

**BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION**

080203

**DOCKET NO. 08____-EI
FLORIDA POWER & LIGHT COMPANY**

**IN RE: FLORIDA POWER & LIGHT COMPANY'S
PETITION TO DETERMINE NEED FOR
WEST COUNTY ENERGY CENTER UNIT 3
ELECTRICAL POWER PLANT**

DIRECT TESTIMONY & EXHIBIT OF:

HEATHER C. STUBBLEFIELD

DOCUMENT NUMBER-DATE

02699 APR-88

FPSC-COMMISSION CLERK

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF HEATHER C. STUBBLEFIELD**

4 **DOCKET NO. 08 _____-EI**

5 **APRIL 8, 2008**

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

8 A. My name is Heather C. Stubblefield. My business address is 700 Universe
9 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) as Manager of
12 Project Development in the Energy Marketing and Trading Division.

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

15 A. I graduated from Auburn University with a Bachelor of Arts degree in Business
16 Administration in 1986. I joined El Paso Corporation (formerly Sonat
17 Corporation) in 1988, where I held various positions in Human Resources,
18 Internal Auditing and the Sonat Marketing Company. In 2003, I joined FPL
19 Group Resources as the Director of Marketing for liquefied natural gas (LNG)
20 initiatives. In 2005, I transferred to the Energy Marketing and Trading division
21 of FPL to support project development activities.

22 **Q. Please describe your duties and responsibilities as they relate to this docket.**

23 A. In my current position, I am responsible for evaluating gas transportation

1 alternatives for FPL's generation expansions. This includes evaluating proposals
2 from pipeline companies, negotiating terms and conditions, and executing
3 transportation agreements which are in the best interest of FPL's customers.

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

5 A. Yes. I am sponsoring Exhibit HCS-1, FPL's Fuel Cost Forecast, which is
6 attached to my direct testimony.

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

8 A. The purpose of my testimony is to present and explain: (1) the fossil fuel price
9 forecast used in the evaluation of FPL's self-build options to determine the best,
10 most cost-effective next planned generating unit (NPGU) and in the evaluation
11 of the NPGU and proposals received in response to FPL's 2007 Request for
12 Proposals (RFP) for firm capacity beginning in the June 2011 to June 2012 time
13 frame; (2) the proposed fuel and fuel transportation for West County Energy
14 Center Unit 3 (WCEC 3); (3) the firm natural gas transportation cost
15 assumptions used by FPL in the RFP evaluation; and (4) the improvement in
16 system efficiency and resulting fuel cost savings realized by the addition of
17 WCEC 3 in June 2011 as opposed to delaying a capacity addition until June
18 2013 when additional capacity would be needed to meet the 20% reserve margin
19 criterion.

20 **Q. Please summarize your testimony.**

21 A. FPL's fossil fuel price forecast reflects the projected supply, demand and price
22 for fuel oil, natural gas, coal, and petroleum coke, as well as, the transportation
23 of these fuels to the existing and proposed sites. FPL's long-term fossil fuel

1 price forecast is reasonable for the evaluation of FPL's NPGU and proposals
2 received in response to the RFP. This fuel price forecast was also used in FPL's
3 recent nuclear uprates need filing (Docket No. 070602) and in FPL's recent need
4 filing for two new nuclear units at Turkey Point (Docket No. 070650).

5
6 WCEC 3 will burn natural gas as its primary fuel source. FPL will supply
7 natural gas to WCEC 3 by utilizing its existing firm transportation rights on the
8 Gulfstream Natural Gas System's (Gulfstream) pipeline. In order to maintain
9 the deliverability of natural gas to FPL's existing facilities, FPL will acquire
10 sufficient additional firm natural gas transportation capacity on the Florida Gas
11 Transmission System (FGT) pipeline. Contracting for firm transportation with
12 FGT instead of acquiring additional transportation on Gulfstream offered FPL
13 two distinct advantages: (1) FGT's proposal for expansion was more cost-
14 effective; and (2) FGT's proposal for expansion provided more flexibility for
15 moving natural gas around FGT's system, which has the capability to deliver gas
16 to all of FPL's generation facilities with the exception of the West County
17 Energy Center (WCEC). Finally, WCEC 3 will utilize light fuel oil as a backup
18 fuel source in the event of a natural gas supply disruption. Light fuel oil will be
19 stored in sufficient quantities to allow the entire WCEC site to operate at full
20 capacity for seventy-two (72) hours of continuous operation.

