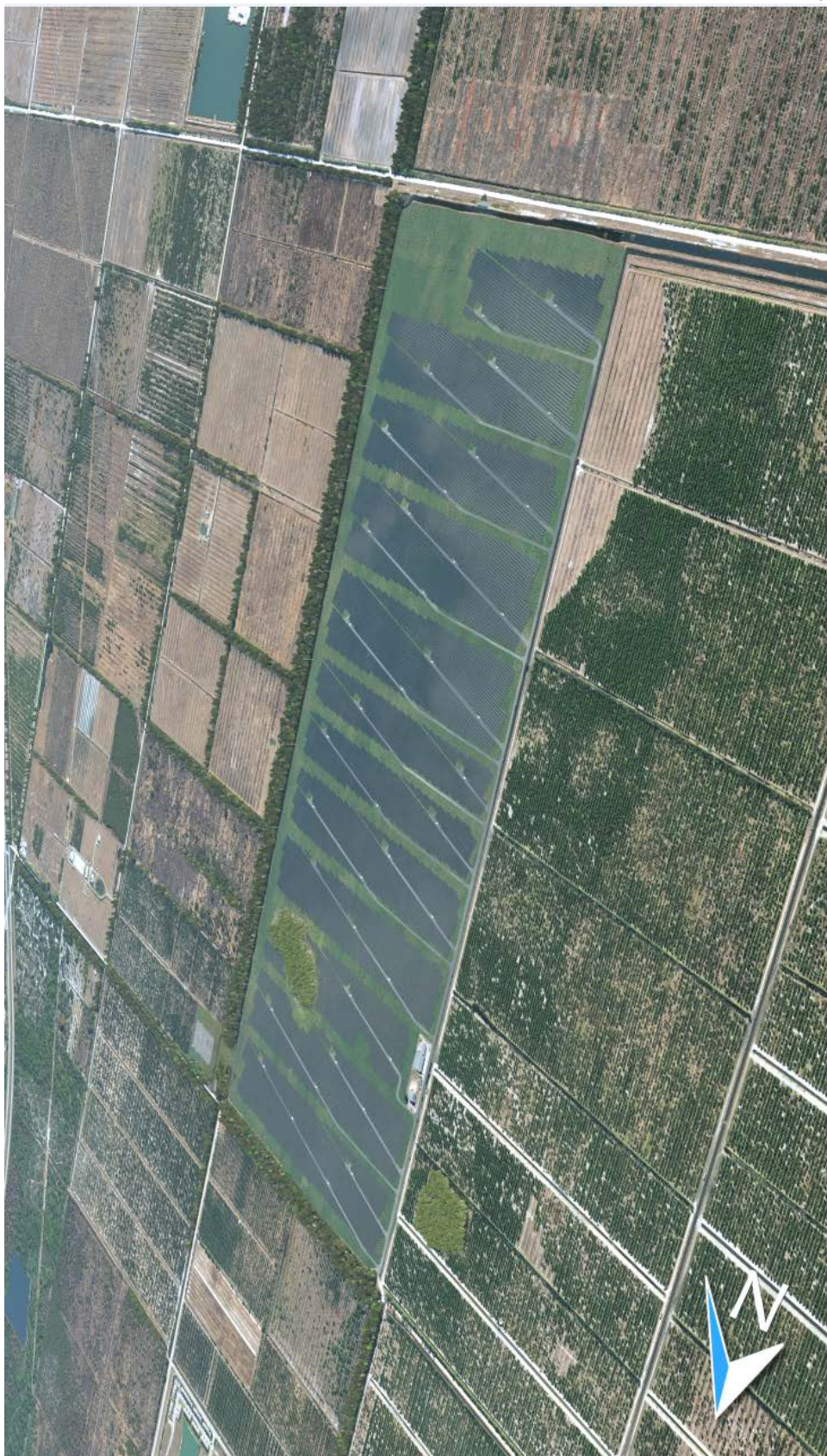


FPL Barefoot Bay Solar Energy Center  
Brevard County, Florida

Artists impression only  
Subject to final engineering

Truescape





**FPL Blue Cypress Solar Energy Center**  
Indian River County, Florida



Artists impression only  
Subject to final engineering

Truescape®





**FPL Hammock Solar Energy Center**  
Hendry County, Florida

Artists impression only  
Subject to final engineering

Truescape®





**FPL Loggerhead Solar Energy Center**  
St. Lucie County, Florida

Artists impression only  
Subject to final engineering

Truescape®



Rendering for the Wildflower Solar Energy Center is pending.

