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May 22, 2000

VIA HAND DELIVERY

Blanca S. Bayo
Director, Division of Records & Reporting
Florida Public Service Commission
Capital Circle Office Center
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

000612-EU

RECORDS AND
REPORTING

00 MAY 22 AM 11:00

RECEIVED FPSC

Re: Petition for Determination of Need for an Electrical Power Plant in St. Lucie County by Duke Energy St. Lucie, L.L.C.

Dear Ms. Bayo:

Enclosed for filing are the original and fifteen (15) copies of the Petition for Determination of Need for an Electrical Power Plant in St. Lucie County by Duke Energy St. Lucie, L.L.C. ("DESL"). DESL is filing the Petition for Determination of Need on the basis that the Florida Supreme Court's April 20, 2000 decision in Tampa Electric Co. v. Garcia, Case Nos. SC95444, SC95445 and SC95446, is not final, and will not be final, until the Court disposes of the pending motions for rehearing and/or clarification. DESL is aware that the Commission has recently decided to hold other pending need determination proceedings in abeyance pending the Court's resolution of the motions for rehearing and/or clarification. DESL, therefore, requests that this proceeding also be held in abeyance. To the extent necessary, DESL is willing to enter into one or more stipulations extending the filing deadlines for all pleadings responsive to the attached Petition.

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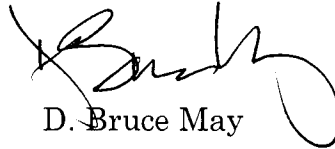
FPSC-RECORDS/REPORTING

Blanca Bayo
May 22, 2000
Page 2

For our records, please acknowledge your receipt of this filing on the enclosed copy of this letter. Thank you for your consideration.

Sincerely,

HOLLAND & KNIGHT LLP

A handwritten signature in black ink, appearing to read "D. Bruce May", with a large, stylized flourish at the end.

D. Bruce May

DBM:kjg
Enclosure

cc: Brent C. Bailey
Michael C. Green

ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition for Determination)
of Need for an Electrical Power)
Plant in St. Lucie County by)
Duke Energy St. Lucie, L.L.C.)
_____)

Docket No. 000612-

Filed: May 22, 2000

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

Duke Energy St. Lucie, L.L.C. ("DESL"), an electric utility under Section 366.02(2), Florida Statutes, regulated by the Florida Public Service Commission ("Commission"), a public utility regulated by the Federal Energy Regulatory Commission ("FERC") under the Federal Power Act, and an "exempt wholesale generator" ("EWG") under the Public Utility Holding Company Act of 1935 ("PUHCA"), respectfully petitions the Commission for an affirmative determination of need for the Duke Energy St. Lucie Generating Project (the "Project"). The Project is a 608 MW (nominal) natural gas-fired, combined cycle power plant with duct firing capability¹ to be located in St. Lucie County, Florida, and includes an associated natural gas lateral pipeline, and the directly associated transmission facilities that will connect the Project to the Florida electric transmission grid. The Project is expected to commence commercial operation by June 1, 2003. This Petition is filed pursuant to the Florida Electrical Power Plant Siting Act, Sections 403.501 – 403.518, Florida Statutes ("the

¹ Duct firing is a process in which burners are placed in the first stage of the heat recovery steam generator where natural gas is burned to increase the exhaust temperature of the combustion turbine. The increase in exhaust temperatures provides higher heat transfer capabilities, thus producing more steam for use in a larger steam turbine generator. The increased steam in the steam turbine will produce more power and, therefore, more electricity.

Siting Act”), Section 403.519, Florida Statutes, and Rules 25-22.080 and 25-22.081, Florida Administrative Code.

Accompanying this Petition are Exhibits describing the Project in detail. In accordance with Rule 25-22.081, Florida Administrative Code, the Exhibits contain the following information:

- A general description of DESL's load and electrical characteristics, generating capability and interconnections;
- A description of the Project, including the size, number of units, fuel type and supply modes, the approximate costs, and the projected in-service date;
- A statement of the specific conditions and other factors that indicate a need for the Project, including load forecasts, the model or models on which they were based, and detailed analyses and supporting documentation of the costs and benefits of the Project;
- A summary discussion of the major available generating alternatives that were evaluated in terms of cost and performance, economics, reliability, environmental benefits, long-term flexibility and usefulness and other relevant strategic factors; and
- An evaluation of the adverse consequences that could result if the Project is not brought into service by June 1, 2003.

