

ORIGINAL

SUZANNE BROWNLESS, P. A.  
ATTORNEY AT LAW  
1311-B Paul Russell Road, Suite 201  
Tallahassee, Florida 32301

ADMINISTRATIVE LAW  
GOVERNMENTAL LAW  
PUBLIC UTILITY LAW

TELEPHONE (850) 877-5200  
TELECOPIER (850) 878-0090

March 6, 2000

VIA HAND DELIVERY

RECORDS AND  
REPORTING

00 MAR - 6 PM 4: 26

RECEIVED-FPSC

000288-EB

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

RE: Petition for Determination of Need for an Electrical  
Power Plant in Lake County by Panda Leesburg Power  
Partners, L.P.

Dear Ms. Bayo:

Enclosed please find the original and fifteen (15) copies of  
the Petition for Determination of Need for an Electrical Power  
Plant in Lake County by Panda Leesburg Power Partners, L.P. Also  
enclosed is a copy of the petition to be stamped and returned to  
our office for our records.

Your attention to this matter is appreciated. Should you have  
any questions or need any other information in order to process  
this filing, please contact me.

Very truly yours,



Suzanne Brownless  
Attorney for Panda Leesburg Power  
Partners, L.P.

cc: Steve Crain, P.E.  
c: 3070

RECEIVED & FILED

DOCUMENT NUMBER-DATE

02948 MAR-68

FPSC-BUREAU OF RECORDS

FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition for Determination )  
of Need for an Electrical Power Plant in )  
Lake County by Panda Leesburg )  
Power Partners, L.P. )  
\_\_\_\_\_ )

DOCKET NO. 000288-ELU

**PETITION FOR DETERMINATION OF NEED**  
**FOR AN ELECTRICAL POWER PLANT**

Panda Leesburg Power Partners, L.P., ("Panda Leesburg") hereby respectfully petitions the Florida Public Service Commission ("FPSC" or "Commission") for an affirmative determination of need for the Panda Leesburg Power Project ("the Project"), which is a natural gas fired, combined cycle power plant that will be located in Lake County, Florida, together with an associated natural gas lateral pipeline and the directly associated transmission facilities that will connect the Project to the Florida electric transmission grid. This petition is filed pursuant to the Florida Electrical Power Plant Siting Act, Sections 403.501-403.518, Florida Statutes ("the Siting Act"), Section 403.519, Florida Statutes, and Commission Rules 25-22.036, 25-22.080, and 25-22.081, Florida Administrative Code.

The Panda Leesburg Power Project will have a net output capability of 1,000 megawatts ("MW") at ISO temperature and humidity conditions (1,100 MW summer and 1,150 MW winter) and will consist of four advanced technology, combustion turbine generators, four matched heat recovery steam generators, and two steam turbine generators. The Project is expected to achieve commercial in-service status by May, 2003. The Project will be connected to the Peninsular Florida transmission grid at the

DOCUMENT NUMBER-DATE  
02948 MAR-68  
FPSC-RECORDS/REPORTING

Central Florida Substation of Florida Power Corporation ("FPC"). Approximately 2,000 feet of 230 kV transmission line will be constructed to interconnect to an existing FPC 230 kV transmission line which ties into FPC's Central Florida Substation adjacent to Panda Leesburg's site. Additionally, Panda Leesburg is exploring the possible construction of a 500 kV transmission line, approximately two miles in length, which will tie into an existing FPC 500 kV line that interconnects to the FPC Central Florida Substation.

Accompanying this Petition are Exhibits describing Panda Energy International, Inc. ("Panda Energy"), Panda Leesburg Power Partners, L.P., the Project site, the Project and its operating characteristics, the permitting and construction schedules for the Project, and the Project's electrical interconnection to the Peninsular Florida grid. The Exhibits also demonstrate Florida's need for the power and the cost-effectiveness of the Project to the Florida Grid, the reliability benefits that the Project will provide to Peninsular Florida, the consistency of the Project with Peninsular Florida's projected power supply needs, and the fuel savings, economic, and environmental benefits that the Project will provide. The Exhibits also discuss the alternative generation technologies considered by Panda Leesburg, and the cost-effectiveness of the Project both to Panda Leesburg and as an additional power supply resource for Peninsular Florida.

In accordance with Rule 25-22.080(1), F.A.C., Panda Leesburg has submitted this petition to the FPSC before filing its application for site certification pursuant to the Siting Act.