## Specifications for Proposed Solar Energy Centers

The specifications provided in the following table are applicable to each of the eight proposed solar energy centers.

<b>Specifications for FPL 74.5 MWac Solar Energy Center</b>	
Peak Alternating Current Output	74.5 MWac
Total Installed Direct Current Capacity	113.24 MWdc
PV Panel Type	Hanwha Q Cells Q.PLLUS L G4.2
PV Panel Power Ratings (Wdc)	345
Total Number of Panels (Typical)	328,231
Inverter DC Input (MWdc)	113.24
DC/AC Ratio	1.52
Number of Power Conversion Units (PCU) <sup>1</sup>	35
PCU Supplier	GE Energy Power Conversion USA, Inc.
Inverters Per PCU	2
Inverter Type	GE LV5
Inverter Rating (MVA/V)	1.15/600
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	GE PROLEC
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	2.3
Number of Inverters	70
Inverter Capacity Installed (MVA)	80.5 @ 35° C
Number of Medium Voltage Transformers	35
Medium Voltage Transformer Capacity Installed (MVA)	80.5
Number of Panel Per PCU Block (Typical)	9,378
DC Input Per PUC Block (MWdc)	3.235
PV Panel Support Mechanism	Fixed Tilt System-Tilt Angle = 20°
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	Hyundai Power Transformers USA, Inc.
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	115 kV <sup>2</sup> , 138 kV <sup>3</sup> & 230 kV <sup>4</sup>

<sup>1</sup> Each PCU is comprised of two inverters in cabinets and a medium voltage transformer all mounted on a single skid.

<sup>2</sup> Horizon

<sup>3</sup> Hammock

<sup>4</sup> Coral Farms, Wildflower, Barefoot Bay, Loggerhead, Indian River & Blue Cypress

Construction Schedule for Proposed Solar Energy Centers

Item	Major Activities	Sites with 2017 COD											
		Coral Farms		Horizon		Wildflower		Indian River					
		Start	Finish	Start	Finish	Start	Finish	Start	Finish				
1	PV panel contract	10/21/2016	2/28/2017	10/21/2016	2/28/2017	10/21/2016	2/28/2017	10/21/2016	2/28/2017	10/21/2016	2/28/2017	10/21/2016	2/28/2017
2	Power Conversion Unit contract	11/4/2016	3/31/2017	11/4/2016	3/31/2017	11/4/2016	3/31/2017	11/4/2016	3/31/2017	11/4/2016	3/31/2017	11/4/2016	3/31/2017
3	LNTP for EPC contracts		2/15/2017		2/15/2017		2/15/2017		2/15/2017		2/15/2017		2/15/2017
4	Contractor mobilization	3/1/2017	3/29/2017	3/1/2017	3/29/2017	3/1/2017	3/29/2017	3/1/2017	3/29/2017	3/1/2017	3/29/2017	3/1/2017	3/29/2017
5	Panel deliveries	5/19/2017	10/13/2017	5/19/2017	10/13/2017	5/19/2017	10/13/2017	5/19/2017	10/13/2017	5/19/2017	10/13/2017	5/19/2017	10/13/2017
6	Power Conversion Unit deliveries	7/17/2017	8/11/2017	7/17/2017	8/11/2017	7/17/2017	8/11/2017	7/17/2017	8/11/2017	7/17/2017	8/11/2017	7/17/2017	8/11/2017
7	Energization, Testing & Startup	11/19/2017	12/31/2017	11/19/2017	12/31/2017	11/19/2017	12/31/2017	11/19/2017	12/31/2017	11/19/2017	12/31/2017	11/19/2017	12/31/2017
8	Commence Commercial Operations	12/31/2017											

