

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition for Determination of)
Need for the Osprey Energy Center in)
Polk County by Seminole Electric)
Cooperative, Inc. and Calpine)
Construction Finance Company, L.P.)

DOCKET NO. 001748-EC

FILED: December 4, 2000

DIRECT TESTIMONY AND EXHIBITS

OF

ROBERT L. WOODALL

ON BEHALF OF

SEMINOLE ELECTRIC COOPERATIVE, INC.

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FPSC-RECORDS/REPORTING

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**
2 **DIRECT TESTIMONY AND EXHIBITS OF ROBERT L. WOODALL**
3 **ON BEHALF OF SEMINOLE ELECTRIC COOPERATIVE, INC.**
4 **DOCKET NO. _____-EC**

5 **DECEMBER 4, 2000**

6
7 **Q. Please state your name, occupation, and business address.**

8 A. My name is Robert L. Woodall. I am employed by Seminole Electric Cooperative
9 as Manager of Fuel Supply. My business address is 16313 N. Dale Mabry
10 Highway, Tampa, Florida 33618.

11 **Q. Please describe your duties and responsibilities in that position.**

12 A. I am responsible for buying and transporting fuel to Seminole's facilities at
13 minimum cost; assuring that fuel quality is within specifications; maintaining
14 adequate inventories; and forecasting fuel prices.

15 **Q. Please summarize your background and experience.**

16 A. In the past fifteen years, I have managed a wide variety of fuel activities for
17 Seminole involving coal, distillate oil, and natural gas. My department conducts
18 daily operations to purchase and transport coal and distillate oil to the Seminole
19 plant. Under the terms of the agreement between TECO Power Services and
20 Seminole, pursuant to which Seminole has first call on 295 MW of the capacity of
21 the Hardee Power Station whenever certain Seminole plants experience outages or
22 deratings, Seminole is deeply involved in the procurement and transportation of fuel
23 to the Hardee plant. As a member of the team assigned by Seminole to carry out

1 those responsibilities, I have participated in many projects related to providing the
2 Hardee Power Station with a supply of natural gas and distillate oil. This includes
3 participating in the negotiation of natural gas pipeline capacity for the Hardee
4 Power Station, approving nominations of natural gas for Seminole's generation at
5 the Hardee Power Station, and approving gas and oil supply contracts proposed by
6 Hardee Power Partners. I managed Seminole's acquisition of firm, permanent,
7 relinquished capacity on the Florida Gas Transmission system pipeline to provide
8 transportation to Seminole's Payne Creek Generating Station, which is presently
9 under construction. I have also been designated Seminole's lead negotiator for
10 pipeline capacity from the proposed new pipelines which may come into Florida in
11 the future.

12 My education includes a Bachelor of Science degree in Process Engineering
13 from Western Michigan University and a Master of Science degree in Industrial
14 Management from Massachusetts Institute of Technology. During the 17 years
15 prior to joining Seminole, my work was concentrated in the energy field. At Dravo
16 Corporation, I was involved with the market studies and new business development
17 projects in the oil, gas and coal industries. For Valley Camp Coal Company, I was
18 responsible for all coal sales, marketing, transportation, and contract negotiations.

19 I have been responsible for preparing fuel forecasts which were used to
20 make major corporate decisions on numerous occasions over the past 25 years.

21 **Q. Have you previously testified before the Commission?**

22 A. Yes, I presented the fuel forecasts which supported the Commission's
23 determination of need for Hardee Power Station Unit #1 and #2, and the Payne

1 Creek Generating Station.

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

3 A. I will present the fuel price forecast that Seminole used in the economic evaluations
4 of available alternatives that led Seminole to identify the Osprey Energy Center
5 proposed by Calpine as the most cost-effective choice to meet Seminole's need for
6 capacity.