## **PROCEDURAL BACKGROUND AND INFORMATION**

1. The name and address of the Petitioner is as follows:

Steven W. Crain, P. E.  
Panda Leesburg Power Partners, L.P.  
4100 Spring Valley, Suite 1001  
Dallas, Texas 75244

2. All pleadings, motions, orders, and other documents directed to the Petitioner are to be served on the following:

Suzanne Brownless, Esq., and  
Suzanne F. Summerlin, Esq.  
1311-B Paul Russell Road, Suite 201  
Tallahassee, Florida 32301

and

Steven W. Crain, P.E.  
Panda Leesburg Power Partners, L.P.  
4100 Spring Valley, Suite 1001  
Dallas, Texas 75244

### **THE PETITIONERS**

3. Panda Leesburg Power Partners, L.P., ("Panda Leesburg") is a public utility under the Federal Power Act, 16 U.S.C.S. Section 824(b)(1) (1994). Panda Leesburg will build, own, and operate the Project and will market the Project's capacity, approximately 1,000 MW, and associated energy to other utilities under negotiated arrangements entered into pursuant to Panda Leesburg's rate schedule approved by the Federal Energy Regulatory Commission ("FERC").<sup>1</sup>

4. Panda Leesburg qualifies as an exempt wholesale generator ("EWG") under the Public Utility Holding Company Act of 1935. 15 U.S.C.S. Sections 79z-5a (1994 &

---

<sup>1</sup> All wholesale power transactions between utilities that are interconnected, either directly or indirectly, to transmission facilities that transmit power across state lines are transactions in interstate commerce subject to the regulatory jurisdiction of the Federal Energy Commission. See Federal Power Comm'n v. Florida Power & Light Co., 404 U.S. 453, 463 (1971), wherein the U.S. Supreme Court upheld the Federal Power Commission's jurisdiction over the transmission of power, at wholesale, by Florida Power & Light over Florida Power Corporation's lines on the ground that the electrical energy thus transmitted "commingled" in interstate commerce. See also 16 U.S.C.S. Section 824(e)&(b)(1) (1994). The Project filed for FERC market-based rates on March 3, 2000.

Supp. 1997). Panda Leesburg filed its application for EWG status with the FERC on January 28, 2000. As an EWG, Panda Leesburg will be prohibited by the Public Utility Holding Company Act of 1935 from making retail sales of electricity from the Project.<sup>2</sup>

5. Panda Energy International, Inc. ("Panda Energy") holds a 100% ownership interest in Panda Leesburg Power Partners, L.P. Through various subsidiaries, Panda Energy has been an active player in the domestic merchant power industry. Most recently, Panda Energy has closed on the financing of two merchant facilities in Texas through its Texas Independent Energy, L.P. ("TIE") joint venture with PSEG Global. The first, Guadalupe Power Partners, L.P., is a 1,000 MW gas-fired facility currently under construction in Guadalupe County, Texas, with commercial operations expected in December, 2000. The second project is the Odessa-Ector Power Partners project, a 1,000 MW gas-fired facility near Odessa, Texas that is expected to come on-line in the summer of 2001. Panda Energy also developed the Lamar Power Partners project, a 1,000 MW gas-fired facility in Paris, Texas, in which a majority ownership interest was sold to FPL Energy prior to financial closing. The last greenfield project currently in development by TIE is the Archer Power Partners project, a 1,000 MW gas-fired project that will have the first 500 MW phase financed in the second quarter of 2000.

6. Panda Energy also has extensive development activities outside of Texas, with approximately 4,700 MW scheduled to be financed by the end of the year 2000. The Union Power Partners project is a 2,700 MW gas-fired facility located outside of El Dorado, Arkansas that is scheduled to reach financial close in the third quarter of 2000. The Oneta Project is a 1,000 MW gas-fired facility that will be located outside of Tulsa,

---

<sup>2</sup> 15 U.S.C. Sections 79Z-5a(a)(1): "The term 'exempt wholesale generator' means any person determined by the Federal Energy Regulatory Commission to be engaged . . . in the business of owning or operating, or both owning and operating, all or part of one or more eligible facilities and selling electric energy at wholesale." An "eligible facility" is a facility "used for the generation of electric energy exclusively for sale at wholesale . . ." 15 U.S.C. Sections 79z-5a(a)(2).

