

ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Determination )  
of Need for an Electric Power Plant in )  
St. Lucie by Panda Midway )  
Power Partners, L.P. )  
\_\_\_\_\_ )

DOCKET NO. 000289-EU

FILED: APRIL 24, 2000

DIRECT TESTIMONY

OF

DANIEL E. WHITE

ON BEHALF OF

PANDA MIDWAY POWER PARTNERS, L.P.

DOCUMENT NUMBER-DATE

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FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: PETITION FOR DETERMINATION OF NEED  
FOR AN ELECTRIC POWER PLANT  
IN ST. LUCIE COUNTY  
BY PANDA MIDWAY POWER PARTNERS, L.P.  
DOCKET NO. 000289-EU

DIRECT TESTIMONY OF DANIEL E. WHITE

1 Q: Please state your name and business address.

2 A: My name is Daniel E. White. My business address is Pace Global Energy Services,  
3 4401 Fair Lakes Drive, Fairfax, VA 22033.

4 Q: For whom are you employed and in what position?

5 A: I am employed by Pace Global Energy Services ("Pace"). My title is Executive Vice  
6 President.

7 Q: Please describe your duties at Pace.

8 A: I head Pace's fuel consulting practice. That practice covers natural gas, crude oil, oil  
9 products, and coal, with natural gas comprising the largest portion of our work. As  
10 head of that practice, I perform and manage a wide range of activities concerning the  
11 natural gas industry, including business planning, market assessments, fuel planning,  
12 contract negotiations, acquisition and lending due diligence, and auditing. The largest  
13 component of my practice relates to fuel for large natural gas-fired power plants.  
14 This includes developing fuel supply strategies, sourcing fuel supplies and  
15 transportation services, negotiating the terms and conditions of these services, and  
16 reviewing the sufficiency, reliability and competitiveness of such arrangements for  
17 equity investors and lenders.

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1 I am the second-ranking officer overall in Pace's consulting practice. In addition to  
2 fuel, that broader practice includes groups focusing on power markets, finance, and  
3 industrial services. I coordinate activities between these groups and lead  
4 engagements involving all of these groups.

5 Q: What is the role of Pace with respect to the Panda Midway Power Project?

6 A: Pace has been engaged to present the fuel plan that Panda Midway Power Partners,  
7 L.P. has developed and to provide an independent review of the reasonableness of the  
8 fuel plan within the context of the regional spot and long term natural gas markets  
9 and in light of Panda's electricity marketing expectations.

10 QUALIFICATIONS AND EXPERIENCE

11 Q: Please summarize your educational history and work experience.

12 A: My resume is attached to this testimony and identified as Exhibit \_\_\_\_ (DEW-1). I  
13 hold a B.A. in Economics and English from the University of Washington. I have  
14 worked full time in the energy industry, with a focus on the natural gas industry, since  
15 1978 when I joined the Federal Energy Regulatory Commission ("FERC"). During  
16 my tenure at the FERC, I worked in the office responsible for regulation of natural  
17 gas commodity and transportation, with my efforts split about equally between  
18 natural gas itself and natural gas pipelines. In 1992, I joined C.C. Pace Resources,  
19 Inc. (the predecessor to Pace), where I have progressed from Account Manager  
20 through a series of promotions to Executive Vice President. Throughout my tenure, I  
21 have worked in the fuels group. Additionally, from November 1993 through  
22 December 1998, I was Executive Director of a trade association of natural gas-fired  
23 power generators called the Fuel Managers Association ("FMA") and later the

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1 Energy Managers Association ("EMA"). The focus of the FMA/EMA was to  
2 represent the interests of natural gas-fired power generators on fuel-related issues  
3 before federal agencies such as the FERC and the Department of Energy.

4 Q: What is your experience with regard to natural gas markets, natural gas supply  
5 arrangements, fuel plans, and regulatory support for power plant development?

6 A: Throughout my employment at Pace, from my very first assignment, I have worked  
7 on matters related to supplying fuel to power generation facilities. While this work  
8 has involved various oil products and coal, most predominately my work has  
9 involved supplying natural gas to such facilities. Over the last eight years, I have  
10 worked on the natural gas fuel supply arrangements for over three dozen power  
11 plants. My involvement has included fuel planning, contract negotiations, acquisition  
12 and lending due diligence, operational management planning, and procurement  
13 auditing. I have worked for many leading developers of large power plants as well as  
14 nearly every lender to such plants. Additionally, I have evaluated gas marketers and  
15 interstate pipelines for acquisition efforts, and monitored new pipeline developments  
16 for customers and lenders. For developers of new pipelines, I have performed market  
17 assessments, designed rate schedules, and drafted tariff terms and conditions. I have  
18 performed each of these tasks both in the North American market and internationally.  
19 In Florida, I worked on arranging fuel supplies for the Tiger Bay and Auburndale  
20 facilities, and was the fuel consultant to the lenders financing the Lake, Mulberry, and  
21 Orange facilities. Additionally, I closely monitored the progress of Florida Gas  
22 Transmission's ("FGT") Phase III expansion for customers and lenders dependent  
23 upon that expansion to provide fuel to power plants. Finally, in my role as Executive

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1 Director of the FMA/EMA, I was deeply involved with the restructuring of FGT  
2 services following the issuance of FERC's Order No. 636.

3 In addition to my personal experience, Pace brings even broader relevant experience  
4 to fuel procurement for power plants. Please refer to Exhibit \_\_\_\_\_(DEW-2) for  
5 corporate information about Pace. Pace has 20 years experience in energy consulting  
6 with a long-standing commercial involvement with fuel procurement and private  
7 power development. In addition to fuel expertise, the firm provides power expertise,  
8 financial advisory services, industrial power plant expertise, and energy management.  
9 Just two examples of the firm's practice: the energy management group has managed  
10 the procurement of natural gas for a number of operating power plants and also  
11 manages the natural gas procurement for the Municipal Gas Association of Florida.

12 Q: Have you previously testified before regulatory authorities or courts?

13 A: In my role as Executive Director of the FMA/EMA, I provided numerous pleadings to  
14 regulatory authorities such as the FERC and appeared before such authorities on  
15 issues concerning natural gas-fired power generators. I have been an expert witness  
16 in several legal proceedings, including a matter involving a natural gas contract for a  
17 power plant, a matter involving the value of natural gas storage, and the appropriate  
18 pricing under a contract governing nearly 400 MMcf per day.

19 SUMMARY AND PURPOSE OF TESTIMONY

20 Q: Please summarize your testimony.

21 A: My testimony describes and reviews the fuel supply arrangements of the Panda  
22 Midway Project. My firm and I were engaged to provide this description and review  
23 from an independent perspective. In other words, neither my firm nor I are

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1 responsible for establishing the fuel plan or negotiating the implementation of the fuel  
2 plan.

3 My testimony in summary: Panda Midway has made long-term arrangements  
4 providing it the right to procure from Gulfstream Natural Gas System ("Gulfstream")  
5 on a firm basis transportation capacity rights sufficient to serve the Project's peak day  
6 natural gas requirement. This arrangement will provide Panda Midway ready access  
7 to natural gas supplies to meet the Project's needs. Additionally, Panda Midway is  
8 arranging for an additional interconnection with FGT that would enhance competitive  
9 procurement of fuel. It is my conclusion that Panda Midway's fuel plan provides a  
10 reasonable and reliable approach to fuel procurement. The plan exploits the expected  
11 increase in gas availability in Florida so as to hold the prospect of reliable,  
12 economical, and efficient fuel procurement matched with the operational expectations  
13 of the Midway Project.

14 Q: Are you sponsoring any exhibits to your testimony?

15 A: Yes, I am sponsoring the following exhibits:

- 16 1. Exhibit \_\_\_\_\_(DEW-1): Resume of Daniel E. White;
- 17 2. Exhibit \_\_\_\_\_(DEW-2): Pace Corporate Information;
- 18 3. Exhibit \_\_\_\_\_(DEW-3): Fuel Plan Review Related to the Midway and Leesburg  
19 Power Plant Projects;
- 20 4. Exhibit \_\_\_\_\_(DEW-4): Precedent Agreement with Gulfstream;
- 21 5. Exhibit \_\_\_\_\_(DEW-5): Letter of Intent with FGT; and
- 22 6. Exhibit \_\_\_\_\_(DEW-6): Letters of Intent with Various Suppliers.

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PIPELINE FACILITIES SERVING PROJECT

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Q: Please describe the proposed Gulfstream pipeline and its permitting status.

A: Please refer to Section II.C. of the "Site" Exhibits attached to the Need Determination Petition sponsored by Mr. Steven W. Crain, which is a map provided by Gulfstream showing the routing of the Gulfstream system. Generally speaking, Gulfstream will run offshore from the Mobile Bay area of Alabama to the Tampa Bay area, and then proceed in an easterly direction across Florida to St. Lucie County. Additionally, there will be a lateral into Polk County. In Exhibit \_\_\_\_\_(DEW-3), Pace summarizes the results of our investigation into the status of Gulfstream's permitting. It is my conclusion that Gulfstream is on track with an appropriate schedule to achieve the required permitting.

Q: Please describe the gas pipeline facilities by which Panda Midway's gas supply will be delivered.

A: Gulfstream's mainline will directly serve the Panda Midway Project by an interconnection on Panda Midway's property. The diameter of the Gulfstream mainline at that point will be 30 inches, and the pressure guaranteed by Gulfstream is 725 psig.

A three-mile lateral may be constructed from the Midway Project site to the FGT mainline system ten miles downstream of FGT's Station 20 or Southwest of Ft. Pierce in St Lucie County.

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GAS SUPPLY AND TRANSPORTATION

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Q: Please summarize the gas supply arrangements for the Panda Midway Project.

A: The Midway Project intends to purchase natural gas via short-term, spot firm natural gas supply transactions with producers and marketers in the Mobile Bay region for supply into Gulfstream and FGT, and additional producers and marketers for supply into FGT in Louisiana and Texas. The price and volume terms of the supply agreements will be agreed to at the time of the transactions. The Project intends to seek to optimize the supply arrangements to generation expectations and commitments provided in any power sales agreements.

Q: Please summarize the gas transportation arrangements for the Panda Midway Project.

A: Panda Midway will have an interconnection with Gulfstream sufficient to provide all fuel the Project requires. Panda Midway has made arrangements providing it the contractual right to procure transportation capacity rights from Gulfstream on a firm basis that are sufficient to cover the Project's peak day natural gas requirement 365 days a year. These firm transportation capacity rights extend to natural gas supply areas in the Mobile Bay, Alabama, and Pascagoula, Mississippi, areas where supply is abundant. Additionally, through pipeline interconnections, the Project will have access to natural gas supplies from throughout the Gulf region.

Also, Panda Midway is expecting to interconnect with FGT (via the lateral previously described) such that the Panda Midway Project can obtain its fuel through FGT. Access to transportation capacity on FGT would provide convenient access to even more natural gas supply sources and increase the Project's competitive alternatives.



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1 Q: Please describe the basic provisions of the gas transportation contract between  
2 Gulfstream and Panda Midway, and the arrangements with FGT.

3 A: Please refer to Exhibit \_\_\_\_ (DEW-4), the Precedent Agreement between Panda  
4 Midway and Gulfstream, redacted to protect confidential rate information. The  
5 Precedent Agreement provides Panda Midway the right to firm transportation  
6 capacity on Gulfstream for up to 200,000 MMBtu/d. The term is for 20 years. The  
7 pressure guaranteed by Gulfstream is 725 psig, sufficient for the Project's turbine  
8 operations. The maximum volume in the Precedent agreement is in excess of the  
9 expected peak demand of approximately 173,000 MMBtu/d, and Panda Midway  
10 retains the option to reduce the capacity commitment to 150,000 MMBtu/d. This  
11 provides Panda Midway the valuable right to turn back a portion of its Gulfstream  
12 firm capacity in favor of more economical and equally reliable alternative fuel  
13 delivery arrangements.

14 Exhibit \_\_\_\_ (DEW-5) is the Letter of Intent between Panda Midway and FGT. The  
15 Letter of Intent between Panda Midway and FGT states that each party will work  
16 toward an interconnection agreement and an IT agreement containing satisfactory  
17 terms to Panda Midway with respect to volumes and in-service dates.

18 Q: How does the fuel supply plan match the expected operation of the Panda Midway  
19 Project?

20 A: The fuel supply plan is well matched to the plant's expected operation. The plan  
21 provides for reliable fuel procurement for the peak daily requirement of  
22 approximately 173,000 MMBtu/d. Additionally, the fuel plan provides flexibility to  
23 adjust fuel procurement with daily, seasonal, and annual operational variations. For

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1 example, while the Project's overall fuel requirements are relatively flat, they peak in  
2 the July/August period and trough in the January/February period. The fuel supply  
3 plan positions Panda Midway to track its procurement with usage to generate  
4 electricity in the most economic fashion.

5 Q: Virtually all of the proposed electric power plants in Florida identified in the Florida  
6 Regional Planning Council's 1999 Regional Plan will be fueled by natural gas. What  
7 assurances can you give the Florida Public Service Commission that there will be  
8 adequate natural gas supplies available to fully supply all of these plants?

9 A: Please refer to Exhibit \_\_\_\_\_(DEW-3), a report Pace prepared that includes a review  
10 of the availability of gas supplies both generally and specifically to serve Florida.  
11 The report concludes that orderly and competitive markets for natural gas supply exist  
12 in the U.S. that allow commodity prices to balance consumption with demand.  
13 Furthermore, the existence of abundant potential natural gas reserves and  
14 continuously improving technologies will allow the natural gas commodity market to  
15 maintain a relatively constant equilibrium price in real terms. To support these  
16 conclusions, the report provides research and analysis pertaining to fundamental  
17 drivers affecting natural gas supply and demand balances, Florida supply and demand  
18 balance, natural gas regulatory and market structures, and a comparison of industry  
19 fundamental forecasts.

20 Concerning Florida specifically, natural gas supply is adequately abundant and  
21 readily available in the producing basins that feed the pipeline systems serving the  
22 Florida market; namely Onshore Gulf Coast, Offshore Gulf Coast, and East Texas.  
23 The pipeline industry has proven to be very responsive to the needs and growth of

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1 natural gas consumers, and can be expected to continue to be so. For example,  
2 Gulfstream is already considering a Phase 2 expansion by extending its pipeline  
3 system to connect with new consumers and increasing compression. In fact, due to  
4 the large number of expected capacity expansions over the next three years in Florida,  
5 Pace expects to see an excess of primary pipeline capacity beginning in 2001.

6 Q: What would happen in the event that there was an outage on Gulfstream?

7 A: As Panda Midway has arranged for firm transportation rights on Gulfstream, the only  
8 two types of outage that would occur would be due to scheduled maintenance and  
9 force majeure events, which by their nature are unscheduled. Scheduled maintenance  
10 is managed such that it has essentially no impact on overall service. Concerning  
11 force majeure events, Panda Midway would receive an allocation of Gulfstream's  
12 remaining capacity and seek additional fuel supplies through its expected  
13 interconnection with FGT.

14 Q: Based on your review of comparable natural gas pipelines, what is the likelihood such  
15 an outage would occur?

16 A: Extremely rare. As discussed further in the Pace report (Exhibit\_\_\_\_(DEW-3),  
17 interstate natural gas transportation service has been extremely reliable both in  
18 Florida and throughout the rest of the North American gas grid during the past 15  
19 years. Numerous factors account for this reliability (e.g., supply diversity, gas  
20 industry restructuring, increasing competitive forces, technological developments,  
21 new contractual arrangements, etc.). In fact, according to the U.S. Department of  
22 Transportation, natural gas pipelines constitute the safest method of energy  
23 transmission.

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1 FGT is a normal example of this reliability. There has been only one major gas  
2 disruption that has materially restricted gas flow on FGT's system during the past 30  
3 years. Since 1984, FGT has only had 24 pipeline incidents, most of which were  
4 minor and repaired quickly.

5 We can expect the same level of reliability from Gulfstream and Buccaneer. Each of  
6 these pipelines is being developed by leading pipeline companies with existing  
7 facilities with long records of highly reliable service.

8 Concerning maintenance, pipeline companies schedule such work during low demand  
9 period so as to minimize the impact on their customers. They also phase work so that  
10 capacity reductions are minimized at any particular time, allocate any reductions first  
11 to non-firm customers, and then allocate any remaining reductions, if any, across all  
12 firm customers on a *pro rata* basis. The result is to reduce the impact of scheduled  
13 maintenance to essentially zero.

14 Q: What would happen to the Panda Midway Project if Gulfstream is delayed or is not  
15 constructed?

16 A: Pace's review indicates that Gulfstream is on track to be constructed and enter service  
17 as planned. Moreover, as an anchor customer of Gulfstream the Panda Midway  
18 Project is supporting the economic viability of the pipeline. Therefore, I have every  
19 reason to believe the pipeline will proceed. If there is a Gulfstream delay or  
20 cancellation, I would expect Panda Midway to either correspondingly adjust its own  
21 completion timetable or to seek alternate fuel supply arrangements from either FGT  
22 or the Buccaneer pipeline project.

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1 BACKUP FUEL

2 Q: What plans, if any, has Panda Midway made to acquire or install on-site backup fuel  
3 supply capability for the Project?

4 A: Panda Midway has concluded that its natural gas fuel plan is so highly reliable that it  
5 is not necessary to acquire or install on-site back-up fuel supply. This conclusion has  
6 been reinforced by Panda Midway obtaining Letters of Intent from various fuel  
7 suppliers to transact with Panda Midway such that if the fuel suppliers fail to perform,  
8 they will compensate Panda Midway for the cost of replacement natural gas or the  
9 cost of substitute electrical generation. Exhibit \_\_\_\_\_ (DEW-6) provides these  
10 Letters of Intent.

11 I concur with Panda Midway's approach. Given the contractual arrangements and the  
12 planned redundancy in pipeline capacity available to the Project, the only additional  
13 contingency that on-site fuel storage would guard against is the possibility of a  
14 unscheduled gas pipeline force majeure event occurring simultaneously with peak  
15 electrical demand and a significant shortfall in electric generating availability. As  
16 discussed in the Pace report (Exhibit \_\_\_\_\_(DEW-3)), natural gas pipelines are  
17 extremely reliable and such force majeure events extremely rare. It would be even  
18 rarer for such an event to line up with peak power demand and low generator  
19 availability.

20 I also note that the Panda Midway approach is the accepted trend nationwide. A  
21 number of natural gas-fired power plants have been built recently that have not had  
22 on-site backup fuel supply. For example, Florida Power and Light is not installing  
23 backup fuel for its 3,000 MWs of repowering projects in Sanford and Fort Myers, and

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1 the 540 MW Westbrook facility under construction in Portland, Maine, is not  
2 installing backup fuel capability.

3 Q: Does this conclude your testimony?

4 A: Yes.

## **DANIEL E. WHITE**

### **PROFESSIONAL QUALIFICATIONS**

#### **QUALIFICATIONS AND EXPERIENCE**

Mr. White has been involved in North American natural gas markets for over 20 years, has lead Pace's fuel consulting practice since 1994, and is the second ranking officer in Pace's 60-person consulting division. He has lead numerous assignments worldwide evaluating natural gas and other fuel markets, preparing strategic energy business initiatives, designing fuel procurement plans for power and industrial plants, negotiating fuel commodity and transportation contracts, and conducting fuel due diligence reviews to support acquisitions and financing.

The largest component of Mr. White's and Pace's fuel practice concerns North American natural gas markets. As head of Pace's 25-person fuel consulting practice, Mr. White supervises a wide array of analysis for numerous developers, utilities, lenders, and regulators. His involvement has ranged widely. For example, in the last several years Mr. White: lead the preparation of a business plan for a leading U.S. electric utility to enter the natural gas marketing business; designed and negotiated innovative fuel arrangements for a merchant power plant, for an industrial company designed a plan to optimize natural gas procurement across over 90 facilities, supervised due diligence analysis of fuel arrangements for numerous new power plants, prepared power and gas commercial operations plans for several gas-fired power plants; and provided expert witness testimony on contracting practices and market dynamics in a large arbitration proceeding. Additionally, for a number of years Mr. White was the Executive Director of a trade association representing independent power plants on natural gas issues. In that capacity Mr. White prepared and presented analysis of natural gas issues to state and federal regulators and agencies.

Mr. White as worked on assignments concerning numerous countries as well as on activities with worldwide scopes. This includes the United Kingdom, Spain, Italy, Egypt, Ghana, Mexico, Colombia, Venezuela, Brazil, Argentina, Chile, Bolivia, Peru, the Philippines, Australia, Thailand, and India. For example, Mr. White: was the lead consultant to a major power and fuels asset developer in establishing an integrated power- and gas-trading company in the United Kingdom; performed an in-depth feasibility study of the electric power and natural gas markets in Colombia; negotiated the natural gas contracts for the first independent power project in Venezuela, designed the tariff for an international natural gas pipeline development in South America; and lead preparation the business plan for a worldwide pipeline development company.