7 **Q. Are you sponsoring any exhibits to your testimony?**

8 A. Yes. Attached to my testimony are Exhibit Nos. ____ (RLW-1 - RLW-3) which
9 relate to our fuel forecast. In addition, I am sponsoring Section D of Volume I of
10 the Exhibits to the Joint Petition.

11 **FUEL PRICE FORECAST**

12 **A. Please describe the specific steps used in preparing the fuel forecast.**

13 A. The procedure reflects my conviction that fuel prices are a function of fundamental
14 relationships which establish long-term trends. While we may observe short-term
15 volatility in the price of a fuel, over time the underlying long-term trend will be
16 reestablished. Guided by this basic proposition, we followed similar steps to
17 develop the forecast for each fuel. First, we examined the long-term actual annual
18 price history and recent actual prices. Next, we examined industry trend data and
19 price forecasts by others. This review included information regarding past, present,
20 and future market trends, technological changes, government policy, OPEC
21 decisions, and other factors which influence energy prices. We then forecasted
22 prices for each fuel at its source based upon the unique set of factors that influence
23 the price for that fuel.

1 **Q. Please summarize the results of your price forecast.**

2 A. Exhibit No. __ (RLW-1) is a table showing Seminole's 10-year forecast of prices
3 for natural gas, distillate oil and coal at its source. Prices are forecast in nominal
4 dollars expressed as dollars per million BTU ("\$/mmBtu"). A base case forecast
5 is presented, as well as high range and low range forecasts.

6 This information is depicted graphically in Exhibit No. __ (RLW-2), which
7 is also included in Volume I of the Exhibits to the Joint Petition. The top three lines
8 on the graph illustrate the base case, high range and low range price of distillate oil
9 for the 10-year period of the forecast. In the base case, the distillate oil price starts
10 at \$4.33/mmBtu in 2000 and increases to \$4.86 mmBtu in nominal dollars in the
11 year 2009. Over this 10-year time period, the nominal distillate oil price grows at
12 an average rate of 1.16% per year. In 2004, when the proposed Osprey Energy
13 Center is scheduled to come on-line, the price of distillate oil is forecast to be
14 \$4.56/mmBtu in nominal dollars.

15 The middle three lines on the graph illustrate the base case, high range and
16 low range price of natural gas for the 10-year forecast time period. In the base case,
17 the natural gas price starts at \$2.34/mmBtu in 2000 and increases to \$2.90 mmBtu
18 in nominal dollars in the year 2009. Over this 10-year time period, the nominal
19 natural gas price grows at an average rate of 2.17% per year. In 2004, when the
20 proposed Osprey Energy Center is scheduled to come on-line, the price of natural
21 gas is forecast to be \$2.57/mmBtu in nominal dollars.

22 The bottom three lines on the graph illustrate the base case, high range and
23 low range prices of coal for the 10-year forecast time period. In the base case, the

1 coal price starts at \$0.82/MmBtu in 2000 and increases to \$0.90 mmBtu in nominal
2 dollars in the year 2009. Over this 10-year time period, the nominal coal price
3 grows at an average rate of 0.90% per year.

4 **Q. Have you compared the results of your natural gas forecast to forecasts made**
5 **by other parties? If so, what do those comparisons show?**

6 A. Yes, I have. Exhibit No. __ (RLW-3), which is also included in Volume I of the
7 Exhibits to the Joint Petition, shows Seminole's forecast of the wellhead price of
8 natural gas compared to the following four national forecasts:

9 American Gas Association - AGA

10 Data Resources International - DRI

11 Department of Energy, Energy Information Administration - EIA

12 Wharton Economic Forecasting Associates - WEFA

13 **Q. Please describe how you prepared Exhibit No. __ (RLW-3).**

14 A. Seminole obtained the data that was used to prepare this exhibit from the EIA
15 publication "Annual Energy Outlook 2000," which was published in December
16 1999. All forecast data was available only in real dollars. To prepare the
17 comparison, Seminole converted the data into nominal dollars.