A discussion of viable non-generating alternatives required by the rule is also contained in this Petition and the Exhibits.

This Petition and the accompanying Exhibits demonstrate: Peninsular Florida and DESL's need for the Project, the reliability benefits that the Project will provide to Peninsular Florida, the Project's consistency with Peninsular Florida's need for adequate electricity at a reasonable cost, and the cost-effectiveness of the Project. The Petition and Exhibits also show the environmental and economic benefits that the Project will provide to Peninsular Florida's electric ratepayers and citizens.

In accordance with Rule 25-22.080(1), Florida Administrative Code, DESL 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:

Duke Energy St. Lucie, L.L.C.
5400 Westheimer Court
Houston, Texas 77056

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

D. Bruce May
Karen D. Walker
HOLLAND & KNIGHT LLP
P.O. Drawer 810
Tallahassee, Florida 32302
Phone (850) 224-7000
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and

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Fax (407) 804-0380

PRIMARILY AFFECTED UTILITY

3. DESL, the applicant for the Commission's determination of need, is the utility primarily affected by the Project. At maximum output during winter peak periods, DESL expects to sell approximately 636 MW of power (its full rated winter peak capacity) to other utilities and power marketers in Peninsular Florida. At maximum output during summer peak periods, DESL expects to sell approximately 598 MW of power (its full rated summer peak capacity) to other utilities and power marketers in Peninsular Florida. The Project is projected to dispatch approximately 75 percent of the time.

4. DESL is an electric utility regulated by the Commission pursuant to Section 366.02(2), Florida Statutes. DESL is also a public utility regulated by FERC under the Federal Power Act. See 16 U.S.C. § 824(b)(1), (e). DESL has no franchised retail service territory. DESL will market the Project's capacity and energy at

wholesale to other utilities and power marketers under negotiated arrangements entered into pursuant to DESL's Rate Schedule No. 1 which has been submitted for approval by FERC. See Duke Energy St. Lucie, LLC, Docket No. ER00-2225-000. That rate schedule, which applies to all sales of capacity and energy by DESL, permits DESL to enter into agreements with willing purchasers of energy and capacity provided by the Project.

5. DESL is an exempt wholesale generator ("EWG") under PUHCA. See 15 U.S.C. § 79z-5a(a); Duke Energy St. Lucie, LLC, Docket No. EG00-132-000. As an EWG, DESL is prohibited by PUHCA from making retail sales of electricity from the Project, and will only be authorized to sell power to wholesale purchasers, that is, to other utilities and power marketers. Based on market characteristics, transmission constraints, and economic factors, DESL expects that virtually all of the wholesale sales from the Project will be made to other utilities and power marketers for use in Peninsular Florida.

6. DESL is a wholly-owned subsidiary of Duke Energy North America, L.L.C. ("DENA"). DENA is a business unit of Duke Energy Corporation ("Duke Energy"). Measured by total assets, Duke Energy is the seventh largest energy corporation in the world. Duke Energy and its affiliates own and operate more than 30,000 MW of electric generating capacity and, through its regulated retail electric utility division, Duke Power, serve more than 2 million retail electric customers in North Carolina and South Carolina. More than 10 percent of all natural gas delivered in the United States is transported through Duke Energy's pipeline systems.

7. DENA is the developer of the Project and functions as DESL's agent in this regard. As more fully described in the Exhibits, DENA is a premier developer, owner and manager of wholesale electric generation projects throughout the United States. DENA is represented on the Florida Reliability Coordinating Council ("FRCC") and participates on behalf of DESL before the FRCC.

THE PROPOSED POWER PLANT

8. The DESL Project will be a natural gas-fired, combined cycle generating plant. The Project will have a net plant output of 608 MW at ISO conditions when operating with full duct firing. The Project's rated capacity with duct firing will be 636 MW in the winter and 598 MW in the summer. The Project will have a net plant output of 497 MW at ISO when operating without duct firing. The Project's rated capacity without duct firing will be 438 MW in the summer and 528 MW in the winter.