21
22 The addition of WCEC 3 in June 2011, as opposed to delaying a capacity
23 addition until 2013 when additional capacity would be needed to meet the 20%

1 reserve margin criterion, will result in a reduction in natural gas and heavy oil
2 consumption during the 24-month period of approximately 31,600,000 MMBtu.
3 The 31,600,000 MMBtu reduction is composed of approximately 18,000,000
4 MMBtu of natural gas and 13,600,000 MMBtu (or approximately 2.125 million
5 barrels) of heavy oil. This reduction in natural gas and heavy oil consumption is
6 projected to provide a fuel savings benefit of \$273 million (\$ nominal) over the
7 24-month period.

8 9 I. FUEL FORECAST

10
11 **Q. What fossil fuel price forecast was used in the evaluation of FPL's self-build**
12 **options to determine its NPGU and in the evaluation of its NPGU and**
13 **proposals received in response to the RFP?**

14 A. FPL's July 31, 2007 update of its long-term fossil fuel price forecast was used in
15 the evaluation of FPL's self-build options to determine its NPGU and in the
16 evaluation of FPL's NPGU and proposals received in response to the RFP. This
17 fuel forecast was published for use by RFP participants shortly after FPL issued
18 the RFP and remained unchanged throughout the RFP evaluation process.

19 **Q. What was FPL's methodology for developing the forecast for fuel oil,**
20 **natural gas and solid fuel (coal and petroleum coke)?**

21 A. For fuel oil and natural gas commodity prices, FPL's forecast applied the
22 following methodology: (1) for 2007 through 2009, the methodology used the
23 July 31, 2007 forward curve for New York Harbor 1% sulfur heavy oil, U. S.

1 Gulf Coast 1% sulfur heavy oil and Henry Hub natural gas commodity prices;
2 (2) for the next two years (2010 and 2011), FPL used a 50/50 blend of the July
3 31, 2007 forward curve and projections from the PIRA Energy Group; (3) for
4 the 2012 through 2020 period, FPL used the annual projections from the PIRA
5 Energy Group; and (4) for the period beyond 2020, FPL used the rate of real
6 (constant dollar) price changes from the Energy Information Administration
7 (EIA). All constant dollar changes were then converted to nominal dollars using
8 a 2.5% annual escalation rate. In addition to the development of commodity
9 prices, price forecasts were also prepared for fuel oil and natural gas
10 transportation costs. The addition of commodity and transportation projections
11 resulted in delivered price forecasts.

12
13 Coal and petroleum coke prices were based upon the following approach: (1)
14 the price forecasts for Central Appalachian coal, South American coal, and
15 petroleum coke were provided by JD Energy; (2) the marine transportation rates
16 from the loading port for coal and petroleum coke to an import terminal were
17 also provided by JD Energy; (3) the terminal throughput fee was based on a
18 range of offers from comparable facilities throughout the southeast U.S.; and (4)
19 the rail transportation rates from Central Appalachia and from the import
20 terminal facility were based on the proposed rail transportation rates.

21 **Q. Please identify the key factors in forecasting the future price of fossil fuels.**

22 **A.** Future fuel oil and natural gas prices, and to a much lesser extent, coal and
23 petroleum coke prices, are inherently uncertain due to a significant number of

1 unpredictable and uncontrollable drivers that influence the short and long-term
2 prices of fuel oil, natural gas, coal, and petroleum coke. These drivers include:
3 (1) current and projected worldwide demand for crude oil and petroleum
4 products; (2) current and projected worldwide refinery capacity/production; (3)
5 expected worldwide economic growth, in particular in China and the other
6 Pacific Rim countries; (4) Organization of Petroleum Exporting Countries
7 (OPEC) production, the availability of spare OPEC production capacity and the
8 expected growth in spare OPEC production capacity; (5) non-OPEC production
9 and expected growth in non-OPEC production; (6) the geopolitics of the Middle
10 East, West Africa, the former Soviet Union, Venezuela, and other countries; (7)
11 the impact upon worldwide energy consumption of various factors including
12 worldwide environmental legislation and politics; (8) current and projected
13 North American natural gas demand; (9) current and projected U. S., Canadian,
14 and Mexican natural gas production; (10) the worldwide supply and demand of
15 LNG; and (11) the growth in solid fuel generation on a U.S. and worldwide
16 basis.