Oklahoma. The final project scheduled for financial close in 2000 is the Gila River project--a 2,000 MW gas-fired project in Southwest Arizona, with the first 1,000 MW phase scheduled for financial close in late 2000.

7. The total projected construction cost of the Project is \$385 million. This amount includes a \$12 million switchyard cost as well as an \$8 million cost to connect with FPC's transmission system.

8. The Project will be financed through debt instruments issued to the bank markets and institutional investors, along with an equity investment by Panda Energy. The capital structure will be optimized based upon the existing environment in the debt markets, and Panda Energy's corporate considerations, and the project itself. Panda Energy has earned a reputation in the banking community for developing strong projects with all of the necessary ingredients for a successful financing.

9. Panda Energy is also currently developing a 1,000 MW gas fired, combined cycle power plant located in St. Lucie County, Florida, through its wholly-owned subsidiary, Panda Midway Power Partners, L.P. More detailed information regarding Panda Leesburg and the Project structure is contained in the Exhibits.

### **THE PROPOSED POWER PLANT**

10. The proposed Panda Leesburg Project will be a natural gas fired, combined cycle generating plant with 1,000 MW of net generating capacity at ISO temperature and relative humidity. The Project's rated winter capacity will be 1,150 MW and its rated summer capacity will be 1,100 MW. The Project will consist of four F series (GE Frame 7FA or equivalent) combustion turbine generators, four heat recovery steam generators ("HRSGs"), and two steam turbine generators ("STG"). The Project will obtain its process and makeup water from a variety of sources including a City of Leesburg

wastewater treatment plant. The Project will use cooling towers to dissipate excess heat.

11. The Project site is located near the Central Florida Substation of FPC in Lake County. Maps of the site location and site layout are included in the Exhibits accompanying this Petition. Preliminary site screening analyses commissioned by Panda Leesburg indicate that the Project is consistent with the overall zoning and plan of development for the area in which the Project will be located, and that no significant problems are anticipated in connection with the environmental permitting process for the Project site.

12. The Project will be fueled by natural gas, which will be purchased on the open market. Panda Leesburg is currently negotiating with Florida Gas Transmission Company ("FGT"), Gulfstream Natural Gas System ("Gulfstream"), and Buccaneer to obtain a firm contract for the transportation of its gas on one or more of these pipeline systems. Panda Leesburg expects these negotiations to conclude by April 15, 2000.

13. The Project will be electrically interconnected to the Peninsular Florida bulk transmission grid at the existing Central Florida Substation owned by FPC. The Central Florida Substation is a 500/230 kV substation that is electrically connected to the transmission system of FPC. To date, load flow studies prepared independently for Panda Leesburg indicate that the Peninsular Florida transmission grid will accommodate delivery of the net output of the Project. These load flow studies also indicate that the Project will not burden the transmission system or violate any transmission constraints or contingencies in Peninsular Florida or elsewhere in accordance with good utility practice.

14. The Project's advanced technology, combined cycle design with natural gas fuel will provide: (a) high availability, with a projected Equivalent Availability Factor of greater than 95 percent; (b) high reliability, with a projected Equivalent Forced Outage Factor of less than 1.5 percent and a Planned Outage Factor of 3.5 percent; and (c) high efficiency, with a projected heat rate of 6,900 Btu per kWh based on the Higher Heating Value of natural gas. Compared to other fossil fuel power plants in Florida, the Project will produce very low emissions of sulfur dioxide (SO<sub>2</sub>); low emissions of nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), and particulate matter; and no emissions of heavy metals. Overall, the Project will have the most benign environmental profile of any technology commercially available and economically feasible for meeting Peninsular Florida's future power requirements. The operation of the Panda Leesburg Project is reasonably likely to result in measurable reductions in emissions of SO<sub>2</sub>, NO<sub>x</sub>, CO, CO<sub>2</sub>, particulate matter, and heavy metals in Peninsular Florida, due to the Project's displacement of generation from less efficient units and units that burn fuels that produce more pollution than is produced by the natural gas fuel used in the Project.

#### **CONDITIONS INDICATING NEED FOR THE PROPOSED POWER PLANT**

15. The Project is consistent with the power supply needs of Peninsular Florida necessary to maintain the Florida Grid's system reliability and integrity and to provide adequate electricity at a reasonable cost. The following discussion addresses the Project's consistency with these needs in more detail.



