

ORIGINAL



Florida Power

A Progress Energy Company

ASSOCIATE GENERAL COUNSEL

JAMES A. MCGEE

October 8, 2001

Ms. Blanca S. Bayó, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

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Re: Docket No. 010001-EI

Dear Ms. Bayó:

Enclosed for filing in the subject docket are an original and ten copies of the Direct Testimonies of Thomas R. Connolly, Pamela R. Murphy, Robert D. Niekum and Javier Portuondo.

Please acknowledge your receipt of the above filing on the enclosed copy of this letter and return to the undersigned. Also enclosed is a 3.5 inch diskette containing the above-referenced document in Word format. Thank you for your assistance in this matter.

Very truly yours,

James A. McGee

JAM/scc
Enclosure

cc: Parties of record

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FLORIDA POWER CORPORATION

DOCKET No. 010001-EI

**DIRECT TESTIMONY OF
THOMAS R. CONNOLLY**

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

2 A. My name is Thomas R. Connolly. My business address is Post Office Box
3 14042, St. Petersburg, Florida 33733.

4

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

6 A. I am employed by Florida Power Corporation (Florida Power or the Company)
7 in the capacity of Manger, Engineering Programs.

8

9 **Q. What are the duties and responsibilities of your position with Florida
10 Power?**

11 A. As Manager of Engineering Programs, I am responsible for engineering
12 programs, testing and inspection, and document management support for
13 Florida Power's fossil fuel generating units, as well as those owned by other
14 subsidiaries of Progress Energy located in North Carolina, South Carolina and
15 Georgia.

16

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

18 A. The purpose of my testimony is to address Issue 19E identified in the
19 Prehearing Officer's September 11, 2001 revised procedural order, regarding
20 the reasonableness of the replacement fuel costs associated with the

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1 unplanned outage at the Company's Crystal River Unit 2 (CR2) coal plant that
2 began on June 1, 2000 and concluded on September 6, 2000.

3

4 **Q. What caused the 14-week unplanned outage at CR2?**

5 A. The outage began when a high voltage disconnect switch between CR2's
6 generator and an auxiliary station service transformer failed, which resulted
7 in a high energy fault that caused significant damage to the generator rotor.

8 The 60 ton, 40-foot long rotor had to be removed from the generator and
9 shipped to the service facility of the generator vendor, General Electric, in
10 Jacksonville for repair and then to the vendor's major equipment facility in New
11 York for final testing and balancing. Finally, the rotor was shipped back to the
12 Crystal River plant site and reinstalled, and CR2 was then returned to service.

13

14 **Q. What were the replacement power costs associated with this unplanned
15 outage?**

16 A. Florida Power's response to Interrogatory No. 6 in Staff's first set of
17 interrogatories to the Company describes the production cost modeling study
18 that calculated total replacement fuel and purchased power costs of \$36.5
19 million associated with CR2's unplanned outage.

20

21 **Q. Could this outage have been avoided or its duration shortened?**

22 A. Based on what the Company has learned from the outage at CR2, I doubt that
23 the cause of this outage would occur today. Because of the outage, Florida
24 Power decided that, system wide, this type of switch will no longer be operated
25 while the related generating unit is on line. At the time CR2's outage occurred,

1 however, I can think of no reason why anyone on the plant's maintenance staff
2 could have foreseen that the operation of that particular switch, which had
3 been operated under similar circumstances many times, would lead to the
4 significant damage to the generator rotor that took place.

