

### Florida Power & Light Company, 215 S. Monroe St., Suite 810, Tailahassee, FL 32301

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May 16, 2006

### VIA HAND DELIVERY

Ms. Blanca S. Bayó, Director Division of the Commission Clerk and Administrative Services Florida Public Service Commission Betty Easley Conference Center, Room 110 2540 Shumard Oak Boulevard Tallahassee, Florida 32399-0850 NECEIVED PPSC SMAY 16 PM 4: 25 COMMISSION CLERK

Re: ERRATA SHEETS TO PREFILED DIRECT TESTIMONY /

NEED STUDY FOR ELECTRICAL POWER PLANT 2009

Docket No. 060225-EI - Petition for determination of need for West County Units 1 and 2 electrical power plants in Palm Beach County, by Florida

Power & Light Company

Dear Ms. Bayó:

Enclosed for filing on behalf of Florida Power & Light Company ("FPL") are the original and 15 copies of the following Errata Sheets:

MP OM TR		1.		ections to Steven R. Sim's prefiled direct testimony well as corrections to FPL's Need Study for Electrical
CR	ange hove system de manufacture (1940).	2.	Alan S. Taylor's Errata Sheet	to prefiled direct testimony filed on March 13, 2006.
iCL iPC	ang. And mengan tradem in Angel Ange	Please	contact me should you or you	r Staff have any questions regarding this filing.
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EC	THE RESERVE TO SERVE THE PROPERTY OF THE PROPE	FPSC-	BURBAU OF RECORDS	Natalie F. Smith

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Enclosures

cc: Parties of Record w/enclosures

DOCUMENT NUMBER-DAT

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# **CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true and correct copy of Florida Power & Light Company's Errata Sheets to Prefiled Direct Testimony has been furnished by United States Mail this 16<sup>th</sup> day of May, 2006 to the following:

Katherine E. Fleming, Esquire Florida Public Service Commission 2540 Shumard Oak Blvd. Gerald L. Gunter Building Tallahassee, FL 32399-0850

Natalie F. Smith

In re: Florida Power & Light Company's	)	
Petition to Determine Need for West	)	Docket No. 060225-EI
County Units 1 and 2 Electrical Power Plant.	)	

# **ERRATA SHEET**

I. DIRECT TESTIMONY OF: Steven R. Sim

PAGE #	LINE #	CORRECTION
25	13	Replace "either 2009 or 2010" with "2009, 2010, or 2011."
27	13	Insert "(except for system emission costs that were calculated using the Fixed Cost Spreadsheet Model)."
36	4	Replace "\$41" with "\$24."
Exhibit SRS-7		Replace SRS-7 with attached new version.

# II. NEED STUDY FOR ELECTRICAL POWER PLANT 2009

PAGE #	LINE #	CORRECTION
8		Replace Table II.B.2.1 with attached new version.
10		Replace Table II.B.4.1 with attached new version.

Difference

### **Economic Evaluation Results for Individual Proposals**

(millions, CPVRR, 2005\$, 2005 - 2037)

(note: assumes all Proposals are eventually declared as "eligible")

(1)	(2)	(3)	(4)	(5)	(6)	(7) = sum of
						(1) thru (6)

#### Transmission-Related Costs \* \*

										Difference
Individual Proposal Number	Type of Proposal	Proposal Summer MW	System Costs *	Integration	Peak Hour Capacity Losses	Annual Energy Losses	Upstream Gas Pipeline Costs * * *	Net Equity Adjustment	Total	from Lowest Cost Proposal
				77 27 27 22 22 2						
P1	25-yr PPA	1,050	106,442	0	0	0	0	117	106,559	0
P2	Sale of Unit	298	106,778	0	0	0	0	0	106,778	219
P3	15-yr PPA	298	106,873	0	0	0	0	12	106,885	326
P4	5-yr PPA	50	106,752	0	0	0	0	2	106,754	195
P5 * * * *	3-vr PPA	50								

<sup>\*</sup> Generation system results include: capital, fixed O&M, variable O&M, project fuel/energy cost, FPL system fuel, transmission interconnection, system emissions, and gas pipeline lateral costs.

