BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Determination of Need of Hines Unit 3 Power Plant	)	DOCKET NO. 020953-EI
	)	Submitted for filing: September 4, 2002

DIRECT TESTIMONY OF PAMELA R. MURPHY

ON BEHALF OF FLORIDA POWER CORPORATION

JAMES A. MCGEE
Associate General Counsel
PROGRESS ENERGY SERVICE COMPANY, LLC
100 Central Avenue
St. Petersburg, Florida 33733
Telephone: (727) 820-5184
Facsimile: (727) 820-5519

GARY L. SASSO
Florida Bar No. 622575
JILL H. BOWMAN
Florida Bar No. 057304
W. DOUGLAS HALL
Florida Bar No. 347906
CARLTON FIELDS, P.A.
Post Office Box 2861
St. Petersburg, FL 33731
Telephone: (727) 821-7000
Telecopier: (727) 822-3768

IN RE: PETITION FOR DETERMINATION OF NEED

BY FLORIDA POWER CORPORATION

FPSC DOCKET NO. 020953-EI

DIRECT TESTIMONY OF PAMELA R. MURPHY

I. INTRODUCTION AND QUALIFICATIONS.

Q: Please state your name, your employer, and business address.

A. My name is Pamela R. Murphy and I am employed by Carolina Power & Light Company (CP&L). My business address is 410 South Wilmington Street, Raleigh, North Carolina 27601.

Q. Please state your position with CP&L and describe your duties and responsibilities in that position.

A. I am currently employed by CP&L as the Director of the Gas & Oil Trading Section in the Regulated Commercial Operations Department. I have held that position for a little over three (3) years. As the Director of Gas & Oil Trading, part of my responsibilities include the provision of certain services for Florida Power Corporation (Florida Power or Company), including the development and maintenance of the Company's fuel forecasts for gas and oil (fuel forecast); the procurement of residual fuel oil, distillate oil, and natural gas for Florida Power's

electrical power generation facilities; and the administration of Florida Power's gas and oil contracts with various suppliers.

Q. Please summarize your educational background and work experience.

A. I graduated in 1984 from West Virginian State College with a Bachelor's Degree in Accounting. I have been in the natural gas industry for approximately 27 years. My previous positions have been with several subsidiaries of the Columbia Energy Group (now known as Nisource, Inc.). Part of my experience was with the energy marketing and trading organization, Columbia Energy Services, where I was Vice President of Operations. Prior to this position, I was Director of Marketing for Columbia Natural Resources, the exploration and production company of the Columbia Energy Group.

In March 1999, I accepted a position in the Gas Supply & Transportation Department of CP&L as Manager, Gas Supply Procurement & Logistics. In December 2000, I was promoted to Director, Gas & Oil Trading. As such, I manage these activities for Florida Power and North Carolina Natural Gas Corporation.

II. PURPOSE AND SUMMARY OF TESTIMONY.

Q. What is the purpose of your testimony in this proceeding?

A. I am testifying on behalf of Florida Power in support of its Petition for Determination of Need by (1) generally describing and explaining the reasonableness of the fuel forecast developed by the Gas & Oil Trading Section, (2) identifying the types and amounts of fuel that Florida Power plans to use at Hines Unit 3, including the

expected availability of those fuels for that plant, and (3) generally describing the options available to transport the types and amounts of fuel the Company plans to use at Hines 3 to the Hines Energy Complex (HEC) where Hines 3 will be located.

Q. Are you sponsoring any sections of Florida Power's Need Study?

A. Yes, I am sponsoring "Fuel Supply and Transportation" in Section II, Description of Hines 3, and "Fuel Price Forecasts" under Other Planning Assumptions in Section III, Resource Need and Identification, of the Need Study.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes, I am sponsoring the following exhibits to my testimony:

PRM-1 Natural Gas Forecast Compared to Other Industry Forecasts

PRM-2 Base, High and Low Case Natural Gas Forecasts

PRM-3 Fuel Price Forecast for Hines

PRM-4 Gas Transportation Options

Each of these exhibits was prepared under my direction, and each is true and accurate.