5 Regarding the duration of the outage, it was only through the persistence
6 of the Florida Power employees assigned to this project that a substantially
7 longer outage was avoided. The vendor's initial recommendation was that the
8 damage to the generator rotor was too extensive to be satisfactorily repaired
9 and would have to be replaced. An extensive search disclosed that no
10 existing replacement rotors suitable for use at CR2 were available. As a
11 result, a new rotor would have to have been manufactured, which would have
12 required the plant to be out of service for at least a year, and possibly as long
13 as 18 months. Instead, after the Florida Power representatives requested the
14 vendor to conduct additional evaluations of repair possibilities, a plan was
15 devised under which temporary repairs were made to the rotor that enabled
16 CR2 to be placed back in service in only three months. This plan also
17 allowed the time consuming process of obtaining a replacement rotor to take
18 place while the unit is in operation. Florida Power will then be able to install
19 the new rotor in conjunction with other required maintenance work during a
20 scheduled outage of the unit, which is currently planned for early 2002.

21
22 **Q. Please describe the specific events that led to this outcome.**

23 A. As I mentioned earlier, a high voltage disconnect switch failed during operation
24 on June 1, 2000, while attempting to place an auxiliary station service
25 transformer back in operation. The transformer had been taken out of service

1 several days earlier for maintenance and repair after sampling tests on the
2 transformer's oil indicated a high percentage of combustibles.

3 The switch failure caused a high-energy electrical fault to occur, which
4 tripped the generator off-line while the unit was operating at full load.
5 Recognizing that a fault of this type had the potential to damage to the turbine
6 generator and other components, a full visual inspection and test was
7 performed immediately on critical major system components, *i.e.*, the
8 generator stator, generator field rotor, step-up transformer, auxiliary
9 transformers and the steam turbine.

10 The initial inspection of the generator rotor conducted with video probe
11 instrumentation revealed significant surface damage that required further
12 inspection, which required that the rotor be removed from the stator. All other
13 major components showed relatively minor or no damage during the initial
14 inspection. After the rotor was removed from the stator, the rotor forging was
15 observed to have suffered serious electric arc strikes and metal spatter from
16 end to end.

17 Consequently, the decision was made to ship the rotor to GE's service
18 facility in Jacksonville for disassembly and further damage assessment.
19 Based on the results of this assessment, GE advised Florida Power that no
20 experiential repairs were available and that the rotor should be replaced. This
21 would have been a serious setback, since the availability of an existing
22 replacement rotor was uncertain and the need to manufacture a new rotor
23 would require a lengthy extension of CR2's unplanned outage. A subsequent
24 search disclosed that, in fact, no replacement rotors suitable for use at CR2
25 were available.

1 For this reason, Florida Power asked GE to conduct additional
2 evaluations to confirm whether concerns over the reliability, scope, and
3 limitations of repairs to the rotor precluded this alternative and required
4 replacement of the rotor. These evaluations involved extensive multiple tests
5 of hundreds of systematically selected locations on the surface of the rotor,
6 which were then repeated two, and in some cases, three times. Analysis of
7 the test results led to the conclusion that repairs could be made that would
8 allow the rotor to be used for limited period, thus avoiding the need to extend
9 CR2's unplanned outage until a replacement rotor could be obtained and
10 installed.

11 The rotor repairs were performed in the Jacksonville service shop under
12 the direction of specialists with GE Engineering from its headquarters in
13 Schenectady, New York. Upon completion of the repairs, a boresonic
14 evaluation of the rotor was performed, which confirmed that the rotor was
15 ready for final testing. The rotor was then shipped to GE's major testing
16 facility in Schenectady on August 7, 2000 for high-speed balancing and
17 dynamic thermal testing to insure that the rotor could be reliably returned to
18 service.

19 The work at the GE testing facility was completed on August 17th and the
20 rotor was shipped back at the Crystal River plant site, where it was received
21 on August 22nd. Florida Power maintenance crews were awaiting the rotor's
22 arrival and were able to complete the reinstallation of the rotor the same day.
23 After completion of start-up testing, CR2 was returned to service on
24 September 6th.

1 All of the repairs, shipping and testing of the rotor were performed on a
2 expedited basis. The overall generator rotor repair activity was the “critical
3 path” component for the entire outage and the activity was worked in this
4 manner to minimize its impact on the duration of the outage.

