

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

**DOCKET NO. 060001-EI**

**FUEL AND CAPACITY COST RECOVERY  
FINAL TRUE-UP**

**JANUARY 2005 through DECEMBER 2005**

**MARCH 1, 2006**

**DIRECT TESTIMONY & EXHIBITS OF:**

**PAMELA R. MURPHY**



**Progress Energy**

DOCUMENT NUMBER-DATE

01789 MAR-1 8

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PROGRESS ENERGY FLORIDA

DOCKET No. 060001-EI

Fuel and Capacity Cost Recovery  
Final True-Up for the Period  
January through December, 2005

DIRECT TESTIMONY OF  
PAMELA R. MURPHY

March 1, 2006

1 Q. Please state your name and business address.

2 A. My name is Pamela R. Murphy. My business address is P. O. Box 1551,  
3 Raleigh, North Carolina 27602.

4  
5 Q. By whom are you employed and in what capacity?

6 A. I am employed by Progress Energy Carolinas, Inc., as Director, Gas & Oil  
7 Trading.

8  
9 Q: Have your duties and responsibilities remained the same since you  
10 last testified in this proceeding?

11 A: Yes

12  
13 Q. What is the purpose of your testimony?

14 A. The purpose of my testimony is to present the additional costs that  
15 Progress Energy Florida (PEF or Company) incurred for natural gas and  
16 No. 6 fuel oil due to storm events during the 2005 hurricane season. I will

1 also describe the Company's efforts to mitigate the effect of natural gas  
2 and oil supply interruptions caused by those storms.

3  
4 **Q. Please summarize your testimony.**

5 A. PEF's natural gas and fuel oil supplies were affected to different extents by  
6 the storm events of the 2005 hurricane season. Tropical Storm Cindy,  
7 Hurricane Dennis, Hurricane Katrina and Hurricane Rita interrupted natural  
8 gas production in the Gulf of Mexico causing PEF's contract ("term")  
9 suppliers to invoke *force majeure* provisions in their contracts. PEF used  
10 various means to mitigate the resulting impact on its natural gas supplies  
11 including replacement gas purchases on the spot market. Because the  
12 spot purchase prices were higher than term contract prices, PEF  
13 experienced higher total natural gas costs. This differential in prices  
14 caused PEF to incur \$45,528,816 of incremental natural gas costs. The  
15 Company also incurred No. 6 oil barge transportation charges of  
16 \$1,572,748 to provide supplemental supplies during the second half of  
17 October through the end of 2005. Thus, in total, PEF incurred \$47,101,564  
18 of incremental natural gas and No. 6 fuel oil costs as a result of the storm  
19 events of the 2005 hurricane season.

20  
21 **Q. Are you sponsoring any exhibits with your testimony?**

22 A. Yes. I am sponsoring Exhibit No. \_\_\_\_ (PRM-1), a table showing the  
23 calculation of total incremental natural gas costs attributable to 2005 storm

1 events and Exhibit No. \_\_\_ (PRM-2), a report of the Mineral Management  
2 Service entitled the "Hurricane Katrina/Hurricane Rita Evacuation and  
3 Production Shut-in Statistics"

4  
5 **Q. Which storm events during the 2005 hurricane season affected PEF's**  
6 **term natural gas supplies?**

7 A. During the 2005 hurricane season, four major storms affected term gas  
8 supplies for PEF: Tropical Storm Cindy affected term gas supplies from  
9 July 5<sup>th</sup> to the 7<sup>th</sup>; Hurricane Dennis affected term gas supplies from July 8<sup>th</sup>  
10 to the 13<sup>th</sup>; Hurricane Katrina affected term gas supplies from August 26<sup>th</sup>  
11 to September 19<sup>th</sup>; and Hurricane Katrina/Hurricane Rita affected term gas  
12 supplies from September 20<sup>th</sup> through October 17<sup>th</sup>. Hurricane Ophelia,  
13 Tropical Storm Tammy, and Hurricane Wilma affected the Florida area but  
14 PEF did not experience any gas supply interruptions during these storms.

