



**ASSESSMENT OF THE FLORIDA
NATURAL GAS MARKET
AND
THE FLORIDIAN NATURAL GAS
STORAGE FACILITY**

Prepared for
Floridian Natural Gas Storage Company, LLC

August 20, 2008

EXECUTIVE SUMMARY

Natural gas is playing an increasingly essential role in the supply of electricity to Florida's growing population. At the same time, the Florida energy marketplace is being transformed by a combination of rapid demand growth, escalating commodity and capital costs, and new environmental initiatives. In this context, the Floridian Natural Gas Storage Company, LLC ("FGS") retained Concentric Energy Advisors, Inc. ("Concentric") to prepare an independent assessment of the Florida natural gas market and the economic and operational benefits associated with FGS' proposed natural gas storage project in south Florida (the "Project"). Key findings from this assessment include:

- Florida's population growth is fueling continued growth in power demand and electricity generators are increasing their reliance on natural gas for fuel supply. In 2006, natural gas-fired generation plants provided 38% of all the electricity consumed in the state and this percentage is forecast to grow to approximately 50% by 2016.
- The Project is specifically designed to provide new peak day deliverability to Florida (i.e., natural gas peaking service) and serve as an emergency reserve should interstate gas supplies be curtailed. Natural gas peaking facilities are designed to deliver large quantities of natural gas for a limited number of days in natural gas markets exhibiting significant fluctuations in hourly or daily gas requirements. Such facilities also contribute to the reliability, efficiency, and flexibility of natural gas delivery systems and provide a physical natural gas price hedge.
- The Project offers a more economical means for supplying natural gas peaking service than contracting for new year-round pipeline capacity or additional out-of-state natural gas storage service. The Project's economic advantage results from the efficient use of existing, but underutilized off-peak pipeline capacity to fill in-state storage for use during a limited number of peak hours and days when the pipelines are fully utilized. The Project is sited in Florida and designed to deliver gas exactly when and where it is most needed.
- Florida imports 100% of its natural gas supply from outside the state. As its natural gas requirements increase, the state is increasingly vulnerable to natural gas supply interruptions and pipeline delivery problems. The Project provides a strategic reserve of gas in south Florida, one large enough to ensure fuel supply sufficient for power generators to serve more than two million homes for as long as 10 days if needed in an emergency. Given its location near the end of the state's pipeline grid and flexible delivery capabilities, the Project also provides several gas and power system operational benefits.
- Florida's power generators routinely burn large quantities of oil. The Project has the capability of displacing significant quantities of oil for power generation purposes, offering a tangible means for reducing greenhouse gas and other harmful air emissions.

I. Introduction

A. Purpose of the Report

FGS retained Concentric to prepare an independent assessment of the Florida natural gas market and the economic and operational benefits associated with the Project. This report presents the results of this assessment and includes a review of natural gas demand drivers (e.g., growth in electricity requirements), resource drivers (e.g., new natural gas pipeline developments), and the potential role the Project can play in meeting Florida's energy needs. The report contains the following sections:

- I. **Introduction** – In addition to the purpose of this report, this section provides a brief description of FGS and the Project;
- II. **Florida Energy Market Overview** – This section provides an overview of the current and forecasted Florida energy market; topics reviewed include electricity demand, existing and proposed power generation resources, and the natural gas infrastructure in Florida;
- III. **Peaking Gas Service Overview** – This section provides context and perspective regarding the role of natural gas peaking facilities and the utilization of this resource by energy market participants;
- IV. **The Role of the Project in Addressing Florida's Energy and Environmental Challenges** – This section identifies several key energy and environmental issues facing the state and discusses the role the Project can play in addressing these issues; and
- V. **Conclusion** – This section provides a summary of conclusions and findings based on the information provided in this report.

B. Project Overview

FGS¹ is proposing to build and operate a natural gas storage facility on a 145 acre superfund site in Martin County, Florida. The Project will include two above ground natural gas storage tanks each of which will hold 4 million MMBtu (approximately 4 billion cubic feet) of natural gas in liquid form. In addition to the storage facilities, the Project will have parallel pipelines² connecting the facility to the two primary interstate natural gas pipelines in Florida (i.e., Florida Gas Transmission ("FGT") and Gulfstream Natural Gas System LLC ("Gulfstream")). The Project will have the initial capability to liquefy 50,000 MMBtu of natural gas per day (i.e., inject into storage inventory) and vaporize 400,000 MMBtu per day (i.e., sendout from storage inventory), but FGS has applied for a federal permit authorizing operation at double these daily injection and sendout rates.³ As a result of the physical storage and associated pipeline assets the Project would have the ability to provide service

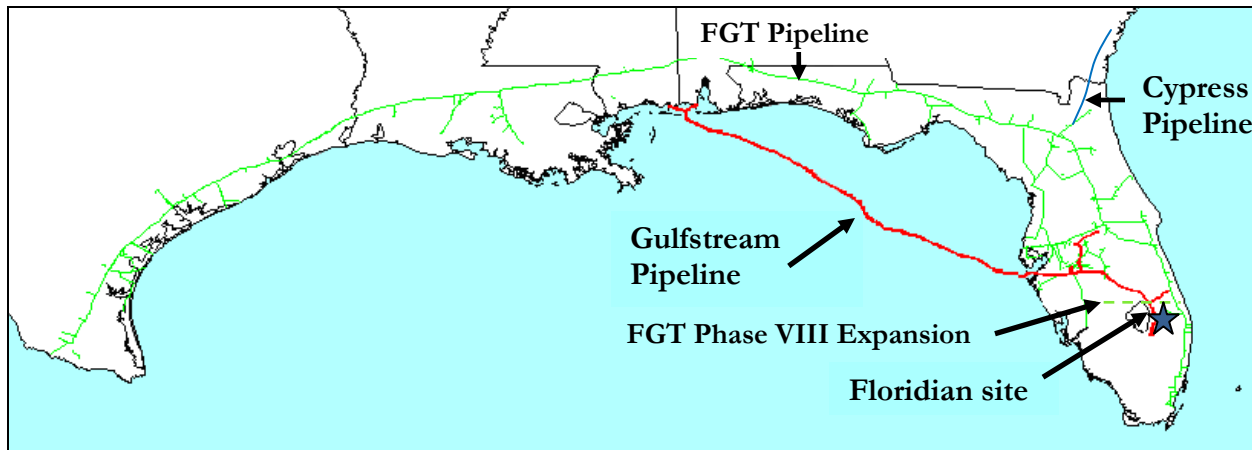
¹ On March 31, 2008, Warburg Pincus transferred its interest in the Project to its operating company Targa Resources, Inc. ("Targa"). As a result, Targa owns 98% of FGS while the remaining 2% is owned by individual private investors. For more information on FGS, visit the company's website at: www.floridiangasstorage.com.

² One of the parallel pipelines (i.e., the 12 inch pipeline) will be utilized to receive natural gas from FGT and Gulfstream while the other parallel pipeline (i.e., the 24 inch pipeline) will be utilized to deliver natural gas to FGT and Gulfstream.

³ The Project is seeking a permit from the Federal Energy Regulatory Commission ("FERC") for 100,000 MMBtu per day liquefaction and 800,000 MMBtu per day vaporization, with initial authorization to build the first 50,000 and 400,000 MMBtu per day, respectively.

in the summer and the winter (i.e., the peak electricity consumption periods in Florida). The map below depicts the proposed Project and the primary existing Florida natural gas pipelines:

Florida Natural Gas Infrastructure



FGS is proposing to provide firm storage, liquefaction and vaporization service to Florida energy participants (e.g., electric utilities, independent power producers, natural gas local distribution companies (“LDCs”), and energy marketers) at market based rates.⁴ Under this approach Florida energy participants would be able to contract for the service level and terms of service that are most appropriate for their requirements and integrate this storage service into their resource portfolio. FGS’ customers will contract for a customized service and will be able to manage that service (i.e., injection/withdrawal decisions) in conjunction with their other in-state assets (e.g., FGT or Gulfstream capacity, fuel switching, and DSM) and their out-of-state assets (e.g., production area natural gas storage). By injecting natural gas into the storage facility during off-peak periods when existing capacity is underutilized and then withdrawing natural gas to serve load under peak conditions or during supply interruptions, the Project will offer customers the opportunity to utilize their contracted FGT and Gulfstream capacity more efficiently. Moreover, the Project, in conjunction with the flexibility of the existing natural gas pipelines, may allow the pipelines to offer additional service under certain operating conditions (i.e., inventory withdrawals from the Project).⁵

FGS has targeted a 1st Quarter 2012 in-service date for the Project based on a two and one-half year process for acquiring all the necessary permits/approvals and a three year construction schedule. Currently, the Project, as outlined above, is expected to cost approximately \$550-\$600 million. To

⁴ The Project has requested authorization from the Federal Energy Regulatory Commission (“FERC”) to provide service at market based rates.