5

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

7 A. Yes.

FLORIDA POWER CORPORATION

DOCKET No. 010001-EI

**DIRECT TESTIMONY OF
PAMELA R. MURPHY**

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

2 A. My name is Pamela R. Murphy. My business address is Post Office Box 1551,
3 Raleigh, North Carolina 26702.

4

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

6 A. I am employed by Carolina Power & Light Company (CP&L) in the capacity of
7 Director, Gas & Oil Trading.

8

9 **Q. What are the duties and responsibilities of your position with CP&L?**

10 A. As Director of Gas & Oil Trading, my responsibilities include managing the
11 purchase, delivery and trading of natural gas, and the purchase and delivery
12 of fuel oil, for Florida Power Corporation (Florida Power or the Company), as
13 well as CP&L, North Carolina Natural Gas Corporation, and Monroe Power
14 Company. I am also responsible for oversight in all negotiations regarding
15 natural gas and oil contracts to meet the requirements of each of these
16 companies.

17

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

19 A. The purpose of my testimony is to address Issues 11 and 19D identified in the
20 September 11, 2001 revised procedural order, regarding the reasonableness

1 of steps taken by Florida Power to manage certain risks associated with its
2 fuel transactions. Because my responsibilities for Florida Power's fuel
3 transactions did not begin until the completion of its merger with Progress
4 Energy in December 2000, I will jointly sponsor this testimony with Mr. Robert
5 Niekum, who was responsible for these fuel transactions prior to the merger.

6 In this regard, I will sponsor those aspects of the testimony related to Florida
7 Power's post-merger risk management activities, and Mr. Niekum will sponsor
8 those aspects related to pre-merger activities.

9
10 **Q. Has Florida Power taken reasonable steps to manage the risks**
11 **associated with its fuel transactions through the use of physical and**
12 **financial hedging practices?**

13 A. Florida Power has not historically used financial hedging in its management
14 of fuel transaction risks. However, the Company has used a combination of
15 pricing options and physical inventory controls to manage these risks in a
16 reasonable manner. The discussion below addresses Florida Power's risk
17 management practices for residual and distillate oil transactions. The
18 Company's risk management practices for natural gas transactions will be
19 discussed in response to the question that follows.

20 Residual (Heavy or No. 6) Oil: Florida Power has used, and continues to
21 use, negotiated fixed pricing as a method of stabilizing prices. Usually, this is
22 accomplished by fixing prices on all or part of individual shipments or a series
23 of shipments to be delivered over a period of one to three months. As a
24 result, the Company has achieved an overall cost savings to its customers for
25 the period March 1999 through March 2001 of approximately \$3 million. Since

1 residual oil is not actively traded, there are fewer hedging options available for
2 this fuel. One key element in reducing price volatility is to build physical
3 inventory when distressed cargoes are available at reduced prices. Other
4 options include purchasing and blending multiple cargoes with varying
5 specifications. This allows individual, lower priced cargoes that may not meet
6 environmental restrictions to be mixed with compliance cargoes to achieve an
7 overall blended product that remains in compliance, yet has a lower average
8 price. In addition, Florida Power is in the market daily evaluating supply and
9 prices as it relates to short-term and long-term market indicators and trends.

10 This information is used to make decisions on purchasing residual oil at a
11 market index or fixed price as a means to obtain fuel at the lowest cost.

12 Distillate (Light or No. 2) Oil: Generally, the demand for distillate oil is
13 driven by simple-cycle combustion turbines used for peaking service. While
14 the volume of fuel consumed by these units can be very substantial, the
15 pattern of usage is difficult to predict since they operate mainly during periods
16 of critical demand, such as extreme weather conditions and unplanned
17 outages of major generating units. Price risk is primarily mitigated by inventory
18 control and the use of natural gas as an alternative fuel. Florida Power has
19 not used fixed pricing for distillate oil due to the difficulty in predicting future
20 inventory levels. Instead, to the extent that Florida Power can take advantage
21 of lower cost fuel, inventory is built up during periods of lower prices and
22 drawn down in higher price periods.