15  
16 **Q. How did Tropical Storm Cindy, Hurricane Dennis, Hurricane Katrina**  
17 **and Hurricane Rita affect natural gas production in the Gulf of**  
18 **Mexico?**

19 A. To different degrees, these storms caused natural gas production in the  
20 Gulf of Mexico to be "Shut-in." (Shut-in occurs when natural gas is no  
21 longer flowing from the production platforms; in this case because the  
22 platforms were evacuated and production was turned off at the well-head.)  
23 According to the "Hurricane Katrina/Hurricane Rita Evacuation and

1 Production Shut-in Statistics" provided by the Mineral Management Service,  
2 a bureau of the U.S. Department of Interior, the total cumulative Shut-in  
3 gas production through January 9, 2006 because of Hurricane Katrina and  
4 Hurricane Rita was 581.7 Bcf. This equates to approximately 15.9% of the  
5 yearly production of gas in the Gulf of Mexico. A copy of the Mineral  
6 Management Service's Report is provided as Exhibit No. \_\_ (PRM-2).  
7

8 **Q. What effect did Tropical Storm Cindy, Hurricane Dennis, Hurricane**  
9 **Katrina and Hurricane Rita have on PEF's term gas supplies?**

10 A. Due to the Shut-ins caused by the storms, PEF's term gas suppliers  
11 invoked *force majeure* clauses in their contracts. Under *force majeure*,  
12 these suppliers were not obligated to perform, and PEF was not obligated  
13 to pay under the contracts. Total term gas supply interruptions attributable  
14 to *force majeure* events caused by Tropical Storm Cindy were 30,160  
15 decatherms (Dths) and 1.1 million Dths for Hurricane Dennis. For  
16 Hurricanes Katrina and Rita, total term gas supply interruptions caused by  
17 *force majeure* events were 6.5 million Dths. Exhibit No. \_\_ (PRM-1) shows  
18 the daily volumes of term natural gas supplies that were not delivered due  
19 to the *force majeure* events associated with Tropical Storm Cindy,  
20 Hurricane Dennis, Hurricane Katrina and Hurricane Rita.  
21

22 **Q. Are PEF's term gas suppliers obligated to make up the deliveries by**  
23 **providing additional natural gas in the future?**

1 A. No. Under the *force majeure* clauses in our supply contracts, suppliers are  
2 relieved of any obligation to perform for the period of the *force majeure*  
3 event and are not obligated to provide additional gas in the future.  
4

5 **Q. How did PEF mitigate term gas supply interruptions caused by**  
6 **Tropical Storm Cindy, Hurricane Dennis, Hurricane Katrina and**  
7 **Hurricane Rita?**

8 A. During each storm and its aftermath, PEF mitigated gas supply  
9 interruptions by: (1) purchasing replacement gas supplies from the spot  
10 market; (2) purchasing gas supplies from third party storage accounts; (3)  
11 utilizing three different 10-day storage daily call options for July through  
12 October; (4) utilizing fuel oil to the extent necessary for reliability purposes;  
13 and (5) working with Gulfstream Natural Gas System and Florida Gas  
14 Transmission to use existing gas in the pipelines to the extent operationally  
15 feasible to meet load (Operational Balancing Account).  
16

17 **Q. How does PEF's Operational Balancing Account on Gulfstream**  
18 **Natural Gas System help mitigate gas supply interruptions?**

19 A. PEF's Operational Balancing Account on Gulfstream Natural Gas System  
20 provides for a daily balancing mechanism to account for the difference in  
21 actual burns versus actual gas deliveries. When PEF has a positive  
22 imbalance in this account, we work with Gulfstream Natural Gas System to  
23 use this excess gas to supplement gas burns to the extent operationally

1 feasible on Gulfstream Natural Gas System's pipeline. PEF utilized this  
2 account to help mitigate the natural gas interruptions caused by Tropical  
3 Storm Cindy, Hurricane Dennis, Hurricane Katrina and Hurricane Rita.

4  
5 **Q. How did the storms of the 2005 hurricane season affect PEF's fuel oil**  
6 **supplies and how did the Company respond?**

7 A. During the 2005 hurricane season, the following storms affected fuel oil  
8 supplies for PEF: Tropical Storm Cindy affected fuel oil supplies from July  
9 5<sup>th</sup> to the 7<sup>th</sup>; Hurricane Dennis affected fuel oil supplies from 8<sup>th</sup> to the 10<sup>th</sup>;  
10 Hurricane Katrina affected fuel oil supplies from August 25<sup>th</sup> to the 29<sup>th</sup>;  
11 Hurricane Rita affected fuel oil supplies from September 20<sup>th</sup> to the 24<sup>th</sup>;  
12 and Hurricane Wilma affected fuel oil supplies from October 20<sup>th</sup> to the  
13 24<sup>th</sup>. Each of these storms caused interruptions of fuel oil deliveries to  
14 most of PEF's oil-fired plants and deliveries of petroleum products to  
15 Florida as a whole.