⁵ Please note that FGT and Gulfstream have been physically configured to provide hourly flexibility, not just daily contracted volume. For example, a customer with a daily quantity of 24,000 MMBtu and no hourly flexibility would deliver to and receive from a pipeline an even hourly limit of 1,000 MMBtu (i.e., 24,000 MMBtu/24 hours); however, that same customer with a 6% hourly flexibility could deliver to the pipeline on an hourly rate of 1,000 MMBtu for 24 hours and could take up to 1,440 MMBtu on a certain number of hours per day as long as the daily quantity is not exceeded. Therefore, if sufficient gas supply is provided to the pipeline at appropriate times and locations and the pipeline’s operating conditions allow, the pipeline may be able to maintain the 1,440 MMBtu volume for a full 24 hours, thus providing additional capacity to the market.

provide context for FGS' cost estimate, Table 1 provides a unit cost comparison of the Project to three recent liquefied natural gas (“LNG”) peaking projects on a unit cost per storage capacity and on a unit cost per daily deliverability:

Table 1: Comparison of Gas Storage Facilities (quantities in million MMBtu)

Entity	Location	Cost (\$MM)	Storage Capacity	\$/MMBtu of Capacity	Storage Sendout	\$/MMBtu of Sendout
Floridian Gas Storage	Florida	\$600	8,000	\$75	0.400	\$1,500
Piedmont Natural Gas [1]	North Carolina	\$325	1,250	\$260	0.125	\$2,600
Terasen Gas	British Columbia	\$200	1,500	\$133	0.150	\$1,333
Yankee Gas	Connecticut	\$108	1,200	\$90	0.060	\$1,800

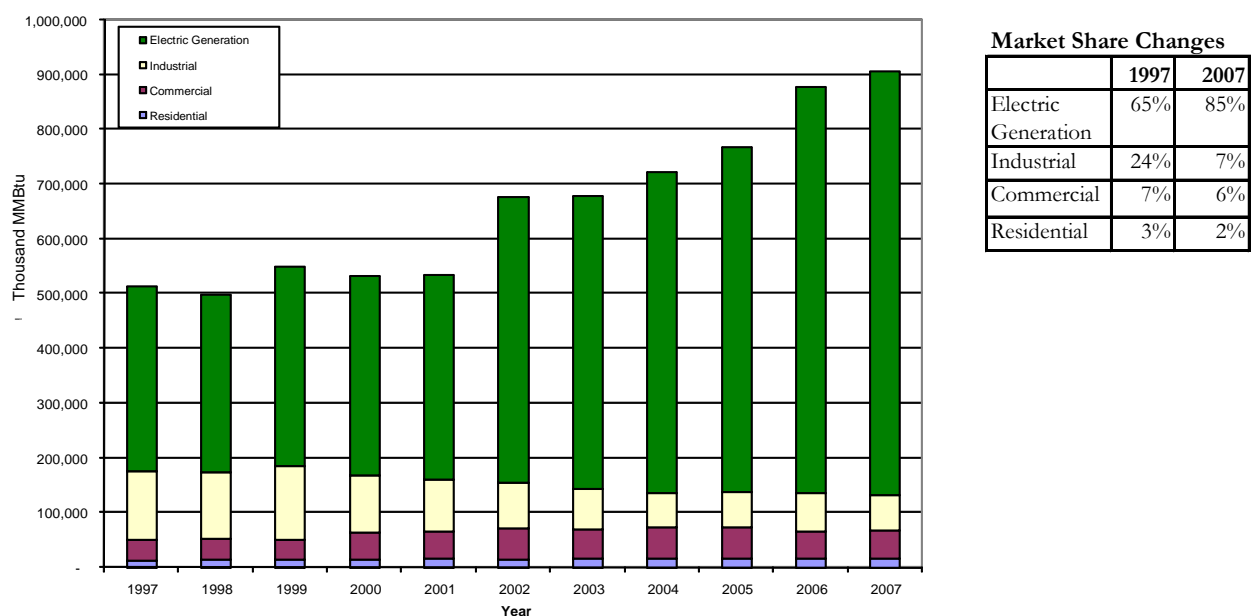
[1] Cost is midpoint of \$300 to \$350 million cost estimate. Assumes deliverability is 10% of total storage capacity.

As shown by Table 1, the Project, as currently configured and budgeted, compares favorably, on a unit cost basis, to comparable natural gas peaking projects.

II. Florida Energy Market Overview

Florida is experiencing rapid growth in population, electricity customers and energy consumption. In fact over the 2002 to 2006 time period: (i) Florida’s population increased by 1.4 million from approximately 16.7 million to approximately 18.1 million;⁶ (ii) the number of electricity customers in Florida increased by over one million from approximately 8.5 million to approximately 9.5 million^{7,8}; and (iii) sales to ultimate electric customers increased approximately 8% from 208,000 GWh to 225,000 GWh.⁹ Although Florida relies on a variety of fuels (e.g., coal, nuclear, oil, and natural gas) for electricity generation, the role of natural gas in electricity generation has increased substantially. Specifically, natural gas-fired generation as a percentage of total electricity generated in Florida has increased from 11.4% in 1990 to 17.6% in 2000 to 38% in 2006.¹⁰ In addition to the electric generation segment, natural gas is consumed by various other customer segments (e.g., industrial, commercial and residential); however the electric generation segment represents the largest component of natural gas consumption. As shown by Figure 1, the electric generation segment in 1997 represented approximately 65% of the Florida natural gas consumption, but by 2007 electric generation was over 80% of the natural gas demand in Florida.

Figure 1: Florida Natural Gas Consumption by End Use - Annual¹¹



As also illustrated by Figure 1, the 2007 total natural gas consumption was approximately 900 million MMBtu, of which 750 million MMBtu was consumed by the electric generation segment. Stated on a daily basis, the 2007 average day natural gas consumption was approximately 2.47

⁶ Florida Public Service Commission, “Statistics of the Florida Electric Utility Industry 2006”, September 2007 P. 8-9.

⁷ Of the 9.5 million electricity customers, approximately 87% or 8.3 million are residential customers.

⁸ Florida Public Service Commission, “Statistics of the Florida Electric Utility Industry 2006”, September 2007 P. 8-9.

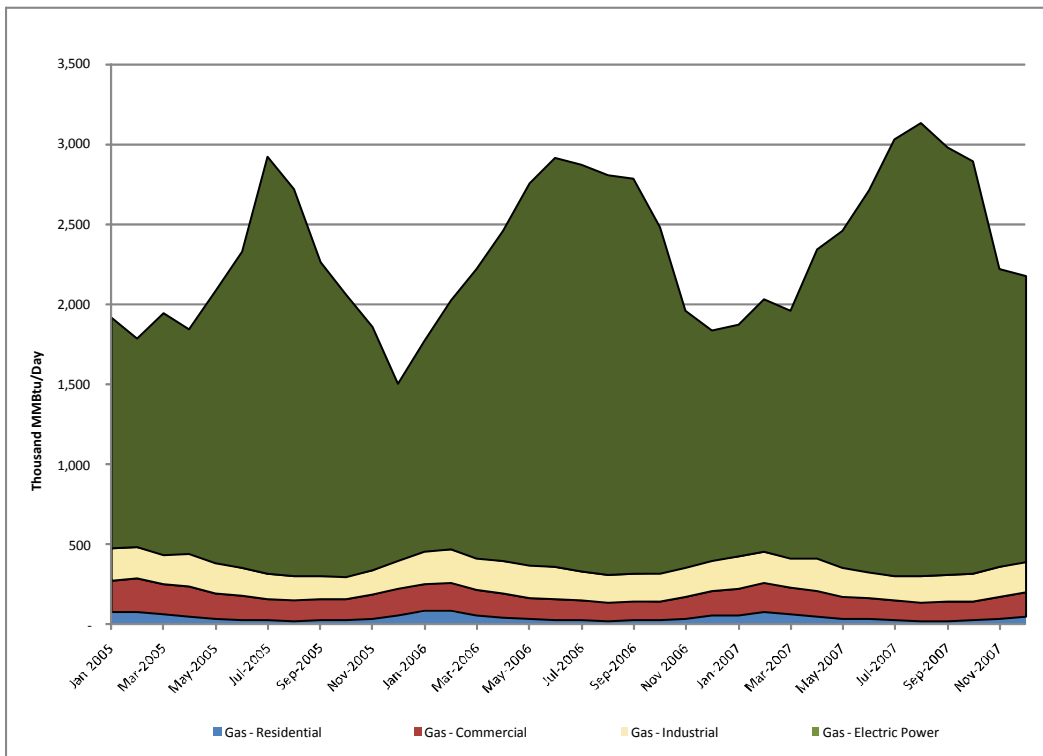
⁹ Florida Public Service Commission, “Statistics of the Florida Electric Utility Industry 2006”, September 2007 P. 8-9.

¹⁰ Florida Public Service Commission, “Review of 2007 Ten-Year Site Plans for Florida’s Electric Utilities”, December 2007 p. 9.

¹¹ Energy Information Administration (EIA); Florida Natural Gas Consumption by End Use, 2007:
http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_dc_u_sfl_a.htm

million MMBtu, of which 2.05 million MMBtu was consumed by the electric generation segment. By comparison, the aggregate maximum daily contract capacity of the FGT and Gulfstream pipelines is approximately 3.3 million MMBtu or approximately 34% greater than the average daily demand for the state. Figure 2, which depicts monthly natural gas consumption divided by the number of days in the respective month, not only illustrates the growth in gas but also depicts the summer peaking nature of Florida's natural gas demand.

Figure 2: Florida Natural Gas Consumption by End Use – Average Daily¹²



As demonstrated by Figure 2 the highest monthly average day consumption reached 3.1 million MMBtu in August 2007, approximately 6% below the 3.3 million MMBtu aggregate maximum daily contract capacity of the FGT and Gulfstream pipelines. However, pipeline capacity is fully utilized on peak days. For example, in 2007 FGT reported peak day and average consecutive three day peak deliveries of approximately 2.25 million MMBtu/day of firm transportation volumes, slightly in excess of its reported daily capacity.¹³

The increasing trend of natural gas consumption is expected to continue as the use of natural gas in electric generation (i.e., Florida's largest natural gas market) is forecasted to increase significantly. As illustrated in Table 2, at the end of last year the proposed electric capacity additions by 2016 totaled approximately 16,300 MW which included 12,973 MW of combined cycle generation (i.e., natural gas-fired generation), 1,738 of combustion turbine and diesel generation, and 4,581 MW of coal-fired and integrated coal gasification generation that was subsequently canceled.

¹² EIA: Florida Natural Gas Consumption by End Use, and Fuel Consumed by Florida Plants with Dual Gas/Oil Capability.