23 Florida Power has also taken measures to mitigate price volatility
24 associated with the limited availability of truck transportation during critical
25 demand periods. For example, the Company is in the process of converting

1 nine of its trucks currently used to transport transformer oil into “terminal
2 friendly” trucks, which will then be able to assist in transporting distillate oil
3 from the terminals to the plants during critical demand periods. While Florida
4 Power’s transportation requirements are usually met by the commercial
5 trucking industry under normal conditions, they do not find it financially
6 attractive in invest in the additional trucking capacity needed to meet the
7 Company’s occasional and unpredictable higher requirements during critical
8 demand periods, unless they receive a substantial premium. As a result,
9 critical demand periods are typically accompanied by limited availability of
10 trucking transportation for distillate oil and higher transportation charges for
11 the trucking capacity that is available. The availability of Florida Power’s own
12 “terminal friendly” trucks to assist in transporting distillate oil to various plant
13 locations will provide additional flexibility and cost savings to the Company and
14 its customers in meeting it peak load requirements.

15 Another innovative transportation measure to mitigate distillate oil price
16 volatility that Florida Power is currently evaluating involves the use of the off-
17 loading capabilities of fuel storage facilities at certain plants where natural gas
18 can be used in lieu of distillate oil. Utilizing this off-loading capability will allow
19 Florida Power to transport distillate oil from these dual fuel plants to other
20 plants that only use distillate oil. During periods of critical demand or supply
21 shortages of distillate oil, this will provide additional flexibility to Florida Power
22 in meeting its generation load requirements and, in some cases, minimizing
23 the need to pay higher fuel or transportation prices. Another benefit this will
24 provide is the ability to maximize the use of the Company’s oil tank storage

1 capacity if market indicators and trends show a continuing upward movement
2 in distillate oil prices.

3
4 **Q. Did Florida Power take reasonable steps to manage the risk associated**
5 **with changes in natural gas prices for the period March 1999 to March**
6 **2001?**

7 A. Yes, the actions taken by Florida Power to manage the risk of natural gas
8 price changes during this period were reasonable. These risk management
9 actions concerned the price of both natural gas transportation and natural gas
10 supply.

11 Natural gas transportation. Florida Power made arrangements for natural
12 gas transportation on the Florida Gas Transmission (FGT) system through a
13 variety of contracts, including long-term firm, short-term firm, and interruptible
14 contracts. Florida Power also contracted for delivered bundled gas supply for
15 its generation needs. Florida Power also was able to secure transportation
16 through low cost FTS-1 transportation contracts obtained in the capacity
17 release market. In addition, Florida Power actively negotiated with the
18 Gulfstream Natural Gas system to obtain capacity on a new competitive
19 interstate pipeline. This capacity augments our current portfolio of
20 transportation assets to provide more diverse and reliable alternatives to serve
21 it native load generation requirements.

22 Natural gas supply. Florida Power entered into contracts for the
23 procurement of natural gas supply with over 20 vendors that contained terms
24 ranging from 1 day to 15 years in duration. This portfolio approach avoided
25 dependence upon sole or limited vendors and encouraged bidding on a more

1 competitive basis. In general, the pricing for the Company's supply contracts
2 are based upon market indexes. However, Florida Power also negotiated
3 terms in a number of supplier contracts that allowed the parties to fix prices for
4 designated periods. This provided the ability to simulate a futures position by
5 locking into a future price for a designated period. These options were
6 exercised several times and resulted in substantial savings over the March
7 1999 - March 2001 period.