#### **REPRESENTATIVE PROJECT EXPERIENCE**

- *Fuel Procurement.* Designed and implemented a fuel procurement plan for a 540MW merchant power plant in New England. (1998-1999)
- *Regional Market Analyses.* Prepared five different detailed regional U.S. gas market assessments for energy project developers. Analyzed supply sources, interstate transportation

routes, storage options, local distribution services and prices, potential customer mix, and load profiles. (1998-9)

- *Large Gas Purchase Arbitration Case.* Expert witness on contracting practices and market dynamics in arbitration covering over 400 MMcf per day of gas supply serving the Northeastern U.S. (1997)
- *Florida Pipeline Due Diligence.* Provided detailed risk assessment and construction monitoring of Florida Gas Transmission Company ("FGT") \$1 billion "Phase III" pipeline expansion on behalf of lenders to end-users dependent upon the expansion. (Fall 1992-spring 1995)
- *Florida Gas Market Analysis.* Provided natural gas commodity and transportation recommendations to the developers of power plants in Florida, including assessment of FGT expansion. (Fall 1997)
- *U.S. Pipeline and Marketing Company Acquisition Effort.* Headed a comprehensive assessment and valuation of a large gas pipeline and marketing company for acquisition by a major American electric utility. Annual pipeline net income is \$700 million and gas-marketing annual gross is \$1 billion. Created a financial model of the pipeline and market areas, analyzed target markets for pipeline capacity and natural gas, evaluated competitors, and analyzed ongoing regulatory developments. Recommended strategies to optimize the pipeline and marketing assets with the company's existing business. (1996)
- *Florida Bond Refinancing.* Prepared an Independent Fuel Consultant's Report included in a Section 144A bond refinancing of a gas-fired power plant in Orange County, Florida. (Fall 1995-spring 1996)
- *Nationwide Gas Procurement Review.* Headed a detailed review of the gas commodity and transportation contracting for an industrial with 91 facilities throughout the U.S. Prepared a corporate-side energy procurement strategy. Negotiated revised and new gas contracts with marketers, pipelines, and local distribution companies. (1997)
- *Midwest Integrated Power and Gas Project.* Supervised the analysis and valuation of a proposed power plant to be sighted at a natural gas storage field in the Midwest. (1998)
- *Pipeline Regulatory Advocacy.* Executive Director of the Energy Managers Association, which represented gas-fired independent power producers before FERC. Since 1992 spearheaded EMA's role in a number of key national industry issues, such as pressing federal regulators to standardize pipeline business practices. (1992-1999)
- *Florida Fuel Consultant.* Fuel consultant for the financings of several different power plants in Florida. For developers this included the Auburndale and Tiger Bay projects. For lenders, this included the Mulberry, Orange, and Lake projects. (Summer 1992-Fall 1995)



- *Pipeline Market Evaluation.* Evaluated natural gas markets (power generation, industrial, commercial, and residential) in eight franchise areas for the developer of a potential new large diameter natural gas pipeline serving Florida. The study included both areas with existing local distribution service and areas not currently served by natural gas. (1997)
- *Global Pipeline Business Plan.* Assessed pipeline markets on global, regional, and project levels for a leading worldwide engineering, construction, and investment company. Scope was worldwide, including North America. Responsible for assessing the demand for oil and gas pipelines, the economic value of the pipelines within the local market, and the potential financial returns to the owner. (1997)
- *Storage Market Evaluation.* Provided one of the largest gas storage owners a detailed evaluation of gas storage markets covering a 13-state region including the upper Midwest, the Mid-Atlantic, and the Northeast regions. Analysis included consideration of alternative supply and transportation portfolios to meet market demands. (1994-1995)
- *U.S. Gas Marketing Plan.* Prepared a comprehensive analysis of gas markets for one of the largest U.S. electric utilities, and developed a board-level business plan to enter that market. Market assessment tasks included analysis of the current state and future prospect of gas supply, transportation, local distribution, and marketing. Business plan tasks included detailed strategies and tactics at the customer, local distribution, state, and regional levels. Briefed senior management on all aspects of the gas market and the business plan. (1997)
- *South American Gas Market Study.* Evaluated gas pipeline and distribution investment opportunities in Latin America for a large U.S. interstate pipeline company. Tasks included assessment of current development projects and preparation of board-level briefing materials. (Spring 1996)
- *Fuel Investment Plan.* Developed international downstream fuel asset investment plan for a major power developer to invest \$250 million in equity by the year 2001. Key officer in charge of the market analysis, resource requirements, pipeline and storage project *pro formas*, and strategies and strategic goals. (1995-1996)
- *Storage Market Expert Witness.* Expert witness in a lawsuit over construction of a gas storage facility in the upper Midwest U.S. Scope was to evaluate the market prospects of the facility. (1995-1996)
- *Worldwide Natural Gas Investment Review.* Represented the international energy development affiliate in a corporate-wide gas business review for one of the largest U.S. gas and electric utilities. Tasks included contributing expertise in downstream international gas businesses such as pipelines, storage, and distribution. (1995)
- *Gas Contract Expert Witness.* Expert witness in lawsuit concerning 18 MMcf/d gas supply

contract to deliver gas from the Gulf of Mexico to the Northeastern U.S. Provided detailed assessment of viability of use of various pipeline transportation routes. (1995)

- *Pipeline Tariff*. Developed tariff structure and valuation *pro forma* for a 150 MMBtu/d international pipeline proposal in South America. This included drafting supply and transportation contracts for customers, and preparation of pipeline-related filings to the national regulatory agency. (1994)

## **EMPLOYMENT EXPERIENCE**

### **Pace Global Energy Services, LLC**

Senior Vice President (8/96 - Present)

Vice President (1/94 - 8/96)

Account Manager (7/92 - 12/93)

- Second ranking officer in energy consulting division within 140 member energy consulting and management firm and its predecessors.
- Leads fuels consulting group
- Directs numerous evaluations of natural gas markets for a variety of clients, such as natural gas producers, pipelines, marketers, investors, lenders, and end-users.
- Responsible for numerous North American and international fuel market assessments and infrastructure project evaluations in the last several years.
- Negotiates natural gas commodity and transportation contracts on behalf of clients.

### **Energy Managers Association**

Executive Director (11/93 – 12/98)

- Managed and represented this national trade association representing gas-fired independent power producers.
- Prepared and submitted position papers in pipeline rate design and policy proceedings before state and federal regulatory agencies.

### **Federal Energy Regulatory Commission**

Senior Gas Utility Specialist (11/78 - 6/92)

- Held a series of positions of increasing responsibility within the Office of Producer and Pipeline Regulation, which is responsible for federal utility regulation of gas producers, interstate pipelines, and gas storage facilities.
- Managed detailed evaluations of pipeline and storage operations.
- Drafted federal rules governing interstate pipeline operations.
- Performed economic and policy analyses of natural gas regulatory issues and pipeline proposals.
- Eight outstanding and superior job performance awards.
- Distinguished Service Award in 1992.

## REPRESENTATIVE SPEAKING AND PAPER PRESENTATIONS

*"Private Power in Africa"* Conference Chair (September 1999)

*"Forecasting Fuel Supply During Development and Operations"* presented at Financing Merchant Power (April 1999)

*"Fuel Supply"* presented at Merchant Plants '99 (January 1999)

*"Forging Non-Traditional Partnerships with Fuel Suppliers to Maximize Your Profitability"* Seminar Head (November 1996)

*"Impact of Market Restructuring on Fuel Management"* presented at "Innovative Fuel Management Strategies for Electric Utilities" Conference Chair (March 1996)

*"Demand for Power and its Effect on Gas"* presented at "Opportunities and Challenges for Gas" (October 1995)

*"The New Financial Underpinnings Required for Cogen/IPP Projects"* presented at "The Outlook for Natural Gas" (September 1995)

*"The Impact of Cogen Demand on Gas Infrastructure Projects"* presented at "Power Sales Contracts in the Industry Restructuring Environment" (September 1995)

*"IPP Fuel Concerns"* presented at "Gas Supply, Planning, Transportation, and Deliverability" (March 1995)

*"Introduction to the Gas Challenge"* presented at "Fueling the Restructured Electric Market" (October 1995)

## EDUCATION

B.A., Economics and English, University of Washington, 1976. *Magna Cum Laude.*



# Corporate Overview

000289-EH  
Exh. D, E, W, -2

## Meeting Your Energy Objectives

As an independent energy management and consulting firm, Pace Global Energy Services, LLC is dedicated to helping clients manage costs and risks, develop assets, and pursue numerous energy-related projects. Whether we are performing an in-depth market assessment for a power project in China or buying natural gas and power for a facility in Pennsylvania, Pace provides innovative solutions to complex problems. We do this by combining our proven technical and operational expertise in the energy, finance, and infrastructure markets with a firm understanding of corporate strategic planning.

## Industry Leaders Trust and Rely on Pace

For over two decades, industry leaders across the country and around the world have relied on Pace for help in buying, selling, transporting, and investing in energy. Pace provides energy consulting expertise as well as hands-on energy procurement and management services to a diverse client base that includes:

- Industrial Facilities
- Private Power Developers and Operators
- Fuel Asset Developers
- Multi-site Commercial Operations
- Energy Purchasing Cooperatives
- Lenders and Investors
- Public Utilities
- Energy Companies
- Law Firms
- Trade Associations
- Governments and Multilateral Development Agencies

## We Don't Sell Energy—We Provide Energy Expertise

Pace is an independent source of energy expertise. We do not sell energy commodities, nor do we have any financial ties to companies that do. Instead, Pace serves as a fiduciary in protecting our clients' energy interests. This independence enables Pace to offer its clients objective planning and analysis services, along with daily management and transactional capabilities—a claim that few of our competitors can make.

(Over)

## **Core Services**

Pace provides technical and worldwide market expertise in fuels, electric power, finance, and risk management at the strategic, tactical, and transactional levels.

Services include:

- Strategic Energy Planning
- Market Assessment & Forecasting
- Risk Management & Transactional Services
- Energy Asset Development
- Asset Valuation
- Due Diligence
- Energy Efficiency
- Regulatory Support
- Fuel Procurement
- Power Procurement
- Load Aggregation
- Commercial Management of Generation

## **Energy Trustee Program**

Clients have the option of hiring us to perform individual consulting tasks or they may choose to have us package a comprehensive suite of services to address their energy needs from a total-systems-perspective. This comprehensive approach to packaging our services forms the basis of Pace's *Energy Trustee Program*. This program is designed to help clients extract the full value of their corporate-wide energy assets and transactions. From strategic planning, to implementation of cost-reduction initiatives, to providing ongoing transactional management, Pace ensures that all *Energy Trustee Program* recommendations fit within the client's broader business objectives.

## **Our Staff**

MBA's, engineers, attorneys, economists, system operations specialists, and political and regulatory specialists encompass our team of professionals. Through a multi-disciplinary approach, members of the Pace team offer a unique matrix of skills, an in-depth knowledge of energy markets worldwide, and hands-on experience to projects they undertake.

## **Locations**

Pace is headquartered in Fairfax, Virginia with regional offices nationwide.

## **Pace Introduction**

Pace is a 125-person consulting and management firm with 20-years focus on energy markets, products and services. In 1979, Alcoa (the world's largest private energy user) acquired a 50% interest and as a result the firm operates under a joint venture company.

Pace provides a comprehensive suite of energy services through five functionally organized divisions: Fuel, Power, Industrial, Financial, and Energy Management. Pace integrates and deploys these services to the benefit of energy companies at the strategic, transaction, and management levels. This approach provides clients exceptional value, especially in energy markets undergoing significant change.

For any particular assignment we draw on the appropriate staff from across our functionally organized divisions – fuel, power, finance, industrial services, and operational management. We integrate these disciplines as necessary to provide clients with multi-faceted evaluations, including assessments at strategic, market, and project levels.

In the last six years Pace has worked in 35 countries on six continents for energy consumers, asset buyers and developers, lenders, energy utilities, governments, and multi-lateral international agencies. This includes numerous Fortune 500 companies. Our assignments have ranged from worldwide business planning, to market analyses on scales ranging from international to local, to technical and contractual evaluations and negotiations. Additionally, Pace provides fuel and power management services on an agency basis to large end-users of energy, providing practical knowledge of the nuts-and-bolts of energy markets and operations.

## **Qualifications Summary**

### **Deep Expertise in Natural Gas Economics and Markets**

Fuel expertise in general and natural gas expertise in particular always has been a core competency of the firm. We have developed a leading natural gas consulting practice not only in North America but internationally, with a focus on market values and gas-fired power generation. Our clients in this area include nearly every participant in the domestic energy market and range from the governments to leading developers and purchasers of pipeline and natural gas reserve assets to lenders to end-users.

For example, going back to the mid-1980s Pace helped major North American producers understand the new market created by third-party gas pipeline transportation, and Pace produced a newsletter on gas markets for a leading publisher. Throughout the 1990s our gas market work has steadily expanded. Today our scope ranges from worldwide gas-related business planning, to managing the gas purchases for local distribution companies, to negotiating gas commodity and transportation contracts in markets around the globe, and designing active risk management programs. Pace's experience encompasses all segments of the oil and gas business including production, long-haul pipelines, shipping, storage, and distribution, and end-use contracting.

## **Focus on Key Energy Market Issues**

Throughout its history, Pace has focused on helping enterprises adapt to changing energy markets. In the 1980's we provided market and management support to natural gas producers as pipelines initiated open access. In the late 1980's and into the 1990's, we supported the entry of utilities and lenders into the new business of non-regulated power development. As the 1990's progressed, our clients took us overseas to support them in restructuring their business on a global scale and building energy assets around the world. Additionally, Pace developed proprietary products and services to help energy companies evaluate deregulated market opportunities and deploy active risk management.

Today we are involved with the latest market issues and project valuation techniques to help companies find opportunities within the complexly changing energy marketplace. This includes:

- Business planning for restructuring and converging energy companies. This has included a leading electric utility's planning to enter the gas business.
- Energy trading and risk management, such as technical inter-commodity trading volatility analysis. For example, we played a central role in the establishment of an energy trading company in the UK.
- Divestiture and acquisition of generation assets. We have been on teams selling or buying assets in a number of U.S. regions ranging from Maine to Washington to Louisiana.
- Financing. Pace has represented lenders in several groundbreaking financings of power generation assets. This has included merchant plants and restructured IPPs.
- Vertical integration. Pace has provided key consulting services to fuel providers seeking to move downstream into the pipeline business as well as power generations seeking to move upstream in the fuel supply chain.

## **An Experienced Multi-Disciplinary Staff**

Pace has an experienced multi-disciplinary staff of over 125, sufficient to cover a wide range of assignments. From our research analysts to our officers we have expertise that ranges from engineering to financial planning to trading to regulatory advocacy. Additionally, our staff is international and multi-lingual to meet the demands of worldwide business initiatives. We assemble project teams from this exceptional pool of talent to efficiently meet the project needs on an integrated basis.

### **Proven Record with Leading Companies**

Has a proven record with leading companies. Pace's client include such firms as Southern Company, Credit Suisse First Boston, Coastal Corporation, Bechtel Enterprises, Shell Oil Company, Kellogg, AEP, and PDVSA. These type of companies have relied on Pace's analysis to establish new businesses on a worldwide basis; expand business into new geographic markets; and undertake multi-billion dollar acquisition and development efforts. The types of businesses have ranged from capital intensive, to trading operations to retail marketing. Additionally, Pace as been engaged by both the U.S. and foreign government entities to assess markets on a technical, financial, and fundamental basis.





**PACE** | Global Energy Services

## **Introduction to Pace**

April 2000

## ENGAGEMENTS

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- 20 Years Energy Management and Consulting Experience
- Projects Undertaken In Over 35 Countries
- Business and Energy Strategy Development
- Strategic (Planning) and Tactical (Transactional) Focus
- Domestic and International Experience
- Integrated Power, Fuel, Financial and Risk Management Services
- Support Consumers and Developers in Changing Energy Markets Both Domestically and Internationally
- Project Development/Financial Advisor
- Manage Daily Energy Transactions/Operations of Industrial End Users, Power Generators and Municipal Utilities

# CAPABILITIES

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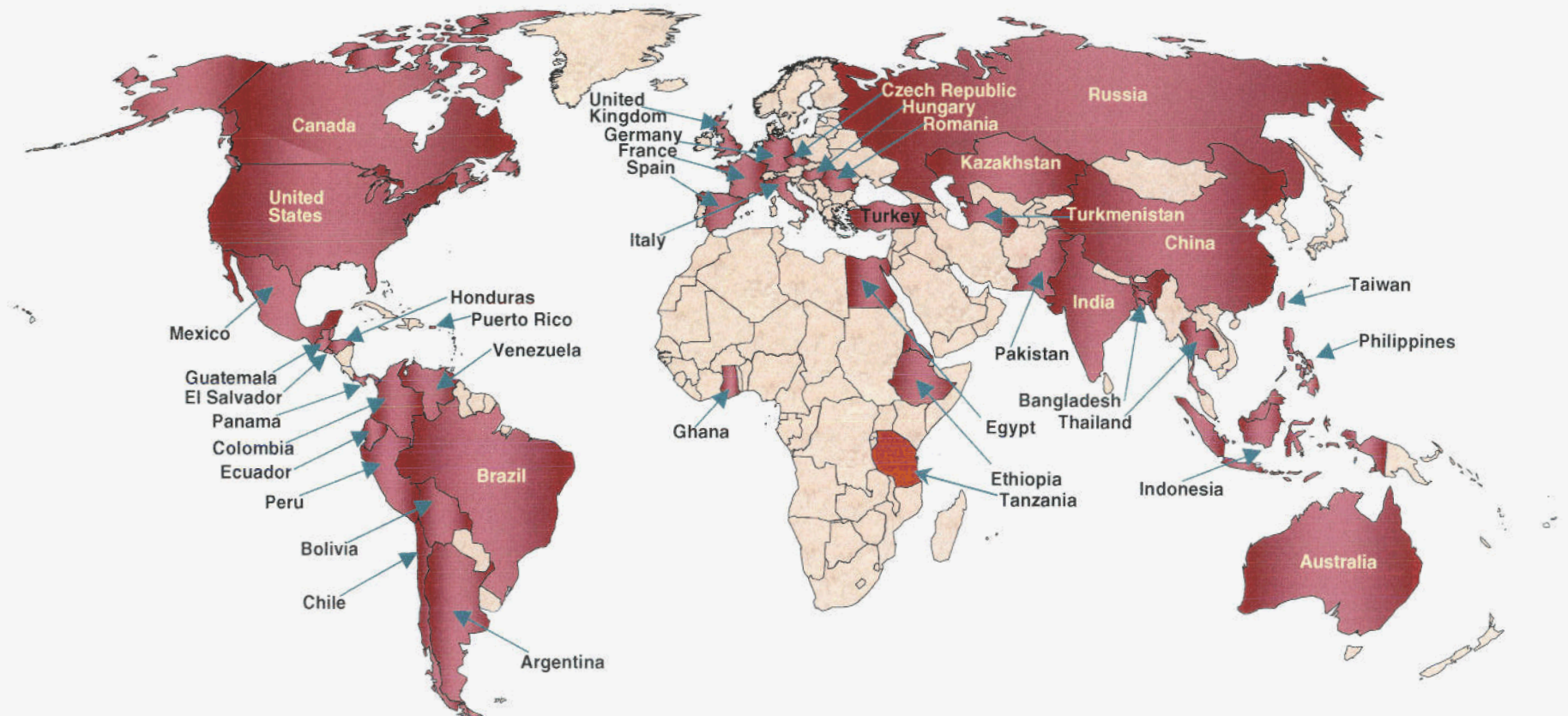
- Independent Energy Experts and Problem Solvers
  - Strong Consulting and Transactional Capabilities
  - Unbiased Services
- Pace Does Not Take Title to Commodities - No “House” Book
- 20 Years of Experience - Energy Management and Consulting
  - Joint Venture of CC Pace Resources, Inc. and Alcoa, Inc.
- 125+ Employees - Multiple Disciplines
  - Energy, Engineering, Economics, Finance, Logistics, Business Planning, Legal
  - Procurement and Management - Energy and Energy Assets
  - Financial Advisory Services and Risk Management Program Development
  - Support Consumers and Developers in Changing Energy Markets - Domestically and Internationally
- Proprietary Tools and Systems

# CORE COMPETENCIES

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- Broad Energy Expertise
  - Electricity (Generation, Transmission)
  - All Fuels (Natural Gas, Oil, Coal, Pet. Coke, Biomass, Etc.)
  - Finance (Project Financing, Corporate Financing)
  - Risk Management (Futures Contracts, Swaps, Options, Etc.)
- Multiple Disciplines with staff of 130
  - Mechanical Engineering
  - Logistics
  - Process Engineering
  - Economics
  - Business Planning
  - Systems Analyst
  - Finance
  - Legal
  - Risk Management
- Independent and Objective Focus on Client's Fiduciary Interests
- Fluency In Many Foreign Languages Including:
  - Mandarin
  - Cantonese
  - German
  - French
  - Portuguese
  - Turkish
  - Swedish
  - Italian
  - Japanese
  - Armenian
  - Farsi
  - Gujerati
  - Spanish
  - Arabic
  - Hindi
  - Russian

# MARKETS INVOLVEMENT



# CORE SERVICES

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## Strategic

- Fuel Plan Development
- Market Assessment
- Market Modeling
- Regulatory Changes
- Site Opportunity Analysis
- Business Planning
- Risk Management

## Tactical

- Cost Reduction Initiatives
- Tariff Negotiation
- Fuels Switching
- Energy Efficiency Studies
- Technology Evaluation
- Process Design and Integration
- Transportation Planning and Logistics

## Transactional

- Energy Infrastructure Development
- Contract Negotiation Support
- Tariff Optimization
- Project Financing
- Asset Valuation
- Risk Assessment
- Power Purchase Structures
- Acquisition Due Diligence
- Technical Support for Bond Offerings
- Procurement of Fuels and Power

# REPRESENTATIVE CLIENT LIST

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## **Industrials**

Alcoa  
Champion International  
Corning Consumer Products  
DuPont  
General Electric  
Heinz Foods  
Kellogg Company  
Raytheon Company  
Smurfit-Stone Container Corporation  
The Stanley Works  
Weyerhaeuser

## **Private Power Developers**

Peco  
PSEG Global  
SEI  
Calpine Corporation  
Ogden Energy, Inc.  
InterGen Energy, Inc.  
Sithe Energies, Inc.  
PSG&E Generating, Inc.  
Constellation Power Source

## **Financial Institutions**

Credit Suisse First Boston  
G.E. Capital Corporation  
NationsBank  
Societe Generale  
ING Barings



4401 Fair Lakes Court, Suite 400  
Fairfax, Virginia 22033-3848 USA  
Phone: 703-818-9100  
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000289-E4  
Exhibit (D.E.W-3)

# Fuel Plan Review Related to the Midway and Leesburg Power Plant Projects

April 20, 2000





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## EXECUTIVE SUMMARY

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Pace Global Energy Services (“Pace”) performed an independent review of the reasonableness of two fuel plans within the context of the regional spot and long term natural gas markets and in light of Panda’s electricity marketing expectations. The fuel plans concern two 1,000 MW, gas-fired power generation units to be located near Midway, FL (the “Midway Project”) and Leesburg, FL (the “Leesburg Project”) (together referred to as the “Projects”). The Projects are under development by Panda Leesburg Power Partners, L.P. and Panda Midway Power Partners, L.P. (“Panda”).

### FINDINGS

#### Summary

Based on Pace’s gas market analysis, it is Pace’s opinion that Panda’s fuel plans provide a reasonable and reliable approach to fuel procurement. The plans exploit the expected increase in gas availability so as to hold the prospect of reliable, economical, efficient fuel procurement matched with the dispatch expectations of the Projects, as developed by R.W. Beck and other gas market and power dispatch developments.

#### Natural Gas Markets

Pace finds the following to be key fundamentals indicating the reliability and availability of natural gas supply and pipeline transportation capacity relevant to the Florida market:

#### *Supply*

- Natural gas supply is abundant and readily available in the producing basins that feed the pipeline system(s) serving the Florida market; namely Onshore Gulf Coast, Offshore Gulf Coast, and East Texas.
- Numerous reputable, investment grade producers and natural gas marketers sell firm supply and other value added services, such as volume flexibility and price hedging, in the Mobile Bay and at FGT’s Zone 1, Zone 2, and Zone 3 pools.
- A highly interconnected natural gas pipeline grid in the Gulf producing region can provide supplemental supply at market based prices to replace supply lost to force majeure.
- There is a general consensus among reputable gas forecasters that national natural gas resources exist to supply the current 22 Tcf/year domestic market for just over 50 years.
- On a national level, industry forecasters expect the growth in productive capacity to maintain a balance with the growth in expected demand on both a national and regional level. Regional balances are maintained through the development and interconnectivity of the natural gas pipeline grid.