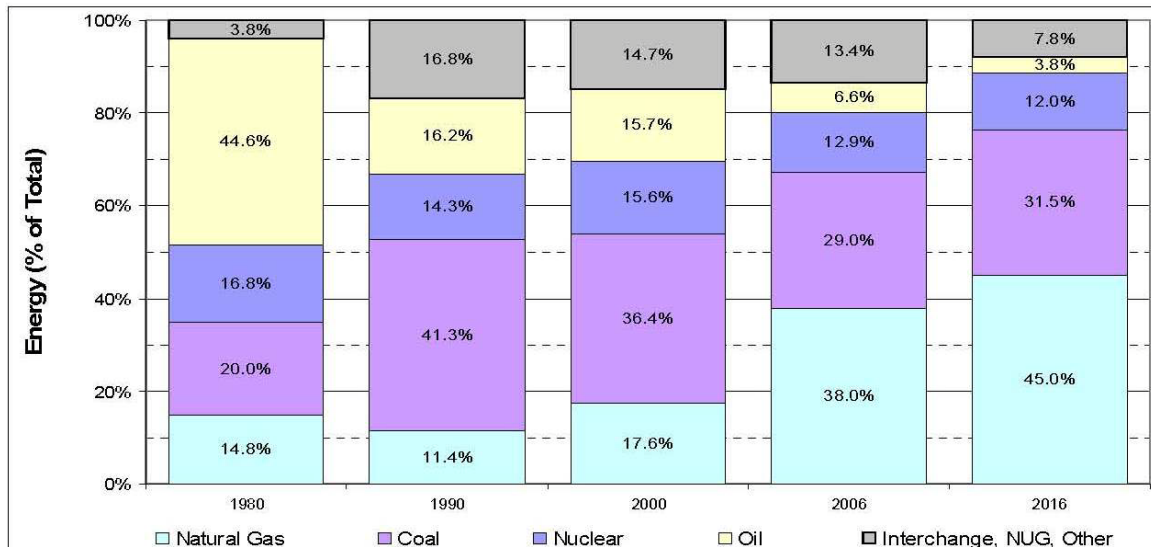
¹³ FGT 2007 FERC Financial Report Form No.2, page 518.

Table 2: State of Florida – Proposed Capacity Additions by 2016¹⁴

Unit Type	Winter Capacity Additions (MW)
Combined Cycle	12,973
Coal (subsequently canceled)	3,676
Integrated Coal Gasification (subsequently canceled)	905
Oil & Gas Fossil Steam	-674
Combustion Turbine & Diesel	1,738
Nuclear	1,305
Firm Purchases - IPP	-2,445
Firm Purchases - Interchange	-356
Firm Purchases - QF	-680
Firm Purchases - Renewables	-104
NET CAPACITY ADDITIONS	16,338

The total installed electric capacity is forecasted to increase from the current level of approximately 56,000 MW¹⁵ to approximately 72,300 MW and most of the electric capacity additions will be natural gas-fired generation. As a result of the forecasted electric capacity additions, natural gas is forecasted to comprise almost half of the electric generation by 2016 as shown by Figure 3.

Figure 3: State of Florida – Energy Generation by Fuel Type (Percent of Total)¹⁶



As illustrated by Figure 3, natural gas fired generation in 1980 represented approximately 15% of the total energy generation; however, by 2006, natural gas fired generation as a percent of total energy

¹⁴ Florida Public Service Commission, “Review of 2007 Ten-Year Site Plans for Florida’s Electric Utilities”, December 2007 p. 7.

¹⁵ Florida Energy Commission, “2007 Florida Energy Commission Report to the Legislature”; December 31, 2007 p. 8.

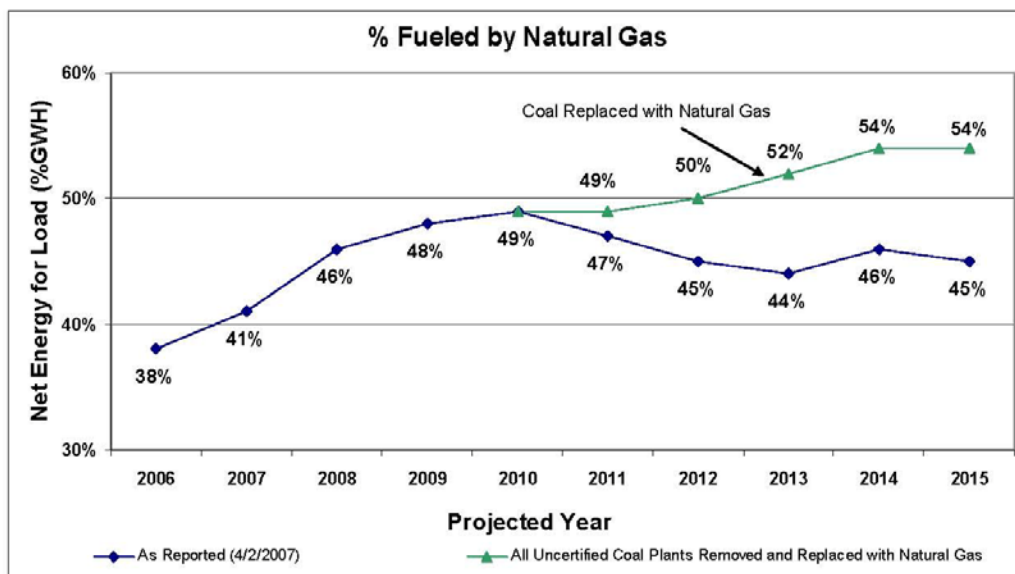
¹⁶ Florida Public Service Commission, “Review of 2007 Ten-Year Site Plans for Florida’s Electric Utilities”, December 2007, p. 9.

generation had more than doubled to approximately 38%. The growth in natural gas fired generation is expected to continue as natural gas generation by 2016 is forecasted to represent 45% of the energy generation. Moreover, the 45% estimate does not reflect the potential natural gas requirements resulting from the recent cancellation of certain coal-fired capacity additions.¹⁷ Specifically, as stated by the Florida Public Service Commission:

Consequently, the generation additions identified in many of the utilities' 2007 Ten-Year Site Plans are no longer indicative of Florida's future capacity additions. As a result, more than 4,000 MW of proposed capacity additions identified in the 2007 Ten-Year Site Plans need to be replaced. If, for example, natural gas becomes the de facto replacement fuel of choice, this option will result in natural gas generation producing more than 50 percent of Florida's energy as early as 2013. (*Emphasis in original*).¹⁸

Figure 4 illustrates the impact of the cancellation of certain coal-fired generation additions. Assuming gas will replace cancelled coal projects, its share of the state's fuel mix for power generation rises to 54% by 2015.

Figure 4: Projected Peninsular Florida Generation by Natural Gas¹⁹



The implications of Florida's increasing dependence on natural gas for electricity generation were discussed by the Florida Public Service Commission:

“Florida’s increased dependence on natural gas has caused the state to be more vulnerable to supply disruptions due to severe storms and hurricanes.”²⁰

¹⁷ Ibid p. 2.

¹⁸ Ibid p. 2.

¹⁹ Ibid., p. 14.

²⁰ Ibid., p. 8.

“As the state’s dependence on natural gas–fired generation continues to grow, gas supply and deliverability become increasingly important. Therefore, utilities should continue evaluation of natural gas supply and delivery options, such as liquefied natural gas, alternate gas pipelines, and natural gas storage. Having multiple options can serve as risk mitigation to unforeseen supply and delivery disruptions.”²¹

There are no natural gas production or natural gas storage facilities in Florida; consequently, all natural gas supplies must be delivered to the state on interstate natural gas pipelines. The two primary gas pipelines that serve the Florida market are FGT and Gulfstream. FGT was initially placed in-service in 1959 with a capacity of 278,000 MMBtu per day; subsequently FGT has undergone seven expansions and has a current capacity of 2.2 million MMBtu per day.²² FGT runs from the Gulf Coast supply area through Texas, Louisiana, Mississippi and Alabama and down both the west and east coasts of Florida. Recently, FGT announced a new expansion (i.e., Phase VIII), which will increase capacity by 800,000 MMBtu/day and result in a total FGT capacity of 3.0 million MMBtu. This most recent FGT expansion has a projected in-service date of 2011 and an estimated construction cost of \$2 Billion. Similar to other expansions on FGT the power generation sector was the primary driver as FPL has contracted for one-half (i.e., 400,000 MMBtu/day) of the Phase VIII expansion.²³

The second primary natural gas transmission line serving Florida is Gulfstream. Unlike FGT, Gulfstream is a recent addition to Florida, coming into service in 2002 and, in 2005, extending service to central Florida. Although Gulfstream is a recent addition to the Florida natural gas infrastructure, 100% of the current 1.1 million MMBtu/day of capacity will be subscribed as a result of FPL’s 345,000 MMBtu/day long-term firm transportation contract that has a scheduled in-service date of June 1, 2009.²⁴ Similar to FGT, Gulfstream is a fully contracted pipeline.

In addition to FGT and Gulfstream, there have been two new pipeline projects that are designed to diversify Florida’s natural gas supply resources. First, the Cypress Pipeline Phase II project began service in May 2007 and connects the FGT system near Jacksonville to the Elba Island LNG import terminal. The primary customer for this project, and the associated FGT Phase VII expansion, was Progress Energy Florida (“PEF”). On July 5, 2005 the Florida Public Service Commission issued its final order approving the PEF Cypress and FGT contracts and stated the following regarding natural gas supply diversity and reliability:

Supply Diversity: Natural gas generation in Florida is expected to increase from approximately 30 percent to over 50 percent over the next ten years, placing added pressure on current natural gas supplies and transportation capacity. Currently, most gas supplied to PEF and the state of Florida comes from the Mobile Bay/Destin area, and is transported through two major pipelines. The proposed contracts will add a new source of gas supply and transportation to the state. The resulting increase in fuel diversity should have a positive impact on gas supply economics and

²¹ Ibid., p. 15.

²² Ibid., p. 35.