16  
17 Hurricanes Katrina and Rita caused delays to barge deliveries of No. 6 fuel  
18 oil that resulted in PEF inventories to decline after these storms. Thus,  
19 PEF procured additional barge transportation to supplement its normal  
20 contract barge supplies. From October 14th through November 9th, six  
21 supplemental barges were received by PEF at an extra cost of \$1,206,348.  
22 On November 10th, one of the barges that regularly delivers No. 6 fuel oil  
23 to PEF struck a submerged platform that was sunk by Hurricane Rita. This

1 barge is no longer available for charter service. As a result, PEF spent  
2 \$366,400 on supplemental barges from November 29<sup>th</sup> through year end  
3 2005. A total of \$1,572,748 of incremental No. 6 fuel oil transportation  
4 costs were incurred by PEF to supplement barge delivery capacity that was  
5 delayed or damaged as a result of the storms in 2005.  
6

7 **Q. How did you determine the incremental natural gas costs attributable**  
8 **to the 2005 storms?**

9 A. Additional natural gas costs attributable to the 2005 storms consist of  
10 incremental costs of spot gas purchases made to replace cuts in term  
11 supplies resulting from *force majeure* events. As shown on Exhibit No. \_\_  
12 (PRM-1), incremental natural gas costs were derived by multiplying the  
13 daily gas cost difference by the daily spot volume purchased to replace cuts  
14 in term supplies. The daily gas cost difference was calculated by  
15 subtracting the average spot natural gas cost from the average term gas  
16 cost for each day affected by the storms. The sum of the daily incremental  
17 gas costs reflects the total incremental gas cost of \$45,528,816 shown on  
18 Exhibit No. \_\_ (PRM-1).  
19

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

21 A. Yes  
22



**PEF 2005 STORM NATURAL GAS COSTS**

Date	A	B	C	D	E	F	G
	Contracted Natural Gas Volumes (MMBtu)	Contracted Natural Gas Volumes Force Majeured (MMBtu)	Spot Natural Gas Volumes to Replace Force Majeured Volumes (MMBtu)	Average Term Gas Cost \$/MMBtu	Average Spot Gas Cost \$/MMBtu	Gas Cost Difference \$ MMBtu	Incremental Natural Gas Cost (C*F)
<b>Tropical Storm Cindy Incremental Gas Cost</b>							
7/5/2005	290,380	1,274	1,274	\$6.260	\$7.490	\$1.230	\$ 1,567
7/6/2005	290,380	20,467	20,467	\$6.290	\$8.040	\$1.750	35,817
7/7/2005	290,380	8,419	8,419	\$6.330	\$8.170	\$1.840	15,491
	871,140	30,160	30,160				\$ 52,875
<b>Hurricane Dennis Incremental Gas Cost</b>							
7/8/2005	290,380	184,144	180,540	\$6.330	\$9.340	\$3.010	\$ 543,425
7/9/2005	290,380	263,487	208,540	\$6.380	\$9.860	\$3.480	725,719
7/10/2005	290,380	262,730	216,438	\$6.380	\$9.850	\$3.470	751,040
7/11/2005	290,380	258,550	248,242	\$6.380	\$9.840	\$3.460	858,917
7/12/2005	290,380	112,334	112,334	\$6.350	\$9.740	\$3.390	380,812
7/13/2005	290,380	12,734	10,509	\$6.330	\$8.200	\$1.870	19,652
	1,742,280	1,093,979	976,603				\$ 3,279,566
<b>Hurricane Katrina Incremental Gas Cost</b>							
8/26/2005	290,040	29,081	29,081	\$6.640	\$11.320	\$4.680	\$ 136,099
8/27/2005	290,040	189,046	189,046	\$6.770	\$13.010	\$6.240	1,179,647
8/28/2005	290,040	226,333	138,949	\$6.770	\$13.010	\$6.240	867,042
8/29/2005	290,040	264,753	59,189	\$6.770	\$13.460	\$6.690	395,974
8/30/2005	290,040	269,493	152,604	\$7.020	\$15.840	\$8.820	1,345,967
8/31/2005	290,040	270,183	234,180	\$7.040	\$17.070	\$10.030	2,348,825
9/1/2005	280,030	231,665	172,942	\$7.680	\$17.620	\$9.940	1,719,043
9/2/2005	280,030	225,949	72,280	\$7.680	\$17.260	\$9.580	692,442
9/3/2005	280,030	192,611	192,611	\$7.680	\$17.290	\$9.610	1,850,992
9/4/2005	280,030	181,054	181,054	\$7.680	\$17.290	\$9.610	1,739,929
9/5/2005	280,030	180,370	180,370	\$7.680	\$17.290	\$9.610	1,733,356
9/6/2005	280,030	178,277	178,277	\$7.680	\$17.290	\$9.610	1,713,242
9/7/2005	280,030	170,064	65,000	\$7.680	\$14.580	\$6.900	448,500
9/8/2005	280,030	151,301	50,000	\$7.680	\$13.820	\$6.140	307,000
9/9/2005	280,030	165,640	0	\$7.680	\$10.500	\$2.820	-
9/10/2005	280,030	164,816	66,959	\$7.680	\$12.250	\$4.570	306,003
9/11/2005	280,030	165,417	66,959	\$7.680	\$12.250	\$4.570	306,003
9/12/2005	280,030	161,497	161,497	\$7.680	\$12.680	\$5.000	807,485
9/13/2005	280,030	166,593	166,593	\$7.680	\$12.870	\$5.190	864,618
9/14/2005	280,030	169,712	153,807	\$7.680	\$12.680	\$5.000	769,035
9/15/2005	280,030	147,786	147,786	\$7.680	\$13.090	\$5.410	799,522
9/16/2005	280,030	129,704	129,704	\$7.680	\$13.930	\$6.250	810,650
9/17/2005	280,030	87,584	65,000	\$7.680	\$13.090	\$5.410	351,650
9/18/2005	280,030	87,874	64,806	\$7.680	\$13.090	\$5.410	350,600
9/19/2005	280,030	82,304	64,994	\$7.680	\$13.140	\$5.460	354,867
	7,060,810	4,289,107	2,983,688				\$ 22,198,492

