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December 8, 2010

VIA HAND DELIVERY

Ms. Ann Cole
Division of the Commission Clerk and
Administrative Services
Florida Public Service Commission
Betty Easley Conference Center
2540 Shumard Oak Boulevard, Room 110
Tallahassee, Fl 32399-0850

RE: Docket No. 100358-EI – Investigation into the design of Commercial
Time-of-Use rates by Florida Power & Light, pursuant to Order No.
PSC-10-0153-FOF-EI

Dear Ms. Cole:

Enclosed for filing on behalf of Florida Power & Light Company (“FPL”) are an
original and 5 copies of FPL’s response to Staff’s Data Request dated November 10,
2010.

Please contact me should you or your Staff have any questions regarding this
filing.

COM _____
APA _____
LCR 4
GCL 1
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SSC _____
ADM _____
OPC _____
CLK _____

Enclosure

cc: Counsel of record (w/enclosure)

Sincerely,

Scott Goorland

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**Investigation into the design of Commercial Time-of-Use rates
by Florida Power & Light, pursuant to Order No. PSC-10-0153-FOF-EI.
Docket No. 100358-EI**

**FPL's Responses to Staff's Data Requests of November 10, 2010
December 8, 2010**

- 1) **Order No. 9661, issued November 26, 1980, states "Average incremental costs during on-peak and off-peak hours are used to allocate average fuel costs between on and off-peak periods. . ." (emphasis added) A review of FPL's Schedule E-1D, filed in the projections testimony filed on September 1, 2010, in Docket No. 100001-EI, appears to indicate that FPL is using average embedded on-peak and off-peak fuel costs to develop its TOU factors. Please explain whether FPL is complying with Order No. 9661, and if not, why a different methodology is used to calculate the on-peak and off-peak fuel factors.**

FPL is in compliance with Order 9661. Order 9661 discusses the use of average incremental costs when describing Staff Tariff proposals in that docket (No. 79-859-EU), rather than as a requirement of the Order itself. In Order 9661 the Commission identified 13 guidelines that utilities must follow in developing optional time-of-use rates and FPL follows these guidelines. The use of incremental costs is not included in those 13 guidelines. Since the early 1980s, the Commission has consistently approved FPL's time-of-use (TOU) factors based on total projected fuel costs during the on-peak and off-peak rating periods.

- 2) **Please refer to Progress Energy Florida's (PEF) projection testimony filed by Marcia Olivier on September 1, 2010, in Docket No. 100001-EI, Schedule E1-E, Exhibit MO-2, Part 2, Development of Time of Use Multiplier. It appears the PEF is using marginal fuel costs to develop its on- and off-peak TOU fuel multipliers, as required by Order No. 9661. Please discuss and explain how FPL's development of TOU fuel factors differs from PEF's.**

FPL's development of Time-Of-Use (TOU) fuel factors is based on the projected average on-peak and off-peak total fuel costs by month based on the on-peak and off-peak definition of TOU as defined in Order No. 9661.

For FPL, the twelve-month total of projected average on-peak MWh load and the twelve-month total of projected average off-peak MWh load are compared to total projected average MWh load to determine the TOU percentages (on-peak and off-peak) that are then applied to total projected sales. The twelve-month total of projected average on-peak fuel costs and the twelve-month total of projected average off-peak fuel costs are compared to total projected average fuel costs to determine the TOU percentages (on-peak and off-peak) that are then applied to total projected fuel costs to derive the on-peak and off-peak fuel costs. The resulting projected on-peak costs are divided by projected on-peak sales to determine the projected average on-peak cost per kWh sold. Similarly, projected off-peak costs are divided by projected off-peak sales to

determine the projected average off-peak cost per kWh sold. These average on-peak and off-peak fuel factors are then adjusted for jurisdictional losses, true-up (cents per kWh), revenue taxes and GPIF (cents per kWh).

PEF's development of TOU fuel factors is based on marginal costs. From PEF's Schedule E-1E, Exhibit MO-2, Part 2, it appears that PEF develops TOU multipliers based on system on-peak and off-peak MWh requirements and marginal fuel costs during the on-peak and off-peak periods. The on-peak multiplier ratchets the levelized fuel factor up and the off-peak multiplier ratchets the levelized fuel factor down. The multipliers are then applied to the levelized fuel cost factors for each metering voltage level, which results in the final TOU fuel factors.

- 3) **Please provide a table similar to PEF's Schedule E1-E, showing for 2011 monthly MWh sales, monthly marginal costs, monthly average marginal c/kWh costs, and resulting on- and off-peak TOU fuel multipliers.**

Please See FPL's response in Attachment A.