9. The Project will consist of two General Electric ("GE") 7FA natural gas-fired combustion turbine generators, two triple stage ABB heat recovery steam generators equipped with duct firing, and one steam turbine generator. The Project will employ state-of-the-art, Dry Low nitrogen oxide ("NOx") combustors and selective catalytic reduction ("SCR") to minimize emissions. The Project's primary source of process and makeup water for its cooling system will be reclaimed water from the existing Fort Pierce Utilities Authority ("FPUA") Water Reclamation Facility ("WRF"). This reclaimed water is currently discharged into a deep injection well at the WRF, which is located on a barrier island. The Project will use a cooling tower to condense

steam back to water for reuse in the heat recovery steam generators and the steam turbine generator.

10. The Project will be located east and north of the intersection of the Florida East Coast Railroad and Canal No. 102, respectively, in St. Lucie County, Florida. The site is currently outside of the Ft. Pierce city limits. The site consists of approximately 67 acres adjacent to the proposed FPUA Mainland WRF. Maps of the site location and site layout are shown in Figures 3-1 through 3-5 of the Exhibits accompanying this Petition.

11. The Project will be fueled solely by natural gas, some or all of which will be delivered through the gas pipeline system of Florida Gas Transmission Company ("FGT"). Duke will also consider interconnection with other proposed Florida natural gas pipelines to provide fuel diversity and reliability. A portion of the Project's gas supply will be provided on a firm basis pursuant to an existing 20-year supply contract with Citrus Trading Corporation ("Citrus"), a joint venture of Enron Corp. and El Paso Energy. After the initial 20-year term, the Citrus contract is renewable from year to year. DESL is continuing to evaluate options for that portion of the Project's gas supply and transportation not under contract with Citrus.

12. The Project will be electrically interconnected to the Peninsular Florida bulk transmission grid at the Florida Power & Light Company ("FPL") Midway Substation on either a 230 kV line or a 500 kV line. The Midway Substation currently has nine 230 kV lines and three 500 kV lines interconnected. Approximately 2.8 miles of transmission lines will be constructed from the output side of the main step-up

transformers to the FPL Midway Substation. Transmission impact studies prepared for DESL indicate that the proposed interconnection, and the existing Peninsular Florida transmission grid, will generally accommodate the delivery of the net output of the Project, regardless of which utilities purchase and receive the Project's output. The transmission impact studies also indicate that, under normal conditions, the Project will not burden the transmission system or violate any transmission constraints or contingencies in Peninsular Florida.

13. The Project's advanced natural gas-fired, combined cycle generating technology will provide: (a) high availability, with a projected equivalent availability factor of 94.8 percent; (b) high reliability, with a projected equivalent forced outage factor of 1.5 percent and a planned outage rate of 3.7 percent; and (c) high efficiency, with a projected net thermal operating efficiency of 48.0 percent.

14. The Project has been designed with careful consideration of environmental issues and will have a favorable environmental profile. The Project will be one of the cleanest power plants in Florida and in the United States with respect to air emissions. The Project will utilize state-of-the-art Dry Low NOx combustion and SCR technology. Operation of the Project is likely to result in measurable reduction in emissions of SO₂, CO, CO₂, NO_x, particulate matter, heavy metals and other air pollutants in Peninsular Florida. These emission reductions will be achieved as the Project displaces 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.

The Project will result in further environmental benefits due to its use of the FPUA's reclaimed water.

15. The specific conditions that indicate a need for the Project are: Peninsular Florida's continuing need to maintain system reliability and integrity, the constrained Peninsular Florida electric reserve margin, the need for the provision of adequate electricity at a reasonable cost, the demonstrated economic benefits of the Project with respect to the reduction of wholesale (and thus retail) electricity prices, the Project's environmental benefits, and the Project's benefit to St. Lucie County's economy. The need is immediate. Analyses of these conditions and the historical and forecasted Peninsular Florida summer and winter peaks, number of customers, and net energy for load and load factors are included in the Exhibits. The Exhibits also contain analyses of the costs and benefits of the Project.