²³ Panhandle Energy Press Release, “Florida Gas Transmission Company Announces Florida Power and Light Is Anchor Shipper for Proposed Pipeline Project.” February 11, 2008.

²⁴ FERC Order Amending Certificate (Issued June 7, 2007), Docket No. CP00-6-014, page 2.

reliability. This is especially important given the projected increase in natural gas-fired generation.²⁵

The second project to increase natural gas supply diversity is the 1.0 million MMBtu/day Southeast Supply Header (“SESH”) project, which will connect the Perryville Hub in Louisiana to various natural gas pipelines including Gulfstream and FGT. The SESH, which has an in-service date of late 2008, has the Florida utilities as the major customers, specifically FPL signed a 500,000 Mcf/day contract and PEF signed a 200,000 Mcf/day contract.²⁶ On March 13, 2007 the Florida Public Service Commission issued a press release regarding the PEF contract on SESH in which the PSC stated:

“Access to the Southeast Supply Header pipeline and new domestic natural gas supply basins will help ensure that Florida can keep up with the growing demand for natural gas...By increasing the number of potential suppliers, utilities can also lessen the impact of possible supply disruptions caused by hurricanes or other severe weather events.”²⁷

In addition to the Cypress Pipeline and SESH there are several LNG import projects proposed for the Florida market that are in various stages of development. The successful completion of one or more LNG import projects could provide new sources of natural gas supply for Florida.

In summary, the electricity demand in Florida is forecasted to increase at a significant level and coupled with the recent cancellation of certain coal-fired generation will likely result in an increase in natural gas consumption for electric generation. The existing Florida natural gas infrastructure (e.g., FGT and Gulfstream) has recently been augmented by new feeder projects (e.g., SESH and supply area storage), however Florida continues to receive all of its natural gas supply from resources outside of the state.

²⁵ Florida Public Service Commission, “Final Order No. PSC-05-0721-FOF-EI”, p. 5.

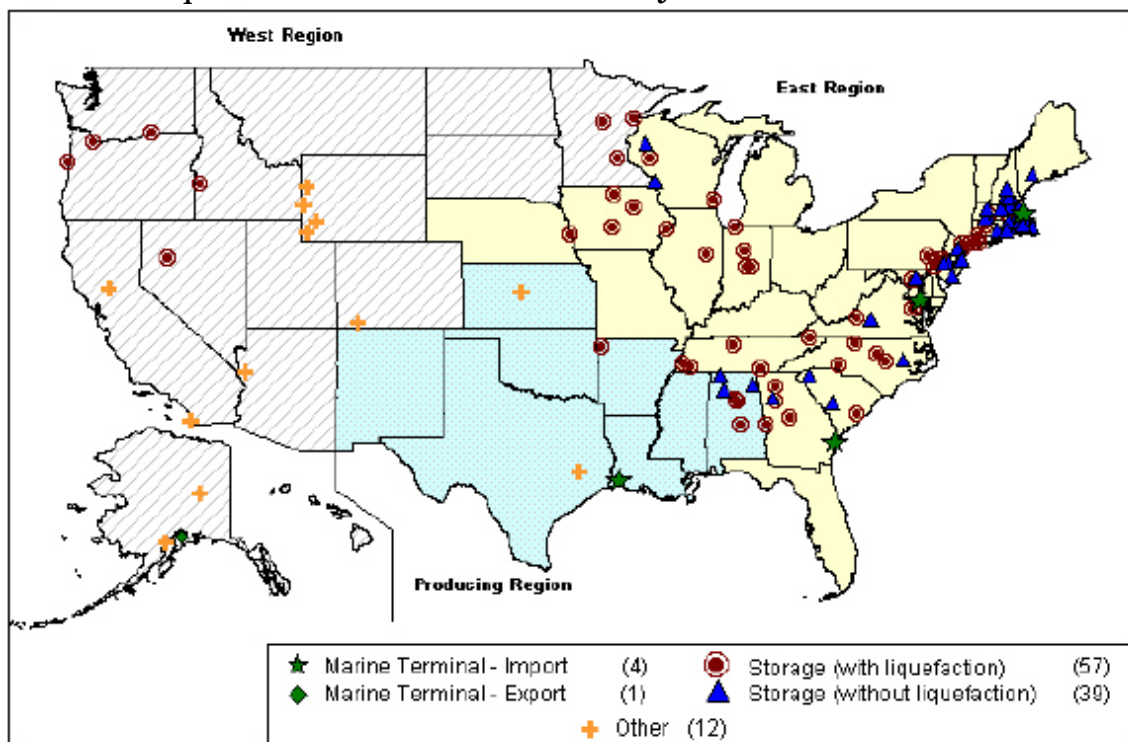
²⁶ Southeast Supply Header Press Releases.

²⁷ Florida Public Service Commission News Release, March 13, 2007.

III. U.S. LNG and LNG Peaking Gas Service Overview

LNG storage, liquefaction and re-gasification technology is a well-established feature of the natural gas industry and has a strong safety record. As shown in Figure 5, there currently are approximately 115 LNG facilities in the United States, which includes eight marine import terminals, 12 special purpose facilities, and 96 peaking facilities.²⁸

Figure 5: U.S. Liquefied Natural Gas Facilities as of June 2004²⁹



Most of the LNG facilities are located in the East Region; in fact, of the 86 million MMBtu of LNG storage, excluding marine terminals, 82%, or approximately 71 million MMBtu, is located in the Consuming East Region.³⁰ Although LNG storage is common in the East, there currently is none in Florida.

²⁸ EIA, “U.S. LNG Markets and Uses: June 2004 Update”, June 2004, p. 2. Please note that there is one LNG export terminal listed which is located in Alaska.

²⁹ Ibid, Figure 1, p. 2.

³⁰ EIA, “U.S. LNG Markets and Uses”, January 2003, p. 10. As defined by the EIA in its “Methodology for EIA Weekly Underground Natural Gas Storage Estimates”, the East Region includes the following states: Connecticut, Delaware, District of Columbia, Florida, Georgia, Iowa, Illinois, Indiana, Kentucky, Massachusetts, Maryland, Maine, Michigan, Missouri, North Carolina, Nebraska, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, Wisconsin, and West Virginia. <http://tonto.eia.doe.gov/oog/info/ngs/methodology.html>

A. Marine Import Terminals

There currently are eight marine LNG import terminals in the U.S.³¹, four of which are based on the east coast of the United States and four that are located in the Gulf of Mexico. The east coast terminals are: Elba Island, Georgia; Cove Point, Maryland; Everett, Massachusetts and the Northeast Gateway Energy Bridge offshore Massachusetts; while the Gulf Coast facilities are the Lake Charles and Sabine Pass terminals in Louisiana; the Gulf Gateway Energy Bridge offshore Louisiana; and the Freeport LNG terminal in Texas. The marine LNG import terminals have the ability to import large quantities of LNG via ship, and have the ability to turn over inventory multiple times (i.e., function as a baseload resource). The Northeast Gateway and Gulf Gateway projects differ from the other six facilities in that they are ship to offshore buoy delivery systems with no direct land-based storage capability.

B. Special Purpose Facilities

As mentioned above, there are 12 special purpose LNG facilities that provide service to a stand-alone utility (i.e., no pipeline access), serve vehicle use, or are utilized for certain processes.³²

C. Peaking Facilities

The last category of LNG facilities is peaking facilities, which has the largest number of facilities, i.e., 96. This category can be further sub-divided into those facilities that have liquefaction capability and those that do not have liquefaction capability, i.e., satellite facilities. There are 57 LNG facilities with liquefaction capability and 39 satellite LNG facilities.

The 96 LNG peaking facilities are owned by LDCs (83 facilities) and pipeline companies (13 facilities); these facilities are utilized to meet certain market demand and operational requirements. More than one-half (i.e., 60) of these facilities were constructed between 1965 and 1975 and, therefore, have been in service for approximately 30 to 40 years.³³

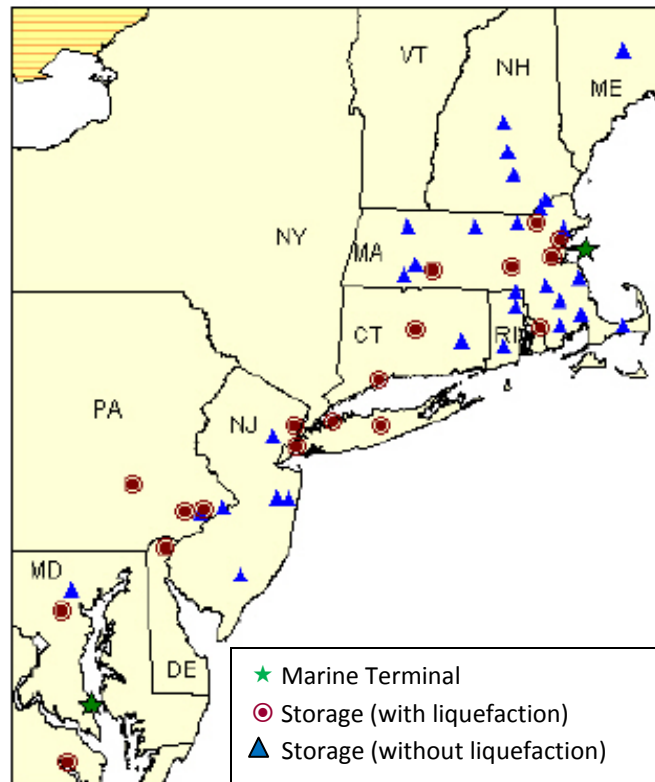
The LNG peaking facilities are not evenly dispersed throughout the United States, but rather are concentrated in the Northeast. As shown in Figure 6 below, approximately two-thirds of the LNG peaking facilities are located in the Northeast (i.e., New England, New York and New Jersey).