Item	Major Activities	Sites with 2018 COD											
		Blue Cypress		Barefoot Bay		Hammock		Loggerhead					
		Start	Finish	Start	Finish	Start	Finish	Start	Finish				
1	PV panel contract	10/21/2016	4/1/2017	10/21/2016	4/1/2017	10/21/2016	4/1/2017	10/21/2016	4/1/2017	10/21/2016	4/1/2017	10/21/2016	4/1/2017
2	Power Conversion Unit contract	11/4/2016	4/28/2017	11/4/2016	4/28/2017	11/4/2016	4/28/2017	11/4/2016	4/28/2017	11/4/2016	4/28/2017	11/4/2016	4/28/2017
3	LNTP for EPC contracts		2/15/2017		2/15/2017		2/15/2017		2/15/2017		2/15/2017		2/15/2017
4	Contractor mobilization	5/2/2017	5/30/2017	6/8/2017	7/6/2017	5/26/2017	6/23/2017	4/25/2017	5/23/2017	4/25/2017	5/23/2017	4/25/2017	5/23/2017
5	Panel deliveries	6/26/2017	11/17/2017	6/26/2017	11/17/2017	6/26/2017	11/17/2017	6/26/2017	11/17/2017	6/26/2017	11/17/2017	6/26/2017	11/17/2017
6	Power Conversion Unit deliveries	9/5/2017	10/6/2017	10/2/2017	10/27/2017	9/18/2017	10/27/2017	9/18/2017	10/27/2017	9/18/2017	10/27/2017	9/18/2017	10/27/2017
7	Energization, Testing & Startup	1/18/2018	3/1/2018	1/18/2018	3/1/2018	1/18/2018	3/1/2018	1/18/2018	3/1/2018	1/18/2018	3/1/2018	1/18/2018	3/1/2018
8	Commence Commercial Operations	3/1/2018											

**Construction Cost Components for Proposed Solar Energy Centers**

<b>2017</b>					
	Coral Farms	Horizon	Wildflower	Indian River	Total/Average
Capital Cost (\$M)	107	109	104	115	435
Name Plate Capacity (MWac)	74.5	74.5	74.5	74.5	298
Capital Cost (\$/kWac)	\$1,438	\$1,470	\$1,397	\$1,541	\$1,461

<b>2018</b>					
	Loggerhead	Barefoot Bay	Hammock	Blue Cypress	Total/Average
Capital Cost (\$M)	113	116	113	115	457
Name Plate Capacity (MWac)	74.5	74.5	74.5	74.5	298
Capital Cost (\$/kWac)	\$1,513	\$1,551	\$1,521	\$1,549	\$1,534

1                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2                   **FLORIDA POWER & LIGHT COMPANY**

3                   **TESTIMONY OF JUAN E. ENJAMIO**

4                   **DOCKET NO. 170001-EI**

5                   **MARCH 1, 2017**

6  
7   **Q.    Please state your name and business address.**

8    A.    My name is Juan E. Enjamio. My business address is Florida Power & Light Company,  
9           700 Universe Boulevard, Juno Beach, Florida 33408.

10 **Q.    By whom are you employed and what is your position?**

11 A.    I am employed by Florida Power & Light Company (“FPL” or the “Company”) as  
12        Manager of Integrated Analysis in the Resource Assessment & Planning Department.

13 **Q.    Please describe your educational background and professional experience.**

14 A.    I graduated from the University of Florida in 1979 with a Bachelor of Science degree in  
15        Electrical Engineering. I joined FPL in 1980 as a Distribution Engineer. Since my initial  
16        assignment in FPL, I have held positions as a Transmission System Planner, Power  
17        System Control Center Engineer, Bulk Power Markets Engineer, Supervisor of  
18        Transmission Planning, and Supervisor of Supply and Demand Analysis. In 2004, I  
19        became Supervisor of Integrated Analysis – Resource Planning. In 2014, I became  
20        Manager of Integrated Analysis – Resource Planning.