8 Since Florida Power is in the natural gas market on a daily basis either
9 procuring or selling supply in order to stay within daily operational balance on
10 FGT's system, it has been able to benefit from this market experience through
11 a better ability to identify and act upon developing trends in the industry. One
12 such market trend that the Company identified as it began in May, 2000 was
13 the potential for a bullish market based on expectations of increased gas
14 usage for power generation. This potential appeared even more promising
15 when coupled with another piece of market intelligence in the form of reports
16 that natural gas injections into underground storage facilities had decreased.
17 Eventually this sparked uncertainty over the adequacy of existing natural gas
18 reserves to meet the expected increase in power generation requirements
19 which, in turn, led to higher natural gas prices. Having recognized this trend
20 early, Florida Power was able to lock in a supply of approximately 35,000
21 MMBtu per day for the months of November 2000 through February 2001, well
22 before the full price increase occurred. This resulted in a cost savings for the
23 Company's customers of approximately \$11 million. Overall, Florida Power
24 achieved cost savings for its customers during the March 1999 - March 2001
25 period of over \$19 million.

1 **Q. Despite this positive experience, did Florida Power have any concerns**
2 **about these kinds of hedging transactions that caused it to be less**
3 **aggressive in taking similar action on other market trends anticipated by**
4 **the Company?**

5 A. Yes, Florida Power was reluctant to pursue these kinds of transactions more
6 aggressively in large part because of its uncertainty over the regulatory
7 treatment that they might receive, particularly since at least some of these
8 transactions undoubtedly will prove to be unsuccessful under even to best of
9 circumstances. To the extent that the Commission's consideration of hedging
10 practices in this proceeding results in a clear and fairly balanced policy on the
11 treatment of gains and losses associated with these kinds of transactions, this
12 reluctance on Florida Power's part can be eliminated.

13
14 **Q. Does this conclude your testimony?**

15 A. Yes.

FLORIDA POWER CORPORATION

DOCKET No. 010001-EI

**DIRECT TESTIMONY OF
ROBERT D. NIEKUM**

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

2 A. My name is Robert N. Niekum. My business address is Post Office Box
3 14042, St. Petersburg, Florida 33733.

4

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

6 A. I am employed by Florida Power Corporation (Florida Power or the Company).
7 Since the merger of Florida Power with Progress Energy in December 2000,
8 I have served in the capacity of Manager, Term Marketing - South. Prior to the
9 merger, I served as Florida Power's Director of Fuels Supply.

10

11 **Q. What were the duties and responsibilities of your former position with**
12 **Florida Power as Director of Fuels Supply?**

13 A. In my former position, I was responsible for managing the procurement of all
14 fossil fuel, including coal, residual and distillate oil, and natural gas, used at
15 Florida Power's generating facilities. My duties included responsibility for
16 negotiations regarding contracts for the purchase of fossil fuel to meet the
17 needs of these generating facilities.

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

2 A. The purpose of my testimony is to jointly sponsor the testimony submitted in
3 this proceeding by Ms. Pamela Murphy, which addresses Issues 11 and 19D
4 identified in the September 11, 2001 revised procedural order, regarding the
5 reasonableness of steps taken by Florida Power to manage certain risks
6 associated with its fuel transactions. In this regard, I will sponsor those
7 aspects of that testimony related to Florida Power's pre-merger risk
8 management activities, and Ms. Murphy will sponsor those aspects related to
9 post-merger activities.

10

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

12 A. Yes.

FLORIDA POWER CORPORATION

DOCKET No. 010001-EI

**SUPPLEMENTAL DIRECT TESTIMONY OF
JAVIER PORTUONDO**

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

2 A. My name is Javier Portuondo. My business address is Post Office Box 14042,
3 St. Petersburg, Florida 33733.

4

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

6 A. I am employed by Florida Power Corporation (Florida Power or the Company)
7 in the capacity of Manager, Regulatory Services.