³¹ The EIA June 2004 LNG Update lists only 4 marine import terminals. Since that time, the Gulf Gateway Energy Bridge, Northeast Gateway Energy Bridge, Sabine Pass LNG and Freeport LNG projects have entered commercial service.

³² EIA, "U.S. LNG Markets and Uses", January 2003, p. 2.

³³ EIA, "U.S. LNG Markets and Uses: June 2004 Update", June 2004, p. 3 and 16.

Figure 6: LNG Facilities in the Northeast³⁴



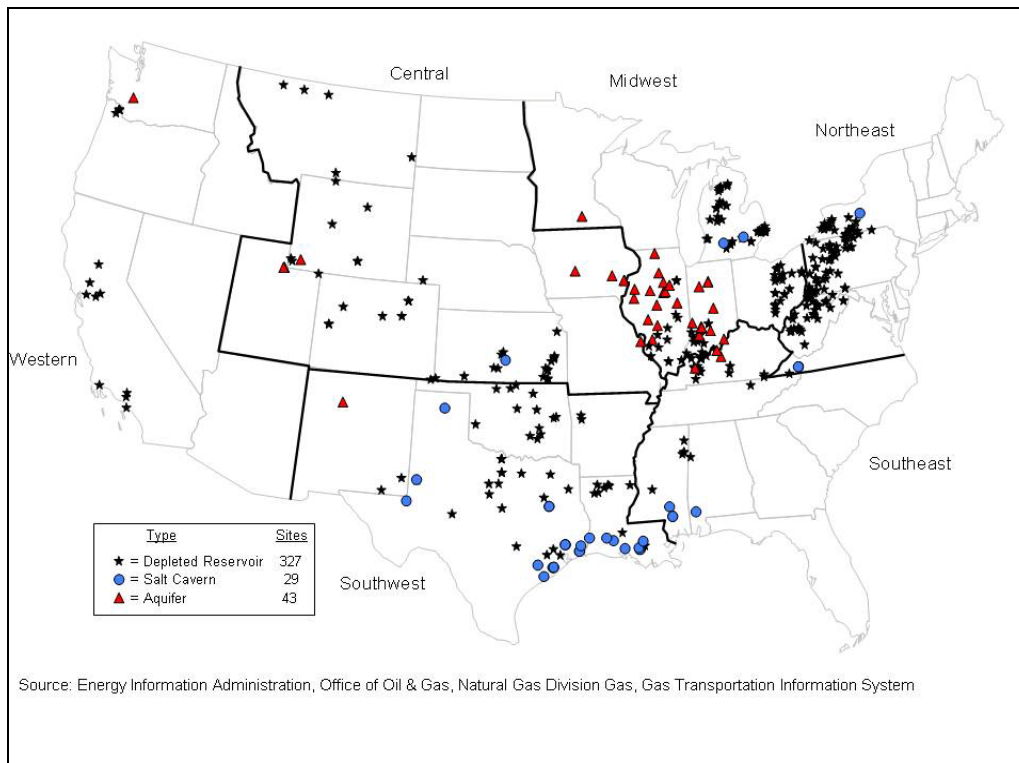
The geographic concentration of LNG peaking facilities can be explained by three factors: (i) the distance between the Northeast and the traditional gas supply basins, i.e., Gulf of Mexico, Western Canada; (ii) geologic limitations with respect to underground storage; and (iii) the nature of the Northeast LDC demand profile.³⁵ Regarding the first factor (i.e., distance from the supply basins), similar to Florida, the Northeast LDCs have been at the “end of the line” with respect to interstate pipeline service since natural gas was first introduced into the region. As a result, the cost of pipeline infrastructure to deliver gas over 2,000 miles is significant, particularly given the nature of the LDC demand profile which is discussed below.

The second factor (i.e., location of underground storage as depicted in Figure 7) also contributes to the concentration of LNG peaking facilities in the Northeast.

³⁴ Ibid, Figure 7, p. 14.

³⁵ “On these peak demand days, space-heating demand spikes can raise a utility’s overall demand by 25 percent or more in some parts of the country. LNG storage facilities meet this demand with a capability of regasifying and delivering large amounts of natural gas into distribution systems with short-notice, otherwise known as relative high ‘deliverability.’ Deliverability in the storage sector of the natural gas industry is generally defined as the amount of gas a facility can send out under peak conditions on a daily basis.” – EIA, “U.S. LNG Markets and Uses: June 2004 Update”, June 2004, p. 12.

Figure 7: Underground Gas Storage Facilities in the U.S.³⁶



This issue (i.e., location of storage/LNG facilities) was discussed in the January 2003 *U.S. LNG Markets and Uses* report by the Energy Information Administration:

Liquefaction also provides the opportunity to store natural gas for use during high demand periods in areas where geologic conditions are not suitable for developing underground storage facilities. For example, in New England and the coastal areas of the Middle Atlantic States, where underground storage is lacking, LNG is a critical part of the region's supply during cold snaps.³⁷

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LNG facilities offer several advantages over alternative storage options. Because LNG facilities can be located above ground, operators and/or owners have many more opportunities for locating LNG facilities in comparison with traditional underground storage alternatives that depend on underground geological conditions such as depleted reservoirs, aquifers, and salt caverns.³⁸

³⁶ Source: EIA website.

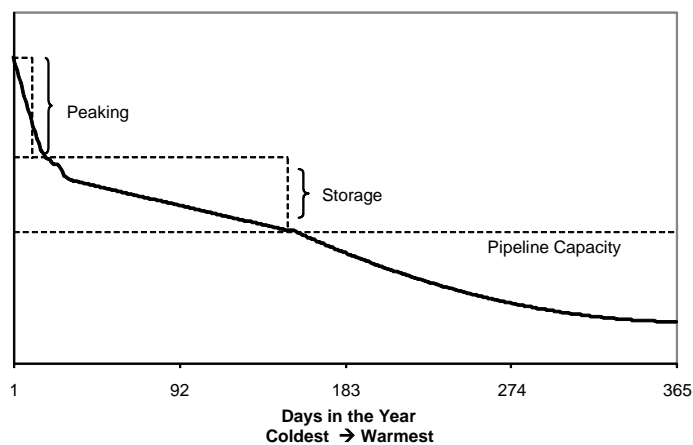
³⁷ EIA, "U.S. LNG Markets and Uses", January 2003, p. 1.

³⁸ Ibid., p. 8.

The last factor explaining the concentration of LNG facilities is the demand profile of the Northeast LDCs. Northeast LDCs have three general types of demand: baseload or year-round demand; winter or seasonal demand; and needle peaking demand, which occurs during approximately the top ten to twenty demand days per year. To meet these various and distinct demand requirements, LDCs have assembled gas supply resource portfolios that are comprised of pipeline and storage assets for the base load and winter demands, and LNG for the needle peaking demand.

Figure 8 is an illustrative example of a Northeast LDC load duration curve which depicts a normal year LDC load with a typical resource/capacity portfolio.

Figure 8: LDC Load Duration Curve -- An Illustrative Example



As shown by Figure 8, the LDC will experience: (i) ten to twenty days per year that are considered needle peak demand days; (ii) seasonal (i.e., winter) demand for approximately 100 to 150 days; and (iii) non-heat or baseload demand. Figure 8 illustrates a typical LDC resource portfolio which consists of pipeline capacity for the baseload demand, storage service (which may include pipeline capacity for delivery) for the seasonal demand, and LNG for the needle peak demand.

In addition, LNG peaking facilities also contribute to the reliability, efficiency, and flexibility of the LDC's distribution system. For example, the LNG peaking facility may provide pressure support, particularly during high demand periods, or the LNG peaking facility may be utilized if there are operational issues on the pipelines serving the LDC. Finally, LNG peaking facilities provide a physical natural gas price hedge as natural gas in the off-peak period can be liquefied at off-peak prices and then vaporized, thus avoiding peak period prices or large price spikes for that volume.

IV. The Role of the Project in Addressing Florida's Energy/Environmental Challenges

This section of the report identifies several key energy and environmental issues facing the state and discusses the role the Project can play in addressing these needs:

- A. As discussed previously, Florida is at the end of the interstate gas pipeline grid and is experiencing a rapidly growing need for natural gas, principally as a fuel supply for power generation to serve an expanding population. Escalating costs and greater environmental restrictions associated with the use of coal and oil as fuel sources are compounding the demand for cleaner-burning gas in the power sector. Serving this growing need cost-effectively is a key challenge confronting the state's utilities and energy policy makers.
- B. Secondly, recent experience with hurricanes that interrupted Gulf Coast natural gas production, damaged the electric transmission and distribution system, and required significant cost and time to restore electricity service to citizens has renewed the state's commitment to energy reliability and energy infrastructure security. This is evidenced by the focus on energy security and infrastructure hardening over the last two years by the Florida Public Service Commission, the Legislature, and the utilities.³⁹
- C. Finally, the state has recently adopted ambitious greenhouse gas ("GHG") reduction goals. While new nuclear power plants and renewable energy sources hold the promise to deliver significant GHG reduction benefits at some point in the future, substituting cleaner burning gas for oil in existing power plants offers a means to secure GHG emission mitigation benefits in the near term.

The 2008 Florida Energy Bill points to energy infrastructure investment as a key to addressing each of these issues:

Further, the Legislature finds that energy infrastructure provides the foundation for secure and reliable access to the energy supplies and services on which Florida depends. Therefore, there is significant value to Florida consumers that comes from investment in Florida's energy infrastructure that increases system reliability, enhances energy independence and diversification, stabilizes energy costs, and reduces greenhouse gas emissions

This section explores these critical challenges facing the state and discusses how the Project can address them.