1 **Q. Please describe your duties and responsibilities in your current position.**

2 A. In my current position as Manager of Integrated Analysis, I am responsible for the  
3 management and coordination of economic analyses of alternatives to meet FPL's  
4 resource needs and maintain system reliability.

5 **Q. Are you sponsoring an exhibit in this case?**

6 A. Yes. I am sponsoring the following exhibits which are attached to my direct testimony:

- 7 • JE-1 Solar Energy Center Assumptions
- 8 • JE-2 Load Forecast
- 9 • JE-3 FPL Fuel Price Forecast
- 10 • JE-4 FPL Resource Plans
- 11 • JE-5 CPVRR – Costs and Benefits
- 12 • JE-6 Avoided Fossil Fuel
- 13 • JE-7 Avoided Air Emissions

14 **Q. What is the purpose of your testimony in this proceeding?**

15 A. The purpose of my testimony is to present the results of the economic analysis which  
16 shows that 596 megawatts alternating current (“MW<sub>ac</sub>”) of universal solar photovoltaic  
17 (“PV”) generation scheduled to be placed in service in late 2017 and early 2018 are cost-  
18 effective. My testimony covers several areas. First, I identify the eight sites on which  
19 the solar PV facilities will be constructed. Second, I discuss the major assumptions and  
20 the methodology used to perform the economic analysis. Third, I present the results of  
21 the economic analysis demonstrating that the addition of 596 MW<sub>ac</sub> of solar PV  
22 generation is cost-effective. Lastly, I discuss non-economic benefits that derive from the  
23 construction and operation of these facilities.



1 **Q. Please summarize your testimony.**

2 A. FPL is proposing the construction and operation of 596 MW<sub>ac</sub> of solar PV generation,  
3 consisting of two separate construction projects, each comprising four universal solar  
4 energy centers with in-service dates of late 2017 and early 2018, respectively. FPL  
5 performed an economic analysis and determined that these centers result in a reduction in  
6 the Cumulative Present Value of Revenue Requirements (“CPVRR”) to FPL customers,  
7 for a total savings of approximately \$39 million. In addition, these centers are projected  
8 to result in a significant reduction in air emissions, primarily Carbon Dioxide (“CO<sub>2</sub>”),  
9 and a reduction in the projected use of fossil fuels, thereby reducing FPL’s reliance on  
10 generation fueled by natural gas.

11 **Q. Please describe the proposed solar generation.**

12 A. FPL is proposing to construct and operate 596 MW<sub>ac</sub> of solar PV generation. Four centers  
13 with a total nameplate capacity of 298 MW<sub>ac</sub> will be constructed and placed in service by  
14 December 31, 2017. Another four centers also with a total nameplate capacity of 298  
15 MW<sub>ac</sub> will be placed in-service by March 1, 2018. Each of these centers can generate  
16 about 176,000 MWh in a year. This is enough energy to serve about 15,000 homes.  
17 Exhibit JE-1 attached to my testimony describes the major characteristics of the eight  
18 centers. FPL witness Brannen describes each center in greater detail and demonstrates  
19 that the cost for the proposed solar generation falls well below the \$1,750 per kilowatt  
20 alternating current (“kW<sub>ac</sub>”) threshold established in the FPL Rate Case Settlement  
21 approved by the Commission in Order No. PSC-16-0560-AS-EI.