PEF 2005 STORM NATURAL GAS COSTS

	A	B	C	D	E	F	G (C*F)
Date	Contracted Natural Gas Volumes (MMBtu)	Contracted Natural Gas Volumes Force Majeured (MMBtu)	Spot Natural Gas Volumes to Replace Force Majeured Volumes (MMBtu)	Average Term Gas Cost \$/MMBtu	Average Spot Gas Cost \$/MMBtu	Gas Cost Difference MMBtu	Incremental Natural Gas Cost
	Hurricane Katrina / Rita Incremental Gas Cost						
9/20/2005	280,030	148,709	95,169	\$7.680	\$14.540	\$6.860	\$ 652,859
9/21/2005	280,030	178,471	146,546	\$7.680	\$15.560	\$7.880	1,154,782
9/22/2005	280,030	188,518	188,518	\$7.680	\$17.210	\$9.530	1,796,577
9/23/2005	280,030	219,486	219,486	\$7.680	\$19.510	\$11.830	2,596,519
9/24/2005	280,030	227,689	227,689	\$7.680	\$21.170	\$13.490	3,071,525
9/25/2005	280,030	185,946	185,946	\$7.680	\$21.170	\$13.490	2,508,412
9/26/2005	280,030	191,700	191,700	\$7.680	\$21.170	\$13.490	2,586,033
9/27/2005	280,030	178,706	178,706	\$7.680	\$20.110	\$12.430	2,221,316
9/28/2005	280,030	149,593	113,376	\$7.680	\$18.410	\$10.730	1,216,524
9/29/2005	280,030	129,367	4,500	\$7.680	\$15.000	\$7.320	32,940
9/30/2005	280,030	113,346	5,500	\$7.680	\$15.810	\$8.130	44,715
10/1/2005	171,900	28,310	28,310	\$8.080	\$15.990	\$7.910	223,932
10/2/2005	171,900	26,490	26,490	\$8.080	\$15.990	\$7.910	209,536
10/3/2005	171,900	25,182	25,182	\$8.080	\$15.990	\$7.910	199,190
10/4/2005	171,900	26,282	26,282	\$8.080	\$16.090	\$8.010	210,519
10/5/2005	171,900	27,793	27,793	\$8.080	\$15.990	\$7.910	219,843
10/6/2005	171,900	30,242	30,242	\$8.080	\$16.180	\$8.100	244,960
10/7/2005	171,900	31,934	31,934	\$8.080	\$15.580	\$7.500	239,505
10/8/2005	171,900	22,969	22,969	\$8.080	\$14.780	\$6.700	153,892
10/9/2005	171,900	14,187	14,187	\$8.080	\$14.780	\$6.700	95,053
10/10/2005	171,900	14,187	14,187	\$8.080	\$14.780	\$6.700	95,053
10/11/2005	171,900	13,706	13,706	\$8.080	\$14.140	\$6.060	83,058
10/12/2005	171,900	12,182	12,182	\$8.080	\$14.380	\$6.300	76,747
10/13/2005	171,900	2,463	2,463	\$8.080	\$14.320	\$6.240	15,369
10/14/2005	171,900	2,640	2,640	\$8.080	\$13.960	\$5.880	15,523
10/15/2005	171,900	2,344	2,344	\$8.080	\$12.960	\$4.880	11,439
10/16/2005	171,900	2,354	2,354	\$8.080	\$12.960	\$4.880	11,488
10/17/2005	171,900	2,167	2,167	\$8.080	\$12.960	\$4.880	10,575
	6,002,630	2,196,963	1,842,568				\$ 19,997,883
TOTAL	15,676,860	7,610,209	5,833,019				\$ 45,528,816