A. Economical natural gas supply to meet Florida's growing demand

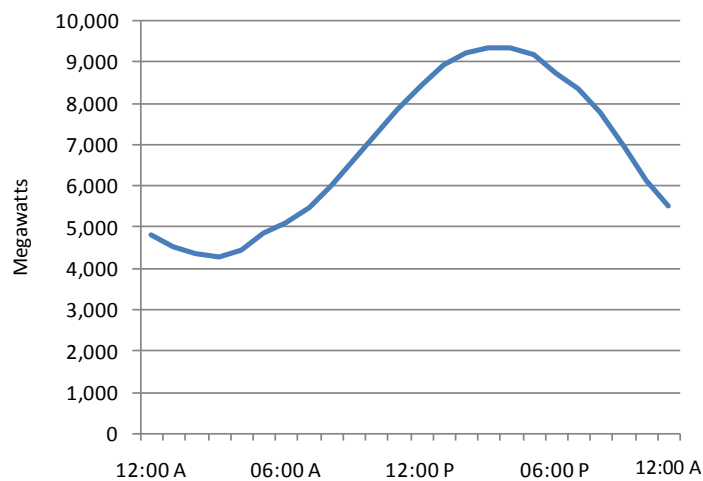
³⁹ "Florida's unique geography and lack of native resources renders it particularly vulnerable to energy supply disruptions. The catastrophic 2004 and 2005 hurricane seasons underscored this vulnerability and the resulting economic impacts. The hurricanes severely disrupted vital natural gas supplies to Florida. The state has since worked to enhance its energy infrastructure's security. Similarly, Florida's increasing dependence on natural gas for electricity is of growing concern. Forecasts show new generation capacity proposed over the next ten years will be almost entirely natural gas-fired. Excessive reliance on a single fuel leaves Floridians subject to price-volatility and supply interruption risks." - Florida Energy Commission, "2007 Florida Energy Commission Report to the Legislature"; December 31, 2007 p.13

As described in Section II of this report, Florida’s gas requirements are driven principally by power demand. The interrelationship between the electric and natural gas infrastructure was recently discussed by the Florida Energy Commission:

Energy infrastructure provides the foundation for secure and reliable access to the energy supplies and services on which Florida depends. The state’s energy infrastructure is comprised of many components, and is complex and interconnected...Generation plants require a dependable transportation infrastructure to deliver the necessary fuels to the power plants...Maintaining a balanced fuel supply adds value in terms of supply reliability and price stability. Fuel diversity is not always a cost-savings measure, but rather a risk-mitigation strategy...If, for example, natural gas becomes the sole replacement fuel of choice, this will result in natural gas generation producing more than 50 percent of Florida’s energy as early as 2013. Given the state’s vulnerability to supply disruptions, and the continued volatility in natural gas prices, this trend is problematic.⁴⁰

This relationship between power generation and natural gas infrastructure will only intensify as demand for electricity continues to grow. As discussed in Section II, electric demand in Florida is forecast to grow at approximately 2% per year. As a result, Florida is projecting approximately 16,300 MW of generating capacity additions by 2016. The type of power generation required is influenced by the electricity demand curve; electricity consumption is not uniform throughout a day, but rather fluctuates with each hour during a day. For example, as illustrated in Figure 9, the afternoon hours may experience more electricity demand as the temperature increases and the air conditioning requirements increase.

Figure 9: Florida Power Corporation’s Warmest Summer Day: Demand Profile⁴¹



To manage the hourly demand fluctuations, electric utilities have assembled a portfolio of generation assets that most economically serve different segments of the electricity demand curve. This concept was recently summarized by the Florida Energy Commission:

⁴⁰ Ibid p. 91.

⁴¹ SNL Industry Data: 2006 Electricity Demand Data for Florida Power Corporation.

Florida's electric systems and utilities must build and operate various types of units to meet the state's changing load. Baseload generation meets the continuous load on the system...As the load rises during the day, intermediate units, mainly oil and natural gas-fired, are brought on line and then lowered as the load decreases at night. These units may run for between 50 and 70 percent of the day...Combustion turbine units, mostly oil- and natural gas-fired, are cycled on for shorter periods to meet peak demand and may only run between 5 and 20 percent of the day, depending on weather conditions.⁴²

This power portfolio concept has implications for the Florida natural gas infrastructure, in particular the issue of average day pipeline demand compared to peak demand for natural gas. This issue was discussed by the Florida Public Service Commission in 2005:

Based on the forecasted requirements of electric utilities and other sectors, the Commission estimates that total pipeline demand will require an average of 3.15 Bcf/day by 2014...Because the 2014 forecasted pipeline capacity requirement, based on the average demand, might understate gas capacity need, the Commission also conducted a forecast based on the projected peak demand for gas capacity. Based on this methodology, the Commission estimates that by 2014, incremental pipeline capacity requirements could increase up to 1.34 Bcf/day.⁴³

Power generation requirements create uneven gas demand and hourly swings (i.e., the 3.15 Bcf/day of average day pipeline demand versus the 4.49 Bcf/day of peak pipeline demand discussed above) and reduces overall annual pipeline load factor. As is the case for Northeastern LDCs, hourly, daily and seasonal fluctuations in natural gas requirements, coupled with the unpredictability of weather and the essential public health and safety concerns associated with maintaining energy reliability, necessitates considering a variety of different gas resources for inclusion in the overall gas supply portfolio. Specifically, baseload natural gas load requirements typically are met with pipeline capacity; seasonal natural gas loads with storage and short-haul pipeline capacity; and natural gas peak demands with peaking resources such as the Project.⁴⁴

Figure 10 depicts Florida's 2007 gas demand profile and helps demonstrate why the Project augments Florida's existing gas supply and delivery resources. This chart depicts Florida's average daily gas demand by month for 2007 sorted from highest to lowest. The chart also includes the potential demand for natural gas that is represented by the quantity of distillate and residual fuel oil burned by Florida's dual-fuel capable power plants in 2007. Combined, these data points suggest a potential average day natural gas load duration curve for the state in 2007, with peak summer natural gas and oil demand for power generation shown to the left side of the chart.

⁴² Florida Energy Commission, "2007 Florida Energy Commission Report to the Legislature"; December 31, 2007 p. 9.

⁴³ Florida Public Service Commission Division of Economic Regulation, "A Review of Florida Electric Utility 2005 Ten-Tear Site Plans". December 2005, P.43.

⁴⁴ DSM and fuel switching also have a role in the resource portfolio.

Figure 10: Florida 2007 Gas and Oil Demand Profile

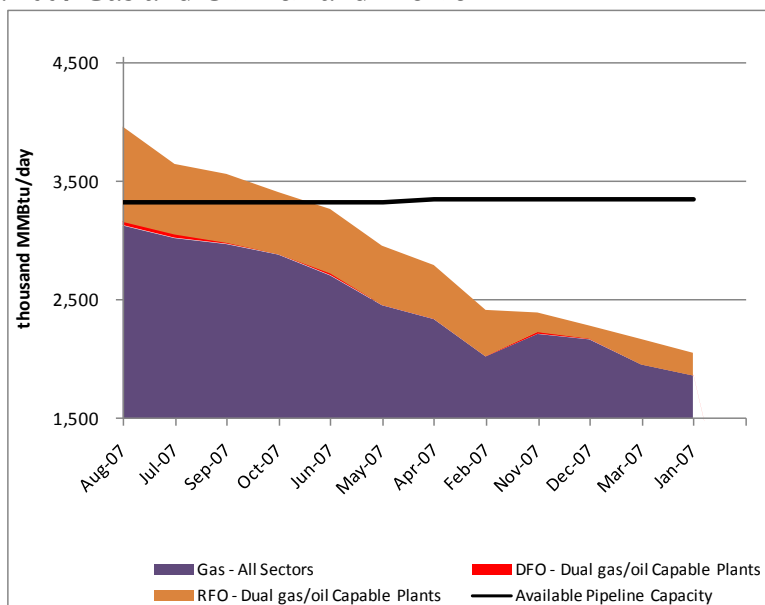


Figure 10 includes a horizontal line indicating the aggregate level of FGT and Gulfstream delivery capacity into Florida. This line indicates that, even during the peak summer months, *average* daily gas consumption is less than aggregate FGT/Gulfstream daily delivery capacity. This suggests that for most of the year there is surplus pipeline capacity available to be used to inject gas into the Project, even during peak demand months (e.g., evening and weekend hours when power demand is below peak levels). Figure 10 also demonstrates that potential average day gas demand (gas plus dual-fuel power plant oil burn) exceeds total FGT/Gulfstream capacity during the peak summer months, indicating that the Project has the potential to displace some portion of peak season oil burn. In effect, by providing an in-state inventory of gas, the Project offers a means to convert existing underutilized pipeline capacity into additional peak-day gas delivery capacity.

Florida currently meets natural gas demand in one of two ways. By holding firm pipeline capacity from the Gulf Coast production region or from the Elba Island LNG import terminal, consumers can buy gas year-round as needed for delivery to Florida. To satisfy peak demand solely using pipeline capacity, consumers would need to reserve sufficient pipeline capacity to satisfy peak demand, but leave the reserved pipeline capacity underutilized during off-peak periods. Alternatively, consumers can contract for gas storage in the Gulf Coast region attached to the interstate pipelines serving Florida. In this way, they can take advantage of off-peak commodity prices for purchases and injections into storage, and withdraw the gas from storage for delivery to the state on-peak. However, in addition to contracting for the storage capacity, production area storage also requires consumers to contract for firm year-round pipeline capacity to deliver the gas from the storage facility into Florida to meet peak day requirements. Even though consumers must pay for this capacity on a year-round basis, it may be underutilized for more than one-half of the year.

Table 3 presents the results of an economic analysis comparing the annual cost to contract for up to forty days of peaking gas service from FGS with the annual cost to contract for the same level of

peaking capacity by means of the two alternative service options discussed above: (i) contracting for new firm pipeline capacity from the Gulf Coast production region, and (ii) contracting for high deliverability production area Gulf Coast storage with associated new firm pipeline capacity for delivery to Florida. This analysis compares the annual cost of each alternative assuming service equal to the Project’s proposed 8 million MMBtu of storage capacity and 400,000 MMBtu/day of deliverability. The analysis estimates the annual costs assuming customers utilize the storage capacity within the volumetric parameters.