**A. Power Supply Needs of Peninsular Florida**

16. Panda Leesburg has evaluated the generation and capacity needs of Peninsular Florida using two distinct models. The first is the generation production and transmission simulation model *Prosym*<sup>TM</sup> using R. W. Beck's data base of resources and load requirements. R. W. Beck is a nationally recognized, multi-disciplined management and engineering consulting firm headquartered in Seattle, Washington, with seventeen offices located in fourteen states throughout the U.S., including an office located in Orlando, Florida, that has been providing consulting services to utilities in the Southeast U.S. for thirty-five years. Exhibits, Site A through I contain R. W. Beck's modeling results. The second analytical methodology was provided by Altos Management Partners and is a market-based approach to generation and transmission modeling. This analysis will be discussed in detail in the testimony of Dr. Dale M. Nesbitt and Michael C. Blaha to be filed later in this proceeding.

17. Under either modeling methodology, the Project is consistent with Peninsular Florida's needs for generating capacity to maintain system reliability and integrity in the Peninsular Florida Grid. Based on the load projections and existing resources listed in the 1999 Regional Load and Resource Plan prepared by the Florida Reliability Coordinating Council ("FRCC") and dated July 1999 ("1999 FRCC Regional Plan"), Peninsular Florida needs more than 8,000 MW of new installed capacity in order to maintain reserve margins (with exercise of load management and interruptible resources) above 20 percent through the winter of 2007-2008. (See Exhibits, Need C.) The Project will either provide part of this needed capacity (if other utilities contract for the Project's output) or, if the Project's capacity remains uncommitted to firm wholesale power sales contracts, the Project will provide additional reliability protection by its

presence and availability. Even if all currently planned power plant construction and purchases are brought into service as planned, based on the 1999 FRCC Regional Plan, Peninsular Florida's winter reserve margins, without exercising load management and interruptible resources, are projected to fluctuate between 9.5 percent and 7.7 percent over the 2003/04 to 2007/08 winter period.

18. Using R. W. Beck's methodology, when only Committed Resources<sup>3</sup> are considered, the Peninsular Florida reserve margin at the time of the winter peak, without exercising load management and interruptible resources, is projected to fluctuate between 9.4 percent to a supply deficiency below projected load of 0.1 percent (-0.1 percent reserve margin). (Exhibits, Need C and D.) The summer reserve margin, without exercising load management and interruptible resources, is expected to range from approximately 14.2 percent to 1.9 percent. (Exhibits, Need C and D.) With load management and interruptible resources exercised, but without the Project's capacity, the winter reserve margin, taking into account the generation identified by R. W. Beck as Committed Resources, is projected to range between 20.6 percent to 9.4 percent over the same period.<sup>4</sup> Under similar circumstances, the summer reserve margin ranges from approximately 22.8 percent to 8.8 percent. Similarly, based on FRCC 1999 Regional Plan data, Peninsular Florida's summer reserve margins will range from

---

<sup>3</sup>Included in the 1999 FRCC Regional Plan are reported generating projects which are in the early planning stages (e.g., neither construction nor air quality permits have been approved, or no petition for determination of need has been submitted prior to the Project's power plant siting application). These projects are considered 'Uncommitted Resources.' There are also projects not included in the 1999 FRCC Regional Plan that have either submitted a petition for determination of need prior to the Project's power plant siting application or do not require a certificate of need and have been permitted for air quality or construction. These projects are considered "Additional Committed Resources."

<sup>4</sup> According to the FRCC's 1999 Ten-Year Plan, State of Florida, Peninsular Florida's winter reserve margin was projected to decline from 21 percent in winter 2003/04 to 15 percent in 2005/06, and further to 9 percent in 2007/08, even with full implementation of interruptible and load management rights. Without interrupting service to interruptible and load management customers, Peninsular Florida's winter peak reserve margin was projected to decline from 9 percent in 2003/04 to 6.5 percent in 2005/06, and to become approximately zero in 2007/08.

11.8 percent to 9.0 percent, without exercising load management and interruptible capabilities. With both the Panda Leesburg and Panda Midway Projects, an additional 2,000 MW of winter capacity, the FRCC summer reserve margin will increase by approximately 5.9 percent to 5.3 percent and the winter reserve margin will increase approximately 5.8 percent to 3 percent. The average increase in both summer and winter reserve margins associated with each Project is approximately 2.8 percent over the 2003-2008 period.