- 4) **Please explain and discuss whether FPL believes it would be appropriate to set the fuel on- and off-peak TOU factors based on marginal/incremental fuel costs, instead of average embedded costs.**

If the Commission determines that the on and off peak differential should be increased, FPL believes the use of marginal/incremental fuel costs, instead of embedded costs, may be an appropriate method to achieve that end.

- 5) **This question relates to the Direct Testimony of AFFIRM Witness Klepper, filed in Docket No. 100001-EI, on September 22, 2010. Starting on page 9, Witness Klepper testifies that the average lambdas are about twice as high during the summer months when compared to the winter months. Based on Witness Klepper's conclusion that marginal fuel costs are higher during the summer than during the winter on-peak periods, please discuss whether it would be appropriate to establish different TOU fuel factors for the summer and winter on-peak periods.**

The suggestion to calculate seasonally delineated (summer and winter) on-peak and off-peak fuel factors while maintaining the currently defined TOU periods has potential merit that may warrant additional investigation by the Commission and the Florida IOUs.

- 6) **In its recent rate case, Docket No. 080677-EI, the Commission approved FPL's plan to install smart meters over a 5-year period. Please discuss whether FPL plans to use the data provided by the smart meters to implement a multi-period pricing TOU rate for residential and/or commercial customers.**

The recent rate case filing reflects FPL's plans to install smart meters at residential (RS1) and non-demand metered small commercial/industrial (GS1) customers. Some demand metered

customers may have a smart meter installed as part of the Energy Smart Florida Department of Energy grant funded project.

FPL currently has no plans to develop or implement a multi-period (more than two) pricing TOU rate for residential and/or commercial customers at this time. FPL will review data collected through smart meters over time and will evaluate the energy data to determine if any alternative rates are warranted. Additionally, as discussed in number 7 below, FPL does not have plans to modify the billing systems to provide for the implementation of multi-period pricing TOU rates.

- 7) **Please discuss and explain whether the smart meters FPL is installing provide the data necessary to implement a multi-period pricing TOU rate for residential and/or commercial customers.**

The smart meters FPL is installing provide both interval data (hourly consumption) and daily register reads. Therefore, the smart meters provide the data necessary for multi-period TOU rates. However, additional functionality within FPL's metering and billing systems would be required to implement multi-period TOU: (1) the data would have to be validated and aggregated into the appropriate multiple periods, which would require implementation of this functionality within the meter data management system for the smart meters; and, (2) the billing system would have to be capable of handling multiple periods, which would require extensive system changes. These steps would require significant time and investment. At this time, there are no plans to implement these significant changes.

- 8) **Did FPL have to modify its billing system to implement the real-time pricing (RTP) rate FPL offered from 1995 through 2003? If yes, please state the costs FPL incurred to implement the RTP rate.**

Yes, modifications were required to FPL's Power Billing & CIS II systems to implement and bill the RTP rate structures. At the end of the pilot, project costs totaled \$1.9 million as outlined in Attachment B, the final Pilot Program Quarterly Report. This program included a per customer administrative adder (approximately \$100 over the course of the pilot) to help defray these costs, and program costs were only assigned to participating customers.

- 9) **On page 12 of its August 2, 2010, TOU report, FPL states that it has offered several new rate options in 2006. Please state if FPL had to make changes to its billing system to offer the SDTR, High Load Factor TOU, and GSCU rates, and if yes, please provide the cost FPL incurred to implement those new rates.**

Yes, modifications were required to FPL's CIS II system in order to implement and bill the new rate options. This included modification of core CIS II billing and financial modules.

The cost to implement the system changes associated with the 10 new rates was approximately \$540,000 in 2005.

- 10) **On page 9 of AFFIRM's response the FPL's report on Time of Use rates in Docket No. 100358-El, it states that the difference between what AFFIRM terms the "Wing" periods and the shorter 3 hour Summer Peak is "significant," not only in percentage terms but in total MW difference. Does FPL agree that the cited differences are significant in terms of ratemaking and cost causation? If not, why not?**

The differences cited by AFFIRM of the average 3-hour peak vs. the 3-hour "Wing" periods are not significant in terms of ratemaking and cost causation. Generation would not be displaced during such a short window as it would still be needed for system support and, as discussed in greater detail in 11 below, this approach has the potential to: a) create a new peak period just following a narrow peak window, requiring FPL to either reset or expand the defined narrow peak period or b) raise the load during the balance of the hours of the peak period. As such, new generation would not be deferred.