- Daily liquidity for supply in the Mobile Bay and at FGT's Zone 1, Zone 2 and Zone 3 supply pools as well as interconnects with other highly liquid interstate pipeline systems is high relative to the Projects' expected swing requirements.

### ***Transportation***

- According to the Department of Transportation Office of Pipeline Safety natural gas pipelines constitute the safest method of energy transmission. Advances technology such as more efficient information/communication technology, smart pigs, and pipeline materials, will continue to improve the safety and reliability of natural gas pipeline operations and transportation services.
- FGT is in constant compliance with the guidelines of the Department of Transportation's Office of Pipeline Safety, which oversees Federal standards relating to the construction, maintenance and repair of pipeline systems. Therefore, it is reasonable to assume that continued compliance will result in high levels of reliability. Pace expects a similar level of compliance to the Department of Transportation's Office of Pipeline Safety guidelines from the planned Gulfstream and Buccaneer pipeline systems. These projects are being developed by leading pipeline companies with existing facilities with long records of highly reliable service.
- The nature of contracts for transportation service is the primary determinant of gas reliability in the gas market, as confirmed by the Interstate Natural Gas Association of America ("INGAA").
- The primary and secondary transportation markets are orderly and competitive and the availability and reliability of transportation capacity is ultimately a function of price.
- The pipeline industry is considered very responsive to the needs and growth of natural gas consumers. For example, Gulfstream Natural Gas System ("Gulfstream") is already considering a Phase 2 expansion by extending its pipeline system to connect with new consumers and increasing compression. Florida Gas Transmission ("FGT"), through a slightly more complicated combination of looping and additional compression is expected to continue to provide additional capacity to serve growing markets. Phase V on FGT includes installment of 42 inch pipeline loops that are substantially oversized relevant to Phase V near term firm requirements, enabling efficient future expansions.
- Due to the large number of expected capacity expansions (totaling between 1.8 – 2.7 Bcf/d) over the next three years in Florida and forecasts for aggregate consumption growth, Pace expects to see an excess of primary pipeline capacity beginning in 2001 (see Exhibit 1).<sup>1</sup>
- FERC may issue preliminary determinations on the non-environmental aspects of the Buccaneer and Gulfstream pipelines at its hearing on April 25, 2000.

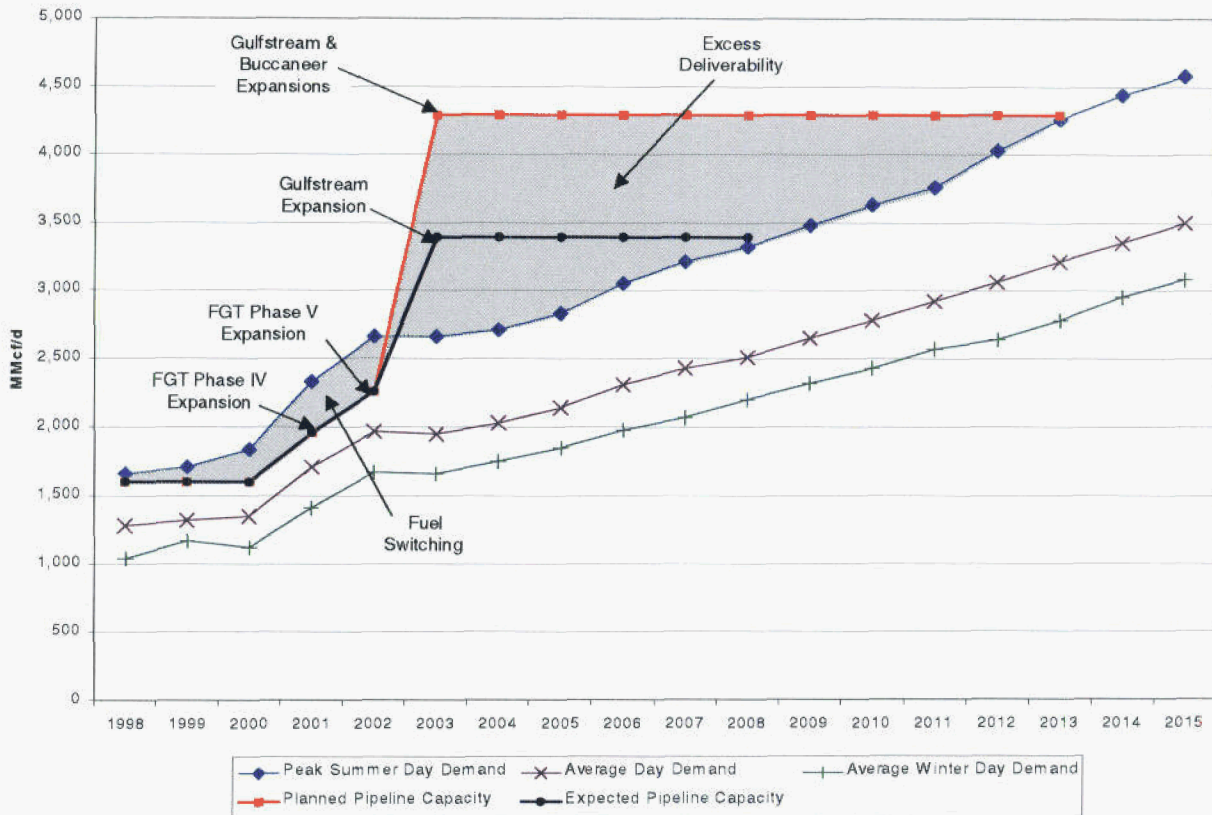
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<sup>1</sup> EIA Form 176 data used to obtain historical gas demand by sector, with adjustments to power generation figures. Projected gas consumption for the power generation sector obtained from Pace modeling. Forecasts of gas consumption for the non-power sectors were developed in consultation with Florida Public Service Commission natural gas staff. The electricity-related demand is consistent with the *1999 Regional Load and Resource Plan*.



- The Midway project is in effect facilitating the development of competitive alternatives to FGT for transportation service, which will ultimately reduce the cost of transportation service and benefit the Florida power consumers.

**Exhibit 1: Projected Pipeline Capacity Supply and Demand Balance in Florida**



Source: Pace

- Pace expects increasing availability of secondary pipeline capacity resulting from (i) Florida’s growing seasonal demand profile, (ii) efficient allocation of existing capacity through capacity release or other bundled transactions, (iii) active marketing of excess capacity by Gulfstream and FGT.
- Availability of delivered gas supplies and transportation under short-term transactions will substantially increase in Florida as the total deliverability of the gas infrastructure increases to meet the increased demand for power generation. As a corollary to this development, delivered gas and pipeline transportation will be available at market-clearing prices.

**Fuel Plans**

Based on Pace’s review of documents provided by Panda and Panda’s explanation of its fuel plans, Pace finds the following to be the key elements associated with the plans:



- Interconnections with Gulfstream (and in the case of Midway an additional connection with FGT.)
- Short-term spot firm natural gas supply transactions with producers and marketers in the Mobile Bay region for supply into Gulfstream and FGT and additional producers and marketers for supply in FGT's Zone 2 (Louisiana) and Zone 1 (Texas). The price and volume terms of the supply agreements will be agreed to at the time of the transaction and will be tied to the generation commitments provided in the power sales agreements.
- 20-year firm transportation ("FT") agreements for 100 percent of the Project's peak day natural gas requirement, which is defined as the fuel required to power the Project at 100% capacity for all 24 hours of a single day. Panda represents that the peak day natural gas requirement is 172,488 MMBtu/d.
- Panda has the right and the intention of turning back a portion of its Gulfstream FT in favor of more economic and equally reliable alternative fuel delivery arrangements for the benefit of the Florida power consumers and the Midway Project. However, Panda does not intend to reduce the FT volumes below 75% of its peak day requirement.



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## **GAS SUPPLY AND DEMAND ASSESSMENT**

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Orderly and competitive markets for natural gas supply exist in the U.S. that allow commodity prices to balance consumption with demand. Furthermore, the existence of abundant potential natural gas reserves and continuously improving technologies will allow the natural gas commodity market to maintain a relatively constant equilibrium price in real terms.

To support these conclusions, the remainder of this section provides our research and analysis pertaining to the following:

- Fundamental Drivers Affecting Natural Gas Supply and Demand Balances.
- Florida Supply and Demand Balance.
- Natural Gas Regulatory and Market Structures.
- Comparison of Industry Fundamental Forecasts.

### **FUNDAMENTAL DRIVERS**

#### **Supply**

North America has substantial potential natural gas resources. For example, estimates of the total technically recoverable natural gas resource base in North America approach 1,500 trillion cubic feet ("TCF").<sup>2</sup> Natural gas reserves are located throughout North America, however, much of the incremental gas supply needed to fuel the 30 TCF gas market will depend on increased drilling in the Western Canadian Sedimentary Basin, the development of coalbed methane resources in the Rockies, and a greater reliance on development of deepwater gas plays in the Gulf of Mexico region.

The U.S. has potentially abundant natural gas resources that can be targeted for future exploration and development. In fact, the National Petroleum Council concluded in a recent study that, "Sufficient resources exist to meet growing demand well into the 21<sup>st</sup> century."<sup>3</sup> Conditions underpinning the existence of an abundant, reliable supply of gas in the U.S. consist of the following:

- Total potential natural gas resources in the U.S. are estimated to exceed 1,037 TCF.<sup>4</sup> The estimated potential resources in the U.S. can satisfy current demand levels for over 50 years.
- Continuous improvements in technology and business practices affecting upstream operations will permit the producing sector to access the potential resource base at a rate consistent with

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<sup>2</sup> The stated volume represents the sum of North American estimates of undiscovered resources in conventional reservoirs, continuous-type resources, and the expected proved ultimate recovery appreciation in known fields.

<sup>3</sup> "Natural Gas: Meeting the Challenges of the Nation's Growing Natural Gas Demand," National Petroleum Council, December 15, 1999.

<sup>4</sup> "Potential Supply of Natural Gas in the United States – 1998.," Potential Gas Committee.

the required production growth to maintain constant proved reserves-to-production ratios (“R/P Ratio”).

- The U.S. currently has enough proved reserves to supply current demand for approximately nine years (i.e., the U.S. has a current R/P ratio of 9 years) (see Exhibit 2).

**Exhibit 2: Natural Gas Production and Proved Reserves, 1998**

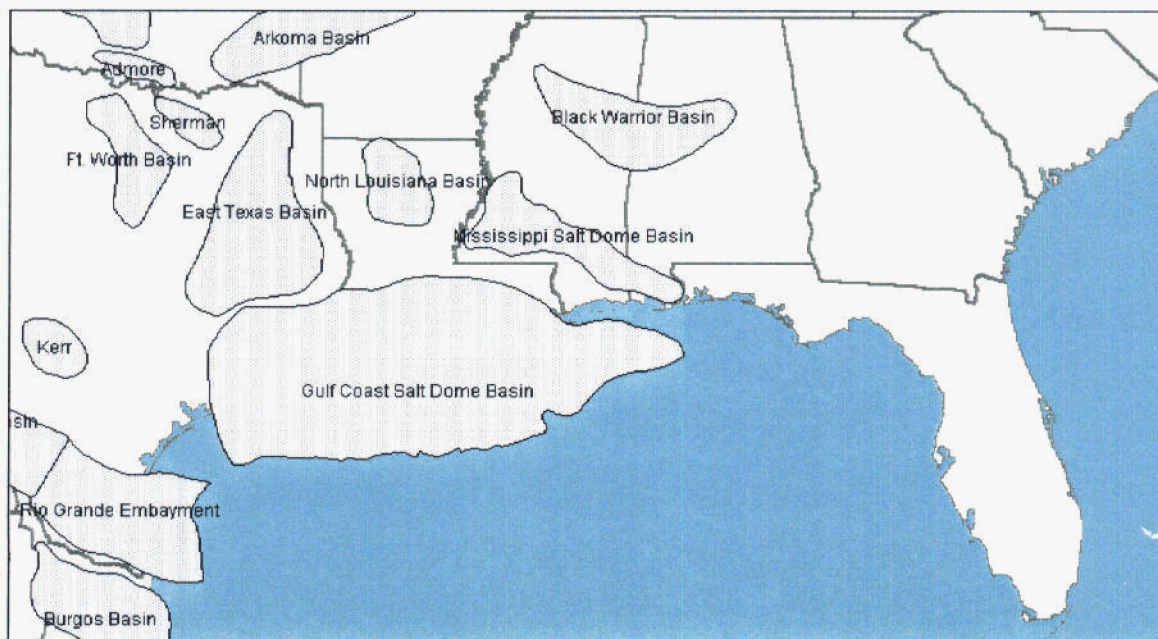
| Supply Region       | Proved Reserves (Tcf) | Production (Tcf) | R/P Ratio |
|---------------------|-----------------------|------------------|-----------|
| Lower 48            | 154.1                 | 18.2             | 8.5       |
| Total U.S.          | 164.0                 | 18.7             | 8.8       |
| Total North America | 224.6                 | 24.5             | 9.2       |

Source: EIA and Statistics Canada

Source: EIA, Canadian Association of Petroleum Producers and Statistics Canada

The Florida market is served primarily from production in the Gulf Coast, Rio Grande, East Texas and Mississippi Basins (“Relevant Producing Region”) (see Exhibit 3). The fundamentals pertaining to these production regions are similar to the national level fundamentals, however, display slightly different characteristics that are unique to the region.

**Exhibit 3: Relevant Production Basins**



Source: RDI and Pace





The fundamentals supporting an orderly and competitive supply market in the Relevant Producing Region are as follows:

- The Relevant Producing Region is the dominant production region in the U.S.
- The potential resource base of the Relevant Producing Region is 229 TCF, as shown in Exhibit 4. Potential resources are split evenly between on-shore and offshore regions.

**Exhibit 4: Potential Resource Base for the Relevant Producing Region**

| Category                               | Resource Base (Tcf) |
|--|---------------------|
| Onshore, 0-15,000 feet                 | 60,155              |
| Onshore, 15,000-30,000 feet            | 46,665              |
| <b>Onshore Subtotal</b>                | <b>106,820</b>      |
| Offshore, 0-200 meters                 | 45,470              |
| Offshore, 200-1000 meters              | 25,540              |
| Offshore, > 1000 meters                | 50,700              |
| <b>Offshore Subtotal</b>               | <b>121,710</b>      |
| <b>Grand Total for Gulf Coast Area</b> | <b>228,530</b>      |

Source: Potential Gas Committee

- Proved reserves in the Relevant Producing Region exceeded 63 TCF in 1998. The Relevant Producing Region supplies almost 50 percent of total U.S. production or 10 TCF.
- R/P ratios will be maintained at current levels reflecting the preference for the producing sector to maintain low inventories to conserve costs.

**Exhibit 5: Production and Proved Reserves for the Relevant Producing Region, 1998**

| Supply Region       | Proved Reserves (Tcf) | Production (Tcf) | R/P Ratio |
|---------------------|-----------------------|------------------|-----------|
| Gulf Coast Offshore | 31.6                  | 5.4              | 5.9       |
| Gulf Coast Onshore  | 20.8                  | 3.4              | 6.2       |
| Total Gulf Coast    | 52.4                  | 8.8              | 6.0       |
| East Texas          | 10.8                  | 1.2              | 8.9       |

Source: EIA

- Significant exploration activity is expected to continue in the Gulf Coast supply areas because of innovations such as horizontal drilling, multilateral completions, and optimization of well locations via 3-D seismic or monitoring-while-drilling.



- Production gas, which is ultimately the commodity that is purchased at liquid trading points and pools, is considered a highly reliable supply source. The service level specified in the gas purchase agreements actually determines the reliability of supply specific to a buyer and firm supply is considered highly reliable subject only to force majeure events.
- Gulfstream, Buccaneer and FGT Phase V expansions all primarily access the Mobile Bay portion of the Gulf Coast Basin. Current productive capacity in the Mobile Bay exceeds 3.6 Bcf/d based on the aggregate capacities of Dauphin Island, Destin, Transco, Exxon/Mobil/Shell, and Chandeleur.
- Gulfstream and Buccaneer plan to interconnect with multiple gas processing facilities and pipelines in Mobile Bay. This will provide access to up to 2.2 Bcf/d (approximately twice the projected capacity of the pipeline) of Mobile Bay supply at market based rates through the following pipelines and processing plants: Destin (600 MMcf/d), the Williams Plant (300 MMcf/d), Dauphin Island pipeline and plant (800 MMcf/d), Koch-Gateway (250 MMcf/d), and the Mary Ann Plant (150 MMcf/d). FGT has access to up to 1.1 Bcf/d of Mobile Bay gas through interconnects with Transco, Destin, and Koch-Gateway (“Koch”).
- Gas production at Mobile Bay has increased markedly since 1991 (see Exhibit 6).



**Exhibit 6: Recent Mobile Bay Offshore Production History**

| <i>Operator(s)/Formation</i>   | <i>1991</i> | <i>1992</i> | <i>1993</i> | <i>1994</i> | <i>1995</i> | <i>1996</i> | <i>1997</i> | <i>1998</i> |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Southeast Mobile Bay           |             |             |             |             |             |             |             |             |
| Mobil/Miocene                  |             |             |             |             |             |             |             |             |
| Lower Mobile Bay - Mary Ann    |             |             |             |             |             |             |             |             |
| Mobil/Norphlet                 | 29,192,297  | 29,620,186  | 31,499,316  | 31,287,756  | 34,103,756  | 38,703,648  | 45,814,397  | 38,416,907  |
| Fairway Shell/Norphlet         | 3,383,309   | 62,720,015  | 65,645,177  | 63,978,449  | 49,964,711  | 43,537,117  | 36,731,030  | 30,856,305  |
| North Dauphin Island Callon    |             |             |             |             |             |             |             |             |
| Offshore (ARCO)/Miocene        | 205,515     | 19,300,088  | 15,876,095  | 11,128,113  | 7,367,065   | 3,767,477   | 2,134,370   | 1,130,972   |
| Northwest Dauphin Island       |             |             |             |             |             |             |             |             |
| Offshore Group                 |             |             |             |             |             |             |             |             |
| (ARCO)/Miocene                 |             | 614,328     | 928,083     | 1,974,763   | 1,209,936   | 895,810     | 597,501     | 545,589     |
| State 109/Federal 821 Unit     |             |             |             |             |             |             |             |             |
| Shell (B.P.)/Norphlet          |             | 668,921     | 780,375     | 463,567     | 415,972     | 311,851     | 418,997     | 224,044     |
| Northwest Gulf-Mobile Area     |             |             |             |             |             |             |             |             |
| Exxon/Norphlet                 |             |             | 11,781,085  | 59,853,353  | 52,219,842  | 46,669,562  | 58,074,595  | 64,264,328  |
| Bon Secour Bay                 |             |             |             |             |             |             |             |             |
| Exxon/Norphlet                 |             |             | 3,323,340   | 25,675,381  | 33,704,104  | 38,564,999  | 38,670,887  | 37,087,894  |
| North Central Gulf-Mobile Area |             |             |             |             |             |             |             |             |
| Exxon/Norphlet                 |             |             | 1,719,004   | 31,947,387  | 32,150,467  | 31,888,950  | 28,269,814  | 42,765,970  |
| South Dauphin Island Scana     |             |             |             |             |             |             |             |             |
| (O.E.D.C.)/Miocene             |             |             | 569,502     | 3,544,948   | 2,617,747   | 1,493,581   | 698,559     | 399,587     |
| Northeast Petit Bois Pass      |             |             |             |             |             |             |             |             |
| Offshore Group/Miocene         |             |             |             | 364,481     | 63,860      | 1,167,330   | 535,627     | 380,813     |
| East Mississippi Sound Legacy  |             |             |             |             |             |             |             |             |
| Resources/Miocene              |             |             |             |             |             |             |             |             |
|                                |             |             |             |             | 122,268     | 1,819,506   | 79,688      |             |
| Goose Bayou Legacy             |             |             |             |             |             |             |             |             |
| Resources/Miocene              |             |             |             |             |             |             |             |             |
|                                |             |             |             |             | 118,071     | 1,334,098   | 61,434      |             |
| State 108/Federal 820 Unit     |             |             |             |             |             |             |             |             |
| Chevron/Norphlet               |             |             |             |             |             | 56,113      | 362,208     | 2,625,635   |
| Aloe Bay Mobil/Norphlet        |             |             |             |             |             |             |             |             |
|                                |             |             |             |             |             |             | 3,497,791   | 3,956,591   |
| South Pelican Island           |             |             |             |             |             |             |             |             |
| Exxon/Miocene                  |             |             |             |             |             |             |             | 331,616     |
| Saxon Bay Legacy               |             |             |             |             |             |             |             |             |
| Resources/Miocene              |             |             |             |             |             |             |             | 226,430     |
| Total                          | 32,781,121  | 112,923,538 | 132,121,977 | 230,218,198 | 214,057,799 | 210,210,042 | 215,946,898 | 223,212,681 |

Source: U.S. MMS, August 1999

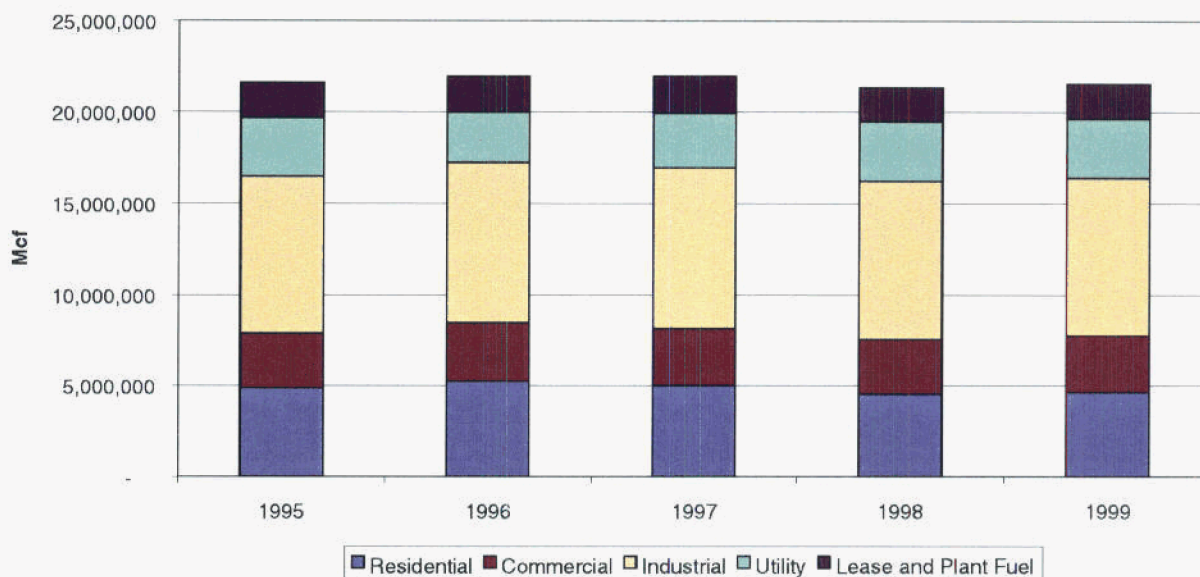
- The potential exists to link production in the portion of the Gulf Coast Basin that is west of Mobile Bay, thus supplementing existing production and offering competitive alternatives.
- Daily liquidity for supply in the Mobile Bay and at FGT's Zone 1, Zone 2 and Zone 3 supply pools as well as interconnects with other highly liquid interstate pipeline systems is high relative to the Projects' expected swing requirements.
- The development of a new liquid trading point at the receipt points of the Buccaneer or Gulfstream systems is highly likely.
- Liquefied natural gas ("LNG") augments domestic production gas. Although its contribution to the aggregate supply of gas in the U.S. is expected to remain small, LNG is expected to grow significantly during the next 20 years and LNG may be an important potential source of regional, short-term gas supply. According to the Energy Information Administration

(“EIA”), LNG imports have grown at a rate of 7.2 percent a year or from 0.07 TCF in 1998 to an estimated 0.39 TCF in 2000.<sup>5</sup>

### Demand

U.S. natural gas consumption across all sectors is about 22 TCF per year (see Exhibit 7). Industrial sector gas consumption has dwarfed all other sectors, representing about 44 percent of total U.S. gas demand historically. Currently, the power and commercial sectors both represent about 16 percent of U.S. gas demand while the residential sector comprises the remaining 24 percent of the market.