NEED FOR THE PROPOSED POWER PLANT

16. There are immediate reliability and economic needs in Peninsular Florida for the Project. The reliability need for 608 MW of highly-efficiently electric capacity and its associated energy production in Peninsular Florida is evidenced by the State's current constrained reserve margins. Peninsular Florida needs the DESL Project because the Project will provide 608 MW of capacity and energy at the lowest cost available to customers as compared to the continued use of traditional rate-based power plants. Moreover, the high efficiency, natural gas-fired, combined cycle technology chosen for the Project represents the lowest cost technology currently available to serve Peninsular Florida's future power supply needs. By all accounts, the

Project represents an environmentally preferred alternative to conventional power plants. As such, there is a demonstrable need for the Project in Peninsular Florida. DESL also needs the Project to participate in the Peninsular Florida competitive wholesale power market, which will enhance competition in the wholesale power market at no risk to customers. Conversely, under the current and foreseeable market conditions in Florida, denying DESL the ability to compete via the St. Lucie Project would send adverse signals to potential competitors in the Florida marketplace and would deny Florida consumers the benefits of enhanced wholesale competition.

17. DESL has evaluated the need for the Project using Van Horn Consulting's ("VHC"'s) busbar comparisons of potential generation technologies and LCG Consulting's ("LGC"'s) integrated UPLAN modeling system. The UPLAN system includes the UPLAN Network Power Model ("NPM"). UPLAN NPM is an Optimal Power Flow ("OPF") and hourly electricity market model that simulates generation, transmission and power markets and addresses issues related to economic efficiency, electric system reliability, market share, environmental concerns and the impacts of competition in interconnected electricity markets. UPLAN has been used throughout North America and abroad to examine operating strategies, cost effectiveness, fuel switching impacts, asset values for merchant plants, nodal, zonal and regional market prices and price volatility forecasts, transmission congestion considering A.C. powerflows, competitive market bidding strategies and portfolio optimization, and simulation of ISO/PX operations. UPLAN also has been used for merger and market power studies. Here the UPLAN model has been applied to examine the hour by hour

operation of the Project and its sensitivity to uncertain future conditions. Appendix B to the Exhibits accompanying this Petition contains a detailed description of the UPLAN model.

18. The UPLAN results demonstrate clearly that the Project is needed from both a reliability and a cost-effectiveness standpoint. The following addresses in detail the manner in which the Project meets these needs.

A. Peninsular Florida's Need for Electric System Reliability and Integrity

19. The Project is consistent with and meets Peninsular Florida's needs for generating capacity to maintain system reliability and integrity. The FRCC has set a minimum planned reserve margin of 15 percent as the planning criteria to meet demands with sufficient reliability. The Commission has also established a minimum planned reserve margin of 15 percent. See Fla. Admin. Code R. 25-6.035(1). On November 29, 1999, the Commission approved a stipulation by Florida's investor-owned electric utilities to adopt a 20 percent minimum reserve margin for 2004. See In re: Generic investigation into the aggregate electric utility reserve margins planned for Peninsular Florida., 99 F.P.S.C. 12:426, 429, Docket No. 981890, Order No. PSC-99-2507-S-EU (Dec. 22, 1999).

20. According to the 1999 Regional Load and Resource Plan published by the FRCC in July of 1999 (the "1999 FRCC Regional Plan"), Peninsular Florida's reserve margin is forecasted to remain very close to the minimum planned reserve margin over the 1999-2008 forecasted period. This forecast is heavily dependent upon the implementation of interruptible loads and demand-side control measures. If

interruptible loads and load management were not implemented at the time of peak demand, Peninsular Florida's reserve margin would fall significantly below the minimum 15-20 percent criteria. Indeed, without utilizing load management and direct load control measures, Peninsular Florida's summer reserve margin through 2008 will range from 9 to 12 percent, and the winter reserve margin in 2003/2004 through 2008/2009 will range from 6 to 8 percent.

21. The 1999 FRCC Regional Plan indicates that Peninsular Florida needs approximately 11,400 MW of new installed capacity in order to maintain minimum reserve margins through 2008. This is an extremely conservative projection. The projection assumes that load management and interruptible customers will continue to request interruption at peak load. Furthermore, the projection assumes that forecasted growth in peak demand over the planning horizon is sound. In fact, the 1999 FRCC Regional Plan forecasts a growth in summer peak demand that is approximately half the rate of the actual historical growth rate from 1989 to 1998.