17 **Q. Is FPL's long-term fossil fuel price forecast reasonable for the evaluation of**
18 **capacity options such as FPL's NPGU and proposals received in response to**
19 **the RFP?**

20 A. Yes. FPL's long-term fossil fuel price forecast is reasonable for the evaluation
21 of FPL's NPGU and proposals received in response to the RFP. FPL's fuel price
22 forecasts reflect the projected supply, demand and price for fuel oil, natural gas,
23 coal, and petroleum coke, as well as, the transportation of these fuels to the

1 existing and proposed sites. This fuel cost forecast was also used by FPL in
2 Docket No. 070602 and Docket No. 070650.

3 **Q. Have you provided FPL's forecasts for the price of fuel oil, natural gas and**
4 **solid fuel?**

5 A. Yes. FPL's forecasts for the price of fuel oil, natural gas and solid fuel are
6 provided in Exhibit HCS-1.

7

8 **II. FUEL TYPE AND FUEL TRANSPORTATION**

9

10 **Q. What is the primary fuel type that will be utilized in WCEC 3?**

11 A. WCEC 3 will burn natural gas as the primary fuel source.

12 **Q. How will natural gas be supplied to WCEC 3?**

13 A. Natural gas will be supplied to WCEC 3 through the Gulfstream pipeline.

14 **Q. Has FPL contracted for additional firm natural gas transportation on the**
15 **Gulfstream pipeline to support WCEC 3?**

16 A. No. Although FPL will supply natural gas to WCEC 3 via the Gulfstream
17 pipeline, FPL will use its existing firm transportation rights on the Gulfstream
18 pipeline to supply WCEC 3.

19 **Q. How will the addition of WCEC 3 impact the deliverability of natural gas to**
20 **existing FPL facilities?**

21 A. FPL has contracted for additional firm natural gas transportation on the planned
22 Phase VIII expansion of the FGT pipeline to ensure the continued deliverability
23 of natural gas to FPL's existing facilities.

1 **Q. How does obtaining firm natural gas transportation on FGT help supply**
2 **WCEC 3 and ensure the continued deliverability of natural gas to FPL's**
3 **existing facilities?**

4 A. In essence, FPL is optimizing the current Gulfstream infrastructure as well as the
5 current and proposed FGT infrastructure to ensure efficient and economic gas
6 deliveries to FPL's generation fleet. FPL will be utilizing the gas transportation
7 on Gulfstream, previously designated for deliveries to FPL's Martin Plant
8 (Martin) located in Martin County, Florida and FPL's Manatee Plant (Manatee)
9 located in Manatee County, Florida, for WCEC 3. Martin is composed of five
10 generating units; two dual-fuel (natural gas/heavy fuel oil) conventional steam
11 units and three combined cycle units totaling approximately 3,600 MW.
12 Manatee is composed of three generating units; two dual-fuel (natural gas/heavy
13 fuel oil) conventional steam units and one combined cycle unit totaling
14 approximately 2,700 MW. FPL will utilize the new FGT gas transportation to
15 serve Martin and Manatee, replacing the Gulfstream capacity that is shifting to
16 WCEC 3. Currently, the Gulfstream pipeline completely supplies the Manatee
17 facility and partially supplies the Martin facility. Gulfstream will completely
18 supply WCEC Units 1 and 2 after the construction of those units is complete and
19 after Gulfstream completes its expansion into the WCEC. As part of FGT's
20 planned Phase VIII expansion, FGT will connect to Manatee and will also
21 connect to Martin through a west to east pipeline. The ability to supply Manatee
22 with FGT supply, and Martin with additional FGT supply, will enable FPL to
23 support WCEC 3 with its existing firm transportation rights on the Gulfstream

1 pipeline.

2 **Q. Why did FPL choose to contract for firm transportation with FGT instead**
3 **of acquiring additional transportation on Gulfstream?**

4 A. FGT's proposal for infrastructure expansion was more cost-effective than the
5 Gulfstream proposal and provided more flexibility to FPL for moving natural
6 gas around the FGT pipeline system, which has the capability to deliver gas to
7 all of FPL's generation facilities with the exception of the WCEC. Also, once
8 the FGT Phase VIII expansion is placed into service, Manatee will be directly
9 connected to both pipelines (Gulfstream and FGT), which will enhance the
10 reliability of supply to that facility. Martin will also experience an enhancement
11 to the reliability of supply, as the FGT expansion will add a third pipeline
12 connection from FGT into the facility.