<sup>\*\*</sup> These transmission-related costs (integration, losses, and impact on dispatch of Southeast Florida units) are not considered in the analysis of individual Proposals.

<sup>\* \* \*</sup> Upstream gas pipeline costs are also not considered in the analysis of individual Proposals.

<sup>\* \* \* \*</sup> Proposal P5 was eventually withdrawn by the Bidder.

Table II.B.4.1 (Revised)

# FPL's Purchased Power MW (Other than QF and Cogeneration MW)

	UF	PS *	Other Firm SJRPP Capacity Purchases		Total			
Year	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
2006	931	931	390	381	1 156	4.000	2 477	2 202
2006   2007	931	931	390	381	1,156 1.380	1,080   354	2,477 2,701	2,392 1,666
2008	931	931	390	381	576	576	1,897	1,888
2009	931	931	390	381	250	250	1,571	1,562
2010	931	930	390	381	0	0	1,321	1,311
2011	930	930	390	381	0	0	1,320	1,311
2012	930	930	390	381	0	0	1,320	1,311
2013	930	930	390	381	0	0	1,320	1,311
2014	930	930	390	381	0	0	1,320	1,311
2015	930	930	390	381	0	. 0	1,320	1,311

<sup>\*</sup> Contains original UPS contract amount through 5/2010 plus UPS replacement contract amount from 6/2010 through 2015.

Table II.B.2.1 (Revised)

# FPL's Firm Capacity & Energy Contracts with Cogeneration & Small Power Production Facilities

Project 	County 	Fuel	Capacity (MW)	In-Service Date	End Date 
Broward South	Broward	Solid Waste	50.6	4/1/91	8/1/09
			1.4	1/1/93	12/31/26
			1.5	1/1/95	12/31/26
			0.6	1/1/97	12/31/26
Broward North	Broward	Solid Waste	45.0	4/1/92	12/31/10
			7.0	1/1/93	12/31/26
			1.5	1/1/95	12/31/26
			2.5	1/1/97	12/31/26
Cedar Bay Generating Co.	Duval	Coal (CFB)	250	1/25/94	12/31/24
Indiantown Cogen., LP	Martin	Coal (PC)	330	12/22/95	12/01/25
Palm Beach SWA	Palm Beach	Solid Waste	47.5	4/1/92	3/31/10

	Winter MW	Summer MW
2006	738	738
2007	738	738
2008	738	738
2009	738	687
2010	687	640
2011	595	595

In re: Florida Petition to De County Units		
		ERRATA SHEET
DIRECT TES	STIMONY OF:	Alan S. Taylor
PAGE #	LINE #	CORRECTION
19	11	"\$38 million and \$71 million" changed to "\$21 million and \$63 million"
DOCUMENT	NO. AST-2	
11		Replace current page with attached new page.
15		Replace current page with attached new page.
18		Replace current page with attached new page.
<u> 19</u>		Replace current page with attached new page.

a clarification question from FPL, the proposer provided detailed annual estimates of this energy charge, predicated on a particular gas price forecast. This gas price forecast was slightly higher than FPL's forecast. Therefore, Sedway Consulting (and FPL) modified the proposer's energy charge estimates by incorporating FPL's lower gas price forecast into the estimates, thereby ensuring consistency in the evaluation process. This resulted in a slight reduction of the energy charges and made the proposal more economically attractive relative to the results associated with the proposer's estimates. The modified energy charges were used in the "Realistic" analysis for the P4 results; the original detailed annual estimates from the proposer were used in the "As Bid" analysis.

Gas supply and firm gas transportation costs: All gas-fired proposals and FPL resources were modeled with firm gas transportation costs as described in Table E.1-1 in FPL's RFP (and subsequently revised by FPL for P2 and P3 in April, 2006). One proposal, P1, had indicated that the facility's gas supply would be with Florida Gas Transmission (FGT); FPL determined that the facility could be connected with the Gulfstream pipeline if an additional 4 miles of pipeline were constructed. This would provide reliability, flexibility, and savings benefits in commodity and transportation costs. FPL estimated that the additional pipeline costs would be approximately \$16 million (in nominal 2010\$). The additional pipeline costs were used in the "Realistic" analysis for the P1 results; they were not were included in the "As Bid" analysis.