22. The foregoing demonstrates that there is a significant and substantial reliability need for new generating capacity in Peninsular Florida. The Project will contribute to meeting that need either: (a) by providing firm capacity (if other utilities contract for the Project's output); or (b) if the Project's capacity remains uncommitted, by providing additional reliability protection by the Project's presence and availability.

23. In either case, the Project is expected to provide an additional 636 MW of net capacity to Peninsular Florida's retail-serving utilities during extreme winter peaking conditions and an additional 598 MW of additional capacity during extreme

summer peaking conditions. The Project's capacity will help to improve the reserve margin for Peninsular Florida by approximately 1.41 percent after commercial operation in June 2003. The Project will provide similar reserve margin improvements in subsequent years. 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 Peninsular Florida 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 125,000 homes during such an event.

24. Finally, it should be noted that all, or virtually all, of the Project's output over the 2003 through 2013 period is expected to be sold to other utilities and power marketers in Peninsular Florida (i.e., within the FRCC region). Indeed there are several significant economic and physical constraints to DESL making wholesale sales outside of Florida. Generation costs are generally lower in Georgia than Florida, resulting in lower wholesale clearing prices, and thus, lower retail costs. Additional transmission wheeling charges also would be incurred to make sales in Georgia. Further, the cost of delivered natural gas fuel is significantly higher into Peninsular Florida than to any other region of the Southeastern United States. Moreover, transmission export capability at the Georgia/Florida interface is limited. All of these factors lead to the conclusion that there would be few hours, if any, in which wholesale sales from Florida-generated electricity would be made to Georgia.

B. Peninsular Florida's Need for Adequate Electricity at a Reasonable Cost

25. The Project meets and is consistent with Peninsular Florida's need for adequate electricity at a reasonable cost. The DESL Project will provide Florida's retail serving utilities a new, low-cost source of generation supply from which to choose. The direct construction cost and heat rate of the Project compare favorably to those of other proposed combined-cycle units in Peninsular Florida.

26. The Project 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 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 plant through its rates. Hence, the utility's ratepayers, rather than its shareholders, bear most of the risks if the plant becomes obsolete. Similarly, absent a finding of imprudence, a utility is permitted to recover the fixed and variable 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.

27. Unlike a traditional "rate-based" plant, a merchant plant has no rate base and no captive ratepayers to which it sells.² A merchant plant simply offers its capacity and energy to potential wholesale customers (i.e., other Florida utilities or marketers), who are free to purchase or decline to purchase capacity and energy offered by the merchant plant. An economically rational purchasing utility will only enter into

² The Commission has defined a "merchant plant" as "a power plant with no rate base and no captive retail customers." See, In re: Joint Petition for Determination of Need for an Electrical Power Plant in Volusia County by the Utilities Commission, City of New Smyrna Beach, Florida, and Duke Energy New Smyrna Beach Power Company Ltd., L.L.P., 99 F.P.S.C. 3:401, 407, Docket No. 981042-EM, Order No. PSC-99-0535-FOF-EM (March 22, 1999).

an agreement to purchase electric capacity or energy from a merchant plant if the costs of that capacity or energy are lower than the costs of alternatives otherwise available to the utility, to-wit: generation from its own power plants or purchases from others. If the cost of power from the merchant plant is higher than the cost 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 Florida ratepayers. The same result will occur if the merchant plant incurs cost overruns or fails to operate as efficiently or reliably as projected – the merchant plant owners, rather than any ratepayer, bear all of the capital, operating, technology, fuel procurement and market risks associated with the power plant. Consequently, if the merchant plant's economics are favorable, other utilities and power marketers will purchase its output and enjoy cost savings. If the plant turns out not to be economic, Florida's ratepayers will incur no financial harm. For these reasons, a merchant plant will provide benefits to other utilities and their ratepayers and can only enhance the supply options competing to sell electricity to Florida wholesale customers. Because no utilities or retail ratepayers 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 costs less than other supply sources, the Project is necessarily consistent with and meets Peninsular Florida's need for adequate electricity at a reasonable cost.