NewsRoom  
 Phone: #3450  
 Date: January 5, 2006

Hurricane Katrina/Hurricane Rita  
 Evacuation and Production Shut-in Statistics Report  
 as of Monday, January 9, 2006

Next Report will be issued on Wednesday, January 11, 2006 at 1:00 PM CST  
 For information concerning the storm click on <http://www.mms.gov/>

Survey reflects 48 companies' reports as of 11:30 a.m. Central Standard Time.

Projects	Lake Jackson	Lake Charles	Lafayette	Houma	New Orleans	Total
Platforms Evacuated	1	33	21	4	41	100
Platforms Evacuated	0	0	0	0	0	0
BOPD Shut-in	722	37,493	44,298	45,854	273,892	402,259
Gas, MMCF/D Shut-in	65.2	412.83	415.61	266.73	695.19	1,855.56

*\*These statistics reflect evacuations and shut-in production from Hurricanes Katrina and Rita (remaining)\**

Due to the relatively small variations in the shut-in statistics, beginning Wednesday, January 11, 2006, MMS will issue Hurricane Katrina/Hurricane Rita Evacuation and Production Shut-in Statistics every 2 weeks. The report will be posted on the <http://www.mms.gov/> website at 2:00 p.m. EST on Wednesdays. In the past few days there has been minimal improvement in the production numbers and this appears to be a trend that will continue with incremental movement over the next several months.

Platform evacuations are equivalent to 12.21% of 819 manned platforms and 0.00% of 134 rigs currently operating in the Gulf of Mexico (GOM).

Today's shut-in oil production is 402,259 BOPD. This shut-in oil production is equivalent to 26.82 % of the daily oil production in the GOM, which is currently approximately 1.5 million BOPD.

Today's shut-in gas production is 1,856 BCFPD. This shut-in gas production is equivalent to 18.56% of the daily gas production in the GOM, which is currently approximately 10 BCFPD.

Cumulative shut-in oil production for the period 8/26/05-1/9/06 is 113,246,964 bbls, which is equivalent to 20.684% of the yearly production of oil in the GOM (approximately 547.5 million barrels).

Cumulative shut-in gas production 8/26/05-1/9/06 is 581.682 BCF, which is equivalent to 15.936 % of the yearly production of gas in the GOM (approximately 3.65 TCF).

The cumulative numbers reflect updated production numbers from all previous reports. The reports only represent input received by 11:30 a.m. CST. If a company does not report by 11:30 a.m. it is not included in the special information release, but it is included in the cumulative shut-in production. This may result in an apparent increase in the cumulative report amount.

Shutdowns for oil and gas production are standard procedures conducted by industry for safety reasons. Once facilities have been inspected and all standard safety procedures have been completed the production for these facilities will be brought back on line.

MMS will continue to update the shut-in statistics at 1:00 PM CST on Wednesdays until these statistics are no longer significant.

an agency of the U.S. Department of the Interior, manages offshore oil and gas exploration as well as renewable and alternative energy sources such as wind, geothermal, and solar on 1.76 billion acres of the Outer Continental Shelf while protecting the human, marine, and coastal environments. The OCS provides 30 percent of oil and 21 percent of natural gas produced domestically, and sand used for coastal restoration. MMS collects, accounts for, and disburses mineral lease proceeds from Federal and American Indian lands, and contributes to the Land and Water Conservation Fund and other special use funds, with Fiscal Year 2005 disbursements of approximately \$9.9 billion and more than \$153 billion since 1982.

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MMS would like to inform everyone that it activated its Continuity of Operations Plan (COOP) for Hurricane Rita on Thursday, September 22nd. To contact the MMS COOP team please call the COOP Operations Center at (281) 873-1962.

Incidents caused by Hurricane Rita are to be reported accordingly to the COOP team at the numbers provided above or faxed to (281) 873-1962. MMS employees should use the phone numbers on the GOM MMS Employee Emergency Information page.

Relevant Web Site:

[MMS Main Website](#)

Media Contact:

[Gary Strasburg \(202\) 208-3985](#)

[MMS: Securing Ocean Energy & Economic Value for America](#)  
[U.S. Department of the Interior](#)