19. Under any scenario, the Project is expected to provide an additional 1,000 MW of net capacity to Peninsular Florida utilities during an extreme weather event. In an extreme weather event, e.g., a prolonged period in the summer with daily high temperatures exceeding 100 degrees F., or winter weather similar to that experienced at Christmas of 1989, the Project will provide substantial additional generating capacity to the Peninsula that would not otherwise be available. Assuming an average coincident peak demand of 5 to 6 kW per residential customer, the Project's capacity would be sufficient to maintain electric service to approximately 180,000 to 230,000 homes during such an event.

#### **B. Need for Adequate Electricity at a Reasonable Cost**

20. The Project is consistent with Peninsular Florida's need for adequate electricity at a reasonable cost. Most new capacity proposed by other Florida utilities is similar gas-fired combined cycle capacity. See Exhibits, Need F; see also, FRCC 1999 Regional Plan. A comparison of the direct construction cost and heat rates of the Panda Leesburg Project to those of other proposed similar plants shows that the Project will have a construction cost and heat rate that is similar to other efficient combined cycle units proposed for commercial service before 2004. Because no

utilities or retail customers are subject to being required to pay for the costs of the Project, and because other Peninsular Florida utilities can reasonably be expected to buy power from the Project only when it is cost-effective vs. other supply sources, the Project is also necessarily consistent with Peninsular Florida's need for adequate electricity at a reasonable cost.

21. The Project is also consistent with the needs of Peninsular Florida for adequate electricity at a reasonable cost and will be a "merchant" plant. A merchant plant differs from a traditional "rate based" plant, in that the costs of a rate-based plant are recovered through the rates charged to the utility's captive customers. If, after a rate based plant is constructed, lower cost power becomes available, the utility nevertheless remains entitled to recover the costs of its plants through its rates. Hence, the utility's ratepayers, rather than its shareholders, bear the risks associated with competition and obsolescence. Similarly, absent a finding of imprudence, a utility is permitted to recover the fixed and operating costs of its rate based plant, even if these costs are higher than originally projected or if the plant fails to operate as well as projected.

22. In contrast, a merchant plant has no rate base and no captive customers. A merchant plant simply offers its capacity and energy to potential wholesale customers, who are free to purchase or decline to purchase capacity and energy offered by the merchant plant. A rational purchasing utility will only enter into a purchase agreement with a merchant utility if the costs of the merchant plant's capacity or energy are lower than the costs of alternatives otherwise available to the utility (e.g., generation from its own power plants or purchases from others). If the cost of power from the merchant plant is higher than the costs of other alternatives, a purchasing utility will simply choose not to buy the merchant plant's output. In such circumstances, the unrecovered

costs of the merchant plant will be borne by the plant's owners, and not by any customer. The same result will occur if the merchant plant incurs cost overruns or fails to operate as efficiently or reliably as projected -- the merchant utility, rather than any ratepayer, bears all of the capital, operating, and market risks associated with the plant. Consequently, if the merchant plant's economics are favorable, other utilities will purchase its output and incur cost savings. If the plant turns out not to be economic, customers will incur no financial harm. For this reason, a merchant plant can only benefit other utilities and their customers.

**C. Strategic Considerations**

23. The Project is also consistent with strategic factors that may be considered when building a power plant, both from Panda Leesburg's perspective and from the perspective of the State. The Project will be fueled by domestically produced natural gas rather than by an imported fuel that may be subject to interruption due to political or other events. The Project has a low installed cost and a highly efficient heat rate, assuring its long-term economic viability. As a merchant plant constructed at the expense of Panda Leesburg, the Project will provide power with no risk to Florida electric customers and will impose no obligation on Florida utilities or their customers. The Project's gas-fired combined cycle technology is clean when compared to other existing and proposed generating technologies and minimizes airborne emissions. Since the Project will use a very clean fuel, there is reduced risk that the Project will be adversely affected by future changes in environmental regulations. Moreover, the Project's use of natural gas in a very efficient generation technology will improve the overall environmental profile of electricity generation in Florida. The Project will also

contribute to reducing the consumption of petroleum fuels for electricity generation in Florida.