**Exhibit 7: Historical Gas Consumption by Sector in the U.S., 1995-1999**



Source: EIA

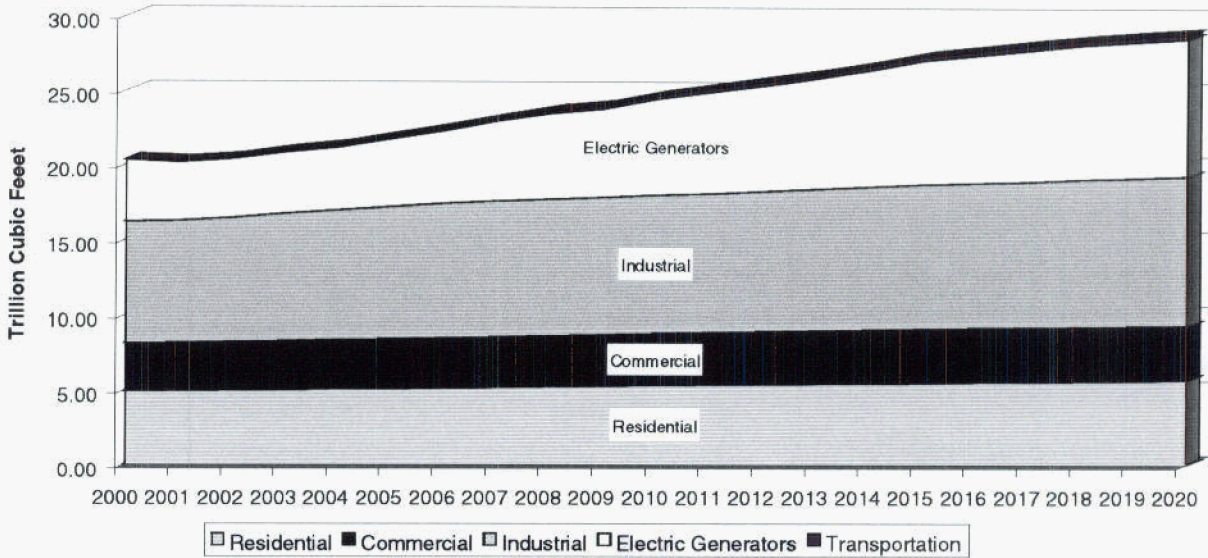
A general consensus exists among forecasters that aggregate U.S. natural gas consumption will increase significantly during the next 20 years. For example, under reference case assumptions EIA projects total natural gas demand of 30 TCF per year by 2020 (see Exhibit 8). All sectors exhibit demand growth.<sup>6</sup>

<sup>5</sup> Expansion of the Distrigas facility in Everett, MA, reactivation of the Elba Island facility, and recently announced contracts for cargoes through CMS Trunkline LNG’s Lake Charles facility are indicative of the potential growth of LNG imports in the U.S.

<sup>6</sup> *Annual Energy Outlook 2000*, Reference Case, EIA.



**Exhibit 8: Projected Growth in U.S. Natural Gas Demand**



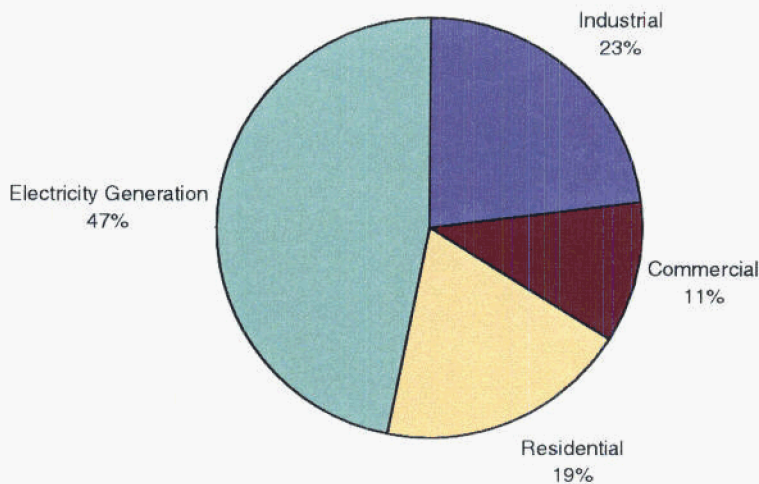
Source: EIA, *Annual Energy Outlook 2000*

However, as depicted in Exhibit 9, nearly 50 percent of the growth in gas demand is likely to come from the power generation sector. Factors accounting for the projected growth in gas-fired power generation consist of the following:

- Robust economic growth.
- Retirements of nuclear power plants and oil steam units.<sup>7</sup>
- Displacement of less efficient power plants, including gas units.
- Favorable capital costs, construction lead times, staffing requirements, modularity, and efficiencies compared to alternative types of generating plants.
- Environmental policies that favor natural gas usage.

<sup>7</sup> According to the American Gas Association, if no operating licenses are extended for nuclear units, nuclear generating capacity would be cut in half by 2020.

**Exhibit 9: Distribution of Future Growth in Gas Demand by Sector**



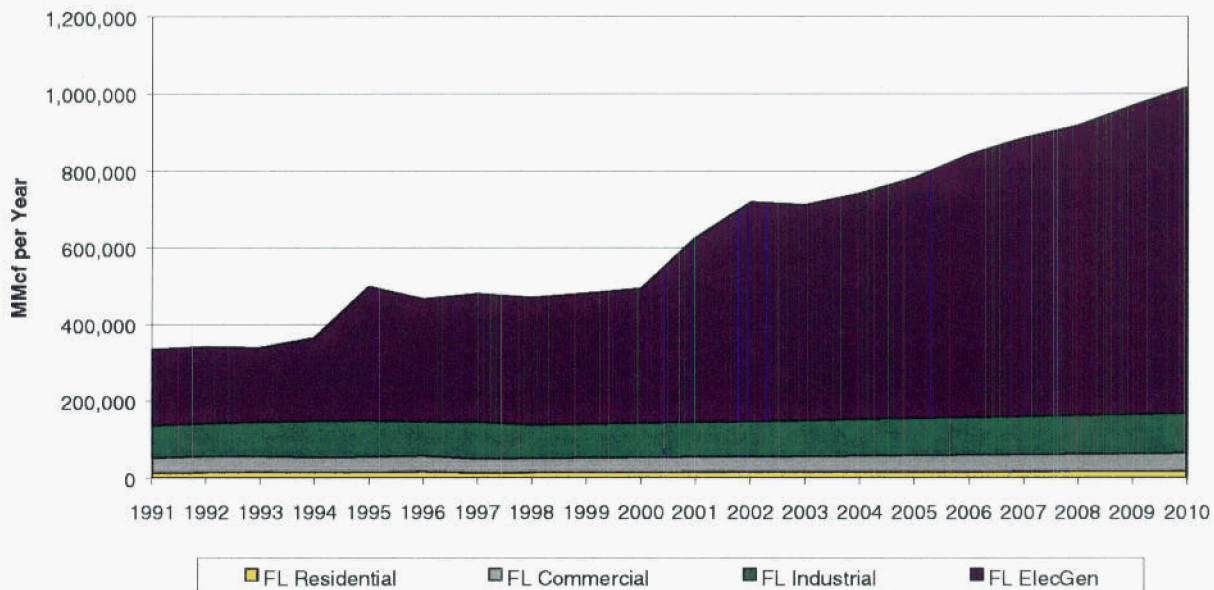
Source: EIA, *Annual Energy Outlook 2000*

Historically, about two-thirds of total gas consumption in Florida has been from the power generation sector. Pace expects the dominance of the power generation sector to continue in Florida. In fact, natural gas consumed by power generators may account for nearly one TCF per year or 83 percent of total Florida demand by 2010 (see Exhibit 10). The majority of incremental gas demand will come from the power generation during the next decade.<sup>8</sup>

<sup>8</sup> Pace’s outlook for residential, commercial, and industrial natural gas consumption is based on discussions with Florida Public Service Commission gas staff and other reported trends for South Atlantic growth in these sectors. The power sector is derived from an electricity demand forecast consistent with the *1999 Regional Load and Resource Plan* prepared by...the Florida Reliability Coordinating Council (“FRCC”).



**Exhibit 10: Florida Natural Gas Demand Forecast by Sector**



Source Pace Global Energy Services

## FLORIDA SUPPLY AND DEMAND BALANCE

Pace’s outlook for the natural gas supply and demand balances in Florida is shown in Exhibit 11. Pace’s analysis of the overall gas balance in Florida is based on the following:

- Demand for the non-power sectors is derived from information contained in Form EIA-176.<sup>9</sup> Pace stripped the non-utility generation data from the commercial and industrial sectors incorporated it into its independent estimate of total power generation demand.
- Residential, commercial and industrial demand growth rates were derived from discussions with natural gas staff at the FPSC and Pace’s analysis of Florida natural gas historical consumption trends.
- The outlook for power sector consumption was determined by modeling fuel consumption using electricity demand estimates consistent with the *1999 Regional Load and Resource Plan* starting in year 2000. Actual power generation consumption, as reported by EIA, were used for 1998 and 1999.
- Historical peak day deliverability on FGT, South Georgia Pipeline, and Southern Natural Gas represents gas supply into Florida. About 2.7 Bcf/d of new summer peak gas deliverability into Florida is currently planned.<sup>10</sup> The supply outlook is determined by

<sup>9</sup> Form EIA-176 contains information on natural gas deliveries to end users by sector.

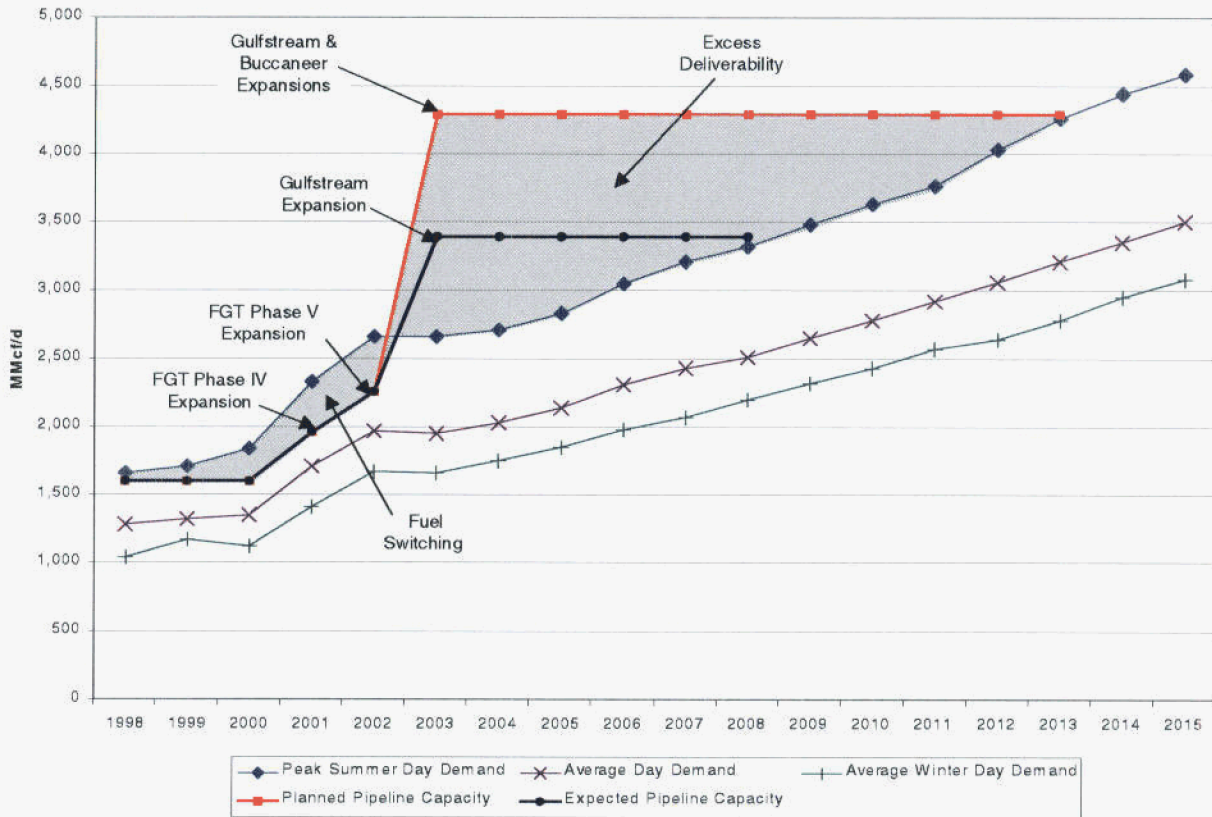
<sup>10</sup> Estimate based on Pace’s review of applications submitted by developers to FERC.



phasing in FGT’s Phase IV (2001) and Phase V (2002) projects along with potential throughput from the Buccaneer (2003) and Gulfstream (2003) offshore pipelines.

- Because of the lack of local production and market area storage, Pace assumes that Florida gas supply is equivalent to interstate gas pipeline deliverability into the state.

**Exhibit 11: Projected Supply and Demand Balance in Florida**



Source: Pace

Given Pace’s projection of total gas demand in Florida, excess pipeline capacity may be available between 2003 to 2013, if all currently planned pipeline capacity goes into service. More specifically, Pace finds that:

- For peak day summer requirements, the gas supply and demand balance will remain tight until 2003 when proposed offshore pipeline projects are planned to come on line.
- Construction of the Gulfstream pipeline (referred to as expected gas pipeline capacity above) will result in excess gas deliverability between 2003 and 2008, even on peak summer day.
- Excess gas deliverability exists from 2003 to 2013 if both Gulfstream and Buccaneer pipelines are built.





- Potential excess gas deliverability is even higher when viewed on an average annual basis. For example, average annual demands for gas are about 500 – 1,000 MMcf/d less than peak day gas demand between 2000 and 2015.

## REGULATORY AND MARKET STRUCTURE

A highly liquid, competitive market for natural gas has developed in the United States during the past two decades because of a series of Federal regulatory and legislative initiatives resulting in wellhead decontrol, open access transportation, and the unbundling of pipeline sales from the transportation function. Action at the State-level complimented Federal regulatory initiatives and enabled end users to exercise much greater latitude in purchasing their own gas and transporting that gas over LDC and interstate systems. Lower natural gas prices and a more efficient gas grid have developed as a result of these actions.

Increasing numbers of buyers, sellers, and transaction volumes have deepened the competitive nature of the market. Natural gas is now a traded commodity with daily and even hourly transactions involving a multitude of different buyers, sellers, and resellers. A liquid futures market and other hedging and forward-trading instruments compliment physical trading. Because of these factors, together with the active trading of natural gas pipeline capacity, gas buyers have many options by which to purchase gas anywhere from the wellhead to the burnertip.

With prices free to move to balance supply and demand and with gas demand being sensitive to changing weather conditions, daily gas prices developed a high degree of volatility. This created a demand for financial trading mechanisms and, in 1990, the NYMEX gas futures contract began trading, complementing the various over-the-counter risk management mechanisms already in use. The futures market has expanded, with open interest of over 100,000 contracts, representing one billion MMBtu.<sup>11</sup>

Pace expects that a substantial portion of the gas market will continue to be traded under short-term arrangements. By the late 1980's, 80 percent of gas was flowing through the short-term market as gas utilities and industrials jumped at the new possibility of buying gas from producers at relatively low monthly "spot" or monthly contract index prices rather than acquiring bundled services at the traditional pipeline sales rate. Over time, the amount of gas sold under short-term contracts decreased and has now stabilized at approximately 25-35 percent of consumption. Pace believes this percentage represents a long-term pattern reflecting the tendency for many end users to segment supply arrangements into a portfolio with varying terms.

In summary, the following factors underpin the orderly and competitive market for natural gas commodity.

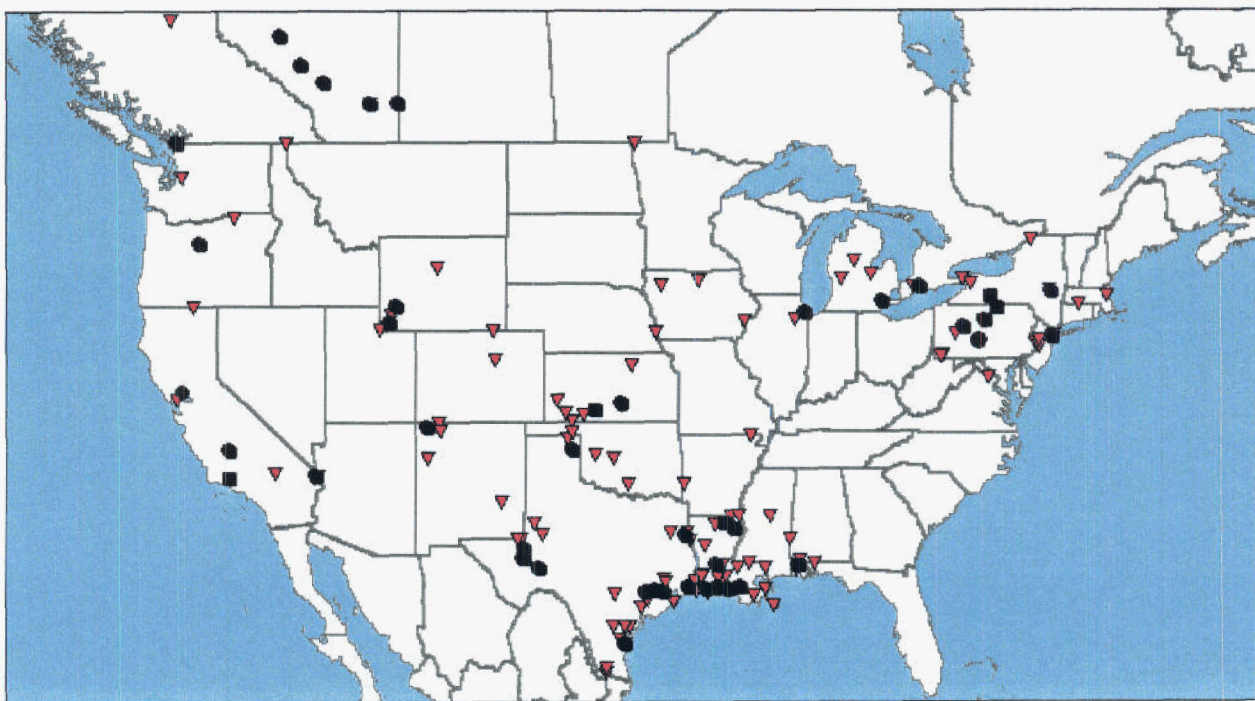
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<sup>11</sup> One contract = 10,000 MMBtu.



- Robust wholesale markets for gas exist as evidenced by the development of liquid trading points and market centers (see Exhibit 12). Market centers facilitate trade by:
  - Bringing together large numbers of buyers and sellers.
  - Improving price transparency and discovery.
  - Facilitating short-term balancing.
- New financial instruments have been created to assist end users in managing risk; open interest for NYMEX futures contracts exceeds 100,000 contracts.
- Integration of gas and electric markets is leading to greater competition among energy service providers.<sup>12</sup>
- Enhanced electronic communication between pipelines and shippers, development of more standardized business practices (i.e., the Gas Industry Standards Board), and the nascent provision of eCommerce gas market services.

**Exhibit 12: North American Market Centers and Liquid Trading Points**



Source: EIA, RDI, Pace

<sup>12</sup> Total U.S. gas consumption is expected to increase from 22 trillion cubic feet in 1997 to over 30 trillion cubic feet by 2010, driven primarily by 4.5 percent annual growth in gas-fired power sector consumption.



**FORECAST COMPARISONS**

A general consensus exists among most natural gas forecasters that the supply of natural gas is likely to grow significantly during the next 15 years.

As shown in Exhibit 13, most forecasters project nearly 2 percent annual growth in U.S. gas production and 3 percent annual growth in Canadian gas imports during the next 15 years. Most of the incremental gas supplies are intended to fuel power generation requirements, which are generally expected to grow about 5 percent per year over this same period.

**Exhibit 13: Comparative Gas Forecasts**

|                              | <b>Pace</b> | <b>WEFA</b> | <b>GRI</b> | <b>EIA</b> | <b>DRI</b> | <b>AGA</b> |
|------------------------------|-------------|-------------|------------|------------|------------|------------|
| <b>U.S. Production</b>       | 1.9%        | 1.6%        | 2.2%       | 1.9%       | 1.3%       | 2.0%       |
| <b>Net Imports</b>           | 3.3%        | 3.2%        | 0.8%       | 2.8%       | 3.3%       | 1.9%       |
| <b>Power Gen. Gas Demand</b> | 5.7%        | 5.7%        | 4.6%       | 5.6%       | 4.9%       | 4.3%       |

Similarly, Pace finds that most entities that report on the likely size of potential gas resources in the U.S. estimate a total resource base in excess of 1,000 Bcf. In its latest analysis of U.S. potential gas supplies, the leading independent organization responsible for assessing U.S. resource base, the Potential Gas Committee (“PGC”), stated that even with moderate growth in demand, technological improvements will continue to foster gas recovery rates and it expects that reserves replacement will continue at a high level.<sup>13</sup> Comparisons of resource base estimates are presented in Exhibit 14.