22 **Q. What are the major system assumptions used in this study?**

23 A. The major assumptions used in this study are the following:

- 1           • **Load Forecast** – The analysis uses FPL’s most recent official long-term load  
2           forecast, approved in December 2016. This updated load forecast, including  
3           system peaks and net energy for load, will be used in FPL’s 2017 Ten Year Site  
4           Plan (“TYSP”) and is shown in Exhibit JE-2;
- 5           • **Fuel Price Forecast** – The analysis uses FPL’s most recent long-term fuel  
6           forecast, based on FPL’s standard long-term fuel forecasting methodology,  
7           approved in November 2016. This fuel forecast will be used in FPL’s 2017 TYSP  
8           and is shown in Exhibit JE-3;
- 9           • **CO<sub>2</sub> Emission Price Forecast** - The CO<sub>2</sub> cost projections used in this filing are  
10          based on ICF’s CO<sub>2</sub> emission price forecast dated December 2016. ICF is a  
11          consulting firm with extensive experience in forecasting the cost of air emissions  
12          and is recognized as one of the industry leaders in this field. This CO<sub>2</sub> emission  
13          price forecast will be used in FPL’s 2017 TYSP.

14 **Q. Please describe the resource plans that formed the basis for FPL’s cost-effectiveness**  
15 **analysis.**

16 A. For purposes of this filing, FPL developed two resource plans. The first resource plan,  
17 called the “No Solar Plan,” does not include any new solar facilities beyond those already  
18 in-service as of the end of 2016. In this plan, future resource needs are met first by  
19 combined cycle units and short-term power purchases through the year 2030, and then by  
20 FPL’s planned two new nuclear units, Turkey Point 6 and Turkey Point 7, which are  
21 assumed in these analysis to enter service in 2031 and 2032, respectively.

1 The second resource plan, called the “2017-2018 Solar Plan,” adds the eight centers that,  
2 as I mentioned earlier, will be built in two separate construction projects, each  
3 comprising four sites. Since solar installations, existing and future, are assumed to  
4 provide FPL 54% of their nameplate capacity as firm capacity to meet the Company’s  
5 reliability obligations, the in-service dates of the two combined cycle units required by  
6 2030 were deferred, and the size of the combined cycle unit planned for 2033 was  
7 reduced to account for the solar firm capacity at time of summer peak. These two  
8 resource plans are shown in Exhibit JE-4.

9 **Q. How did FPL determine the firm capacity that solar facilities will provide?**

10 A. Firm capacity value is based on the expected output of a solar facility at time of peak  
11 load, which typically occurs in August from 4 p.m. to 5 p.m. in the summer, and in  
12 January from 7 a.m. to 8 a.m. in the winter. FPL applies this same methodology to all its  
13 solar PV facilities, existing or new.

14  
15 The eight solar energy centers have an average summer firm capacity value of 54% of  
16 their nameplate rating. Therefore, each of the eight solar energy centers with a nameplate  
17 capacity of 74.5 MW<sub>ac</sub> is assumed to have a firm capacity value of 40.2 MW<sub>ac</sub> for a total  
18 firm capacity of 322 MW<sub>ac</sub> at time of summer peak. Solar installations have little, if any,  
19 firm capacity value at time of winter peak due to FPL’s winter peak occurring in the  
20 morning.

21 **Q. Please provide an overview of the analytical process that FPL used to determine the**  
22 **cost-effectiveness of the proposed solar generation.**

23 A. FPL used the hourly production costing model UPLAN to forecast the system economics

1 and compare resource plans that include or exclude the 596 MW<sub>ac</sub> of solar PV generation.  
2 This model has been used by FPL in prior proceedings at the Commission. Each UPLAN  
3 modeling run is used to determine generation system costs, consisting primarily of fuel  
4 costs, variable O&M costs, and emissions costs for a given resource plan. The output of  
5 each of the UPLAN model runs is then imported into FPL's Fixed Cost Spreadsheet  
6 ("FCSS") Model, which adds fixed costs such as capital costs, capital replacements costs,  
7 and fixed O&M costs. The FCSS Model is used to determine the CPVRR for each  
8 resource plan.