13 **Q. Will WCEC 3 have a backup fuel source in the event of a natural gas supply**
14 **disruption?**

15 A. Yes. WCEC 3 will be capable of burning light fuel oil in the event of a natural
16 gas supply disruption. Light fuel oil will be trucked to the site and stored on-site
17 in sufficient quantities to allow the entire WCEC site to operate at full capacity
18 for seventy-two (72) hours of continuous operation.

1 **III. FIRM NATURAL GAS TRANSPORTATION ASSUMPTIONS**

2

3 **Q. What are the long-term firm natural gas transportation costs assumed by**
4 **FPL in its evaluation of FPL's NPGU and the proposals received in**
5 **response to the RFP?**

6 **A. For the purposes of the analysis, FPL developed an estimated transportation cost**
7 **of \$1.165 per MMBtu based on preliminary proposals from both FGT and**
8 **Gulfstream to evaluate FPL's NPGU and the proposals received in response to**
9 **the RFP.**

10

11 **IV. SYSTEM BENEFITS**

12

13 **Q. Does the addition of WCEC 3 in June 2011, as opposed to delaying a**
14 **capacity addition until June 2013 when additional capacity would be**
15 **needed to meet the 20% reserve margin criterion, provide a benefit to**
16 **FPL's system?**

17 **A. Yes. As described in the testimony of FPL witnesses Silva and Sim, bringing**
18 **WCEC 3 into service in June 2011 compared to bringing in-service a similar**
19 **combined cycle unit in June 2013 provides an economic advantage of \$460**
20 **million cumulative present value of revenue requirements in 2008 dollars**
21 **(CPVRR). On a more detailed level, the addition of WCEC 3 in June 2011, will**
22 **improve FPL's average system heat rate over the 24-month period (June 2011 to**
23 **June 2013) from 8,311 Btu/KWh to 8,194 Btu/KWh. This represents an overall**

1 system efficiency improvement of 117 Btu/KWh (1.4%) and a reduction in
2 natural gas and heavy oil consumption of approximately 31,600,000 MMBtu
3 over the 24-month period. The 31,600,000 MMBtu reduction is composed of
4 approximately 18,000,000 MMBtu of natural gas and 13,600,000 MMBtu (or
5 approximately 2.125 million barrels) of heavy oil. This efficiency improvement
6 is projected to result in approximately \$273 million (\$ nominal) in fuel cost
7 savings over the 24-month period, which is part of the \$460 million CPVRR in
8 projected customer savings attributed to beginning operations of WCEC 3 in
9 2011.