**Start-up costs:** The annual costs for starting up facilities (either outside proposers' or FPL options) were premised on FPL's assumption of six starts/year for intermediate/baseload proposals. For peaking resources, FPL assumed 100 starts/year. The start-up costs (along with start-up fuel requirements) were incorporated into the RSM as annual fixed costs.

## Portfolio Development and Cost Computation

#### **Individual Proposal Analysis**

In the first stage of the evaluation, the RSM was used to analyze individual resources. This analysis was based on the RSM calibration results that were embedded from EGEAS – the model that FPL used for its individual proposal analysis. The results of this analysis yielded a ranking of all outside proposals and the second of FPL's Next Planned Generating Units (i.e., Unit 2 in 2010), based on net levelized costs (in \$/kW-month). In addition, the RSM provided the net costs in total present value dollars for each resource. However, in order to conduct a total net cost comparison for each of the resources, it was necessary to recognize the different sizes of the resources and equalize the analysis by developing individual bid "portfolios." Each of these portfolios included one specific power supply option – with the rest of the 2009-2011 FPL capacity need met with the generic filler resource. These individual bid portfolios could then be compared on an apples-to-apples basis in the first stage of the evaluation. In addition to the individual bid total costs from the RSM, there were two additional cost elements that

	Sedway Consulting, Inc.	
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that EGEAS adds new resources in any year in which FPL's reserve margin drops below 20% – even if the shortfall is only 1 MW. If the new resource options are large facilities, this can lead to varying levels of surplus capacity in each year. However, FPL chose to use a relatively small future generic resource alternative (i.e., its 553 MW filler unit) so that the long-term expansion plans exhibited a "smoother" pattern.

As mentioned above, Sedway Consulting also reviewed and corroborated the calculations of many of the additional costs that were added to the core economic results that were produced by the EGEAS, P-MArea/Integrated Model, and RSM modeling. Specifically, Sedway Consulting confirmed the calculations of capacity-related costs associated with peak-hour transmission losses, energy-related costs associated with annual transmission losses, and the net equity adjustment values.

## **RSM Evaluation Results**

### Individual Proposal Analysis

Table 3 provides a ranking of the outside proposals from the Individual Proposal Analysis. For each proposal, the table shows the capacity, length of contract, the RSM's \$/kW-month net levelized fixed price (as described above), and the CPVRR differential of each portfolio relative to the lowest cost bid portfolio (i.e., that which included P1). The RSM results reflect the EGEAS-based production cost process under the Realistic scenario; the P-MArea-based ranking was the same. The RSM values reflect the core costs and operating characteristics of the proposed projects plus filler costs and the net equity adjustment; however, they do not include any transmission-related costs.

Table 3 Ranking of Outside Proposals Individual Bid Analysis						
Proposal	Summer Capacity (MW)	Term (years)	Net Levelized Fixed Price (\$/kW-month)	CPVRR Difference from Lowest Cost Bid (\$M)		
P1	1050	25	(\$5.79)	\$0		
P4	50	5	(\$3.47)	\$141		
P2	298	29	(\$0.92)	\$234		
Р3	298	15	\$0.96	\$288		

The 2010 West County Energy Center Unit 2 had a net cost of -\$11.50/kW-mo.