9 **Q. Please provide the result of the economic analysis.**

10 A. To determine the CPVRR impact of the proposed solar generation, FPL subtracted the  
11 CPVRR of the No Solar Plan from the CPVRR of the 2017-2018 Solar Plan. As shown  
12 in Exhibit JE-5, CPVRR Costs and Benefits, the CPVRR benefit to FPL customers is  
13 approximately \$39 million.

14 **Q. Will these solar energy centers reduce FPL's use of fossil fuels, specifically natural  
15 gas and oil?**

16 A. Yes. The energy from these solar energy centers will displace fossil fuel generation.  
17 Combined, these centers are expected to reduce the annual average use of natural gas by  
18 8,400 million cubic feet, the use of oil by 14,600 barrels, and the use of coal by 3,600  
19 tons. By adding these solar energy centers to its generation fleet, FPL reduces its reliance  
20 on natural gas, as well as coal and oil.

21 **Q. What effect will these solar energy centers have with respect to greenhouse gases  
22 and other air emissions?**

23 A. Reducing the use of fossil fuel results in an average annual reduction of 526,000 tons of

1 global warming gases, specifically CO<sub>2</sub>. This reduction in CO<sub>2</sub> is equivalent to removing  
2 approximately 102,000 cars from the road. Sulfur dioxide and nitrogen oxide emissions  
3 are reduced by an annual average of 46 tons and 64 tons, respectively.

4 **Q. What is your conclusion regarding the cost effectiveness of the proposed solar**  
5 **generation?**

6 A. As demonstrated by the economic analysis described in my testimony, the addition of  
7 these solar energy centers will result in CPVRR savings of approximately \$39 million. In  
8 addition, these centers will reduce the use of fossil fuels, reduce air emissions, and reduce  
9 FPL's reliance on natural gas. Therefore, I conclude that the proposed solar generation  
10 meets the cost-effectiveness requirement established in the FPL Rate Case Settlement and  
11 recommend approval by the Commission.

12 **Q. Does this conclude your testimony?**

13 A. Yes.

**Solar Energy Center Assumptions**

<b>Solar Energy Centers</b>	<b>In-service date</b>	<b>Nameplate Capacity (MWac)</b>	<b>Projected 1st Year Net Capacity Factor</b>	<b>Capital Cost (\$M)</b>	<b>Capital Cost (\$/kW)</b>
Coral Farms	12/31/2017	74.5	26.8%	\$107	\$1,438
Horizon	12/31/2017	74.5	27.0%	\$109	\$1,470
Wildflower	12/31/2017	74.5	26.9%	\$104	\$1,397
Indian River	12/31/2017	74.5	26.2%	\$115	\$1,541
Loggerhead	2/28/2018	74.5	26.5%	\$113	\$1,513
Barefoot Bay	2/28/2018	74.5	26.9%	\$116	\$1,551
Hammock	2/28/2018	74.5	26.9%	\$113	\$1,521
Blue Cypress	2/28/2018	74.5	26.2%	\$115	\$1,549
<b>Total/Average =</b>	<b>---</b>	<b>596</b>	<b>26.6%</b>	<b>\$893</b>	<b>\$1,498</b>

**Load Forecast  
 (December 2016)**

<b>Year</b>	<b>Summer Peak MW</b>	<b>Winter Peak MW</b>	<b>Net Energy for Load MWh</b>
2017	24,009	20,361	119,186
2018	24,297	20,673	120,500
2019	24,496	20,828	121,122
2020	24,605	20,978	122,325
2021	24,717	21,172	122,053
2022	24,967	21,113	122,806
2023	25,338	21,289	123,653
2024	25,756	21,452	124,933
2025	26,137	21,591	125,680
2026	26,552	21,773	126,825
2027	26,956	21,928	127,419
2028	27,387	22,098	128,593
2029	27,916	22,363	130,480
2030	28,422	22,659	132,616
2031	28,907	22,896	134,623
2032	29,394	23,082	136,469
2033	29,861	23,314	137,456
2034	30,307	23,575	138,943
2035	30,761	23,841	140,651
2036	31,207	24,065	142,080
2037	31,634	24,270	143,264
2038	32,078	24,481	144,831
2039	32,520	24,689	146,357
2040	32,953	24,910	148,081
2041	33,292	25,149	149,509
2042	33,632	25,389	150,938
2043	33,972	25,629	152,368
2044	34,314	25,869	153,799
2045	34,655	26,109	155,232
2046	34,998	26,350	156,667
2047	35,341	26,591	158,103
2048	35,685	26,832	159,540
2049	36,030	27,073	160,980
2050	36,376	27,314	162,420