Q. Please summarize your testimony.

A. The fuel forecast is prepared under my direction as Director of the Gas & Oil Trading Section in the Regulated Commercial Operations Department, and I am involved in the preparation of the forecast. Fuel forecasts and relevant fuel prices and their differentials are important economic factors in determining the kinds of new generation to be added to Florida Power's system. The fuel forecast projects both

short- and long-range prices for the various types and grades of fuel available to and used by Florida Power on its electrical generation system. The fuel forecast is based on an extensive review and a rigorous analysis of available and relevant information on fuel prices. The fuel forecast for Florida Power is reasonable and in line with the forecasts of other recognized industry sources.

Natural gas is the primary fuel planned for Hines 3. It is a readily available fuel source, given current and projected levels of long-term supply of natural gas in the United States; and, as a result, is an economical fuel source for Hines 3. Backup fuel for Hines 3 will be distillate oil, which is also readily available as a fuel source now and in the future.

Compared to coal and oil, natural gas is a clean burning fuel. As such, natural gas results in favorable construction capital costs and minimal air compliance issues relative to current and future environmental regulations.

The HEC is currently served by a connection to the Florida Gas Transmission Company (FGT) pipeline and Gulfstream Natural Gas System (GNGS). Florida Power is confident that it will be able to arrange for all of the firm gas transportation service it will require for Hines 3 in time to meet the expected in-service date for that unit.

Q. Do you have an opinion about natural gas as a fuel source for Hines 3?

A. Yes. Natural gas is and will be a competitively-priced fuel source for Hines 3 compared to other types of fuel and generation technologies, based on the forecast of natural gas price trends compared to oil and coal price trends. It is also an attractive

fuel source because, compared to coal and oil, it is a clean burning fuel. This has a favorable impact on the capital cost of constructing generating facilities capable of complying with current and future environmental regulations, including the Clean Air Act, and can minimize Florida Power's overall sulfur emissions in order to comply with the Clean Air Act.

Furthermore, based on our experience and in our professional judgment, and based also on other widely recognized and generally accepted fuel forecasts, the projected prices for natural gas and No. 2 Fuel Oil in the fuel forecast reasonably reflect Florida Power's future fuel costs.

Exhibit ___ (PRM-1) shows Florida Power's natural gas forecast along with the natural gas forecasts of other widely recognized and generally accepted third-party sources. As demonstrated by this exhibit, Florida Power's natural gas forecast is in line with the natural gas forecasts of the third-party sources reported there.

III. FLORIDA POWER'S FUEL FORECAST.

Q. Why do you develop a fuel forecast?

A. Fuel forecasts are an integral part of our planning and operations. Relevant fuel prices and their differentials are important economic factors in determining the kinds of new generation to be added to Florida Power's system. Additionally, fuel prices are relevant to the determination of the most efficient method of operating existing and proposed generating units on Florida Power's system in compliance with environmental and system requirements.

Q. Please describe the methodology behind Florida Power's gas and oil fuel forecasts?

A. Florida Power uses Energy Ventures Analysis, Inc. (EVA) as a forecasting consultant service for both oil and gas forecasting. EVA periodically provides us a forecast for the various fuels that potentially could be used at Florida Power's existing and future generation plants. Those fuels are oil (2.5 percent sulfur, 1.5 percent sulfur, 1.0 percent sulfur residual fuel oil, and No. 2 fuel oil) and natural gas.

Using the EVA forecast as a starting point, we consider other widely recognized and generally accepted third-party sources of information relevant to the projected supply and price of each fuel, combined with our historical experience with fuel prices, to arrive at a final forecast. The final forecast includes a base case, which is considered the most likely scenario, as well as a high and low forecast for each fuel.

For the gas forecast, in addition to the EVA base forecast, we also consider available data from other sources such as the Energy Information Administration (EIA), Cambridge Energy Research Associates (CERA), New York Mechantile Exchange (NYMEX) futures, and current market prices.

For oil, in addition to the base EVA forecast, we use available EIA forecasts, NYMEX futures market prices, current contracts, and current market data. As previously noted, the final forecast for oil or gas reflects our best professional judgment of future costs at that time based on all the factors considered.

Once a fuel forecast is prepared, it is periodically reevaluated against various standard third-party fuel price forecasts, developments, and trends with respect to each fuel type to verify that Florida Power was and is reasonable in developing its fuel forecasts. When and if necessary, Florida Power will adjust its fuel forecast to take into account changes in the fuels markets. A chart of Florida Power's base, low, and high natural gas price forecast is shown in Exhibit ____ (PRM-2). This forecast was developed in February 2002 and is the forecast upon which the April 2002 TYSP is based.