**Exhibit 14: Comparative Resource Base Assessments**

| Resource/Category              | GRI<br>Current<br>1998 | GRI<br>Advanced<br>1998 | NPC<br>Current | NPC<br>Advanced | Potential<br>Gas<br>Committee<br>1999 | USGS<br>MMS<br>1995-<br>1996 |
|--------------------------------|------------------------|-------------------------|----------------|-----------------|---------------------------------------|------------------------------|
| Total Conventional Resources   | 1384                   | 1466                    | 516            | 581             | 895                                   | 786                          |
| Total Unconventional Resources | 567                    | 747                     | 383            | 576             | 141                                   | 358                          |
| Total Lower 48 States          | 1455                   | 1670                    | 756            | 986             | 785                                   | 918                          |
| Total Alaska                   | 496                    | 543                     | 143            | 171             | 251                                   | 226                          |
| Total United States            | 1951                   | 2213                    | 899            | 1157            | 1036                                  | 1144                         |

<sup>13</sup> *Potential Supply of Natural Gas in the United States*, Potential Gas Committee, Colorado School of Mines, March 1999.



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## NATURAL GAS TRANSPORTATION ASSESSMENT

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Interstate natural gas transportation service has been extremely reliable in Florida and throughout the rest of the North American gas grid during the past 15 years. Numerous factors account for this reliability (e.g., supply diversity, gas industry restructuring, increasing competitive forces, technological developments, new contractual arrangements, etc.).

Pace finds the following is support that an orderly, competitive market exists for reliable natural gas transportation services in the U.S.

- Natural gas transportation services throughout North America are highly reliable; force majeure events significantly affecting mainline throughput are rare.
- The reliability of natural gas transportation since the implementation of FERC Order 636 is largely a function of the quality or the type and level of service contracted by the shipper; customers buy the quality of service they need.
- Additional capacity will be developed when the market demands it.
- Currently nearly 2.7 Bcf of incremental capacity is planned in Florida from 2001 - 2003. Pace expects that approximately 1.8 Bcf/d of new pipeline capacity will be constructed by 2003.
- Beyond the current announced projects; additional capacity can be added to the Peninsula under FGT Phase VI and VII or by adding compression to either of the offshore pipeline options likely to be built.
- According to the INGAA, substantial investments in pipeline capacity will be made during the next 10 years to ensure the development of a 30 TCF market.<sup>14</sup>

Discussion of natural gas transportation issues is divided into four sections:

- Historic Reliability of FGT's System.
- Reliability of the North American Gas Grid.
- New Pipeline Developments in Florida.
- Market Dynamics Affecting Florida Gas Capacity.

### FGT RELIABILITY

FGT's pipeline system has been very reliable, historically. Pace finds that FGT's historically reliable service is likely to continue because:

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<sup>14</sup> *Pipeline and Storage Infrastructure Requirements for a 30 TCF U.S. Gas Market*, Interstate Natural Gas Association of America Foundation, January 26, 1999.



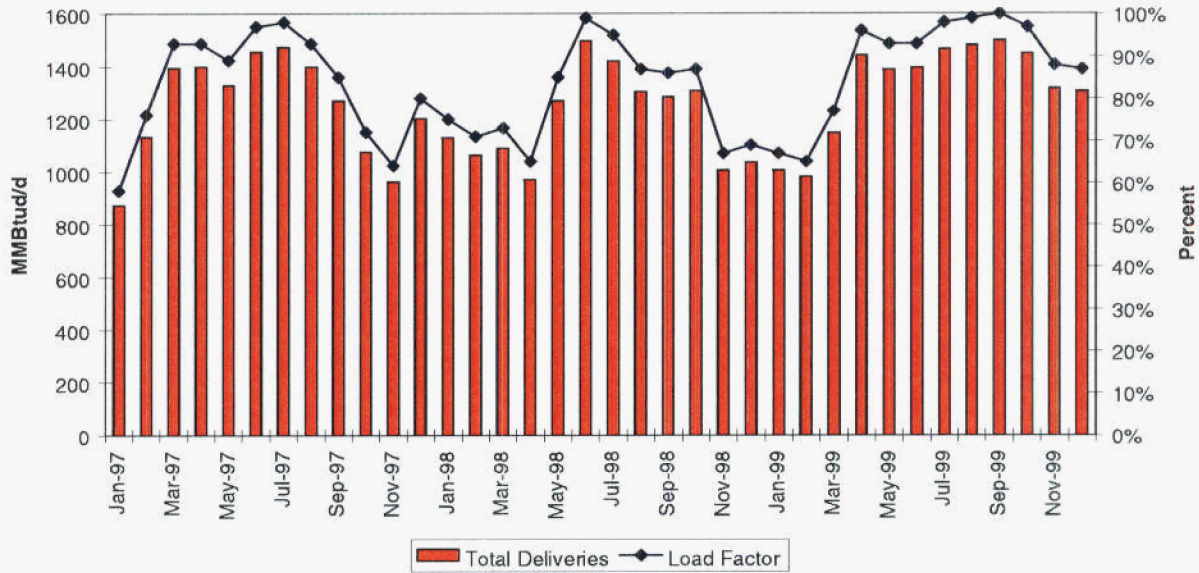
- According to FGT only one major gas disruption has restricted gas flow on FGT's system during the past 30 years.<sup>15</sup> Moreover, since 1984 FGT has only had 24 pipeline incidents, most of which were minor and repaired quickly.
- Its entire system now operates as an integrated network now enabling FGT to provide service to most customers even if one of its major looped lines goes out of service.
- A fourth "barrel" is being added to FGT's "triple looped" system. FGT is initiating a 42" loop as part of Phase V expansion to parallel ROWs for the 24", 30", and 36" diameter mainlines thus providing enhanced deliverability and reliability.
- Multiple compressors exist at many of the compressor station locations thus providing enhanced reliability through redundancy if a compressor needs to be taken off-line for planned or unplanned maintenance.
- Only about 0.3 percent of FGT's pipeline system is above ground.
- Numerous interconnections exist with pipelines at upstream points.
- FGT employs the U.S. Department of Transportation's regulations, (49 C.F.R. Part 192) as the minimum standards for construction. Moreover, FGT intends to use the latest technological innovations involving: 1) metallurgical materials (API 5L X-70) for its 26- to 36-inch pipe, 2) coatings, 3) 100 percent radiography, and 4) turbine equipment.
- Interruptible transportation on FGT is reliable, particularly during the winter due to climate. Exhibit 15 demonstrates that FGT's system operates at a relatively high system load factor; however, secondary market capacity is available in the winter and can be purchased during the summer although restrictions may apply at certain receipt points during summer months.

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<sup>15</sup> Multiple lightning strikes at Compressor Station 15 in August 1998 resulted in restricted gas flows. As a result of this event FGT has redesigned the yard pipe at its compressor stations so that they are better grounded and less prone to outages from lightning.



**Exhibit 15: Recent Load Factor History on FGT**



**RELIABILITY OF THE UNITED STATES GAS GRID**

Natural gas transportation service is reliable throughout North America. Pace bases this conclusion on the following factors:

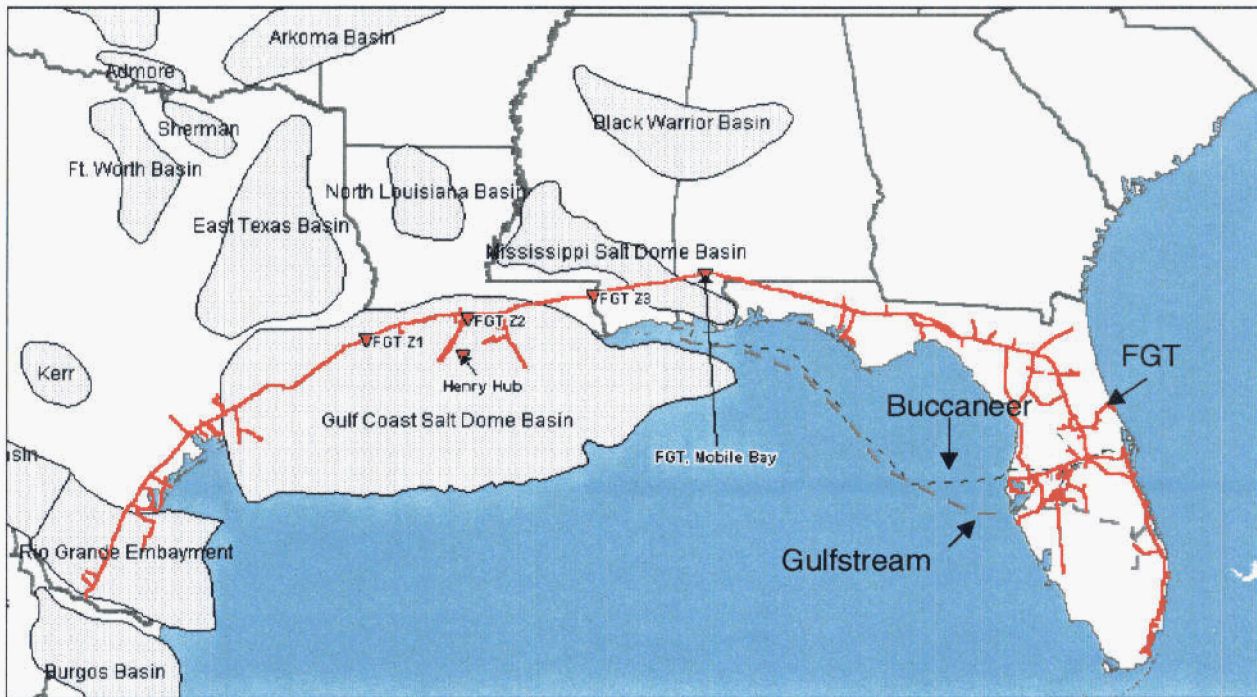
- According to the Department of Transportation, National Transportation Safety Board natural gas and liquids pipelines are the safest methods of transporting energy in North America.
- The interstate delivery system is efficient and expanding rapidly. More than \$10 billion worth of interstate pipeline infrastructure has been approved or announced for development over the next 3 years.<sup>16</sup>
- Gas industry restructuring and increased reliance on market forces has improved the quality and breadth of services.
- Market forces determine the price of gas. The cost of delivery is based on the nature of the service and the level of reliability the customer chooses. Hence, reliability of service has become a function of the sanctity of contracts.
- New gas transportation service providers have entered the market. The redundancy of transportation service providers has increased reliability by reducing the odds of coincidental force majeure events.
- Advances in information technology, smart pigs, pipeline materials, etc. have improved the safety and reliability of natural gas deliveries during the past 15 years.

<sup>16</sup> "U.S., Canada Operators Plan to Build 12,500 Miles of New Lines," *Pipe Line & Gas Industry*, February, 2000.

**PROPOSED PIPELINE EXPANSIONS IN FLORIDA**

Exhibit 16 illustrates existing and proposed pipeline infrastructure on the Peninsula.

**Exhibit 16: Peninsula Gas Infrastructure**



Several pipeline expansions have been proposed during the past two years in Florida, including the following projects:

- Buccaneer.
- Gulfstream.
- FGT Phase IV.
- FGT Phase V.
- Sawgrass.

**Buccaneer**

The Williams Companies and Duke, two large North American pipeline infrastructure developers, cosponsor the Buccaneer pipeline project for which an application for a Certificate of Public Convenience and Necessity (“CPCN”) was filed on October 28, 1999. If approved, the pipeline will bring 900,000 Dth of new capacity to central Florida. Buccaneer pipeline is on the



FERC's meeting schedule for April 25, 2000.<sup>17</sup> Pace anticipates a preliminary determination from the FERC for construction of the facilities at that time. Currently under environmental review, Buccaneer project managers anticipate that the pipeline will meet its target in-service date of April 2002. Buccaneer has binding Precedent Agreements for about 50 percent or 450,000 Dth of its total firm capacity. Negotiations for additional shipper capacity commitments are on-going.

### **Gulfstream**

Gulfstream, being developed by The Coastal Corp. ("Coastal"), filed an application to obtain a CPCN at FERC on October 15, 1999. Subsequently, El Paso Energy tendered an offer to merge with Coastal.<sup>18</sup> FERC announced its intent to prepare an Environmental Impact Statement regarding the Gulfstream project on December 6, 1999. Gulfstream claims it is the first major pipeline project to comply with FERC Order No. 603 and No. 603-A, which require that applications contain significantly more information up front than in the past on environmental conditions along a proposed project route. Officials from Gulfstream state that the project 1) is slated to come on-line in June 2002, 2) has received overwhelming support from county governments and the business community, and 3) that the proposed route has met with favorable reaction by environmental officials in Florida.

Currently, Gulfstream has 10 non-affiliated shippers and a substantial portion of its total capacity is subscribed.<sup>19</sup> According to Gulfstream, some customers may exercise options to increase their capacity commitments. Negotiations with additional shippers are on-going.

On March 16, 2000, Coastal announced that its affiliate, Gulfstream Natural Gas System, L.L.C., has signed a letter of intent with Berg Steel Pipe Corporation, of Panama City, Fla., providing for Berg to manufacture and deliver most of the steel pipe needed to build the Gulfstream.

Gulfstream's application to construct facilities is on FERC's meeting agenda for April 25, 2000.<sup>20</sup> Based on Gulfstream's progress made in responding to FERC questions regarding rate design, cost allocation, market need, etc. issues, Gulfstream believes FERC may grant a preliminary determination approving non-environmental aspects of the pipeline. Gulfstream further contends that FERC is likely to issue a ruling on Draft Environmental Impact Statement ("DEIS") issues by July 2000. Completion of these milestones will greatly enhance the ultimate viability of the proposed Gulfstream's pipeline.

<sup>17</sup> FERC on-line Meeting Agenda, April 19, 2000.

<sup>18</sup> On March 31, 2000, El Paso Energy Corporation and The Coastal Corporation announced through the mailing of a joint proxy statement, that special meetings of stockholders to vote on the proposed merger involving Coastal and El Paso Energy on May 5, 2000.

<sup>19</sup> Pace can not confirm the exact level of capacity commitments yet because of confidentiality restrictions between Gulfstream and its shippers.

<sup>20</sup> FERC on-line Meeting Agenda, April 19, 2000.

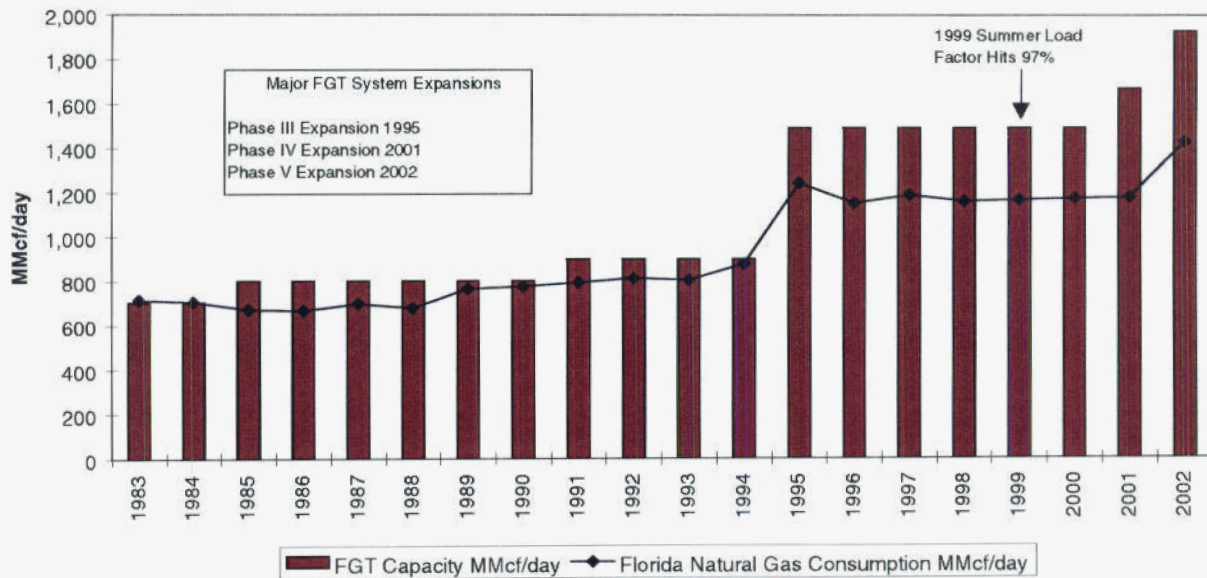




## Florida Gas Transmission

The historical growth in FGT's mainline capacity is shown in Exhibit 17. Recently, FGT has announced two major expansions of its system. These expansions reflect the first major changes to FGT's system since Phase III facilities were placed into service in 1995. Targeted in-service dates for FGT Phase IV and Phase V expansions are 2001 and 2002, respectively.

**Exhibit 17: Growth in FGT Mainline Capacity**



Source: FGT and Pace

### Phase IV

The project will increase FGT's average annual capacity to the Florida market by 272 MMBtu/d. FGT filed a CPCN application in December 1998 to construct Phase IV facilities. A preliminary determination was granted in July 1999. FERC issued a Draft Environmental Impact Statement in September 1999. The project received a final FERC certificate in February 2000. FGT has a target in-service date of May 2001. The \$268 million, 139-mile pipeline expansion project includes the addition of over 38,000 horsepower and uprating compressor facilities at various locations in Florida.

### Phase V

Through the \$438 million proposed Phase V Expansion FGT will be adding 231 miles of pipeline and approximately 90,000 horsepower of compression and associated facilities. Phase V will provide approximately 405,000 MMBtu/d of incremental firm transportation service. FGT filed a CPCN on December 1, 1999 and has targeted February 2001 as the date for receiving a final FERC certificate to construct facilities. The estimated in-service date is April



2002. This application is supported by 20-year firm service agreements for the full amount of incremental capacity. The filing includes extensive data concerning the environmental impacts of the project.

## **MARKET DYNAMICS AFFECTING FLORIDA CAPACITY**

In its recent analysis of the U.S. gas industry, the National Petroleum Council concluded that the “gas market has become highly efficient and sophisticated, with numerous participants ensuring competitive prices. Increased confidence in the functionality of the gas market and in competitive gas prices has played a significant role in increasing gas demand.”<sup>21</sup> Mirroring national trends, an orderly and competitive market for transportation services has developed in Florida.

Dynamics affecting Florida’s transportation markets are distinguished by a number of pro-competitive features including the following:

- Many Florida end users purchase transportation capacity, either bundled with supply or unbundled, in competitively priced, reliable and liquid spot markets.
- Introduction of alternative and competing sources of transportation in the Florida market (e.g., FGT expansions, Buccaneer, Gulfstream).
- Recent Federal regulatory initiatives are likely to facilitate the development of market-based transportation services.

### **Florida Spot Markets**

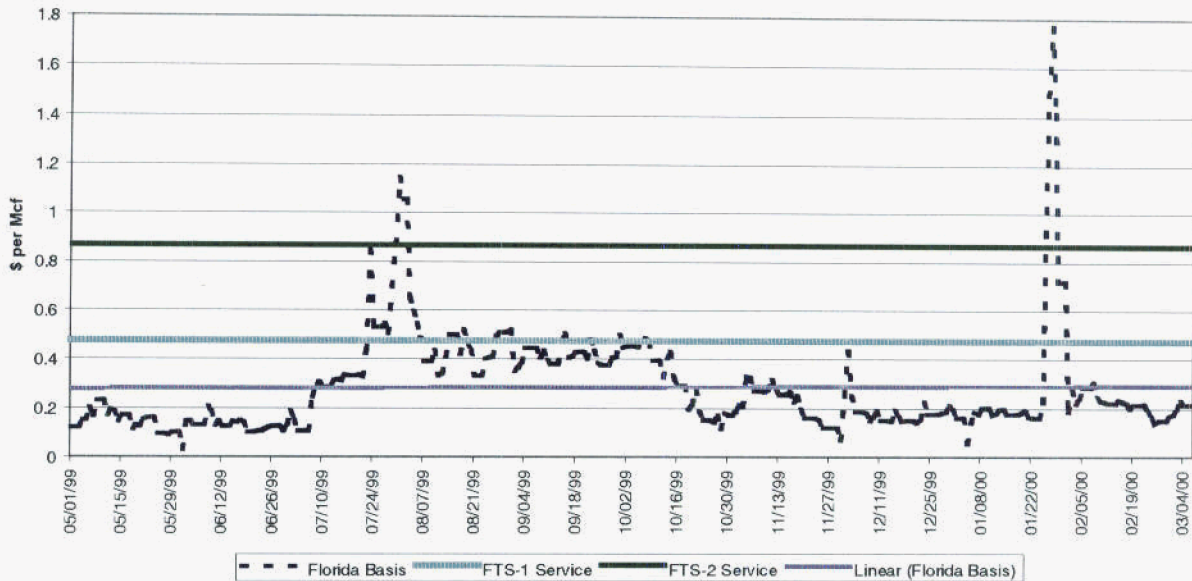
Spot market transportation can be purchased at prevailing market prices in Florida. In fact, as shown in Exhibit 18, the price of this transportation capacity is usually substantially discounted relative to maximum tariff rates on FGT under FTS-1 and FTS-2. For example, the average daily Florida Citygate basis relative to FGT Zone 2 index from May 1999 to March 2000 indicates a market price of transportation of just \$0.29/MMBtu which is \$0.18/MMBtu, \$0.57/MMBtu and \$0.33/MMBtu less than FGT FTS-1, FGT FTS-2, and Gulfstream FT services respectively. Pace expects that the liquidity of the secondary markets will increase over time as the Florida markets grow and excess pipeline deliverability is installed.

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<sup>21</sup> “Natural Gas: Meeting the Challenges of the Nation’s Growing Natural Gas Demand,” National Petroleum Council, December 15, 1999, p. 3.



**Exhibit 18: Comparison of Florida Citygate Basis Versus Full Tariff Pricing**



Source: Pace

Note: FTS-1 and FTS-2 transportation service priced at maximum tariff, including fuel and surcharges.

A large number of buyers and sellers execute trades on a daily basis at major receipt points into FGT’s system (see Exhibit 19). These liquid trading points represent major receipt points of gas into FGT’s system – South Texas at Agua Dulce, onshore Gulf at FGT Z2 and Z3, and Mobile Bay at FGT Mobile Bay. Zone 2 is the most liquid point, with reported volumes averaging about 340 MMBtu per day. However, trading volumes for all of the liquid trading points averaged in excess of 100,000 MMBtu/d.