- 11) **FPL notes that peak shifting may occur with a shorter peak period. Please provide any empirical evidence FPL has to support that position?**

In responding, FPL assumes that this question is based on the following statements in the first paragraph of Section 3 of FPL's September 22, 2010, response:

"Sending a large price signal during a narrow 3-hour time period would incent customers to shift load outside of this narrow period. Given that FPL's overall load is relatively flat, a strong price signal over a short period of time (such as is proposed by AFFIRM) has the potential to create a new system peak outside of the shortened on-peak period."

These statements are supported by FPL's analyses of the impacts on a projected FPL peak day load shape from implementing all of FPL's load control capability. New rate alternatives are evaluated as to how the proposed rate impacts the peak day load shape after load control impacts have been accounted for. The result of implementing all of FPL's load control capability is that what would have been (assuming no load control was implemented) a day with a one-hour peak is transformed into a much flatter load shape with up to 8 hours having the same peak load.

FPL has no current analysis using the specific short on-peak periods advocated by AFFIRM. However, if FPL were to perform such an analyses using a new "starting point" (i.e., an analysis in which it is assumed that a new short on-peak period rate was in existence), two undesirable outcomes are possible. First, the peak day load after load control would remain flat for approximately 8 hours except for the hour immediately after the short on-peak period ended. In that hour, the peak load would be increased due to the fact that the cost of electricity use would then be significantly lower for customers on the assumed new rate. This is the possible outcome FPL discussed in its September 22, 2010, response.

A second, undesirable outcome is also possible. In this case, the peak day load shape after load control would still remain flat for approximately 8 hours, but the flat peak load would be increased due to load control being implemented differently in order to address the greater electricity usage from customers on the assumed new rate in the hour immediately after the on-peak period ended. In this case, the entire 8-hour time period would see a higher peak load. Therefore, with either of these two possible outcomes, the introduction of a short on-peak period rate could result in higher peak loads for the FPL system.

- 12) **On page 15 of AFFIRM's response in Docket No. 100358-EI, AFFIRM takes issue with what it terms FPL's assertion that coincident peak contributions of classes tend to be more correlated with energy sales than demand readings. If this is a correct characterization of FPL's position, please provide data to support the correlation between coincident peak and energy sales.**

In this instance, AFFIRM is citing testimony from the 2005 Rate Case Docket No. 050045-EI. FPL's response to an interrogatory from a party in that proceeding, the Commercial Group, addresses the correlation between coincident peak and energy sales. Please see attachment C for FPL's response to the Commercial Group's 1st set of interrogatories, question 4, subpart (b), in Docket No 050045-EI.

DEVELOPMENT OF TIME OF USE MULTIPLIERS *

<u>Mo/Yr</u>	<u>ON-PEAK PERIOD</u>			<u>OFF-PEAK PERIOD</u>			<u>TOTAL</u>		
	<u>System MWH Requirements</u>	<u>Marginal Cost</u>	<u>Average Marginal Cost (\$/kWh)</u>	<u>System MWH Requirements</u>	<u>Marginal Cost</u>	<u>Average Marginal Cost (\$/kWh)</u>	<u>System MWH Requirements</u>	<u>Marginal Cost</u>	<u>Average Marginal Cost (\$/kWh)</u>
Jan-11	2,389,061	167,735,973	7.021	5,744,782	185,384,115	3.227	8,133,843	353,120,088	4.341
Feb-11	1,983,045	117,277,281	5.914	5,377,454	208,430,117	3.876	7,360,499	325,707,398	4.425
Mar-11	2,236,360	93,479,848	4.180	5,983,493	213,850,040	3.574	8,219,853	307,329,888	3.739
Apr-11	2,751,509	256,275,548	9.314	5,624,075	234,130,242	4.163	8,375,584	490,405,791	5.855
May-11	3,304,872	262,010,252	7.928	6,615,002	264,798,530	4.003	9,919,874	526,808,782	5.311
Jun-11	3,662,970	406,296,632	11.092	6,591,124	265,490,475	4.028	10,254,094	671,787,107	6.551
Jul-11	3,541,416	349,573,173	9.871	7,579,093	383,350,524	5.058	11,120,509	732,923,697	6.591
Aug-11	3,993,110	433,731,608	10.862	7,277,802	347,369,489	4.773	11,270,912	781,101,098	6.930
Sep-11	3,684,162	462,472,856	12.553	6,851,989	357,536,786	5.218	10,536,151	820,009,642	7.783
Oct-11	3,278,173	334,144,174	10.193	6,799,959	313,410,110	4.609	10,078,132	647,554,284	6.425
Nov-11	2,159,495	79,469,416	3.680	6,073,581	204,133,057	3.361	8,233,076	283,602,473	3.445
Dec-11	2,188,042	82,467,303	3.769	6,029,670	205,430,857	3.407	8,217,712	287,898,160	3.503
TOTAL	35,172,215	3,044,934,065	8.657	76,548,024	3,183,314,343	4.159	111,720,239	6,228,248,408	5.575