### **COST-EFFECTIVENESS**

24. The Project is the most cost-effective alternative available to Panda Leesburg for meeting its projected future wholesale power sales obligations under either R. W. Beck's or Altos Management Partners' models. Using R. W. Beck's methodology, based on its highly efficient heat rate and low direct construction cost, the Panda Leesburg Project is demonstrably cost-effective relative to virtually all Committed gas-fired combined cycle power plants proposed to be developed in the FRCC over the next eight years.<sup>5</sup> Using Altos Management Partners' model, the Project is demonstrably cost-effective relative to virtually all other gas-fired plants proposed in the FRCC region over the next ten years. Accordingly, using either model, the Project can and should be expected to provide cost-effective power to Peninsular Florida.

#### **A. Cost-Effectiveness to Peninsular Florida**

25. The Project will be a cost-effective power supply resource for Peninsular Florida. As modeled by R. W. Beck, projections of the Project's operations prepared for Panda Leesburg show that the Project will operate, economically, at capacity factors ranging from 72 percent in 2004, the first full year of operation, to approximately 76 percent in 2008 and between 6,300 and 6,600 GWh per year of net generation. (Exhibits, Need G.) This result takes into account other new Committed efficient combined cycle resources proposed for Peninsular Florida (and for the State of Florida). Using Altos

---

<sup>5</sup> The R. W. Beck analysis does not use its own projections beyond 2008, but is based on FRCC data available from the 1999 Regional Load and Resource Plan, which stops in 2008.

Management Partners' model, the Project will operate, economically, at capacity factors ranging from 94 percent in 2003 to 83 percent in 2013. The presence of the Project, with its high efficiency, can be expected to suppress wholesale power prices in Florida below what they would otherwise be. As a merchant plant, the output of which no utility is obligated to buy, the Project can only reduce power supply costs; it cannot increase them above the cost of alternatives.

26. The primary market for power produced by the Project is wholesale sales to other utilities in Peninsular Florida. Using the Altos Management Partners' model, Panda Leesburg projects that all sales from the Project over the 2003-2013 period are expected to be to other utilities in Peninsular Florida (i.e., within the FRCC region), on the basis of the relative economics of the Project and other Peninsular Florida generation facilities. Using R. W. Beck's model, virtually all sales (more than 99 percent) over the 2003-2008 will also be made within the FRCC region. Moreover, the Project will reduce higher priced imported energy during peak periods.

27. Even if the Project were not the most cost-effective alternative for Panda Leesburg, that concern should be irrelevant to the Commission, except as it relates to the Project's financial viability, because Panda Leesburg will only be able to sell its wholesale power to other utilities if, and when, utility purchasers determine that such purchases are cost-effective for the purchasing utilities after considering alternative power supply options, i.e., self-generation or other wholesale purchases. Based on Altos Management Partners' modeling, projections of the Project's operations prepared for Panda Leesburg show that the Project will reduce the wholesale price of electricity by 1.8% in 2003 throughout Peninsular Florida. Furthermore, the Project will reduce

the retail price of electricity by 2.1% in 2003 throughout Peninsular Florida. The analysis by R. W. Beck indicates that each of the Projects is projected to reduce wholesale energy costs in the FRCC on the average of \$48 to \$59 million dollars per year, in year 2000 dollars, over the period 2003 through 2008. (Exhibits, Need H.)

28. Even if the Project were not needed to maintain reliable service to Florida electric customers, Panda Leesburg believes that the Commission should grant the requested need determination because the Project will necessarily provide cost-effective power to utilities that provide retail service in Florida. Since the savings resulting from cost-effective purchases from the Project will be passed directly through to retail customers through the utilities' fuel and purchased power cost recovery charges, the Project will also provide cost-effective power to those utilities' retail customers. The Project will not be subject to inclusion in any utility's rate base, and accordingly, there is no risk of captive retail customers being required to bear the Project's capital or other costs. Retail customers can only be asked to pay for the Project's power when their retail-serving utility elects to buy power from the Project. These purchases will occur only when such transactions are cost-effective to the purchasing utility, i.e., when the Project offers power at a lower cost than that available elsewhere.