Table 3: Comparison of Annual Cost of Peaking Service Options

	Production Area		
	Transportation Only (annual \$)	Storage and Transportation (annual \$)	FGS service (annual \$)
Case 1: Excludes 2005	\$ 156,865,321	\$ 150,658,358	\$ 123,447,094
Case 2: Includes 2005	\$ 156,865,321	\$ 141,219,861	\$ 115,522,513

This analysis contains the following key assumptions:

- Cost of new pipeline capacity. FGT is the largest pipeline connecting Florida to production areas in the Gulf, but its current capacity is fully subscribed and the recent sharp increase in the cost of construction materials results in the current FTS-1 and FTS-2 firm transportation rates being less than the cost of new capacity. FGT is moving forward with a large new capacity expansion project to serve growing power generation demand, i.e., the Phase VIII expansion. Although FGT has not publicly disclosed the estimated cost for new firm service, the Phase VIII capacity is expected to be priced incrementally at a premium to existing rates. Southern Natural Gas’ recent Cypress Phase II project provides some indication of the cost of new pipeline capacity into Florida. Cypress Phase II allows current FGT shippers to access gas supplies from the Elba Island LNG import terminal. The combination of the Cypress rate (\$0.36/MMBtu) and FGT’s existing FTS-2 transportation rate (\$0.77/MMBtu) yields a \$1.13/MMBtu proxy for the recent cost of building pipeline capacity into Florida. On this basis, the analysis in Table 3 assumes a \$1.15/MMBtu cost of incremental FGT pipeline capacity.⁴⁵
- Cost of production area high deliverability storage. Most of the existing or planned high deliverability storage facilities located in the Gulf region that are not fully subscribed have received FERC approval for market-based rates, which means that the rates are not publicly available. Based on publicly-released information for the cost to develop new high deliverability storage capacity in the Gulf Coast region, Concentric estimates that new storage capacity will cost in excess of \$4.00 per MMBtu of reserved capacity per year.

⁴⁵ Florida Public Service Commission Docket No. 080203-EI, Docket No. 080245-EI, and Docket No. 080246-EI, Florida Power & Light Company Direct Testimony of Heather C. Stubblefield, April 8, 2008, page 10.

- Cost of FGS delivery. Given the location of the Project (i.e., southern Florida) this analysis assumes that customers will be able to deliver gas from the Project without additional firm transport cost (e.g., using their existing capacity on the interstate pipelines). Concentric assumes that, depending on pipeline operating conditions, customers would either schedule a backhaul or segment their capacity to schedule a forward haul of gas from the Project. For this analysis, Concentric assumes gas deliveries from the Project are priced at FGT's existing FTS-2 transportation rate (\$0.77/MMBtu) on a daily, as-needed basis. Some or all of this cost (i.e., a total of approximately \$12 million annually) may be avoidable via capacity segmentation.
- Avoided gas costs. Both storage options, i.e., the FGS Project and production area storage, provide customers with a physical natural gas price hedge to buy lower cost gas supplies for storage and use during higher commodity price periods, thus lowering annual commodity costs and reducing price volatility. This analysis deducts the annual value of avoiding high commodity; prices within the volumetric parameters of storage and the Project, from the annual fixed costs of storage service. The analysis considered the average annual value derived from avoided high gas cost periods over the past five years. In Table 3, Case 1 excludes the avoided costs for 2005 which were significantly influenced by the Gulf Coast hurricanes, while Case 2 includes the 2005 avoided peak period gas costs.

The analysis summarized in Table 3 indicates that the Project is the least cost option for meeting up to 40 days of peaking natural gas requirements in Florida. The analysis reveals that although both storage options benefit from avoiding peak period gas purchases, the FGS option is additionally advantaged by avoiding the cost of contracting for year-round firm transportation service. These results highlight the Project's fundamental economic advantage over the alternative means of securing peaking supplies. Unlike the alternatives, the Project is located and designed to deliver gas exactly where and when it is most needed, the days and even hours in a day when the natural gas delivery system in the Florida market area is operating at maximum capacity. Pipeline capacity is highly valuable for serving baseload and seasonal demands that do not vary significantly across the year or season, but becomes less economic as annual utilization for the resource declines.⁴⁶

As shown in Table 3, the Project is estimated to cost consumers in the state approximately \$116 million to \$124 million annually net of avoided high cost gas purchases. If spread over all of Florida's roughly 9.5 million electric customers, this service results in approximately a \$1.00 increase in each customer's monthly bill. The economic returns enabled by this investment are numerous:

- The Project allows more efficient use of existing, underutilized off-peak pipeline capacity to deliver gas into storage, where it is available for use specifically when it is most valuable, during peak demand hours and/or during curtailments in otherwise available pipeline supplies;
- The Project allows customers to substitute off-peak gas purchases for peak period gas purchases, thereby offering a tool for reducing fuel costs and price volatility;
- The Project can reduce the need to burn more expensive oil for power generation;

⁴⁶ For example, the cost of FGT's existing FTS-2 capacity is approximately \$0.77/MMBtu when utilized fully every day of the year (100% load factor). However, if utilized solely to meet 40 days of peaking gas requirements, the annual load factor falls to approximately 11.0% (40/365) and the per unit cost of capacity climbs to approximately \$7.00/MMBtu.

- The Project allows Florida energy market participants to better align the next pipeline capacity decision with increases in baseload and intermediate generation requirements; and
- As discussed below, the Project provides increased natural gas supply security and environmental benefits.

B. Ensuring the reliability and security of Florida’s energy supplies

As shown in Figure 3, natural gas comprises a growing percentage of Florida’s power supply portfolio. Rapid demand growth, the cancellation of certain proposed coal-fired electric generation projects, and announced conversions of existing oil-fired power generation capacity to gas-fired are all pointing to rapid increases in near-term demand for gas-fired power generation and growing peak day gas requirements. At the same time, Florida imports 100% of its gas supply from other states, including the gas withdrawn from the production area storage that certain Florida utilities currently control. As a consequence, Florida is increasingly vulnerable to gas supply interruptions and pipeline delivery problems. Electricity providers are taking steps to reduce the state’s vulnerability to power supply interruptions, including hurricane hardening of the electric transmission and distribution systems and diversifying their gas supply resources (i.e., assembling a portfolio of natural gas assets which include SESH, production area storage and Cypress Pipeline). However, with a power supply portfolio increasingly reliant on the availability of out-of-state gas supplies, electric infrastructure reliability investments increasingly need to be viewed in concert with fuel supply reliability.

As was vividly demonstrated in 2004 and 2005, hurricanes pose a real and significant threat to Gulf Coast natural gas supply reliability. Gulf Coast natural gas storage can mitigate natural gas supply curtailment risk, but because natural gas storage still requires delivery of stored natural gas into Florida, out-of-state natural gas storage does not offer complete hurricane insurance as both natural gas storage and pipeline operations can be impacted. For example, the owner of the MoBay Storage Hub in Mobile Bay, Alabama had this observation in the aftermath of Hurricane Ivan in September 2004:

Despite all that Ivan threw at us, we were up and running at full production capacity within 72 hours after the storm made landfall. We’d have been making gas deliveries sooner if the take-away pipelines in the area had been fully operational over the weekend. The irony is that storage deliveries are supposed to be available to supplement gas supply lost during events like hurricanes, but that can’t happen if the pipelines can’t take the gas or if gas storage facilities shut down during hurricanes like some in the Gulf Coast have done in the past.⁴⁷

Storage and pipeline delivery curtailments resulting from another supply area hurricane event (e.g., Ivan, Katrina, or Rita) will not affect the Project’s ability to deliver gas. The facility is located in the heart of the Florida natural gas market with access to both of the interstate pipelines linking all of Florida’s natural gas demand centers. Even if a hurricane was to curtail 13% of flowing natural gas on a typical August day (i.e., approximately 400,000 MMBtu per day) the Project could replace that supply for as long as 20 consecutive days. This is enough natural gas for power generators to maintain service to over one million residential customers for 20 days (or two million customers for 10 days if the Project installs the full 800,000 MMBtu/day of permitted vaporization capacity). The

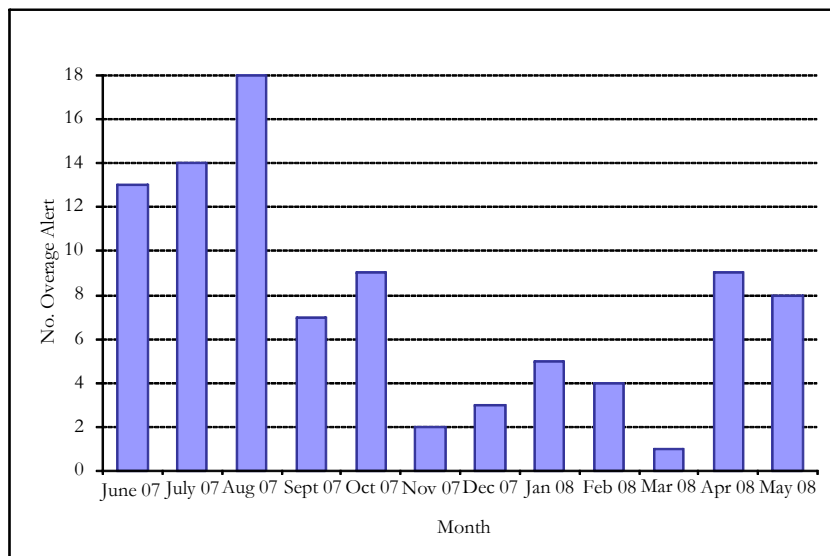
⁴⁷ Business Wire: “Falcon Gas Storage Company’s MoBay Gas Storage Hub Withstands Full Assault from Hurricane Ivan”; September 21, 2004.