Gas transportation costs for Florida, including fixed and variable components, are estimated based upon the prevailing tariff rate and agreements for service on the FGT and GNGS with expected escalation. Similarly, oil transportation costs are estimated based on existing contracts and expected escalation. Exhibit ____ (PRM-3) presents the base oil and gas forecast, including variable transportation, applicable to Hines 3. In addition to the variable transportation costs included in this exhibit, a fixed transportation cost is also applicable to natural gas for Hines 3. The fixed natural gas transportation cost used in the TYSP was $0.63/MMBtu.

IV. FUELS FOR THE HINES 3 UNIT.

Q. Please describe the types and amounts of fuels Florida Power expects to use for the Hines 3 unit.

A. The Hines 3 unit will be a state-of-the-art combined cycle unit similar to the Hines 1 and 2 units. Hines 3, like Hines 1 and 2, will operate primarily on natural gas. At

peak operation, Hines 3 would require approximately 97,000 million British thermal units (MMBtu) of gas a day, and its average use will be around 55,000 MMBtu per day. With the ability to obtain gas from two interstate gas pipelines, the expected need for backup fuel is minimal; however, the Hines 3 unit will be constructed so that distillate oil can be used as a backup fuel. Distillate fuel oil will be available from the existing storage facility currently in place to serve Hines 1 and 2.

Q. Will Florida Power be able to obtain sufficient natural gas supplies for Hines 3 at a reasonable cost?

A. Yes. The natural gas exploration and production industry, in this country and in Canada, is engaged in aggressive efforts to maintain and expand the North American natural gas reserve base, spurred by both greater demand for gas and higher gas prices. Florida is situated close to significant existing and potential gas reserves in Louisiana, Mississippi, and Alabama. In addition, there is a substantial amount of exploration and development activity going forward in the deeper waters of the Gulf of Mexico, where large new gas reserves have been and are expected to be discovered and developed. These supply sources have, and will continue to have, access to FGT and/or GNGS pipelines.

Consequently, transportation distances for natural gas into Florida are now relatively short and have resulted in lower transportation costs for gas sold for consumption in Florida. Based on supply availability and lower transportation costs, I am confident that sufficient gas can be provided for Hines 3 at a reasonable cost.

Q. Has Florida Power signed any contracts or letters of intent for its gas supply to Hines 3?

A. At this point, it would be premature, potentially costly, and unnecessary for Florida Power to enter into contracts for either short- or long-term gas supplies. Most suppliers would insist that Florida Power make significant "up-front" payments and/or "stand-by" payments in return for a commitment of their reserves at this time to Hines 3. Based on our fuel forecast and gas procurement experience, we are confident that the cost of gas supply for Hines 3 can be contracted for at competitive prices as the facility's in-service date draws nearer, so that supplier(s) will receive immediate cash flow from the supply contract(s).

Q. Will Florida Power be able to obtain short- and long-term gas supply contracts in time for the commercial operation of Hines 3?

A. Yes. The Company plans to enter into contractual arrangements for firm transportation capacity for Hines 3 well prior to the commencement of commercial operation of Hines 3. The Company plans to enter into contractual arrangements for firm gas supply for delivery to Hines 3 approximately six to eight months prior to the commencement of commercial operation of Hines 3. The Gas & Oil Trading Section has developed and maintains gas supply relationships with a number of gas producers and gas marketers, and anticipates no difficulty in obtaining contracts for gas supplies adequate for Hines 3 on competitive terms and conditions at market-based prices. In all likelihood, we will enter into a portfolio of gas supply contracts of varying terms

to meet the Hines 3 requirements in order to achieve the lowest cost of fuel consistent with reliable availability.

As discussed more fully below, we expect to contract on a long-term firm basis for gas transportation capacity needed to support Hines 3 gas requirements, although we may enter into one or more supply contracts under the terms of which the gas supplier arranges for the delivery of the gas to the HEC for Hines 3.