29. The Project is also demonstrably cost-effective based on a comparison of the Project's construction cost and heat rate to the costs and heat rates of other proposed units. (This analysis is based on the reasonable assumption that the cost of gas to the Project would be similar to the cost of gas to other proposed power plants.) The direct construction cost of the Project is projected to be approximately \$385 million, which Panda Leesburg plans to finance with capital financing. This construction cost equates



to approximately \$335 per kW of installed capacity. The Project's heat rate is projected to be 6,900 Btu per kWh (HHV of gas). Both the Project's direct construction cost and its heat rate compare favorably to those of other gas-fired combined cycle power plants proposed for Peninsular Florida. Only the proposed Cane Island 3 Project of the Florida Municipal Power Agency and the Kissimmee Utility Authority, the Duke New Smyrna Project, the PG&E Okeechobee Project, and the Seminole Electric Cooperative, Hardee 3 Project have similar projected construction costs and heat rates. Comparative construction cost and heat rate data for the Project and for other proposed power plants is included in the Exhibits. (Exhibits, Need F.)

**B. Cost-Effectiveness to Panda Leesburg**

30. As described more fully in the Exhibits, Panda Leesburg has evaluated various generating technologies and has determined that the proposed combined cycle power plant represents the most cost-effective alternative for Panda Leesburg to meet its wholesale power sales obligations. Using R. W. Beck's and Altos Management Partners' methodologies, this technology was found to be the most cost-effective alternative of current commercially available base load generating technologies.

**ENERGY CONSERVATION**

31. As a federally-regulated public utility selling electricity only at wholesale, Panda Leesburg does not engage directly in the implementation of end-use energy conservation programs. Moreover, Panda Leesburg is not required to have conservation goals pursuant to Section 366.82(2), Florida Statutes. For purposes of this proceeding, Panda Leesburg accepts the Peninsular Florida load forecasts presented in the 1999 FRCC Regional Plan, which reflect the assumed implementation

of currently approved energy conservation programs. The Panda Leesburg Project is consistent with the overall goals of the Florida Energy Efficiency and Conservation Act ("FEECA"), Sections 366.80-.85 and 403.519, Florida Statutes, because the Project contributes directly and significantly to the increased efficiency and cost-effectiveness of electricity production and natural gas use. Section 366.81, Florida Statutes. The Project does so by using state-of-the-art generation technology. Using R. W. Beck's methodology, the Project, with its heat rate of 6,900 Btu per kWh (HHV), is projected to displace generation from less efficient oil-fired and gas-fired steam units, combustion turbines, and combined cycle resources with average weighted heat rates of approximately 9,800 Btu per kWh. As such, the Project is projected to result in substantial increases in the efficient use of all fuel types in the FRCC. It is projected that the Project will annually reduce fuel consumption in Peninsular Florida by approximately 16,800,000 MMBtu per year, with most of the net reduction in fuel usage coming from heavy oil fuel. To the extent that the Project displaces oil-fired generation, it will contribute to the express statutory goal of conserving expensive resources, especially petroleum fuels. Sections 366.81 and 366.82(2), Florida Statutes.

### **TRANSMISSION FACILITIES**

32. The Project will be electrically interconnected to the Peninsular Florida transmission system at the Central Florida Substation, which is owned by FPC. The transmission interconnection, switching equipment, and transmission lines are described in the Exhibits. Based on transmission load flow studies to date, commissioned independently by Panda Leesburg, Panda Leesburg has concluded that this interconnection and the indicated additional 500 kV circuits will support deliveries of

power from the Project to the FPC grid and from there to other utilities in Peninsular Florida.

### **ASSOCIATED FACILITIES**

33. The Project's natural gas fuel will be delivered over one of the State's existing or proposed natural gas pipeline systems--FGT, Buccaneer or Gulfstream. Panda Leesburg intends to make its final decision when it completes its negotiations by April 15, 2000.

### **CONSEQUENCES OF DELAY**

34. Delaying the construction and operation of the Project will delay the realization of the reductions in atmospheric emissions that will result from the significantly greater efficiency of the Project, and its use of clean natural gas fuel, as compared to the efficiency and emission rates of the power supply resources whose output will be displaced by the Project. Preliminary analyses by R. W. Beck indicate that the Project would displace approximately 6,300,000 MWh of electric energy produced from oil-fired and less-efficient gas-fired generation facilities in 2003, and greater amounts in following years (more than 6,600,000 MWh in 2008).

35. Delaying the construction and operation of the Project will result in lower reserve margins for Peninsular Florida for each month and season that the Project's construction and operation are delayed. Such delays will in turn increase the probability that the power supply resources available to Peninsular Florida will be insufficient to maintain reliable service. For every day that the Project's operation is delayed, the probability of brownouts and blackouts in Peninsular Florida is greater than it should be, and greater than it would be with the Project in operation.