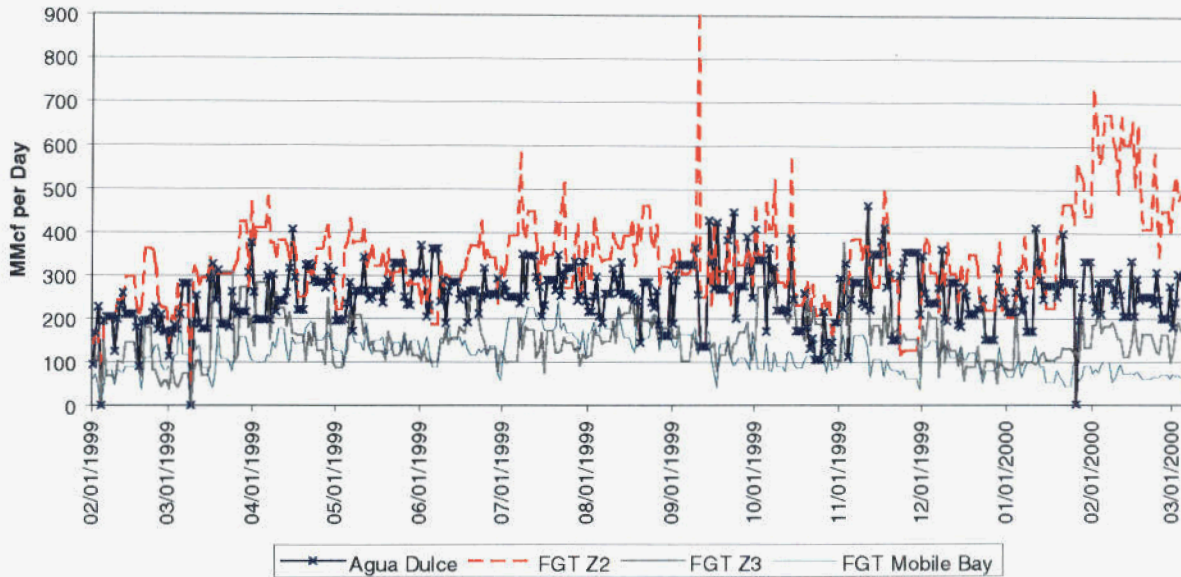
Recently, FERC singled out the liquidity of current energy markets by stating:

“There has been a dramatic growth in the amount of price information on the types of goods and services priced. This proliferation of prices indicates that market participants are finding ways to make transactions in the new energy markets. In general, more services being priced means that market forces are leading to creative strategies and innovation in goods and services, and indicate that markets are functioning.”<sup>22</sup>

<sup>22</sup> *State of the Markets 2000*, Federal Energy Regulatory Commission, March 2000, p. 25.



**Exhibit 19: Liquidity at the Relevant Trading Points**



Source: RDI and Pace.

With the likelihood of Florida gas deliverability doubling by 2003, market liquidity is likely to expand rapidly.<sup>23</sup> In fact, actual market liquidity may be exponentially greater than incremental capacity additions through pipeline interconnections bringing together potential buyers and sellers of market-based gas services at supply pools.

**Competing Transportation Options**

A broad array of competitively priced transportation services in Florida has developed despite FGT’s historic transportation monopoly on the peninsula. New proposals to develop offshore pipelines are introducing even greater competition to the Florida marketplace for gas. The Panda projects are providing the market support for these pipelines. Pace concludes that this new capacity will foster the continued maturation of an orderly and competitive market for gas in Florida by:

- Providing true transportation competition on the peninsula.
- Improving the liquidity of the market.
- Expanding arbitrage opportunities via pipeline interconnections.
- Enabling end users to structure more sophisticated portfolios and take advantage of new services (e.g., Gulfstream and Buccaneer term differentiated rates and variable pricing/ratable take proposals).

<sup>23</sup> More capacity is contemplated beyond that time frame. FGT already has plans to extend its proposed 42-inch diameter loop under a possible Phase VI and VII projects and Gulfstream and Buccaneer could inexpensively add land-based compression to increase deliverability of their systems.



## Regulatory Oversight

Policies governing the regulation of short-term transportation markets issued by FERC on February 9, 2000, as part of Order 637, are the latest in a series of major orders that have resulted in the widespread availability of pro-competitive transportation services. Major tenets of Order 637 that could lead to a more level the playing field among classes of service, enhanced price signals, expanded market participation are as follows:

- Removing the price caps on secondary market capacity for a two-year trial period. Firm capacity rights-holders will now be able to sell their capacity for whatever the market will bare, for term deals of less than one-year. Previously, end users had to execute a grandfathered buy/sell arrangement or purchase/sell gas in bundled transactions to avoid violating the Order 636 rule prohibiting shippers from selling capacity for prices above the maximum tariff. Now end users can more easily acquire the transportation reliability they need, just by paying more for it – as is done with gas commodity.
- Making nominations and scheduling procedures between capacity release and IT more comparable to foster a level playing field for these services and enhance the attractiveness of using the capacity release market.



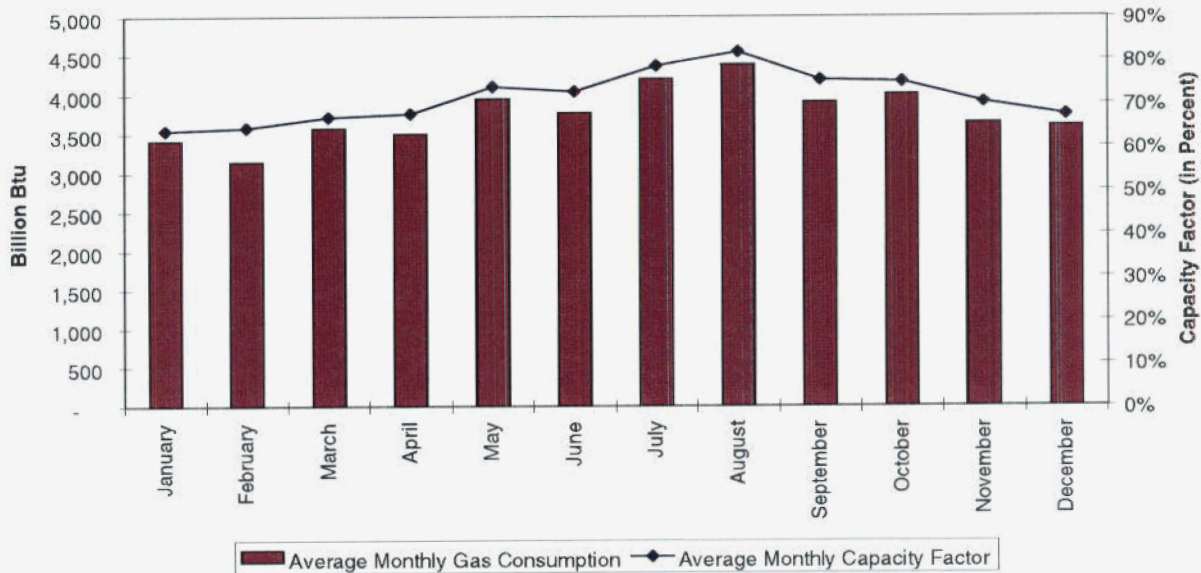
## PROJECT FUEL PLANS

### FUEL REQUIREMENTS

Each Project's fuel requirements are a function of the heat rate and electric generation capacity of the plant. Fuel consumption for a 1,000 MW natural gas combined cycle generating facility with General Electric Type 7 FA or equivalent combustion turbines and an average heat rate of 7,187 Btu/kWh operating at a 100% capacity factor would average 7,187 MMBtu per hour, or approximately 172,488 MMBtu per day. Based on an average annual capacity factor of 72 percent, each Project will consume about 45,088 billion Btu per year.

Based on dispatch model results provided by R.W. Beck, Pace estimates fuel consumption will average approximately 3,757 billion Btu per month between years 2004 and 2008.<sup>24</sup> As shown in Exhibit 20, the Project's fuel requirements will vary monthly depending on the Project's dispatch pattern or capacity factors. The Project's overall fuel requirements are relatively flat, but peak fuel requirements are expected in July and August. Conversely, minimum fuel consumption is expected in January and February.

**Exhibit 20: Average Monthly Fuel Consumption and Capacity Factors, 2004-2008**



Source: R.W. Beck and Pace

<sup>24</sup> Monthly capacity factors by year delivered to Pace by R.W. Beck on April 18, 2000.



## FUEL PLANS

Pace understands, through discussions with Panda, that the fuel plans for each of the Projects allow each Project to identify and capture fuel market opportunities, match power price dispatch and pricing, and generate synergies across the two Projects. As such, the two fuel plans are similar and can be characterized as follows:

- Interconnections with Gulfstream and in the case of Midway an additional interconnection with FGT.
- Short-term spot firm natural gas supply transactions with producers and marketers in the Mobile Bay region for supply into Gulfstream and FGT and additional producers and marketers for supply in FGT's Zone 2 (Louisiana) and Zone 1 (Texas). The price and volume terms of the supply agreements will be agreed to at the time of the transaction and will be tied to the generation commitments provided in the power sales agreements.
- 20-year firm transportation ("FT") agreements for 100 percent of the Project's peak day natural gas requirement, which is defined as the fuel required to power the Project at 100% capacity for all 24 hours of a single day. Panda represents that the peak day natural gas requirement is 172,488 MMBtu/d.
- Panda has the right and the intention of turning back a portion of its Gulfstream FT in favor of more economic and equally reliable alternative fuel delivery arrangements for the benefit of the Florida power consumers and the Midway Project. However, Panda does not foresee reducing the FT volumes below 75% of its peak day requirement.
- Panda currently has a Precedent Agreement with Gulfstream for the Midway Project, which includes an amendment that brings the total commitment to firm transportation to 200,000 MMBtu/d. Panda retains the option to reduce the capacity commitment to 150,000 MMBtu/d.
- Panda is currently working on Precedent Agreement with Gulfstream for the Leesburg Project. Because Leesburg is currently not on the original pipeline route as filed with FERC, Gulfstream, must consider a connection with this Project as part of its Phase 2 expansion. Panda and Gulfstream has executed a Letter of Intent ("LOI") to pursue negotiations that are satisfactory to Panda regarding capacity commitments and in-service dates. A term sheet containing terms of a deal similar to those existing in the current Precedent Agreement with the Midway Project is attached to the LOI.
- Panda has a LOI and attached term sheet executed with Nobel Gas Marketing and expects to shortly have three other LOIs and term sheets executed with Enron Capital and Trade, El Paso Merchant Energy and NUI. The term sheets require that the supplier provide on a delivered firm basis volumes ranging from zero to some maximum daily quantity ("MDQ") (most likely between 50,000 and 100,000 MMBtu/d). Furthermore, the term sheet requires that each supplier cover the cost of replacement power or replacement gas (at the suppliers option) when gas supply is interrupted for reasons other than force majeure.
- Panda has executed a LOI with FGT stating that each party will work toward an interconnect agreement and an IT agreement containing satisfactory terms to Panda with respect to volumes and in-service dates.



- A three-mile lateral may be constructed from the Midway Project site to the FGT mainline system 10 miles downstream of FGT's Station 20 or Southwest of Ft. Pierce in St Lucie County.
- The Projects are located at a terminus point on the Gulfstream mainline; therefore no lateral is required.



## PRECEDENT AGREEMENT

This Precedent Agreement ("Agreement"), is made and entered into as of this 5<sup>th</sup> day of October, 1999, by and between Panda Midway Power Partners, LP, a Delaware limited partnership ("Shipper"), and Gulfstream Natural Gas System, L.L.C., a limited liability company formed under the laws of the State of Delaware ("Gulfstream") (hereinafter Shipper and Gulfstream are sometimes referred to individually as a "Party" or collectively as the "Parties").

### WITNESSETH:

WHEREAS, Gulfstream intends to design, construct, own and operate a natural gas pipeline that will extend from interconnections with the facilities of various natural gas treatment plants, processing plants and interstate natural gas transmission systems in the vicinity of Mobile, Alabama to various delivery points in peninsular Florida ("Gulfstream Project"); and

WHEREAS, Shipper intends to design, construct, own and operate a natural gas fired electric generating plant in St. Lucie County, Florida ("Plant") and desires to receive firm transportation service(s) from Gulfstream on the Gulfstream Project for the natural gas supply required for the Plant; and

WHEREAS, subject to the terms and conditions set forth in this Agreement, Gulfstream is willing to proceed with its efforts to develop the Gulfstream Project for the provision of the firm transportation service(s) hereinafter described, and Shipper is willing to subscribe for such transportation services.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein, and intending to be bound, Shipper and Gulfstream agree as follows:

1. Intent to Proceed. Within ninety (90) days following execution and delivery of this Agreement by Shipper, Gulfstream will proceed with the filing and

prosecution of the application(s) with respect to the Gulfstream Project described in Paragraph 2 below. To facilitate Gulfstream's ability to develop the Gulfstream Project, Shipper will refrain from committing to any firm transportation service(s) from other person(s) which service(s) would be in lieu of the firm transportation services provided for herein.

2. Regulatory Authorizations To Be Sought By Gulfstream. Subject to the other terms and conditions of this Agreement, Gulfstream will proceed with due diligence to apply for and attempt to obtain all governmental and regulatory authorizations, including without limitation authorizations from the Federal Energy Regulatory Commission ("FERC"), which Gulfstream determines are necessary for Gulfstream to (i) construct, own and operate (or cause to be constructed and operated) the Gulfstream Project, (ii) render the transportation service(s) contemplated in this Agreement and all of the precedent agreements with other shippers for transportation service(s) to be provided utilizing the Gulfstream Project and (iii) perform its obligations as contemplated in this Agreement. Gulfstream will, in its FERC application, request that the FERC issue a preliminary determination on the non-environmental aspects of the Gulfstream Project by June 1, 2000. Gulfstream reserves the right to file and prosecute any and all applications for such authorizations (and any supplements and amendments thereto) and, if necessary, institute any court review with respect thereto, in such manner as it deems to be in its best interest. Gulfstream shall, within ten (10) business days of the preparation or receipt of any environmental reports, assessments and/or environmental impact statements prepared for or as a result of Gulfstream's application, provide Shipper with copies of all such environmental reports, assessments and/or environmental impact statements. After filing for its application for FERC authorizations to construct the Gulfstream Project, Gulfstream shall provide Shipper with an update of the status of the application and provide further updates every ninety (90) days

thereafter. Shipper agrees to support and cooperate in the efforts of Gulfstream to obtain all authorizations which Gulfstream determines are necessary for Gulfstream to construct, own and operate the Gulfstream Project and render the transportation service(s) contemplated in this Agreement, including but not limited to filing an intervention or other pleading in support of the Gulfstream Project. If the FERC determines that information related to Shipper's gas supply or upstream or downstream transportation arrangements is required from Gulfstream, Shipper agrees to provide Gulfstream with such information in a timely manner to enable Gulfstream to respond within the time required by FERC. Gulfstream will diligently seek to obtain a protective order from the FERC for any commercially sensitive or confidential information identified by Shipper.

3. Regulatory Authorizations To Be Sought by Shipper. Subject to the other terms and conditions of this Agreement, Shipper shall proceed with due diligence to apply for and attempt to obtain from all governmental and regulatory authorities having jurisdiction all authorizations which Shipper determines are necessary for Shipper to (i) construct, own and operate (or cause to be constructed and operated) the Plant and all other facilities necessary to enable Shipper to utilize the transportation service(s) contemplated in this Agreement and (ii) perform its obligations as contemplated in this Agreement. Shipper reserves the right to file and prosecute applications for such authorizations (and any supplements and amendments thereto) and, if necessary, institute any court review with respect thereto, in such manner as it deems to be in its best interest; provided, however, that Shipper shall prosecute such applications (and any supplements and amendments thereto or court appeals) in a timely manner and in no event shall Shipper take any action that would obstruct, interfere with or delay the receipt by Gulfstream of the authorizations described in Paragraph 2 above or otherwise jeopardize development of the Gulfstream Project. Gulfstream agrees to support

and cooperate in the efforts of Shipper to obtain all authorizations necessary for Shipper to utilize the transportation service(s) contemplated herein. Subject to its receipt of all such necessary authorizations, Shipper agrees to proceed with due diligence to construct, or cause to be constructed, the Plant and all other facilities necessary for Shipper to utilize the transportation service(s) contemplated herein.

4. Service Agreement.

(a) Service Agreement. When Gulfstream has satisfied and/or waived the conditions precedent set forth in Paragraph 6 (a) hereof, it shall immediately notify Shipper that the conditions have been satisfied and/or waived. When Shipper has satisfied and/or waived the conditions precedent set forth in Paragraph 6 (b) hereof, it shall immediately notify Gulfstream that the conditions have been satisfied and/or waived. Within ten (10) business days after the second of the Parties gives the other such notice, the Parties agree to execute the Firm Transportation Service Agreement attached hereto as Attachment 1, as such Agreement may be amended from time to time to conform to changes approved by the FERC to Gulfstream's FERC Gas Tariff ("Service Agreement"). Service under the Service Agreement will commence as set forth in Paragraph 4(b) below.

(b) Commencement and Term of Service. Shipper will give Gulfstream written notice of the approximate date Shipper plans to place the Plant in-service no less than eighteen (18) months prior to such date (the "Plant In-Service Date"); and further provided that Shipper shall give Gulfstream timely written notice of any change(s) to the Plant In-Service Date. Transportation service(s) under the Service Agreement will commence on the date specified by Gulfstream in the written notice to be provided to Shipper pursuant to Paragraph 4(c) below. After transportation service(s) commences under the Service Agreement, such service(s) will continue for the primary term set forth therein and year to year thereafter subject to termination in accordance with the provisions of the Service Agreement.

(c) Notice of Commencement of Transportation Service(s). Gulfstream will notify Shipper in writing of the expected date that transportation service(s) will commence under the Service Agreement no later than ninety (90) days prior to such expected commencement date and Gulfstream will give Shipper a report on the status of construction of the Gulfstream Project and any changes in the expected commencement date every thirty (30) days thereafter. No less than thirty (30) days prior to the date Gulfstream is ready to commence transportation service(s) under the Service Agreement, Gulfstream will notify Shipper in writing that such transportation service(s) will commence on a date certain, which date will not be prior to the later to occur of (1) June 1, 2002 or (2) the Plant In-Service Date. Gulfstream will stand ready to provide firm transportation service(s) to Shipper pursuant to the provisions of the Service Agreement, and Shipper will pay to Gulfstream all applicable charges provided for in the Service Agreement commencing on the earlier to occur of (1) the Plant In-Service Date or (2) January 1, 2004. Gulfstream will also notify Shipper in writing no less than thirty (30) days prior to the date Gulfstream is ready to commence interruptible transportation service(s) for the test gas required for the Plant.

5. Construction of Facilities.

(a) Design and Construction. Subsequent to the execution and delivery of this Agreement by the Shipper, Gulfstream will undertake the preliminary design of the facilities for the Gulfstream Project and any other preparatory actions required for Gulfstream to complete and file application(s) with the FERC and other governmental or regulatory agencies having jurisdiction for the authorizations which Gulfstream determines are necessary for Gulfstream to (i) construct, own and operate (or cause to be constructed and operated) the Gulfstream Project, (ii) render the transportation service(s) contemplated in this Agreement and all of the precedent agreements with other shippers for transportation service(s) to be

provided utilizing the Gulfstream Project and (iii) perform its obligations as contemplated in this Agreement. Upon satisfaction of each of the conditions precedent set forth in Paragraph 6 below, or written waiver of the same by the Party on whose behalf such condition is imposed, and subject to the continuing commitments of Shipper and all of the other shippers who have executed precedent agreements for transportation service(s) to be provided utilizing the Gulfstream Project, Gulfstream will proceed with due diligence to construct the pipeline and other facilities (as authorized by the FERC and other governmental or regulatory agencies having jurisdiction) which are necessary for the provision of the firm transportation service(s) contemplated in this Agreement. After receipt of FERC authorization to construct the Gulfstream Project, Gulfstream shall prepare a report to Shipper on the proposed construction milestones, financial milestones, and closing dates, and the in-service date of the Gulfstream Project. Gulfstream shall provide Shipper with updates to such report every sixty (60) days thereafter. Notwithstanding Gulfstream's due diligence, if Gulfstream is unable to commence the transportation service(s) for Shipper as contemplated herein by the Plant In-Service Date, Gulfstream will continue to proceed with due diligence to complete construction of such necessary pipeline and other facilities, and commence transportation service(s) for Shipper at the earliest practicable date thereafter.

(b) Pipeline Construction. If Gulfstream is unable to complete the construction of such pipeline and other facilities and commence the firm transportation service(s) contemplated herein by the Plant In-Service Date, Gulfstream will continue to proceed with due diligence to complete construction of such pipeline and other facilities, and commence such transportation service(s) for Shipper at the earliest practicable date thereafter.

6. Conditions Precedent.

The commencement of transportation service(s) under the Service

Agreement, and Gulfstream's and Shipper's respective rights and obligations hereunder and under the Service Agreement, are expressly made subject to the satisfaction of each of the following conditions precedent; provided, however, that each such condition may be waived in writing by the Party on whose behalf the condition is imposed:

(a) Conditions Precedent Imposed On Behalf Of Gulfstream:

- (i) Receipt and acceptance by Gulfstream, no later than June 1, 2001, of all necessary authorizations required by the FERC and all other governmental or regulatory agencies having jurisdiction for the construction, ownership and operation of the Gulfstream Project by Gulfstream and the provision of transportation service(s) consistent with the terms and conditions of this Agreement. It is expressly understood that all such authorizations shall be in form and substance acceptable to Gulfstream and shall be final and no longer subject to appeal or rehearing; provided, however, Gulfstream may waive the condition that any of such authorizations be final and no longer subject to appeal or rehearing.
- (ii) Receipt and acceptance by Gulfstream of a financial commitment or commitments from financial institutions, on terms acceptable to Gulfstream, in its sole discretion, for the financing necessary for Gulfstream to construct the Gulfstream Project, by no later than thirty (30) days after the later of (1) the date Gulfstream receives the 18 month notice provided for in Subparagraph 4(b) or (2) the date set forth in Subparagraph 6(b)(ii).
- (iii) Issuance by the FERC of a preliminary determination on the non-

environmental aspects of the Gulfstream Project, by no later than June 1, 2000.

- (iv) Mutual agreement by Gulfstream and Shipper, by no later than the date Gulfstream receives the 18 month notice provided for in Subparagraph 4(b), on the creditworthiness requirements consistent with Gulfstream's FERC Gas Tariff that Shipper will be required to satisfy upon execution and delivery of the Service Agreement (the "Agreed Creditworthiness Requirements").
- (b) Conditions Precedent Imposed On Behalf Of Shipper:
  - (i) Gulfstream has in good faith, on or before ninety (90) days following execution and delivery of this Agreement by Shipper, made its initial filing with respect to the Gulfstream Project as such filing is described in Paragraph 2 hereof.
  - (ii) Receipt and acceptance by Shipper in a form satisfactory to Shipper, no later than December 31, 2001, of all necessary authorizations required by all governmental or regulatory agencies having jurisdiction for the construction, ownership and operation of the Plant by Shipper. It is expressly understood that all such authorizations shall be in form and substance acceptable to Shipper and shall be final and no longer subject to appeal or rehearing; provided, however, Shipper may waive the condition that any of such authorizations be final and no longer subject to appeal or rehearing.
  - (iii) Receipt and acceptance by Shipper of a financial commitment or commitments from financial institutions, on terms acceptable to Shipper, in its sole discretion, for the financing necessary for Shipper to construct the Plant, by no later than the later of (1)



the date Gulfstream receives the 18 month notice provided for in Subparagraph 4(b) or (2) the date set forth in Subparagraph 6(b)(ii).