Project provides a physical insurance policy in the form of a strategic reserve of natural gas located in Florida for emergencies (hurricane or otherwise) when interstate delivery of pipeline natural gas to Florida is interrupted or curtailed.⁴⁸ While the Project does not improve the state’s inter-fuel diversity, it does diversify the state’s gas supply portfolio and reduces the state’s reliance on flowing interstate natural gas supplies and its vulnerability to interstate delivery curtailments.

In addition to energy security benefits, the Project offers several operational benefits to Florida’s gas and power systems due to its physical location attached to the extreme market ends of both the FGT and Gulfstream pipelines:

- The Project has the ability to deliver natural gas into the pipeline grid at the pipelines’ maximum allowable operating pressures, thereby enhancing the pipelines’ ability to deliver gas when needed most. This could be particularly beneficial during peak summer demand periods when FGT may impose delivery restrictions in response to high demands and low line pressures. For example, FGT’s tariff allows it to declare an Alert Day when: “the pipeline is experiencing or may experience in the next gas day high or low line pack operating conditions which threaten the ability to render firm services.”⁴⁹ FGT documents the occurrence of Alert Days on its electronic bulletin board, where this information remains publically available for one year.⁵⁰ Figure 11 depicts the number and distribution of FGT’s Overage Alert Days, (i.e., days in which FGT experienced a low line pack), from June 2007 through May 2008. FGT issues Overage Alert Days in response to warm weather and, less commonly, for cold weather and non-weather related restrictions (less than 12% of Overage Alert Days in the past year were due to cold weather). During this period (i.e., June 2007 – May 2008), FGT issued 92 Overage Alert Days.

Figure 11: FGT Alert Days June 2007 – May 2008



⁴⁸ Although Florida’s dual-fueled power generators can burn significant quantities of oil to replace curtailed gas supplies, higher oil prices and air emissions reduction goals diminish the value of oil backup.

⁴⁹ FERC Gas Tariff 13.D.2 p. 245.

⁵⁰ “Non Allocation Notices.” Florida Gas Transmission Company, LLC. 3 Jun. 2008.

As demonstrated in Figure 11, Overage Alert Day distribution suggests a seasonal pattern, with nearly half of the days occurring from June through August, and less than 13% occurring from December 2007 through February 2008. For overages exceeding the designated Alert Day tolerance, FGT's tariff provides for charges equal to 200% of daily gas price indices for the week in which the Alert Day occurred. For example, on May 25, 2008, the Alert Day overage charge was in the range of \$24/MMBtu.

- In addition, because the Project is expected to be connected to both FGT and Gulfstream, customers can move gas under their transportation contracts or they can use backhaul or interruptible capacity on an as-needed basis to deliver withdrawn gas to virtually any location on the pipeline grid in Florida. Moreover, the Project's high liquefaction and vaporization capacity means that it can operate in a daily swing mode to meet hourly peak demands with the opportunity for limited off-peak daily or weekend refills. This hourly operational flexibility is directly attributable to the Project's strategic location in the market area and distinguishes it from high deliverability production area storage outside the market area that relies on downstream delivery of natural gas supplies on the interstate pipelines. This highly flexible, intra-day swing capability enhances overall gas delivery and electric grid reliability for the state.

C. Reducing Florida's greenhouse gas emissions

Florida, like many other states, has recently adopted greenhouse gas (GHG) reduction goals and is looking to the power generation sector to take a leading role in lowering GHG emissions. While new nuclear power plants and renewable energy sources hold the promise to deliver significant future GHG reduction benefits for the power generation sector, substituting cleaner burning natural gas for oil in existing power plants offers a tangible means to reduce the power sector's carbon profile in the near term.

Florida's power generators routinely burn oil. As shown earlier in Figure 3, in 2006, 6.6% of Florida's electricity was generated by burning distillate and residual fuel oil in the state's power plants. Putting this into context, in 2006, Florida's electric utilities accounted for approximately 50%⁵¹ of all oil burned in the U.S. by electric utilities for power generation. Rapidly rising peak demand for power, cancellation of coal-fired generating capacity, and the increasing cost of incremental natural gas pipeline capacity portends increases in on-peak oil burn and higher air emissions.

By making more gas available to Florida power generators at peak demand hours, the Project has the potential to displace oil burned for power generation. For each turn of its 8 million MMBtu storage capacity, the Project could displace as much as 58 million gallons of distillate fuel oil or 53 million gallons of residual fuel oil. On a comparable per MMBtu basis, natural gas emits 27% less carbon dioxide than distillate fuel oil and 33% less carbon dioxide than residual fuel oil when burned for power generation applications. Natural gas also produces fewer SO₂, NO_x, and other harmful air

⁵¹ EIA: Electric Power Monthly with data for December 2007 (Report Released March 13, 2008), Table 1.8.B. Net Generation from Petroleum Liquids by State by Sector, Year-to-Date through December 2007 and 2006.

emissions when burned for power generation. Because natural gas is a cleaner burning fuel, oil displacement offers the state significant air emissions reduction benefits:

- Displacing 58 million gallons of distillate fuel oil would reduce carbon dioxide emissions by 177,000 tons/year, SO₂ emissions by 4,000 tons/year, and NO_x emissions by 2,000 tons/year.
- Displacing 53 million gallons of residual fuel oil offers even greater GHG benefits, i.e. carbon dioxide emissions fall by 227,000 tons/year.

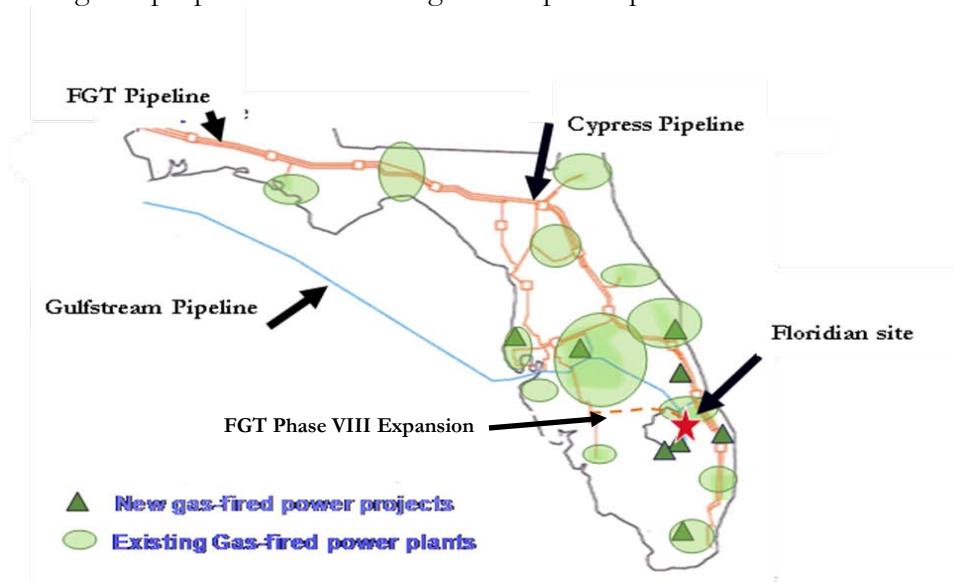
In addition, there are other secondary environmental benefits associated with reductions in oil burn, including reduced air emissions associated with oil resupply by ship and truck and reduced exposure to oil spills.

The Project is proposing to enter commercial service by the 1st Quarter of 2012, offering Florida one of the few choices for near-term reductions in carbon dioxide emissions in support of the state's ambitious GHG mitigation policy. Thus, the Project contributes to a carbon mitigation bridge to a future when nuclear and other non-emitting or low emitting power generation resources are available to help meet the state's GHG reduction objectives.

V. Conclusion

Florida faces even greater energy supply challenges than it has confronted in the past. These challenges stem from rapid growth in demand for electricity, surging energy supply costs, and recognition of the need to secure meaningful GHG reductions.

As indicated below, the Project site in south Florida and its proposed interconnection to both of the primary interstate natural gas pipelines serving the state will allow the Project to access virtually all of the state's existing and proposed new natural gas-fired power plants.



The Project's strategic location offers Florida a new in-state peaking resource with significant economic and environmental benefits. In addition, the Project also provides a cost-effective in-state insurance policy to support critical energy security and system reliability objectives. By allowing consumers to convert underutilized off-peak pipeline capacity into high value peak hour deliverability, the Project promotes efficiency and creates economic value for Florida while enhancing the state's energy security.

About Concentric Energy Advisors, Inc.

Concentric is a management consulting and economic advisory firm focused on the North American energy and utility industries. Headquartered in Marlborough, Massachusetts, Concentric specializes in transaction-related financial advisory services, energy market strategies, market assessments, utility operations and planning, regulatory and litigation support, energy commodity contracting and procurement, economic feasibility studies and capital market analyses and negotiations. Concentric's analytical work in the energy industry spans all aspects of the natural gas and electric markets, including both wholesale and retail levels. We have performed market assessments for new entry and investment decisions in electric generation, LNG, gas storage, electric transmission, gas pipeline and renewable energy projects throughout North America. Often, this has involved providing expert testimony before federal, state and provincial regulatory agencies.

Concentric's clients have included regulated electric and gas utilities, municipal utilities, energy project developers, electric market operators, regulatory agencies, international energy suppliers, lenders and investors in energy projects, and energy marketing and trading companies. Our work has provided the analytical underpinning supporting our clients' investment in and development of several billion dollars of electric generation, natural gas pipeline, LNG and other energy projects.

Working in close collaboration with our energy sector clients, Concentric provides a diverse array of market assessment and strategy development services, including:

- *Integrated resource planning*
- *Market entry analyses*
- *Market power analyses*
- *Expansion planning*
- *Demand and supply forecasting*
- *Energy procurement and contracting*
- *Energy portfolio optimization*
- *Risk assessment and management*
- *New service development*
- *New market design and implementation*
- *Competitive assessment and repositioning*