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

11 **A. Yes.**

FPL's Natural Gas Price Forecast

YEAR	ZONE 1 FGT	ZONE 2 FGT	ZONE 3 FGT	ZONE 3 MOBILE	GULFSTREAM		GULFSTREAM	GULFSTREAM		UPS REPLACEMENT	WILLIAMS -	PROGRESS	HENRY HUB
	FIRM	FIRM	FIRM	BAY/DESTIN	FIRM - SESH	FIRM - MOBILE	BAY	NON-FIRM	NON-FIRM BACKHAUL		TRANSKO ZONE 4		
	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU	\$/MMBTU
2008	\$8.72	\$8.83	\$9.00	\$9.04	\$9.38	\$8.58	\$8.82	\$9.41	\$9.81		\$8.56	\$9.13	\$8.45
2009	\$9.02	\$9.13	\$9.26	\$9.26	\$9.60	\$8.83	\$9.03	\$9.63	\$10.02		\$8.83	\$9.44	\$8.74
2010	\$8.22	\$8.33	\$8.46	\$8.46	\$8.80	\$8.05	\$8.25	\$8.84	\$9.24	\$8.18			\$7.96
2011	\$7.79	\$7.90	\$8.04	\$8.04	\$8.38	\$7.69	\$7.89	\$8.49	\$8.88	\$7.84			\$7.56
2012	\$7.17	\$7.28	\$7.41	\$7.41	\$7.75	\$7.07	\$7.28	\$7.87	\$8.26	\$7.22			\$6.96
2013	\$7.41	\$7.52	\$7.65	\$7.65	\$8.00	\$7.31	\$7.52	\$8.11	\$8.50	\$7.46			\$7.19
2014	\$7.76	\$7.87	\$8.00	\$8.00	\$8.34	\$7.65	\$7.86	\$8.45	\$8.85	\$7.81			\$7.53
2015	\$8.22	\$8.33	\$8.46	\$8.46	\$8.80	\$8.10	\$8.31	\$8.90	\$9.30	\$8.26			\$7.97
2016	\$8.47	\$8.58	\$8.71	\$8.71	\$9.05	\$8.35	\$8.55	\$9.15	\$9.54				\$8.21
2017	\$8.72	\$8.83	\$8.96	\$8.96	\$9.30	\$8.60	\$8.80	\$9.40	\$9.79				\$8.45
2018	\$8.97	\$9.08	\$9.22	\$9.22	\$9.56	\$8.85	\$9.05	\$9.65	\$10.04				\$8.70
2019	\$9.44	\$9.55	\$9.69	\$9.69	\$10.03	\$9.31	\$9.52	\$10.11	\$10.51				\$9.15
2020	\$9.92	\$10.03	\$10.16	\$10.16	\$10.50	\$9.78	\$9.98	\$10.58	\$10.98				\$9.61
2021	\$10.28	\$10.39	\$10.53	\$10.53	\$10.87	\$10.14	\$10.34	\$10.94	\$11.34				\$9.96
2022	\$10.66	\$10.77	\$10.90	\$10.90	\$11.25	\$10.51	\$10.72	\$11.31	\$11.71				\$10.33
2023	\$11.06	\$11.17	\$11.30	\$11.30	\$11.64	\$10.90	\$11.10	\$11.70	\$12.10				\$10.71
2024	\$11.46	\$11.57	\$11.70	\$11.70	\$12.05	\$11.30	\$11.50	\$12.10	\$12.50				\$11.10
2025	\$11.89	\$12.00	\$12.13	\$12.13	\$12.47	\$11.71	\$11.92	\$12.52	\$12.92				\$11.51
2026	\$12.32	\$12.43	\$12.56	\$12.56	\$12.91	\$12.15	\$12.35	\$12.95	\$13.35				\$11.93
2027	\$12.78	\$12.89	\$13.02	\$13.02	\$13.36	\$12.59	\$12.80	\$13.39	\$13.80				\$12.37
2028	\$13.25	\$13.36	\$13.49	\$13.49	\$13.83	\$13.06	\$13.26	\$13.86	\$14.26				\$12.82
2029	\$13.73	\$13.84	\$13.97	\$13.98	\$14.32	\$13.53	\$13.74	\$14.34	\$14.74				\$13.29
2030	\$14.24	\$14.35	\$14.48	\$14.48	\$14.82	\$14.03	\$14.24	\$14.83	\$15.24				\$13.78
2031	\$14.76	\$14.87	\$15.00	\$15.01	\$15.35	\$14.55	\$14.75	\$15.35	\$15.76				\$14.28
2032	\$15.31	\$15.42	\$15.55	\$15.55	\$15.89	\$15.08	\$15.29	\$15.88	\$16.29				\$14.81
2033	\$15.87	\$15.98	\$16.11	\$16.11	\$16.45	\$15.64	\$15.84	\$16.44	\$16.85				\$15.35
2034	\$16.45	\$16.56	\$16.69	\$16.69	\$17.04	\$16.21	\$16.42	\$17.01	\$17.43				\$15.91
2035	\$17.06	\$17.17	\$17.30	\$17.30	\$17.64	\$16.81	\$17.01	\$17.61	\$18.02				\$16.50
2036	\$17.68	\$17.79	\$17.93	\$17.93	\$18.27	\$17.42	\$17.63	\$18.23	\$18.64				\$17.10
2037	\$18.33	\$18.44	\$18.58	\$18.58	\$18.92	\$18.07	\$18.27	\$18.87	\$19.28				\$17.73
2038	\$19.01	\$19.12	\$19.25	\$19.25	\$19.59	\$18.73	\$18.93	\$19.53	\$19.95				\$18.38

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FPL's Solid Fuel Price Forecast