**FPL Fuel Price Forecast  
(November 2016)**

<b>Year</b>	<b>FGT Firm Gas (\$/MMBTU)</b>	<b>Gulfstream Firm Gas (\$/MMBTU)</b>	<b>Sabal Trail Firm Gas (\$/MMBTU)</b>	<b>Residual Oil (\$/MMBTU)</b>	<b>Distillate Oil (\$/MMBTU)</b>	<b>Scherer 4 Coal Price (\$/MMBTU)</b>
2017	3.12	3.07	3.10	8.42	12.26	2.29
2018	3.06	3.02	3.03	8.64	12.95	2.38
2019	3.60	3.54	3.55	10.47	15.31	2.48
2020	3.59	3.54	3.54	10.98	15.95	2.73
2021	3.95	3.89	3.89	13.62	18.62	2.84
2022	3.74	3.68	3.69	14.03	19.23	2.98
2023	3.98	3.92	3.92	14.34	19.71	3.08
2024	4.19	4.13	4.13	14.62	20.55	3.15
2025	4.39	4.32	4.32	14.97	21.65	3.23
2026	4.57	4.50	4.49	15.25	21.93	3.31
2027	4.74	4.67	4.66	15.64	22.12	3.39
2028	4.90	4.83	4.81	16.03	22.25	3.47
2029	5.05	4.98	4.96	16.43	22.24	3.56
2030	5.20	5.12	5.10	16.86	22.44	3.66
2031	5.34	5.26	5.24	17.21	22.65	3.74
2032	5.48	5.40	5.37	17.58	22.87	3.82
2033	5.61	5.53	5.51	17.96	23.09	3.90
2034	5.75	5.66	5.64	18.34	23.32	3.99
2035	5.88	5.80	5.77	18.73	23.59	4.08
2036	5.99	5.90	5.87	19.10	24.09	4.18
2037	6.09	6.00	5.97	19.49	24.60	4.28
2038	6.20	6.11	6.08	19.88	25.13	4.39
2039	6.31	6.22	6.18	20.28	25.67	4.50
2040	6.43	6.33	6.29	20.69	26.22	4.61
2041	6.54	6.45	6.41	21.11	26.78	4.73
2042	6.66	6.56	6.52	21.54	27.35	4.85
2043	6.78	6.68	6.63	21.98	27.94	4.97
2044	6.90	6.80	6.75	22.43	28.54	5.10
2045	7.02	6.92	6.87	22.88	29.16	5.23
2046	7.15	7.04	6.99	23.35	29.78	5.36
2047	7.28	7.17	7.12	23.83	30.43	5.49
2048	7.41	7.30	7.24	24.32	31.08	5.63
2049	7.54	7.43	7.37	24.82	31.76	5.78
2050	7.67	7.56	7.50	25.33	32.44	5.92



**Resource Plans**  
**At Time of Summer Peak**  
**Unit(s)/Capacity added**

<b>Year</b>	<b>No Solar Resource Plan</b>	<b>2017-2018 Solar Resource Plan</b>
2017		298 MW 2017 Solar
2018		298 MW 2018 Solar
2019	Okeechobee 3x1 CC Unit	Okeechobee 3x1 CC Unit
2020		
2021		
2022		
2023		
2024	1-year 69 MW PPA	
2025	1 Greenfield 3x1 CC Unit	1-year 174 MW PPA
2026		1 Greenfield 3x1 CC Unit
2027		
2028	1-year 118 MW PPA	
2029	1 Greenfield 3x1 CC Unit	1-year 388 MW PPA
2030		1 Greenfield 3x1 CC Unit
2031	Turkey Point 6	Turkey Point 6
2032	Turkey Point 7	Turkey Point 7
2033	Equalizing 599 MW CC	Equalizing 291 MW CC