36. Delaying the construction and operation of the Project will also delay the availability of cost-effective power to the other utilities in Peninsular Florida and their retail customers. Pursuant to R. W. Beck's analysis, Panda Leesburg anticipates sales of approximately 6,300,000 MWh to other Peninsular Florida utilities in 2004, the Project's first full year of projected operation, and greater amounts in following years. Panda Leesburg's projections reflect the realistic assumption that such sales will be made only when cost-effective to the purchasing utilities. Thus, while actual purchase prices will depend on negotiations between Panda Leesburg and its wholesale customers, the output of the Project can reasonably be expected to provide significant power cost savings to Panda Leesburg's wholesale customers and to their retail customers since such savings are passed through to those retail customers. Delaying the Project's operation will cost those customers, and the State of Florida, these amounts.

37. Delay also costs the State the fuel savings that the Project would provide in terms of reduced primary fuel consumption for the same amount of electricity produced. According to projections prepared for Panda Leesburg by R. W. Beck, the Project is expected to annually displace approximately 6,300,000 MWh of power produced by less efficient oil and gas-fired generation units (i.e., steam, combined cycle and combustion turbine generators fired by oil, natural gas, or both, with heat rates that generally average approximately 9,800 Btu per kWh). The Project is expected to displace greater amounts of gas/oil-fired generation in subsequent years. With a projected average heat rate of approximately 9,800 Btu per kWh for existing gas/oil-fired generation, the Project would provide primary fuel savings of approximately 17 trillion Btu (16,800,000 MMBtu) in an average year. If all of the Project's output

displaced oil-fired steam generation, approximately 2.6 million barrels of oil would be saved. If all of the Project's output displaced gas-fired steam generation, approximately 16 million Mcf of natural gas would be saved. Delaying the construction and operation of the Project will deprive the State of these fuel savings benefits. Delaying the Project's construction and operation will also deprive the State of the environmental benefits of the Project's operations.

### **CONCLUSION**

38. Based upon two independent analyses, the proposed Panda Leesburg Project is consistent with the needs of Peninsular Florida for system reliability and integrity, and for reliable electricity at a reasonable cost. The Project will contribute meaningfully to the reliability of electric supply in Peninsular Florida, enhancing reserve margins in 2003 and thereafter. The power produced by the Project will be cost-effective to the ratepayers of Florida, reducing wholesale energy costs by approximately \$48 to \$59 million per year, in year 2000 dollars, over the period 2004 through 2008 (Exhibits, Need H).

39. The Project will necessarily be cost-effective to other wholesale purchasers and their retail customers, because the costs of the Project will not be included in rate base, and because no utility nor any electric customer will be obligated to purchase the Project's output. Wholesale purchasers will buy the Project's power only if it is cost-effective when compared to other alternatives. All of the investment, market, and operating risks of the Project will be borne by Panda Leesburg. Given the relative economics of current generating plants in Florida and the Southeast, Panda Leesburg expects that the vast majority of the Project's output will be sold at wholesale to Florida

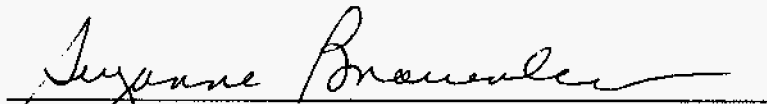
utilities serving retail customers in Florida. Finally, the Project is consistent with, and promotes the goals of, the Florida Energy Efficiency and Conservation Act.

40. Accordingly, the Commission should grant the requested determination of need for the Panda Leesburg Project, as described herein.

**RELIEF REQUESTED**

WHEREFORE, Panda Leesburg Power Partners, L.P., respectfully requests the Commission to enter its order granting this petition for an affirmative determination of need for the proposed Panda Leesburg Project, as described herein.

Respectfully submitted this 6<sup>th</sup> day of March, 2000.



Suzanne Brownless, Esq.  
Florida Bar No. 309591  
1311-B Paul Russell Road  
Suite 201  
Tallahassee, Florida 32301  
(850) 877-5200

and



Suzanne F. Summerlin, Esq.  
Florida Bar No. 398586  
1311- B Paul Russell Road  
Suite 201  
Tallahassee, Florida 32301  
(850) 656-2288

Attorneys for PANDA LEESBURG POWER PARTNERS, L.P.