<u>YEAR</u>	ST. JOHNS			
	PLANT SCHERER DISPATCH PRICE WITHOUT SO2	RIVER POWER PARCK DISPATCH PRICE WITHOUT SO2	ICL DISPATCH PRICE WITHOUT SO2	CEDAR BAY DISPATCH PRICE WITHOUT SO2
	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>
2008	\$2.01	\$2.65	\$3.18	\$2.65
2009	\$2.06	\$2.66	\$3.16	\$2.68
2010	\$2.11	\$2.64	\$3.19	\$2.69
2011	\$2.17	\$1.97	\$3.23	\$2.07
2012	\$2.21	\$1.99	\$3.27	\$2.10
2013	\$2.25	\$2.02	\$3.19	\$2.13
2014	\$2.29	\$2.05	\$3.23	\$2.16
2015	\$3.00	\$2.08	\$3.27	\$2.19
2016	\$3.04	\$2.11	\$3.34	\$2.22
2017	\$3.08	\$2.14	\$3.42	\$2.25
2018	\$3.12	\$2.17	\$3.50	\$2.29
2019	\$3.17	\$2.21	\$3.59	\$2.32
2020	\$3.22	\$2.24	\$3.67	\$2.36
2021	\$3.27	\$2.28	\$3.75	\$2.40
2022	\$3.31	\$2.32	\$3.83	\$2.44
2023	\$3.35	\$2.36	\$3.91	\$2.48
2024	\$3.39	\$2.40	\$4.00	\$2.53
2025	\$3.44	\$2.44	\$4.14	\$2.57
2026	\$3.48	\$2.49	\$4.23	\$2.62
2027	\$3.53	\$2.53	\$4.32	\$2.67
2028	\$3.57	\$2.58	\$4.42	\$2.72
2029	\$3.62	\$2.63	\$4.52	\$2.77
2030	\$3.67	\$2.68	\$4.62	\$2.82
2031	\$3.72	\$2.73	\$4.73	\$2.87
2032	\$3.77	\$2.77	\$4.84	\$2.92
2033	\$3.83	\$2.82	\$4.95	\$2.97
2034	\$3.88	\$2.87	\$5.06	\$3.02
2035	\$3.94	\$2.92	\$5.17	\$3.08
2036	\$3.99	\$2.97	\$5.29	\$3.13
2037	\$4.05	\$3.02	\$5.41	\$3.18
2038	\$4.11	\$3.07	\$5.54	\$3.24

FPL's Heavy Oil Price Forecast

YEAR	PORT EVERGLADES			INDIAN RIVER TURKEY POINT & CANAVERAL			SANFORD 1%	RIVIERA 1%
	MARTIN 1%	1%	MANATEE 1%	1%	1%	1%		
	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>
2008	\$9.90	\$9.89	\$9.90	\$9.91	\$9.90	\$10.17	\$9.90	
2009	\$9.78	\$9.78	\$9.78	\$9.79	\$9.78	\$10.05	\$9.78	
2010	\$9.58	\$9.58	\$9.59	\$9.60	\$9.59	\$9.86	\$9.58	
2011	\$9.85	\$9.85	\$9.85	\$9.86	\$9.85	\$10.12	\$9.85	
2012	\$10.09	\$10.09	\$10.09	\$10.10	\$10.09	\$10.36	\$10.09	
2013	\$10.38	\$10.37	\$10.38	\$10.39	\$10.38	\$10.65	\$10.38	
2014	\$10.70	\$10.70	\$10.70	\$10.72	\$10.71	\$10.98	\$10.70	
2015	\$11.09	\$11.09	\$11.09	\$11.10	\$11.09	\$11.36	\$11.09	
2016	\$11.60	\$11.60	\$11.60	\$11.62	\$11.61	\$11.87	\$11.60	
2017	\$12.11	\$12.11	\$12.11	\$12.12	\$12.12	\$12.38	\$12.11	
2018	\$12.61	\$12.60	\$12.61	\$12.62	\$12.61	\$12.88	\$12.61	
2019	\$13.11	\$13.11	\$13.11	\$13.12	\$13.11	\$13.38	\$13.11	
2020	\$13.61	\$13.61	\$13.61	\$13.63	\$13.62	\$13.88	\$13.61	
2021	\$14.10	\$14.10	\$14.10	\$14.11	\$14.10	\$14.37	\$14.10	
2022	\$14.60	\$14.60	\$14.60	\$14.61	\$14.60	\$14.87	\$14.60	
2023	\$15.12	\$15.12	\$15.12	\$15.13	\$15.13	\$15.39	\$15.12	
2024	\$15.66	\$15.66	\$15.66	\$15.67	\$15.67	\$15.93	\$15.66	
2025	\$16.22	\$16.22	\$16.22	\$16.24	\$16.23	\$16.49	\$16.22	
2026	\$16.80	\$16.80	\$16.81	\$16.82	\$16.81	\$17.08	\$16.80	
2027	\$17.41	\$17.41	\$17.41	\$17.42	\$17.41	\$17.68	\$17.41	
2028	\$18.03	\$18.03	\$18.04	\$18.05	\$18.04	\$18.31	\$18.03	
2029	\$18.68	\$18.68	\$18.69	\$18.70	\$18.69	\$18.96	\$18.68	
2030	\$19.36	\$19.36	\$19.36	\$19.37	\$19.36	\$19.63	\$19.36	
2031	\$20.06	\$20.06	\$20.06	\$20.07	\$20.06	\$20.33	\$20.06	
2032	\$20.78	\$20.78	\$20.79	\$20.80	\$20.79	\$21.06	\$20.78	
2033	\$21.54	\$21.54	\$21.54	\$21.55	\$21.54	\$21.81	\$21.54	
2034	\$22.32	\$22.32	\$22.32	\$22.33	\$22.32	\$22.59	\$22.32	
2035	\$23.13	\$23.13	\$23.13	\$23.14	\$23.13	\$23.40	\$23.13	
2036	\$23.97	\$23.97	\$23.97	\$23.98	\$23.98	\$24.24	\$23.97	
2037	\$24.84	\$24.84	\$24.85	\$24.86	\$24.85	\$25.12	\$24.84	
2038	\$25.75	\$25.75	\$25.75	\$25.76	\$25.75	\$26.02	\$25.75	