- (iv) Gulfstream has received its preliminary determination on the non-environmental aspects of the Gulfstream Project from the FERC by no later than June 1, 2000.
- (v) Within twenty (20) months following Gulfstream's filing of its application(s) for authorizations from the FERC to construct, own and operate (or cause to be constructed and operated) the Gulfstream Project and to render the transportation service(s) contemplated in this Agreement, Gulfstream shall have obtained all such authorizations.
- (vi) Gulfstream has in good faith commenced and diligently continued substantial construction of the Gulfstream Project by no later than September 1, 2001.
- (vii) Gulfstream has completed construction of the pipeline facilities and stands ready and able to begin and, if requested, begins the transportation service(s) contemplated herein on or before the Plant In-Service Date.
- (viii) Within ninety (90) days of Shipper's selection of a financial institution, such financial institution has approved this Precedent Agreement and the Service Agreement which selection shall occur no later than ninety (90) days before date Shipper satisfies or waives the condition precedent set forth in Subparagraph 6(b)(iii).
- (ix) Mutual agreement by Gulfstream and Shipper, by no later than the date Gulfstream receives the 18 month notice provided for

in Subparagraph 4(b), on the creditworthiness requirements consistent with Gulfstream's FERC Gas Tariff that Shipper will be required to satisfy upon execution and delivery of the Service Agreement (the "Agreed Creditworthiness Requirements").

7. Rates and Rate Design Methodology. The rates to be charged pursuant to the Service Agreement will reflect the following principles:

(a) Shippers electing recourse rates will agree to pay such rates, subject to changes determined by FERC from time to time. Recourse rates will be the rates filed with and approved by the FERC, pursuant to the Natural Gas Act or successor legislation.

(b) Shippers electing negotiated rates will agree to pay such rates without regard to any action or determination of the FERC with respect to the proposed recourse rates.

8. Representations and Warranties.

(a) Gulfstream. Gulfstream represents and warrants that (i) it is duly organized and validly existing under the laws of the State of Delaware and has all requisite legal power and authority to execute this Agreement and carry out the terms, conditions and provisions hereof; (ii) this Agreement constitutes the valid, legal and binding obligation of Gulfstream, enforceable in accordance with the terms hereof, (iii) there are no actions, suits or proceedings pending or, to Gulfstream's knowledge, threatened against or affecting Gulfstream before any Court or administrative body that might materially adversely affect the ability of Gulfstream to meet and carry out its obligations hereunder; and (iv) the execution and delivery by Gulfstream of this Agreement has been duly authorized by all requisite limited liability company action.

(b) Shipper. Shipper represents and warrants that (i) it is duly organized

and validly existing under the laws of the State of Delaware and has all requisite legal power and authority to execute this Agreement and carry out the terms, conditions and provisions hereof; (ii) this Agreement constitutes the valid, legal and binding obligation of Shipper, enforceable in accordance with the terms hereof, (iii) there are no actions, suits or proceedings pending or, to Shipper's knowledge, threatened against or affecting Shipper before any Court or administrative body that might materially adversely affect the ability of Shipper to meet and carry out its obligations hereunder; (iv) the execution and delivery by Shipper of this Agreement has been duly authorized by all requisite limited partnership action, and (v) upon execution and delivery of the Service Agreement, Shipper will satisfy the Agreed Creditworthiness Requirements.

9. Term. This Agreement shall become effective when executed by both Gulfstream and Shipper, and shall remain in effect unless and until terminated as hereinafter provided.

(a) Termination of Precedent Agreement. In the event each of the conditions precedent set forth in Paragraph 6 above has not been satisfied or waived by the Party on whose behalf such condition is imposed by the date specified in such Paragraph, then such Party may terminate this Agreement by giving written notice of termination to the other Party within thirty (30) days of such date.

(b) Commencement of Transportation Service(s). If this Agreement is not terminated pursuant to Paragraph 9(a) above, then this Agreement will terminate by its express terms on the date of commencement of transportation service(s) under the Service Agreement, and thereafter Gulfstream's and Shipper's respective rights and obligations related to the transactions contemplated herein shall be determined pursuant to the terms and conditions of the Service Agreement and the terms and conditions of Gulfstream's FERC Gas Tariff, as in effect from time to time.

(c) Commercial Reasonableness. Notwithstanding the foregoing, Shipper shall have the right to terminate this Agreement if Shipper determines in good faith that it is not commercially reasonable to design, construct, own and operate a natural gas fired electric generating plant in St. Lucie, Florida. Shipper shall exercise such right to terminate by notifying Gulfstream of its determination in writing on or before the later of (1) the date Gulfstream receives the 18 month notice provided for in Subparagraph 4(b) or (2) the date set forth in Subparagraph 6(b)(ii).

10. Financing Parties' Requirements; Lien Waivers And Assignment. Each Party acknowledges that the other Party will borrow certain funds from such Party's Financing Parties for, in the case of Gulfstream, the construction of the Gulfstream Project, and, in the case of Shipper, the construction of the Plant and that, as a condition to making loans to a Party, such Party's Financing Parties may from time to time require certain documents from the other Party. "Financing Parties", with respect to a Party, means the lenders, security holders, investors, export credit agencies, multilateral institutions, equity providers and others providing financing or refinancing to or on behalf of Gulfstream, for the development, construction, ownership, operation and maintenance of the Gulfstream Project or any portion thereof, or, to or on behalf of Shipper, for the development, construction, ownership, operation and maintenance of the Plant or any portion thereof, or any trustee or agent acting on behalf of any of the foregoing. In connection therewith, each Party agrees to furnish to the other Party's Financing Parties, such written information, certificates, opinions, copies of invoices and receipts, lien waivers (upon payment), affidavits and other like documents as the other Party's Financing Parties may reasonably request. Upon the request of the other Party's Financing Parties, as a condition precedent to the other Party's Financial Closing, each Party shall state in writing, if required,

whether or not it is satisfied with the other Party's performance hereunder to that date. "Financial Closing", with respect to each Party, shall mean that all of the following events shall have occurred (which events may occur over a period of time) with respect to the Gulfstream Project, in the case of Gulfstream, or the Plant, in the case of Shipper: (i) the Financing Documents have been fully executed (which documents may be executed over a period of time) which together provide for financing for the Gulfstream Project, in the case of Gulfstream, or the Plant, in the case of Shipper, in an amount and on the terms acceptable to Shipper or Gulfstream, as the case may be; (ii) all conditions precedent to the initial availability of funds under the Financing Documents referred to in the preceding clause (i) have been fulfilled or waived and the first draw thereunder has been made by Shipper or Gulfstream, as the case may be; and (ii) Shipper or Gulfstream, as the case may be, has received commitments for such equity as is required by such Party and satisfies the requirements of such Party's Financing Parties.

"Financing Documents" shall mean all the loan agreements, notes, indentures, securities, debt instruments, bonds, security agreements, swap agreements, letters of credit and/or other documents relating to the financing (including refinancing) of the Gulfstream Project or any part thereof or the Plant or any part thereof, as the case may be.

Each Party shall promptly execute any additional documentation as may be mutually agreed on form and substance, reasonably requested by the other Party's Financing Parties, including, but not limited to, documents evidencing such Party's, and if required, such Party's Financing Parties' consent to assignment of this Agreement as a security to the other Party's Financing Parties.

In the event of Shipper's default under this Agreement, Shipper's Financing Parties shall have such right to cure Shipper's default as Gulfstream's Financing Parties agree to. In that regard, Shipper's Financing Parties shall have (i) thirty (30)

days from the date notice of default is delivered to Shipper's Financing Parties to cure such default if such default is the failure to pay amounts to Gulfstream which are due and payable under this Agreement or (ii) not fewer than ninety (90) days to cure such default if the breach or default cannot be cured by the payment of money to Gulfstream so long as Shipper's Financing Parties or their designee shall have commenced to cure the default within such ninety (90) day period and thereafter diligently pursues such cure to completion and continues to perform any monetary obligations under this Agreement and all other obligations under this Agreement are performed by Shipper or Shipper's Financing Parties. If possession of the Plant is necessary to cure such breach or default, and Shipper's Financing Parties declare Shipper in default and commence foreclosure proceedings, Shipper's Financing Parties will be allowed a reasonable period to complete such proceedings. If Shipper's Financing Parties are prohibited by any court order or proceedings from curing the default or from commencing or prosecuting foreclosure proceedings, the foregoing time periods shall be extended by the period of such prohibition. Gulfstream further agrees to perform its obligations hereunder for the benefit of Shipper's Financing Parties in the event of Shipper's default under this Agreement or under Shipper's Financing Documents, provided that Shipper's Financing Parties shall have cured all defaults of Shipper's obligations hereunder and shall have paid all amounts then due, including costs to cure. In such event, Shipper's Financing Parties (or its assignee) shall have the right and obligations of Shipper under this Agreement.

Except as expressly permitted in this Agreement, neither Party shall assign this Agreement or any portion hereof, or any of its rights or obligations hereunder, whether by operation of law or otherwise, without the prior written consent of the other Party. This Agreement shall inure to the benefit of, and be binding upon, the successors and permitted assigns of the Parties.

Notwithstanding the foregoing, Shipper shall be entitled to assign this Agreement and its rights herein without the consent of Gulfstream to any of Shipper's affiliates that satisfies the Agreed Creditworthiness Requirements and that has a direct interest in the Plant. In addition, each Party hereby consents to the granting of a security interest in and an assignment by the other Party of this Agreement and its rights herein to the other Party's Financing Parties and their successors, assigns and designees in connection with any financing or refinancing related to the development, construction, operation and maintenance of the Plant or the Gulfstream Project, as the case may be. Each Party shall enter into a direct agreement with the other Party's Financing Parties if requested by the other Party to evidence such consent and the other rights and remedies of the other Party's Financing Parties in connection with this Agreement. Each Party shall execute such documents and instruments as requested by the other Party to evidence the security interest of the other Party's Financing Parties in the other Party's rights hereunder. In furtherance of the foregoing, each Party acknowledges that the other Party's Financing Parties may under certain circumstances assume the interests and rights of the other Party under this Agreement.

Each Party acknowledges that the other Party's Financing Parties may under certain circumstances foreclose upon and sell, or cause the other Party to sell or lease the Plant, in the case of Shipper, or the Gulfstream Project, in the case of Gulfstream, and cause any new lessee or purchaser of the Plant or the Gulfstream Project, as the case may be, to assume all of the interests, rights and obligations of the other Party arising under this Agreement. In such event, each Party agrees to seek its Financing Parties' consent to the assignment by the other Party and the other Party's Financing Parties of this Agreement and its rights herein to such purchaser or lessee.

Each Party agrees that the other Party's Financing Parties are intended to be

a third party beneficiary of this Paragraph 10. In that regard, each Party will not after the other Party's Financial Closing, without the prior written consent of the other Party's Financing Parties, amend or modify this Paragraph 10 in any respect.

11. Modification or Waiver.

No modification or waiver of the terms and conditions of this Agreement shall be made except by the execution by the Parties of a written amendment to this Agreement.

12. Notices.

All notices, requests, demands, instructions and other communications required or permitted to be given hereunder shall be in writing and shall be delivered personally or mailed by certified mail, postage prepaid and return receipt requested or by facsimile, as follows:

If to Gulfstream:

Gulfstream Natural Gas System, L.L.C.  
500 Renaissance Center  
Detroit, Michigan 48243  
Attention: Stanley A. Babiuk  
Senior Vice President  
Telephone: (313) 496-5653  
Facsimile: (313) 496-5052

If to Shipper:

Panda Midway Power Partners, LP  
4100 Spring Valley  
Suite 1001  
Dallas, Texas 75244  
Attention: James L. Adams, Jr.  
Vice President - Fuel  
and Power Services  
Telephone: (972) 980-7159  
Facsimile: (972) 980-6815

or to such other place within the United States of America as either Party may designate as to itself by written notice to the other Party. All notices given by



personal delivery or mail shall be effective on the date of actual receipt at the appropriate address. Notice given by facsimile shall be effective upon actual receipt if received during recipient's normal business hours or at the beginning of the next business day after receipt if received after the recipient's normal business hours.

13. Limitation of Liability. Shipper agrees that any and all claims, demands and causes of action that it may bring against Gulfstream shall be limited to the assets of Gulfstream. Execution of this Agreement does not bind any Member of Gulfstream or any of its affiliates or require any Member of Gulfstream or any of its affiliates to undertake any obligation in connection with this Agreement. Accordingly, Shipper waives its rights to proceed against the Members of Gulfstream or any of their respective affiliates. Shipper and Gulfstream further agree that neither Party shall be liable to the other Party for consequential, incidental, indirect or punitive damages, whether arising in contract, tort or otherwise.

14. No Third Person Beneficiary. Except as otherwise provided in Paragraph 10 in respect of each Party's Financing Parties, this Agreement shall not create any rights in third parties, and no provision hereof shall be construed as creating any obligations for the benefit of, or rights in favor of, any person or entity other than Gulfstream and Shipper.

15. Governing Law. THE CONSTRUCTION, INTERPRETATION, AND ENFORCEMENT OF THIS AGREEMENT SHALL BE GOVERNED BY THE LAWS OF THE STATE OF DELAWARE, EXCLUDING ANY CONFLICT OF LAW OR RULE WHICH WOULD REFER ANY MATTER TO THE LAWS OF A JURISDICTION OTHER THAN THE STATE OF DELAWARE.

16. Multiple Counterparts. This Agreement may be executed by the Parties in any number of counterparts, each of which shall be deemed an original

instrument, but all of which shall constitute but one and the same agreement.

17. Effect of Invalid Provision. Except as otherwise expressly stated herein, in the event any provision contained in this Agreement shall for any reason be held invalid, illegal or unenforceable by a court or regulatory agency of competent jurisdiction by reason of a statutory change or enactment, such invalidity, illegality or unenforceability shall not affect the remaining provisions of this Agreement.

18. Confidentiality. Except as hereinafter provided, neither Gulfstream nor Shipper, nor their respective affiliates, directors, officers, and employees, advisors and representatives shall disclose to any third person (other than each Party's Financing Parties as required by Paragraph 10) the terms and conditions of this Agreement, without the other Party's prior written consent to such disclosure. This Paragraph 18 shall not apply to disclosures that, in the opinion of Gulfstream's or Shipper's counsel, as the case may be, are required by state or federal laws, rules or regulations or are required by the FERC in respect of the Gulfstream Project or by the Florida Public Service Commission in respect of the Plant (in which case, the Party so required to make such disclosure shall advise the other Party prior to such disclosure and, if requested by the other Party, shall use every effort to maintain the confidentiality of this Agreement, including, without limitation, seeking a protective order). The disclosure of any information pertaining to this Agreement within Gulfstream's or Shipper's internal organization (including affiliates) and within the organization of any third person to which disclosure is authorized by Gulfstream or Shipper shall be limited to those personnel whose duties require their review or counsel with respect to this Agreement and the Party making such disclosure shall instruct such personnel to maintain the confidentiality of this Agreement.

19. Entire Agreement. This Agreement and the Attachments hereto

constitute the entire agreement between the Parties with respect to the subject matter hereof, superseding any and all prior negotiations, discussions, agreements and understandings, whether oral or written, relating to such subject matter.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed in multiple originals by their duly authorized officers as of the date first written above.

L.L.C.

**GULFSTREAM NATURAL GAS SYSTEM,**

By: *Stanley A. Babick*  
Name: STANLEY A. BABICK  
Title: Senior Vice President

**PANDA MIDWAY POWER PARTNERS, LP**

By: *J. L. Adams, Jr.*  
Name: J. L. Adams, Jr.  
Title: Vice President - Fuels

FIRST AMENDMENT  
TO  
PRECEDENT AGREEMENT

This First Amendment to Precedent Agreement ("First Amendment"), is made and entered into as of this 20th day of April, 2000, by and between Panda Midway Power Partners, LP, a Delaware limited partnership ("Shipper"), and Gulfstream Natural Gas System, L.L.C., a limited liability company formed under the laws of the State of Delaware ("Gulfstream") (hereinafter Shipper and Gulfstream are sometimes referred to individually as a "Party" or collectively as the "Parties").

WHEREAS, Shipper and Gulfstream entered into a Precedent Agreement dated as of October 5, 1999 (the "Precedent Agreement"), with respect to natural gas transportation service(s) utilizing the Gulfstream Project (as such term is defined in the Precedent Agreement) to a natural gas fired electric generating plant which Shipper intends to design, construct, own and operate in St. Lucie County, Florida.

WHEREAS, Shipper and Gulfstream desire to amend the Precedent Agreement as hereinafter set forth.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein, and intending to be bound, Shipper and Gulfstream agree as follows:

1. Exhibit A to Attachment 1 to the Precedent Agreement ("Exhibit A") is amended by changing the Contracted Capacity and the Total Delivery Point MDQ from "141,660 Dth/d" to "200,000 Dth/d" and Exhibit B to Attachment 1 to the Precedent Agreement is amended by changing the Quantity from "141,660 Dth/d" to "200,000

Dth/d".

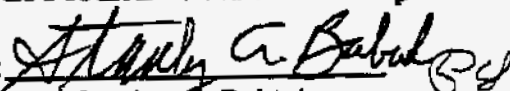
- 2. Exhibit A to Attachment 1 to the Precedent Agreement ("Exhibit A") is further amended by changing all references therein to footnote (1) to footnote (2) and by adding a new footnote (1) which reads as follows:

Within one hundred and eighty (180) days of the Plant In-Service Date Shipper may request a decrease in the Contracted Capacity from 200,000 Dth per day to a quantity which shall be no less than 150,000 Dth per day.


- 3. The Precedent Agreement is amended only as hereinbefore provided. In all other respects, the Precedent Agreement is confirmed and shall continue in full force and effect.
- 4. This First Amendment may be executed in any number of counterparts, all of which shall be considered together as one instrument.

IN WITNESS WHEREOF, the Parties have caused this First Amendment to be duly executed in multiple originals by their duly authorized officers as of the date first above written above.

GULFSTREAM NATURAL GAS SYSTEM, L.L.C.

By:   
Name: Stanley A. Babiuk  
Title: Senior Vice President

PANDA MIDWAY POWER PARTNERS, LP

By:   
Name: S. E. Adams, Jr.  
Title: Vice President - Fuels

**LETTER OF INTENT**

FPSC Docket No. 000289-EU  
Panda Midway: White  
Exhibit (DEW-5)  
Page 1 of 3

**between**

**Florida Gas Transmission Company  
and  
Midway Power Partners, L.P.**

This Letter of Intent ("LOI") dated effective as of \_\_\_\_\_, is executed by and between Florida Gas Transmission Company ("FGT"), whose mailing address is P.O. Box 1188, Houston, TX 77251-1188 and Midway Power Partners, L.P. ("MPP"), whose mailing address is 4100 Spring Valley, Suite 1001, Dallas, TX 75244. This LOI sets forth the understanding between the Parties (as hereinafter defined) for the negotiation of an interruptible transportation agreement and an agreement for interconnection of the interstate pipeline facilities of FGT and a 1000 megawatt power plant to be constructed by MPP in St. Lucie County, Florida (the "Agreements").

1. MPP and FGT are herein referred to collectively as "Parties" and individually as "Party." The Parties hereby agree to cooperate until April 1, 2001, to negotiate and attempt to finalize the definitive Agreements. THIS LOI IS MERELY INTENDED TO EXPRESS THE DESIRE OF THE PARTIES TO NEGOTIATE ONE OR MORE TRANSACTIONS THAT WILL BE FINALIZED IN WRITTEN AGREEMENTS AT A FUTURE TIME. THIS LOI DOES NOT ITSELF CREATE ANY BINDING OBLIGATION FOR EITHER PARTY TO ENTER INTO AGREEMENTS WITH THE OTHER PARTY AND IT SHALL NOT BE CONSTRUED AS A BINDING CONTRACT. Any commitment or agreement is subject to satisfactory negotiation and execution by April 1, 2001 of mutually acceptable definitive Agreements, and the approval of MPP's management and FGT's management, and financial closing (with funding) of MPP's St. Lucia power plant project.

2. The Parties shall cooperate in the development and sharing of all information reasonably necessary for the negotiation and execution of the Agreements. It is hereby agreed that all such information shall be governed by that certain Confidentiality Agreement dated as of July, 1998 between FGT and its Affiliates and MPP. With respect to information obtained from or furnished by third parties, no representation or warranty is made by FGT or MPP with respect to the accuracy, completeness or veracity of any of such information.

3. This LOI will be effective from the execution hereof until the earlier of (i) the execution of the Agreements that supersede and replace this LOI; or (ii) April 1, 2001; or (iii) written notice by either party of its intent to terminate this LOI. In the event the Agreements are not executed by the Parties on or before April 1, 2001, this LOI shall terminate. Upon termination, neither Party shall have any obligation to the other hereunder.

4. THIS LOI SHALL BE CONSTRUED AND INTERPRETED UNDER THE LAWS OF THE STATE OF TEXAS (EXCLUSIVE OF ANY CONFLICT OF LAW PROVISIONS WHICH WOULD APPLY THE LAW OF ANOTHER JURISDICTION), PROVIDED THAT ANY PROVISION OF SUCH LAWS INVALIDATING ANY PROVISION OF THIS LOI OR MODIFYING THE INTENT OF FGT AND MPP AS EXPRESSED IN THE TERMS OF THIS LOI, SHALL NOT APPLY. Neither FGT nor MPP shall be entitled to assign this LOI without the other's prior written consent, which consent shall not be unreasonably withheld. This LOI is for the benefit of FGT and MPP and is not intended nor shall it be construed to confer any rights or any benefits upon persons other than FGT or MPP.

5. No change, amendment or modification of this LOI shall be valid or binding upon the Parties hereto unless such change, amendment or modification is in writing and duly executed by the appropriately authorized representatives of all Parties hereto.

6. No presumption shall operate in favor of or against any Party as a result of any responsibility or role that any Party may have had in the drafting of this LOI.

7. Nothing contained in this LOI shall be construed as constituting a joint venture or partnership between the Parties.

8. The failure of any Party to insist upon or enforce, in any instance, strict performance by any other Party of any provision or to exercise any right herein conferred shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon any such provision or rights on any future occasion.

9. No oral agreement or conversation with any officer, agent or employee of any Party, either before or after the execution of this LOI, shall affect or modify any of the terms or obligations herein contained. This LOI constitutes the entire agreement between the Parties hereto and no changes, alterations or modifications hereof shall be effective unless in writing and signed by the duly authorized representatives of the Parties.

10. All Parties must give prior consent to the issuance of any press release, advertisement, publicity material, prospectus, financial document or similar matter or to the participation in a media interview which mentions or refers to the Agreements or this LOI.