18 Only the EIA forecast contained annual data. The earliest year covered by
19 the other forecasts is 2015. In order to compare the other forecasts to Seminole's
20 forecast in 2009, Seminole extrapolated from 2015 to 2009.

21 **Q. What does the comparison indicate with respect to the predicted price of**
22 **natural gas?**

23 A. At the start of the forecast time period in 2000, the EIA forecast is slightly below

1 the Seminole forecast. The EIA forecast shows prices increasing a little faster than
2 Seminole's forecast. In 2004, when Seminole will begin receiving energy from the
3 Osprey Energy Center both forecasts indicate a natural gas price of \$2.57/mmBtu.
4 At the end of the time period, EIA is indicating a price of \$3.35/mmBtu, which is
5 higher than any of the other forecasts depicted on the exhibit. The other forecasts
6 range from \$3.19 to \$3.08/mmBtu. Seminole forecasts a price of \$2.90/mmBtu for
7 that year. The highest forecast is only 15% above the lowest forecast. The
8 closeness of these forecasts provides confidence that Seminole's forecast is an
9 appropriate tool with which to make long-term decisions related to natural gas.

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

11 **A. Yes.**

Docket No. _____
Witness: Robert L. Woodall
Exhibit No. ____ (RLW-1)

FUEL PRICE FORECAST

WELLHEAD GAS U.S. GULF COAST PRICE NOMINAL \$/MMBTU

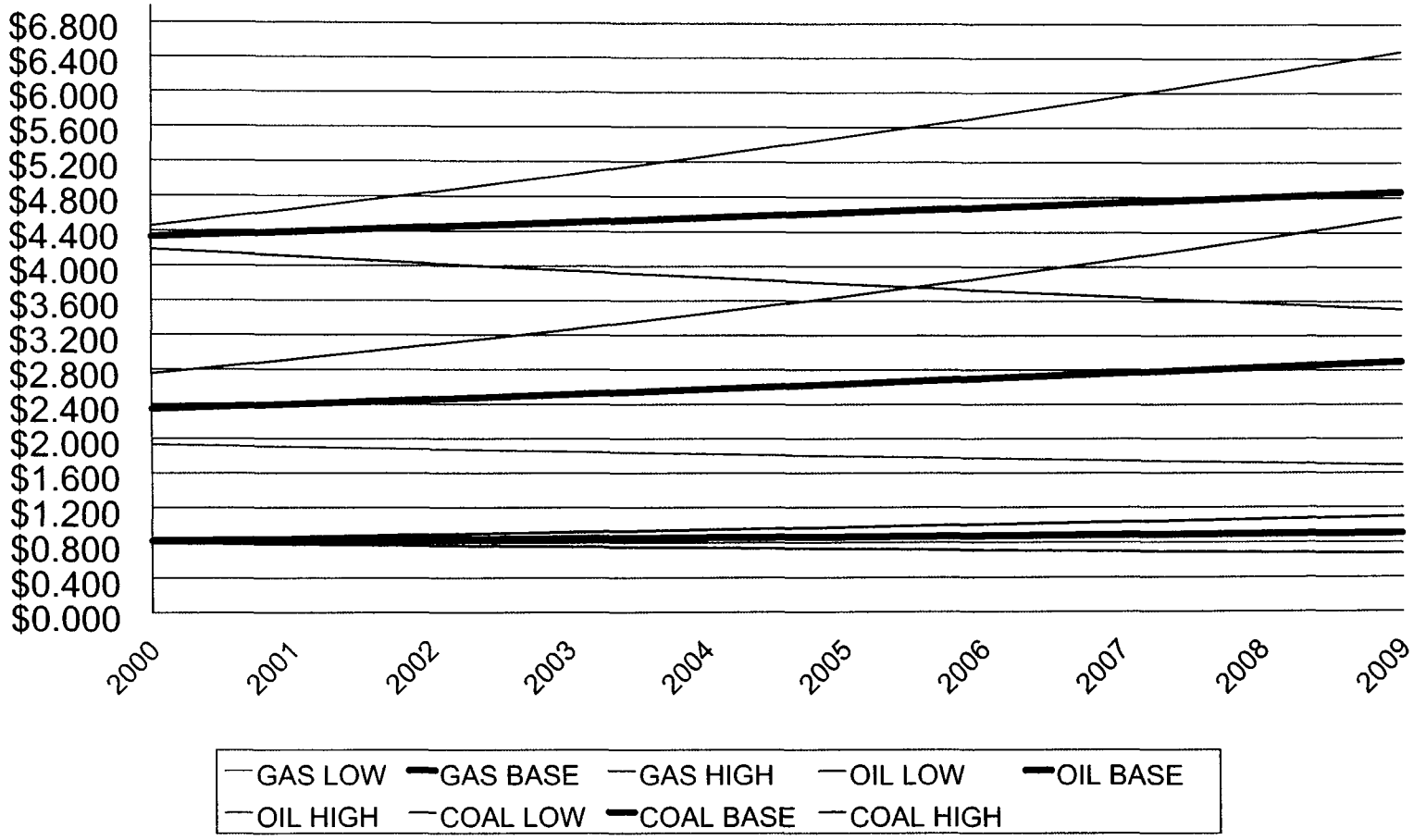
DISTILLATE FUEL OIL U.S. GULF COAST PRICE NOMINALS/MMBTU

<u>YEAR</u>	<u>LOW</u> <u>RANGE</u>	<u>BASE</u> <u>CASE</u>	<u>HIGH</u> <u>RANGE</u>	<u>LOW</u> <u>RANGE</u>	<u>BASE</u> <u>CASE</u>	<u>HIGH</u> <u>RANGE</u>
2000	\$1.932	\$2.341	\$2.757	\$4.193	\$4.331	\$4.457
2001	\$1.904	\$2.397	\$2.917	\$4.111	\$4.388	\$4.646
2002	\$1.877	\$2.454	\$3.087	\$4.031	\$4.445	\$4.844
2003	\$1.850	\$2.513	\$3.266	\$3.953	\$4.502	\$5.049
2004	\$1.823	\$2.573	\$3.456	\$3.876	\$4.561	\$5.264
2005	\$1.796	\$2.635	\$3.657	\$3.800	\$4.620	\$5.487
2006	\$1.770	\$2.699	\$3.869	\$3.726	\$4.680	\$5.720
2007	\$1.745	\$2.763	\$4.094	\$3.654	\$4.741	\$5.963
2008	\$1.719	\$2.830	\$4.332	\$3.583	\$4.803	\$6.216
2009	\$1.694	\$2.898	\$4.584	\$3.513	\$4.865	\$6.480