V. FUEL TRANSPORTATION FOR HINES 3.

Q. Will Florida Power be able to obtain sufficient and reliable transportation service for the Hines 3 gas supplies?

A. Yes. As reflected by Exhibit ___ (PRM-4), FGT has constructed its Phase IV pipeline expansion wherein Florida Power has subscribed for firm capacity for its existing gas-fired generation fleet. FGT has also completed its Phase V pipeline expansion and is currently working on one additional expansion, Phase VI, which will provide additional gas transportation capacity to the Florida gas markets. On May 28, 2002, GNGS was placed in service. Florida Power has three existing generation sites connected directly to GNGS. Further, El Paso Energy Corporation has proposed a pipeline project, the Cypress pipeline, to transport gasified liquefied natural gas (LNG) from its Elba Island LNG terminal located in Savannah, Georgia, to an interconnection with FGT in north Florida. Florida Power has discussions ongoing with FGT, GNGS, and Cypress, concerning the Company's requirements for firm gas transportation capacity for Hines 3.

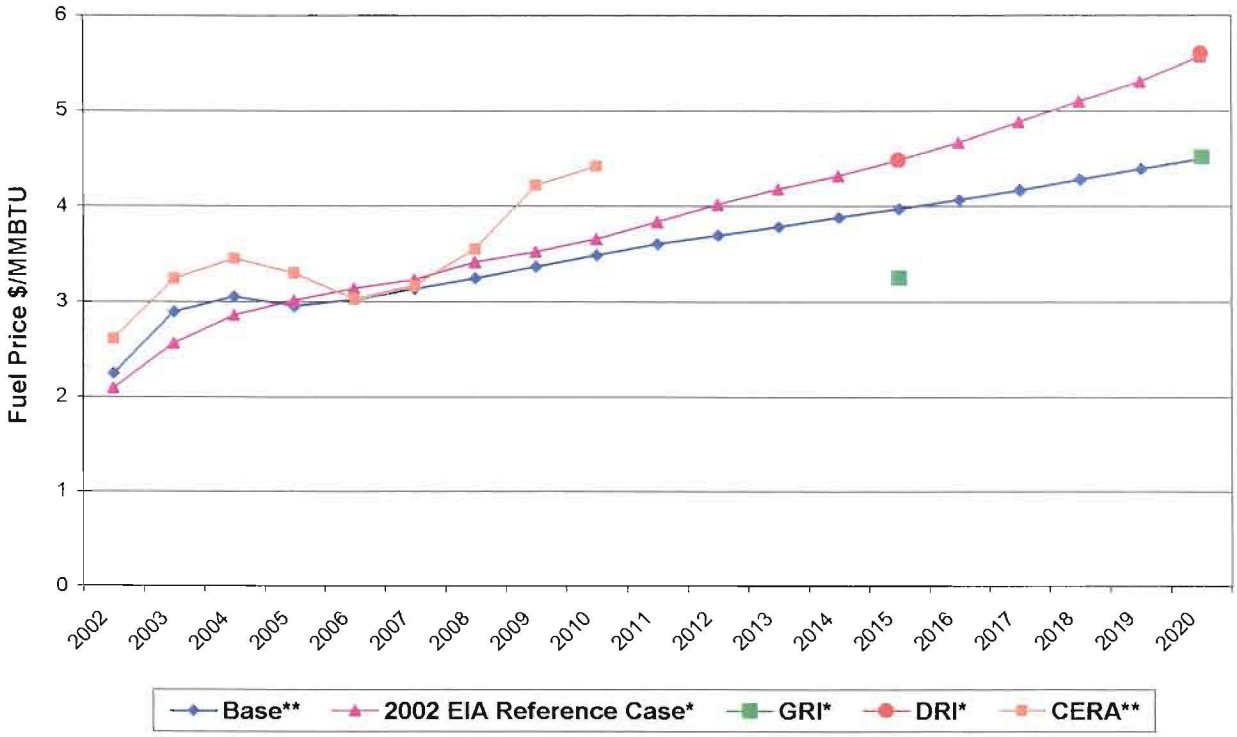
Florida Power is confident that it will be able to obtain a contract(s) for all of its gas transportation service requirements for Hines 3. The Company expects that the rates it will pay for that service will be no higher than the rate for firm gas transportation service currently charged by FGT under its Federal Energy Regulatory Commission (FERC) natural gas tariff.