FPL's Light Oil Price Forecast

YEAR	OLEANDER	PORT	LAUDERDALE	FT MYERS	PUTNAM	MARTIN &
	<u>\$/MMBTU</u>	EVERGLADES	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	WCEC
	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>	<u>\$/MMBTU</u>
2008	\$16.11	\$15.50	\$15.50	\$16.00	\$16.18	\$16.15
2009	\$15.85	\$15.24	\$15.24	\$15.75	\$15.93	\$15.89
2010	\$12.91	\$12.29	\$12.29	\$12.80	\$12.98	\$12.94
2011	\$13.09	\$12.47	\$12.47	\$12.98	\$13.16	\$13.12
2012	\$14.06	\$13.44	\$13.44	\$13.95	\$14.13	\$14.09
2013		\$13.95	\$13.95	\$14.46	\$14.64	\$14.60
2014		\$14.45	\$14.45	\$14.96	\$15.14	\$15.10
2015		\$14.93	\$14.93	\$15.43	\$15.61	\$15.58
2016		\$15.57	\$15.57	\$16.08	\$16.26	\$16.22
2017		\$16.23	\$16.23	\$16.73	\$16.91	\$16.88
2018		\$16.88	\$16.88	\$17.38	\$17.56	\$17.52
2019		\$17.54	\$17.54	\$18.04	\$18.22	\$18.19
2020		\$18.20	\$18.20	\$18.71	\$18.89	\$18.85
2021		\$18.82	\$18.82	\$19.33	\$19.51	\$19.47
2022		\$19.46	\$19.46	\$19.97	\$20.15	\$20.11
2023		\$20.13	\$20.13	\$20.63	\$20.81	\$20.78
2024		\$20.82	\$20.82	\$21.32	\$21.50	\$21.46
2025		\$21.53	\$21.53	\$22.03	\$22.21	\$22.18
2026		\$22.26	\$22.26	\$22.77	\$22.95	\$22.91
2027		\$23.02	\$23.02	\$23.53	\$23.71	\$23.67
2028		\$23.81	\$23.81	\$24.31	\$24.49	\$24.46
2029		\$24.62	\$24.62	\$25.13	\$25.31	\$25.27
2030		\$25.47	\$25.47	\$25.97	\$26.15	\$26.12
2031		\$26.34	\$26.34	\$26.84	\$27.02	\$26.99
2032		\$27.24	\$27.24	\$27.75	\$27.93	\$27.89
2033		\$28.18	\$28.18	\$28.68	\$28.86	\$28.82
2034		\$29.14	\$29.14	\$29.65	\$29.83	\$29.79
2035		\$30.14	\$30.14	\$30.65	\$30.83	\$30.79
2036		\$31.18	\$31.18	\$31.68	\$31.86	\$31.82
2037		\$32.25	\$32.25	\$32.75	\$32.93	\$32.89
2038		\$33.35	\$33.35	\$33.86	\$34.04	\$34.00