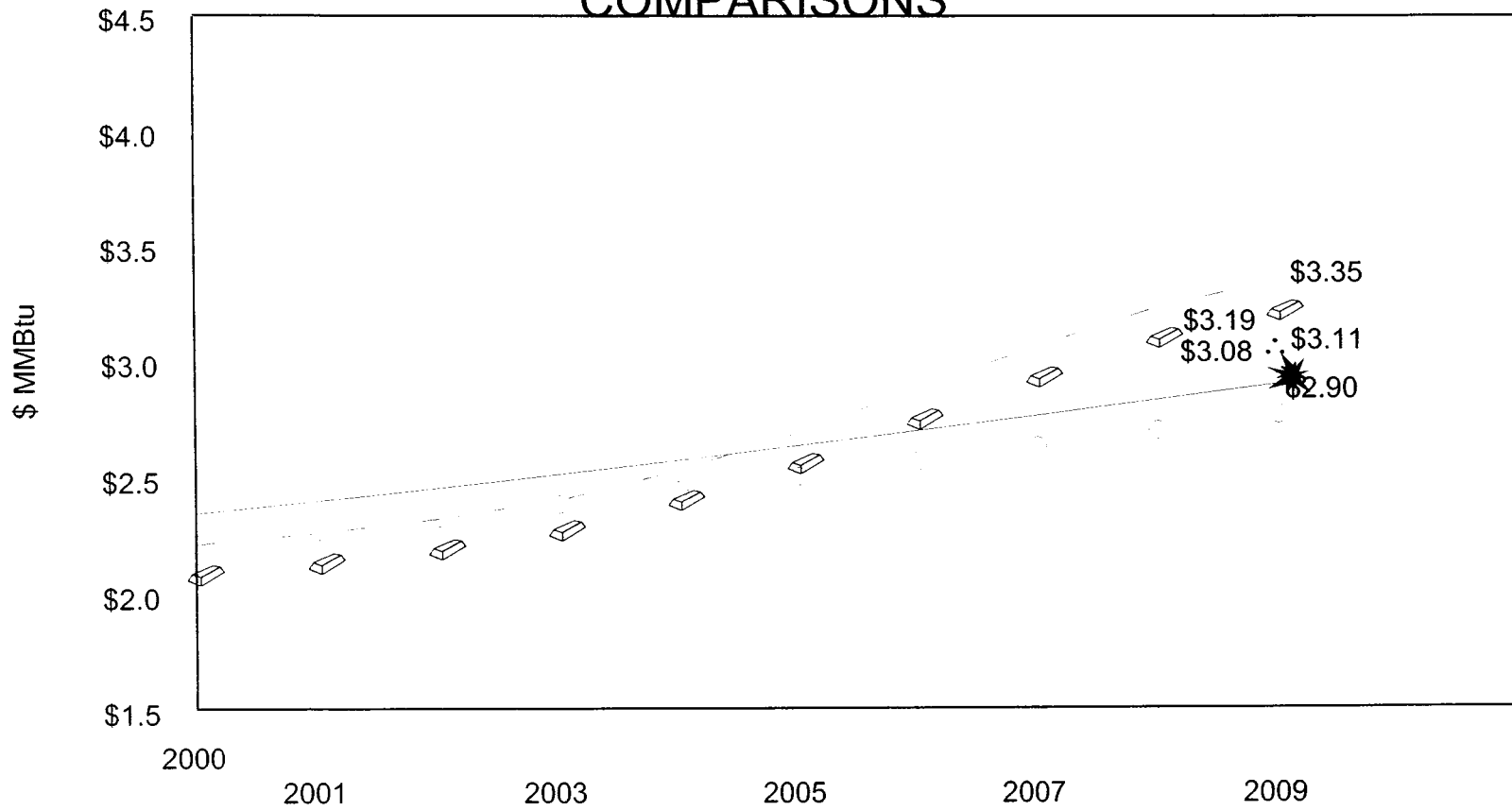
HIGH SULFUR COAL MINE MOUTH PRICE NOMINAL \$/MMBTU

<u>YEAR</u>	<u>LOW</u> <u>RANGE</u>	<u>BASE</u> <u>CASE</u>	<u>HIGH</u> <u>RANGE</u>
2000	\$0.804	\$0.825	\$0.844
2001	\$0.788	\$0.831	\$0.868
2002	\$0.773	\$0.838	\$0.893
2003	\$0.758	\$0.847	\$0.919
2004	\$0.743	\$0.855	\$0.946
2005	\$0.729	\$0.864	\$0.973
2006	\$0.715	\$0.874	\$1.002
2007	\$0.701	\$0.884	\$1.031
2008	\$0.687	\$0.893	\$1.061
2009	\$0.674	\$0.903	\$1.091

FUEL PRICE FORECAST



WELLHEAD NATURAL GAS FUEL PRICE FORECAST COMPARISONS



SECI Long Term Forecast (Base Case) EIA Forecast (1998) DRI Forecast (1999)
 WEFA Forecast (1999) AGA Forecast (1998)