MARGINAL FUEL COST
WEIGHTING MULTIPLIER

ON-PEAK
1.553

OFF-PEAK
0.746

AVERAGE
1.000

*Based on FPL's October 1, 2010 filing in Docket No. 100001-EI.

Docket No. 100358-EI
FPL Response to
Staff's First Data Request
Question #3
Attachment A

**Experimental Real-Time Pricing Program
 Thirty Sixth Quarterly Report
 Report Period: Fourth Quarter 2003**

Program Status:

The Real-Time Pricing Program (RTP) and corresponding rate were approved by the Commission in Order No. PSC-94-1232-FOF-BG dated October 11, 1994. The effective date of the tariff is February 1, 1995. In Order No. PSC-96-0027-FOF-BI, the Commission granted FPL's request to lower the required minimum monthly demand to qualify for the RTP rate from 1,500 kw to 1,000 kw, effective December 19, 1995. In Order No. PSC-99-0058-FOF-EG dated January 6, 1999, the Commission granted FPL's request to extend the program through December 31, 2000. In Order No. PSC-01-0083-PAA-EI, the Commission granted FPL's request to extend the program through March 31, 2001. On January 9, 2001, in order No. PSC-01-0067-TRP-BI, the Commission granted FPL's request to further lower the required minimum monthly demand from 1,000 kw to 500 kw, effective April 1, 2001 and extend the program through December 31, 2002. On November 5, 2002, in Order No. PSC-02-0961-EI, the Commission granted FPL's request for an extension of the RTP-GX rate through December 31, 2003. As of December 31, 2003 there were zero (0) customers taking service under the rate.

Program activities in the fourth quarter 2003 consisted primarily of maintenance costs related to the rate.

Expenditures:

The costs expended in the 4th Quarter, Year-To-Date, and Total Project-To-Date are as follows:

O+M	4 th Q 2003	Year To Date	Project To Date
Development	\$0	\$0	\$793,909
Marketing	\$336	\$1,552	\$794,127
Operations and Monitoring	\$2,518	\$9,606	\$202,469
Analysis	\$0	\$0	\$145,289
Total O+M	\$2,854	\$11,158	\$1,935,794

Program Bank Balances are as follows:

	4 th Q 2003	Year To Date	Project To Date
Marginal Recovery	\$17,140	(\$3,287)	\$1,677,076
Marginal Reliability	\$0	(\$8,471)	\$166,295

If the RTP Expenses for the twelve months ended December 31, 2003 were included in the calculation, FPL's December 31, 2003 Jurisdictional Return on Equity of 13.58 % would not change.

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FPL Response to the Commercial Groups 1st set of interrogatories, Question 4, Subpart (b)

Q. For the purposes of this interrogatory, refer to page 21 of the Morley Testimony.

(b) Please explain and describe in detail how FPL reconciles FPL's proposal to increase the customer and energy charge components of rate GSLD-1 and keep the demand charge at its present level with the statement that the GSLD-1 rate class has experienced relatively faster increases in its contribution to the peak than in its share of total kWh of energy since the 830465-EI case and that this suggests that the GSLD-1 rate class is accounting for an increasing share of demand related costs.

A.

(b) FPL's proposal to keep the demand charge at its present level while increasing customer and energy charges is supported on the basis that kWh sales is the best billing determinant available to track 12 CP costs *within* the GSLD-1 rate class. Long-term trends confirm that *within* the GSLD-1 class kWh sales tend to track increases in the class's 12 CP better than its billing KW demands.

**Correlation with 12 CP
GSLD-1 Load Research Sample Points**

kWh Sales (1)	97%
Billing kW (2)	93%

NOTES:

(1) Annual kWh Sales

(2) Monthly Customer Maximum Demands

Moreover, as shown below, increases in the class's billing kW have fallen far short of the increases in the class's 12 CP. Given the significant difference between the cumulative increases in kWh and 12 CP versus billing kW, kWh as a billing determinant is superior to billing kW.

GSLD-1

Cumulative Increases (1984 - 2006)

kWh Sales	153%
12 CP	162%
Billing kW	117%