8

9 **Q. Have the duties and responsibilities of your position with the Company**
10 **remained the same since you last testified in this proceeding?**

11 A. Yes.

12

13 **Q. What is the purpose of your supplemental testimony?**

14 A. The purpose of my supplemental testimony is to address Issues 12, 13 and
15 14 identified in the Prehearing Officer's September 11, 2001 revised
16 procedural order, regarding the appropriate regulatory treatment for the costs
17 and benefits resulting from various hedging activities by utilities in connection
18 with their fuel transactions.

1 **Q. How has Florida Power approached the use of hedging activities in**
2 **connection with its fuel transactions to date?**

3 A. Florida Power has been engaged for many years in traditional hedging
4 activities to mitigate volatility in the market price of the various types of fuel
5 used in its generating facilities. These activities include such basic hedging
6 practices as Florida Power's well established history of using long-term
7 contracts for the procurement of varying portions of its coal requirements, as
8 well as the hedging activities described in the testimony of Florida Power
9 witnesses Murphy and Niekum regarding natural gas and oil procurement.
10 However, Florida Power has taken a generally conservative approach to the
11 use of non-traditional hedging practices, such as futures and options
12 contracts, derivatives, and other financial instruments, which appear to be at
13 the focus of the Staff's hedging issues in this proceeding.

14

15 **Q. Why has Florida Power taken a conservative approach to the use of**
16 **these non-traditional hedging practices?**

17 A. Since the economic consequences of Florida Power's fuel procurement
18 activities are borne by its customers, these activities are obviously, and for
19 good reason, subject to considerable scrutiny by the Commission in the
20 ongoing fuel adjustment proceeding. In the absence of a Commission policy
21 on the appropriateness of these non-traditional hedging practices and
22 recovery of their costs, Florida Power has been reluctant to presume these
23 practices will be viewed with favor by the Commission. This reluctance is
24 heightened by the realization that, even under the best scenario, these
25 practices will occasionally result in higher costs.

1 **Q. What would be the appropriate regulatory policy for the Commission to**
2 **adopt regarding the treatment of the economic consequences**
3 **associated with the various practices that an investor-owned utility may**
4 **employ in hedging its fuel transactions?**

5 A. If the Commission decides, as I believe it should, to adopt a policy on the
6 treatment of the gains and losses, premiums paid and received, transaction
7 costs, and other economic consequences of the various hedging practices,
8 including those identified in Issues 12, 13 and 14, the policy should recognize
9 the reality that a utility's hedging activities, even if successful overall, will
10 necessarily involve some individual transactions in which the costs exceed the
11 benefits. The policy must therefore provide for the recovery of a utility's costs
12 associated with both successful and unsuccessful transactions, including
13 transactions such as those identified in Issue 12 that may result in an outright
14 loss. In this regard, the policy should be clear that the Commission's review
15 of a utility's hedging activities will be based on the reasonableness of those
16 activities at the time they were conducted, and not on the results of the
17 activities determined after the fact.

18 In addition, if the Commission determines that it wants to affirmatively
19 encourage utilities to proactively engage in hedging activities generally, or in
20 certain particular types of hedging activities, it should consider including an
21 explicit economic incentive in the policy. An incentive may be especially
22 appropriate in view of the utility resources and infrastructure required to deal
23 with the risks and complexity of many hedging activities. If the Commission
24 decides to explore the possibility of adopting a utility hedging incentive, the
25 workshop process may be an appropriate vehicle.

1 Q. Does this conclude your supplemental testimony?

2 A. Yes.

FLORIDA POWER CORPORATION

DOCKET NO. 010001-EI

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the Direct Testimonies of Thomas R. Connolly, Pamela R. Murphy, Robert D. Niekum and Javier Portuondo has been furnished to the following individuals by regular U.S. Mail this 8th day of October, 2001.

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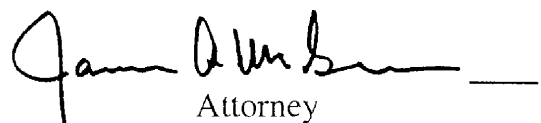
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