Solar Revenue Requirements		Non-Solar (Avoided) Generation Costs						Avoided System Costs			Total CPVRR (Millions)
Generation Capital (Millions)	Fixed O&M (Millions)	Generation Capital (Millions)	Fixed O&M (Millions)	Transmission Interconnection (Millions)	Capital Replacement (Millions)	Incremental Gas Transport (Millions)	Short-Term Purchases (Millions)	System Net Fuel (Millions)	Startup + VOM (Millions)	Emission (Millions)	Total CPVRR (Millions)
\$969.5	\$45.0	(\$224.0)	(\$10.6)	(\$13.7)	(\$37.4)	(\$157.8)	\$8.5	(\$515.8)	(\$31.2)	(\$71.3)	(\$38.6)

\* Negative Indicates Savings to FPL Customers

**Avoided Fossil Fuel**

<b>Year</b>	<b>Avoided Natural Gas MMCF</b>	<b>Avoided Oil Barrels</b>	<b>Avoided Coal Short Tons</b>
2017	10	0	0
2018	8,165	69,984	28,567
2019	9,151	77,324	25,345
2020	9,623	13,151	13,681
2021	8,757	10,172	39,629
2022	8,890	19,697	28,431
2023	8,989	29,774	24,076
2024	8,999	39,548	27,137
2025	4,777	8,597	(44,431)
2026	6,320	19,522	(67,562)
2027	9,231	29,703	5,009
2028	8,868	36,020	21,957
2029	5,066	39,254	(20,399)
2030	6,923	50,493	(22,787)
2031	9,296	19,095	9,188
2032	8,318	23,467	29,297
2033	8,878	0	569
2034	8,755	(904)	(15)
2035	8,214	(811)	19,053
2036	8,724	(244)	161
2037	8,874	103	78
2038	8,776	0	109
2039	8,507	56	173
2040	8,786	0	461
2041	8,721	(190)	200
2042	8,647	(190)	(70)
2043	8,559	(362)	131
2044	8,721	0	15
2045	8,804	(190)	68
2046	8,747	0	117
2047	8,551	42	77
2048	8,680	0	80
2049	8,681	0	80
2050	8,682	0	79
<b>Average* =</b>	<b>8,415</b>	<b>14,640</b>	<b>3,591</b>

\* Average does not include 2017

**Avoided Air Emissions**

<b>Year</b>	<b>Avoided CO<sub>2</sub> Short Tons</b>	<b>Avoided SO<sub>2</sub> Short Tons</b>	<b>Avoided NO<sub>x</sub> Short Tons</b>
2017	573	0	0
2018	692,011	234	387
2019	705,962	240	384
2020	638,832	78	325
2021	716,227	78	366
2022	673,100	111	374
2023	662,713	120	318
2024	683,817	143	316
2025	62,063	(44)	(900)
2026	42,918	(31)	(683)
2027	581,331	94	224
2028	648,140	110	258
2029	214,177	39	(693)
2030	317,879	112	(312)
2031	600,061	53	192
2032	645,635	81	249
2033	522,566	5	88
2034	511,979	2	67
2035	575,643	13	107
2036	511,370	4	68
2037	519,903	7	68
2038	514,305	4	66
2039	498,920	3	59
2040	516,636	7	95
2041	511,458	3	98
2042	505,726	3	64
2043	501,488	2	63
2044	510,608	2	69
2045	515,651	4	81
2046	512,644	3	67
2047	501,013	7	59
2048	541,094	7	64
2049	584,381	8	69
2050	631,131	8	74
<b>Average* =</b>	<b>526,405</b>	<b>46</b>	<b>64</b>

\* Average does not include 2017