Q. Does this conclude your direct testimony?

A. Yes.

Exhibit – PRM-1

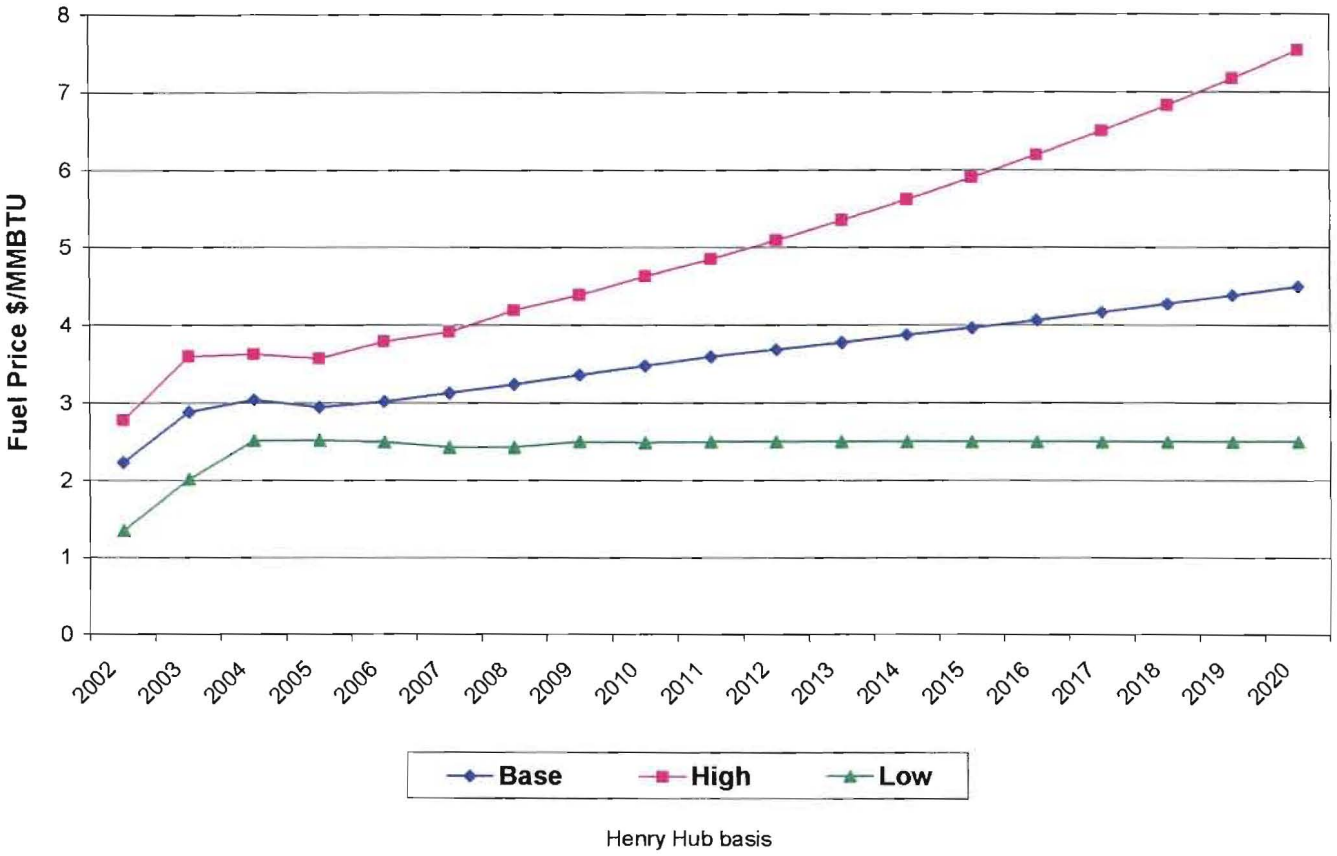
Natural Gas Forecasts Compared to Other Industry Forecasts



* From 2002 EIA Annual Energy Outlook Report and Wellhead basis
**Henry Hub basis