	<u> </u>	T	able 4 -	Continu	ied		
	Com	parison of Eval		Portfolio	s - Real	<u>istic Sce</u>	
			Net	I Ca	T	Not Cost	Difference from All-FPL Portfolio
İ				In-Service Year	Term	Net Cost (\$M)	(\$M)
Portfolio			(MW)	Tear	(years)	(\$141)	(31/1)
FPL	WCEC 1		1219	2009	28	N/A	
P1	SPC CC		1050	2010	25	\$125	
P2	PEV Sale		298	2009	28	\$137	
1	12, 54.0	Total:	2567		20	\$262	
		Surplus Capacity:	196			(\$99)	
Ì					Subtotal:	\$163	
		Transmission Integra	tion:			\$0	
		Capacity Losses:				\$12	
		Energy Losses:				\$62	
		Net Equity Adjustme	nt:			\$117	
				Net Total C	ost:	\$353	\$775
Portfolio	#1n					<u> </u>	
FPL	WCEC 1		1219	2009	28	N/A	
P1	SPC CC		1050	2010	25	\$125	
P3	PEV 15-y	r PPA	298	2009	15	\$166	
	12 10 )	Total:	2567	2009	15	\$291	
		Surplus Capacity:	196			(\$99)	
ì		ou.p.us oupuo	.,,		Subtotal:	\$192	
		Transmission Integrat	tion:			\$0	
		Capacity Losses:				\$12	
		Energy Losses:				\$62	
		Net Equity Adjustmen	nt:			\$129	
				Net Total C	ost:	\$395	\$816
Portfolio	#11						
FPL	WCEC 1		1219	2009	28	N/A	
FPL	WCEC 1		1219	2010	27	(\$377)	
P2	PEV Sale		298	2009	28	\$137	
1 2	I L V Saic	Total:	2736	2007	20	(\$240)	
		Surplus Capacity:	365			(\$160)	
		ourplus Cupucity.			Subtotal:	(\$400)	
		Transmission Integrat	ion:		2	\$0	
		Capacity Losses:				\$0	
		Energy Losses:				\$0	i
		Net Equity Adjustmen	nt:			(\$0)	
				Net Total C	ost:	(\$400)	\$21
D46-11	412						
Portfolio FPL			1219	2009	28	N/A	
FPL FPL	WCEC 1 WCEC 2		1219	2019	28 27	(\$377)	
P3	PEV 15-yr	r DD A	298	2010	15	\$166	
13	TEV 13-9	Total:	2736	2009	13	(\$210)	
		Surplus Capacity:	365			(\$160)	
		ourplus Capacity.	303		Subtotal:	(\$370)	
		Transmission Interest	ion:		Subtotal.	(\$370)	
		Transmission Integrat	IOII.			\$0 \$0	
		Capacity Losses:				<b>\$</b> 0	
		Energy Losses:	11.			\$12	
		Net Equity Adjustmen		Vat Tatal C	sat:	(\$359)	\$63
				Net Total Co	ost:	(3339)	\$03

Table 5 provides a portfolio ranking and compares the Realistic scenario results and As-Bid scenario results on a total cost differential basis (relative to the least-cost NPGU Portfolio #2). The table shows that the variations in input assumptions did not have a significant impact on the portfolio cost differences and had no impact on the ranking of the portfolios or the general conclusions of the analysis.

# Table 5 Comparison of Realistic and As-Bid Results Total Portfolio Cost Differentials (\$M, 2005 CPVRR)

Portfolio	Resources	Realistic Total Portfolio Costs	As-Bid Total Portfolio Costs
2	WCEC1, WCEC2	\$0	\$0
1	WCEC1, WCEC2, P4	\$15	\$17
11	WCEC1, WCEC2, P2	\$21	\$21
12	WCEC1, WCEC2, P3	\$63	\$63
5	WCEC1, P1	\$753	\$696
4	WCEC1, P1, P4	\$767	\$712
9	WCEC1, P1, P2	\$775	\$717
10	WCEC1, P1, P3	\$816	\$758

## **Conclusions**

Sedway Consulting performed an independent and parallel evaluation of the responses to FPL's 2005 resource RFP and concluded that the West County Energy Center Units 1 and 2 (the Next Planned Generating Units) represented the lowest-cost portfolio of options for meeting FPL's 2009-2011 resource needs. Under the Realistic scenario, this portfolio was found to be \$753 million (CPVRR) less expensive than the next cheapest portfolio that did not include both West County units. Additional proposed resources could be added to the NPGU portfolio but would only result in higher costs of at least \$15 million. Thus, the selection of such additional resources was not found to be cost-effective.