IN WITNESS WHEREOF, each of the Parties hereto has caused this LOI to be executed as of the date and year written below, but effective as set forth hereinabove.

MIDWAY POWER PARTNERS, L.P.

by: PANDA MIDWAY I, LLC, its general partner

By: Stuart W. Crain

Title: V.P. - Merchant Plant Development

Date: 4/20/00

FLORIDA GAS TRANSMISSION COMPANY

By: A.E. Dwyer <sup>gk</sup>

Title: V.P. Marketing

Date: 4/19/00



## LETTER OF INTENT

between

**Koch Energy Trading, Inc.**  
and  
**Panda Midway Power Partners, L.P.**

This Letter of Intent ("LOI") dated effective as of the 20th day of April, 2000, is executed by and between Koch Energy Trading, Inc. ("KET"), located at 20 E. Greenway Plaza, Houston, Texas 77046 and Panda Midway Power Partners, L.P. ("Panda"), whose mailing address is 4100 Spring Valley, Suite 1001, Dallas, TX 75244. This LOI sets forth the understanding between the Parties (as hereinafter defined) for the negotiation of an agreement for the supply of natural gas ("Gas Supply Agreement"). KET and Panda are herein referred to collectively as "Parties" and individually as "Party."

1. The Parties hereby agree to cooperate until September 30, 2001, in good faith, to negotiate and attempt to finalize a definitive Gas Supply Agreement. Panda has set forth its proposal for gas supply on the term sheet attached as Exhibit "A." Such terms are for use in negotiations only and neither party shall be bound to such terms unless and until execution and delivery of a final definitive Gas Supply Agreement.

2. The Parties shall cooperate in the exchange of information reasonably required to be exchanged for the negotiation and execution of the Gas Supply Agreement. It is hereby agreed that all such information shall be maintained in confidence by the receiving party.

3. This LOI will be effective from the execution hereof until the earlier of (i) the execution of an Gas Supply Agreement that supersedes and replaces this LOI; or (ii) September 30, 2001. In the event the Gas Supply Agreement is not executed by the Parties on or before September 30, 2001, this LOI shall terminate, and neither Party shall have any obligation to the other hereunder.

4. No action, course of conduct or failure to act by KET or Panda, prior to the execution of a definitive Gas Supply Agreement, will give rise to or serve as a basis for any obligation or other liability on the part of KET or Panda. Any commitment or agreement is subject to satisfactory negotiation and execution by September 30, 2001 of a mutually acceptable definitive agreement, and the approval of KET's management and Panda's management, and financial closing (with funding) of Panda's Midway power plant project.

5. This LOI shall be construed and interpreted under the laws of the State of Texas (exclusive of any conflict of law provisions which would apply the law of another jurisdiction), provided that any provision of such laws invalidating any provision of this LOI or modifying the intent of KET and Panda as expressed in the terms of this LOI, shall not apply. Neither KET nor Panda shall be entitled to assign this LOI without the other's prior written consent, which consent shall not be unreasonably withheld. This

LOI is for the benefit of KET and Panda and is not intended nor shall it be construed to confer any rights or any benefits upon persons other than KET or Panda.

6. No change, amendment or modification of this LOI shall be valid or binding upon the Parties hereto unless such change, amendment or modification is in writing and duly executed by the appropriately authorized representatives of all Parties hereto.

7. No presumption shall operate in favor of or against any Party as a result of any responsibility or role that any Party may have had in the drafting of this LOI.

8. Nothing contained in this LOI shall be construed as constituting a joint venture or partnership between the Parties.

9. The failure of any Party to insist upon or enforce, in any instance, strict performance by any other Party of any provision or to exercise any right herein conferred shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon any such provision or rights on any future occasion.

10. No oral agreement or conversation with any officer, agent or employee of any Party, either before or after the execution of this LOI, shall affect or modify any of the terms or obligations herein contained. This LOI constitutes the entire agreement between the Parties hereto and no changes, alterations or modifications hereof shall be effective unless in writing and signed by the duly authorized representatives of the Parties.

11. All Parties must give prior consent to the issuance of any press release, advertisement, publicity material, prospectus, financial document or similar matter or to the participation in a media interview which mentions or refers to the Gas Supply Agreement or this LOI.

IN WITNESS WHEREOF, each of the Parties hereto has caused this LOI to be executed as of the date and year written below, but effective as set forth hereinabove.

**Panda Midway Power Partners, L.P.**  
**By Panda Midway I, LLC**  
**Its general partner**

**Koch Energy Trading, Inc.** <sup>KLC</sup>

By: Stan W. Green

By: Chris M. [Signature]

Title: VP - Merchant Plant Development

Title: V.P. - KET

Date: 20 Apr 00

Date: April 20, 2000

**PANDA EN  
INTERNATIONAL, INC.**  
The Global Power Company

April 18, 2000

**EXHIBIT "A"**

Mr. Chris Fischer  
Koch Energy Trading, Inc.  
20 East Greenway Plaza  
Houston, TX 77046

Re: Term Sheet for Firm Gas Supply Transactions

Dear Chris:

This Term Sheet outlines the principal terms and conditions of a proposed GISB Short Term Natural Gas Purchase and Sale Agreement ("GISB") between Koch Energy Trading, Inc. ("KET") and the Panda Midway Power Partners, L.L.C. Project near Midway, Florida ("PMPP") and Panda Leesburg Power Partners, L.L.C. project near Leesburg, Florida ("PLPP") (herein referred to as the "Project", "Projects" or "Buyer") under which Supplier will sell natural gas to the Projects on a firm basis. The Projects intend to use such gas for electric generation.

The Projects intend to execute a letter of intent with Supplier referencing this Term Sheet that addresses the mutually agreeable terms as outlined below. This Term Sheet may be submitted as part of an application to obtain a Certificate of Need from the Florida Public Service Commission.

**Principal Terms**

|                         |  |
|-------------------------|--|
| Type of Service:        | Firm Gas Supply  |
| Type of Contract:       | GISB w/Special Conditions  |
| Quantity:               | As negotiated on Transaction Confirmation                          |
| Maximum Daily Quantity: | 100,000 MMBtu/d  |
| Term:                   | Two years initial, with evergreen provision and a Buyer's right of |

4100 Spring Valley Road, Suite 1001, Dallas, Texas 75244  
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**PANDA ENI**  
**INTERNATIONAL, INC.**  
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first refusal for any proposed changes to the GISB or Special Conditions requested by Supplier.

- Start Date:** Effective at the beginning of the Projects test gas period ("Facility Testing Date"), approximately October 1, 2002
- Delivery Points:** At the Supplier's option, any of the following delivery points can be used:  
(A) PLPP/Gulfstream  
(B) PMPP/Gulfstream  
(C) PMPP/FGT
- Buy Back Option:** In the event either Project is unable to receive gas that was committed on any day, Buyer may request to (i) in the case of Gulfstream deliveries, move the delivery point between the Projects or (ii) sell the gas back to Supplier at a negotiated price
- Price:** As negotiated on Transaction Confirmation
- Conditions Precedent:** The following conditions precedent to the GISB shall exist:  
(i) Project financing shall have been completed by November 1, 2001, and  
(ii) The Gulfstream pipeline shall be constructed and in service by the Facility Testing Date.
- Performance Obligation:** Supplier shall have firm obligation to deliver quantities agreed to in a Transaction Confirmation subject to the Cover Standard selected in the GISB agreement which will apply to all non-performance events except Force Majeure events. In the event of Supplier's failure to deliver firm gas, Supplier shall have the option to: (a) pay the cost to cover replacement firm gas, (b) pay the cost to cover replacement firm power, or (c) supply replacement firm power.
- Confidentiality:** Neither Supplier nor Buyer shall disclose to any third parties, except for financial advisors, Florida Public Service Commission (subject to FPSC confidentiality rules) and consultants retained by

**PANDA ENE  
INTERNATIONAL, INC.**  
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Buyer for the purpose of evaluating and/or implementing this transaction, or make any public representations or announcements relating to this Term Sheet, the pricing contained in it, or the terms discussed, without the prior approval of the other party.

Sincerely,

J. L. Adams, Jr.  
Vice President - Fuels

JLA/lc

4100 Spring Valley Road, Suite 1001, Dallas, Texas 75244  
PHONE - 972/960-7159 FAX - 972/980-6815

**LETTER OF INTENT**

**between**

**Noble Gas Marketing, Inc.  
and  
Panda Midway Power Partners, L.P.**

This Letter of Intent ("LOI") dated effective as of April \_\_\_\_, 2000, is executed by and between Noble Gas Marketing, Inc. ("Noble"), whose mailing address is 350 Glenborough, Suite 180, Houston, TX 77067 and Panda Midway Power Partners, L.P. ("Panda"), whose mailing address is 4100 Spring Valley, Suite 1001, Dallas, TX 75244. This LOI sets forth the understanding between the Parties (as hereinafter defined) for the negotiation of an agreement for the supply of natural gas ("Gas Supply Agreement"). Noble and Panda are herein referred to collectively as "Parties" and individually as "Party."

1. The Parties hereby agree to cooperate until September 30, 2001, in good faith, to negotiate and attempt to finalize a definitive Gas Supply Agreement. Panda has set forth its proposal for gas supply on the term sheet attached as Exhibit "A." Such terms are for use in negotiations only and neither party shall be bound to such terms unless and until execution and delivery of a final definitive Gas Supply Agreement.
2. The Parties shall cooperate in the exchange of information reasonably required to be exchanged for the negotiation and execution of the Gas Supply Agreement. It is hereby agreed that all such information shall be maintained in confidence by the receiving party.
3. This LOI will be effective from the execution hereof until the earlier of (i) the execution of an Gas Supply Agreement that supersedes and replaces this LOI; or (ii) September 30, 2001. In the event the Gas Supply Agreement is not executed by the Parties on or before September 30, 2001, this LOI shall terminate, and neither Party shall have any obligation to the other hereunder.
4. No action, course of conduct or failure to act by Noble or Panda, prior to the execution of a definitive Gas Supply Agreement, will give rise to or serve as a basis for any obligation or other liability on the part of Noble or Panda. Any commitment or agreement is subject to satisfactory negotiation and execution by September 30, 2001, of a mutually acceptable definitive agreement, and the approval of Noble's management and Panda's management, and financial closing (with funding) of Panda's Midway power plant project.
5. This LOI shall be construed and interpreted under the laws of the State of Texas (exclusive of any conflict of law provisions which would apply the law of another jurisdiction), provided that any provision of such laws invalidating any provision of this LOI or modifying the intent of Noble and Panda as expressed in the terms of this LOI, shall not apply. Neither Noble nor Panda shall be entitled to assign this LOI without the

other's prior written consent, which consent shall not be unreasonably withheld. This LOI is for the benefit of Noble and Panda and is not intended nor shall it be construed to confer any rights or any benefits upon persons other than Noble or Panda.

6. No change, amendment or modification of this LOI shall be valid or binding upon the Parties hereto unless such change, amendment or modification is in writing and duly executed by the appropriately authorized representatives of all Parties hereto.

7. No presumption shall operate in favor of or against any Party as a result of any responsibility or role that any Party may have had in the drafting of this LOI.

8. Nothing contained in this LOI shall be construed as constituting a joint venture or partnership between the Parties.

9. The failure of any Party to insist upon or enforce, in any instance, strict performance by any other Party of any provision or to exercise any right herein conferred shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon any such provision or rights on any future occasion.

10. No oral agreement or conversation with any officer, agent or employee of any Party, either before or after the execution of this LOI, shall affect or modify any of the terms or obligations herein contained. This LOI constitutes the entire agreement between the Parties hereto and no changes, alterations or modifications hereof shall be effective unless in writing and signed by the duly authorized representatives of the Parties.

11. All Parties must give prior consent to the issuance of any press release, advertisement, publicity material, prospectus, financial document or similar matter or to the participation in a media interview which mentions or refers to the Gas Supply Agreement or this LOI.

IN WITNESS WHEREOF, each of the Parties hereto has caused this LOI to be executed as of the date and year written below, but effective as set forth hereinabove.

**Panda Midway Power Partners, L.P.**  
**By Panda Midway I, LLC**  
**Its general partner**

By: [Signature]  
Title: Vice President - Fuels  
Date: 4/19/00

**Noble Gas Marketing, Inc.**

By: [Signature]  
Title: President  
Date: 4/18/00

**PANDA ENE  
INTERNATIONAL**  
The Global Power Company

April 18, 2000

Mr. Bob Burleson  
Noble Gas Marketing, Inc.  
350 Glenborough  
Suite 180  
Houston, TX 77067

Re: Term Sheet for Firm Gas Supply Transactions

Dear Bob:

This Term Sheet outlines the principal terms and conditions of a proposed GISB Short Term Natural Gas Purchase and Sale Agreement ("GISB") between Noble Gas Marketing, Inc. ("Noble") and the Panda Midway Power Partners L.P. Project near Midway, Florida ("PMPP") and Panda Leesburg Power Partners L.P. project near Leesburg, Florida ("PLPP") (herein referred to as the "Project", "Projects" or "Buyer") under which Supplier will sell natural gas to the Projects on a firm basis. The Projects intend to use such gas for electric generation.

The Projects intend to execute a letter of intent with Supplier referencing this Term Sheet that addresses the mutually agreeable terms as outlined below. This Term Sheet may be submitted as part of an application to obtain a Certificate of Need from the Florida Public Service Commission.

**Principal Terms**

|                         |  |
|-------------------------|--|
| Type of Service:        | Firm Gas Supply  |
| Type of Contract:       | GISB w/Special Conditions  |
| Quantity:               | As negotiated on Transaction Confirmation                          |
| Maximum Daily Quantity: | 100,000 MMBtu/d  |
| Term:                   | Two years initial, with evergreen provision and a Buyer's right of |

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INTERNAL**  
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first refusal for any proposed changes to the GISB or Special Conditions requested by Supplier.

- Start Date:** Effective at the beginning of the Projects test gas period ("Facility Testing Date"), approximately October 1, 2002
- Delivery Points:** At the Supplier's option, any of the following delivery points can be used:  
(A) PLPP/Gulfstream  
(B) PMPP/Gulfstream  
(C) PMPP/FGT
- Buy Back Option:** In the event either Project is unable to receive gas that was committed on any day, Buyer may request to (i) in the case of Gulfstream deliveries, move the delivery point between the Projects or (ii) sell the gas back to Supplier at a negotiated price
- Price:** As negotiated on Transaction Confirmation
- Conditions Precedent:** The following conditions precedent to the GISB shall exist:  
(i) Project financing shall have been completed by November 1, 2001, and  
(ii) The Gulfstream pipeline shall be constructed and in service by the Facility Testing Date.
- Performance Obligation:** Supplier shall have firm obligation to deliver quantities agreed to in a Transaction Confirmation subject to the Cover Standard selected in the GISB agreement which will apply to all non-performance events except Force Majeure events. In the event of Supplier's failure to deliver firm gas, Supplier shall have the option to: (a) pay the cost to cover replacement firm gas, (b) pay the cost to cover replacement firm power, or (c) supply replacement firm power.
- Confidentiality:** Neither Supplier nor Buyer shall disclose to any third parties, except for financial advisors, Florida Public Service Commission (subject to FPSC confidentiality rules) and consultants retained by

**PANDA EN  
INTERNAT****The Global Power Company**

Buyer for the purpose of evaluating and/or implementing this transaction, or make any public representations or announcements relating to this Term Sheet, the pricing contained in it, or the terms discussed, without the prior approval of the other party.

Sincerely,



J. L. Adams, Jr.  
Vice President - Fuels

JLA/lc

**LETTER OF INTENT****between****NUI Energy Brokers, Inc.  
and  
Panda Midway Power Partners, L.P.**

This Letter of Intent ("LOI") dated effective as of April 20, 2000, is executed by and between NUI Energy Brokers ("NUIEB"), whose mailing address is 550 Route 202-206, Bedminster, New Jersey 07921 and Panda Midway Power Partners, L.P. ("Panda"), whose mailing address is 4100 Spring Valley, Suite 1001, Dallas, TX 75244. This LOI sets forth the understanding between the Parties (as hereinafter defined) for the negotiation of an agreement for the supply of natural gas ("Gas Supply Agreement"). [CP] and Panda are herein referred to collectively as "Parties" and individually as "Party."

1. The Parties hereby agree to cooperate until September 30, 2001, in good faith, to negotiate and attempt to finalize a definitive Gas Supply Agreement. Panda has set forth its proposal for gas supply on the term sheet attached as Exhibit "A." Such terms are for use in negotiations only and neither party shall be bound to such terms unless and until execution and delivery of a final definitive Gas Supply Agreement.

2. The Parties shall cooperate in the exchange of information reasonably required to be exchanged for the negotiation and execution of the Gas Supply Agreement. It is hereby agreed that all such information shall be maintained in confidence by Parties in accordance with and subject to the Confidentiality Agreement between the Parties dated April 14, 2000.

3. This LOI will be effective from the execution hereof until the earlier of (i) the execution of an Gas Supply Agreement that supersedes and replaces this LOI; or (ii) September 30, 2001. In the event the Gas Supply Agreement is not executed by the Parties on or before September 30, 2001, this LOI shall terminate, and neither Party shall have any obligation to the other hereunder.

4. No action, course of conduct or failure to act by NUIEB or Panda, prior to the execution of a definitive Gas Supply Agreement, will give rise to or serve as a basis for any obligation or other liability on the part of NUIEB or Panda. Any commitment or agreement is subject to satisfactory negotiation and execution by [drop dead date] of a mutually acceptable definitive agreement, and the approval of NUIEB's management and Panda's management, and financial closing (with funding) of Panda's Leesburg power plant project.

5. This LOI shall be construed and interpreted under the laws of the State of Texas (exclusive of any conflict of law provisions which would apply the law of another jurisdiction), provided that any provision of such laws invalidating any provision of this LOI or modifying the intent of NUIEB and Panda as expressed in the terms of this LOI, shall not apply. Neither NUIEB nor Panda shall be entitled to assign this LOI without the

other's prior written consent, which consent shall not be unreasonably withheld. This LOI is for the benefit of NUIEB and Panda and is not intended nor shall it be construed to confer any rights or any benefits upon persons other than NUIEB or Panda.

6. No change, amendment or modification of this LOI shall be valid or binding upon the Parties hereto unless such change, amendment or modification is in writing and duly executed by the appropriately authorized representatives of all Parties hereto.

7. No presumption shall operate in favor of or against any Party as a result of any responsibility or role that any Party may have had in the drafting of this LOI.

8. Nothing contained in this LOI shall be construed as constituting a joint venture or partnership between the Parties.

9. The failure of any Party to insist upon or enforce, in any instance, strict performance by any other Party of any provision or to exercise any right herein conferred shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon any such provision or rights on any future occasion.

10. No oral agreement or conversation with any officer, agent or employee of any Party, either before or after the execution of this LOI, shall affect or modify any of the terms or obligations herein contained. This LOI constitutes the entire agreement between the Parties hereto and no changes, alterations or modifications hereof shall be effective unless in writing and signed by the duly authorized representatives of the Parties.

11. All Parties must give prior consent to the issuance of any press release, advertisement, publicity material, prospectus, financial document or similar matter or to the participation in a media interview which mentions or refers to the Gas Supply Agreement or this LOI.

IN WITNESS WHEREOF, each of the Parties hereto has caused this LOI to be executed as of the date and year written below, but effective as set forth hereinabove.

**Panda Midway Power Partners, L.P.**  
**By Panda Midway I, LLC**  
**Its general partner**

**NUIEB Energy Brokers, Inc.**

By: [Signature]

By: [Signature]

Title: Vice President Fuels

Title: President

Date: 4/20/00

Date: 4/20/00

**PANDA EN  
 INTERNATIONAL, INC.**  
 The Global Power Company

**EXHIBIT A**

**April 18, 2000**

**Mr. Peter Gross  
 NUI Energy Brokers**

**Re: Term Sheet for Firm Gas Supply Transactions**

**Dear Peter:**

This Term Sheet outlines the principal terms and conditions of a proposed GISB Short Term Natural Gas Purchase and Sale Agreement ("GISB") between NUI Energy Brokers ("NUI") and the Panda Midway Power Partners, L.L.C. Project near Midway, Florida ("PMPP") and Panda Leesburg Power Partners, L.L.C. project near Leesburg, Florida ("PLPP") (herein referred to as the "Project", "Projects" or "Buyer") under which Supplier will sell natural gas to the Projects on a firm basis. The Projects intend to use such gas for electric generation.

The Projects intend to execute a letter of intent with Supplier referencing this Term Sheet that addresses the mutually agreeable terms as outlined below. This Term Sheet may be submitted as part of an application to obtain a Certificate of Need from the Florida Public Service Commission.

**Principal Terms**

|                                |   |
|--------------------------------|---|
| <b>Type of Service:</b>        | <b>Firm Gas Supply</b>  |
| <b>Type of Contract</b>        | <b>GISB w/Special Conditions</b>  |
| <b>Quantity:</b>               | <b>As negotiated on Transaction Confirmation</b>  |
| <b>Maximum Daily Quantity:</b> | <b>100,000 MMBtu/d</b>  |
| <b>Term:</b>                   | <b>Two years initial, with evergreen provision and a Buyer's right of first refusal for any proposed changes to the GISB or Special</b> |

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**Conditions requested by Supplier.**

- Start Date:** Effective at the beginning of the Projects test gas period ("Facility Testing Date"), approximately October 1, 2002
- Delivery Points:** At the Supplier's option, any of the following delivery points can be used:  
(A) PLPP/Gulfstream  
(B) PMPP/Gulfstream  
(C) PMPP/FGT
- Buy Back Option:** In the event either Project is unable to receive gas that was committed on any day, Buyer may request to (i) in the case of Gulfstream deliveries, move the delivery point between the Projects or (ii) sell the gas back to Supplier at a negotiated price
- Price:** As negotiated on Transaction Confirmation
- Conditions Precedent** The following conditions precedent to the GISB shall exist:  
(i) Project financing shall have been completed by November 1, 2001, and  
(ii) The Gulfstream pipeline shall be constructed and in service by the Facility Testing Date.
- Performance Obligation:** Supplier shall have firm obligation to deliver quantities agreed to in a Transaction Confirmation subject to the Cover Standard selected in the GISB agreement which will apply to all non-performance events except Force Majeure events. In the event of Supplier's failure to deliver firm gas, Supplier shall have the option to: (a) pay the cost to cover replacement firm gas, (b) pay the cost to cover replacement firm power, or (c) supply replacement firm power.

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**Confidentiality:**

Neither Supplier nor Buyer shall disclose to any third parties, except for financial advisors, Florida Public Service Commission (subject to FPSC confidentiality rules) and consultants retained by Buyer for the purpose of evaluating and/or implementing this transaction, or make any public representations or announcements relating to this Term Sheet, the pricing contained in it, or the terms discussed, without the prior approval of the other party.

Sincerely,



J. L. Adams, Jr.  
Vice President - Fuels

JLA/c

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