Exhibit – PRM-2

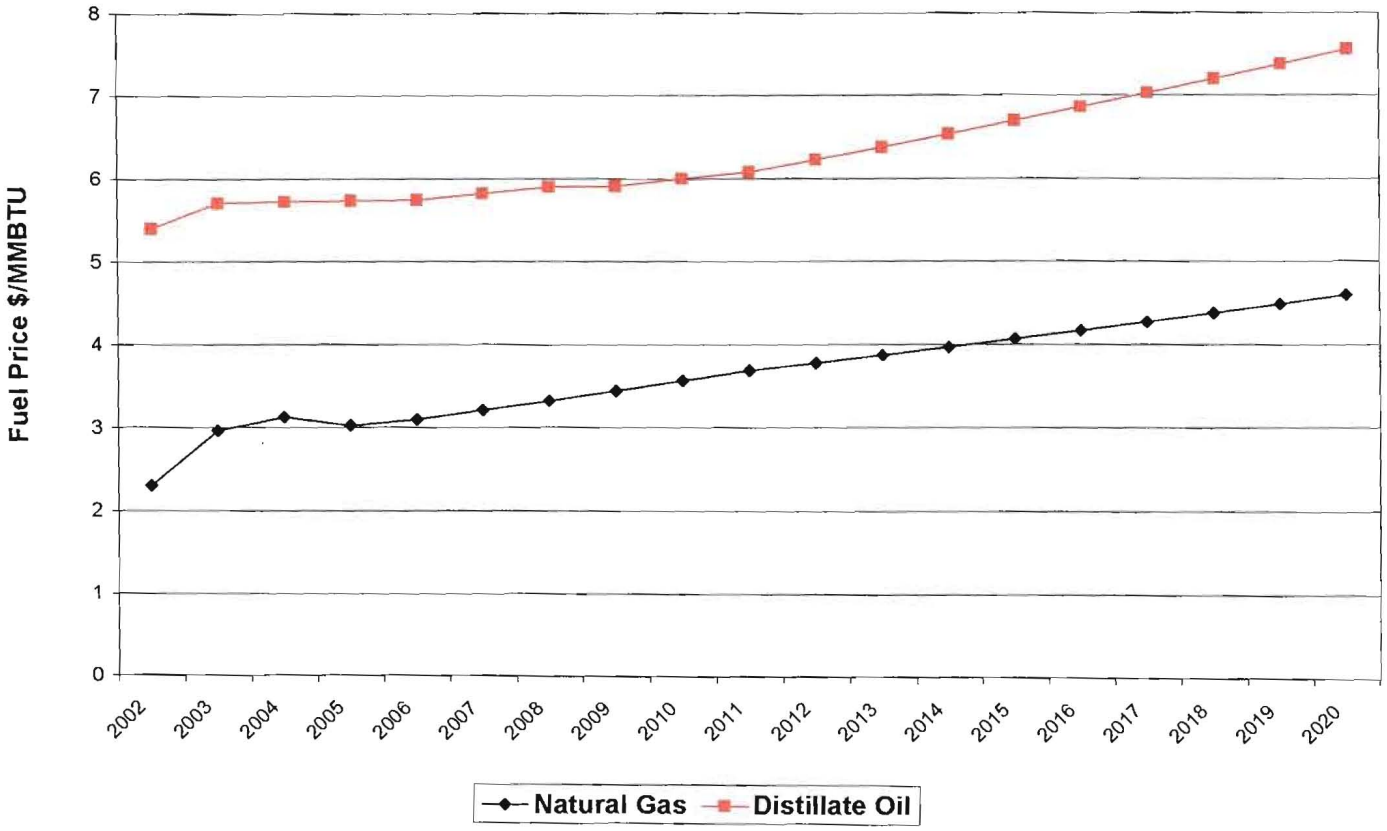
Base, High and Low Case Natural Gas Forecasts



Henry Hub basis

Exhibit – PRM-3

Fuel Price Forecast for Hines



Variable Transportation Included

Exhibit – PRM-4

Gas Transportation Options

	Florida Gas Transmission Company	Gulfstream Natural Gas System LLC	Cypress Natural Gas Company
Existing Capacity	2,130,000 MMBtu / Day	1,100,000 MMBtu / Day	0 MMBtu / Day
Capacity in November 2003 (planned in service)	2,250,000 MMBtu / Day with Phase 6 expansion	1,100,000 MMBtu / Day	310,000 MMBtu / Day
Capacity available for Hines 3	Yes	Yes	Yes
Connection to Hines	Existing	Existing	Through FGT Phase 6
Status	FERC Certification Granted 6/13/02	Constructed	Open Season Closed
Expected in-service date	June 2003	N/A	June 2003
Connections	Anclote Avon Park Bartow DeBary Higgins Hines Intercession City Tiger Bay University of Florida	Hines Intercession City Tiger Bay	Anclote Avon Park Bartow DeBary Higgins Hines Intercession City Tiger Bay University of Florida