C. DESL's Need for the Project

28. The Project is needed by DESL and DENA to participate in Peninsular Florida's competitive wholesale power market. DESL's business objective is to develop, construct, own and operate the Project in a manner that will provide reliable, competitively priced, environmentally clean power in the Peninsular Florida wholesale market without risk to Florida's retail electric customers. The Project is being developed consistent with the policies of FERC to develop and promote a robust, competitive wholesale electricity market. Indeed, a fundamental goal of FERC is to "...remove impediments to competition in the wholesale bulk power marketplace and to bring more efficient, lower cost power to the Nation's electricity consumers." Order No. 888, 62 Fed. Reg. 21, 539 (1996). The FPSC has also recognized that a competitive wholesale electricity market is enhanced by merchant plants: "Merchant plants increase wholesale competition thereby in theory lowering wholesale electric prices from what they otherwise may be." In re: Joint Petition for Determination of Need for an Electrical Power Plant in Volusia County by the Utilities Commission, City of New Smyrna Beach, Florida, and Duke Energy New Smyrna Beach Power Company Ltd., L.L.P., 99 F.P.S.C. 3:401, 438, Docket No. 981042-EM, Order No. PSC-99-0535-FOF-EM (March 22, 1999). DENA, through DESL, seeks to continue its role in developing merchant plants and needs the Project to pursue the state and federal governments' goal of ensuring competitively priced generation for the benefit of electric ratepayers.

D. Strategic Considerations

29. The Project is also consistent with strategic factors that may be considered when building a power plant. The Project will be fueled by domestically produced natural gas rather than by 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 by DESL with internal funds, the Project will provide power to the Florida grid without presenting any financial risk to Florida ratepayers. The Project's natural gas-fired, combined cycle technology is exceptionally clean and minimizes airborne emissions. Because the Project will use a very clean fuel, there is little 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 conserve primary energy consumed for electricity production in Florida. It will enhance the overall efficiency of electricity production and of natural gas use, as well as reduce the consumption of petroleum fuels for electricity generation in Florida.

COST-EFFECTIVENESS

30. The Project is the most cost-effective alternative available for meeting the future power supply needs of Peninsular Florida utilities and their retail electric customers as evidenced by the UPLAN model simulation and analysis of the FRCC electric system with and without the Project. The UPLAN model shows that the

Project, because of its highly efficient heat rate and low direct construction cost, is demonstrably cost-effective relative to existing power plants and to other gas-fired combined cycle power plants proposed for the FRCC region. The Project is also the most cost-effective alternative available to DESL for meeting its projected wholesale sales obligations. Accordingly, the Project will provide cost-effective power to Peninsular Florida.

A. Cost-Effectiveness to Peninsular Florida

31. The Project will be a cost-effective power supply resource for Peninsular Florida. The presence of the Project, with its high efficiency, is expected to increase wholesale competition and to reduce Florida's wholesale power prices in Florida. As a merchant plant, the output of which no utility is obligated to buy, the Project will minimize power supply costs. It will not, and indeed cannot, increase such costs above the cost of other available power supply alternatives.

32. DESL will only be able to sell its wholesale power to other utilities if and when utility purchasers determine that such purchases are cost-effective relative to those utilities' alternative power supply options, e.g., self-generation or other purchases. In addition, the FPSC's ongoing regulatory oversight of utilities' fuel and purchased power costs ensures that Florida's ratepayers are responsible only for reasonable and prudent expenses. In other words, not only will the market ensure that Florida retail-serving utilities' purchases are cost-effective, the FPSC's ongoing regulation will similarly ensure that purchases of output from the Project are cost-effective.

33. Even if the Project were not needed to maintain reliable service to Florida electric customers (which it is), 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. The Project will not be subject to inclusion in any utility's rate base. Accordingly, there is no risk that captive retail (or wholesale) customers will be required to bear the Project's capital or other costs. Retail ratepayers can only be asked to pay the cost of power from the Project 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 that costs less than what is available elsewhere. Because the savings resulting from cost-effective purchases from DESL will be passed directly through to retail ratepayers through the purchasing utilities' fuel and purchased power cost recovery charges, the Project will necessarily provide cost-effective power to those utilities' retail ratepayers.

34. The Project is also cost-effective when one compares the Project's construction costs and heat rate to the costs and heat rates of other proposed units. As previously stated, the direct construction cost of the Project is expected to be approximately \$210 million, which equates to approximately \$345 per kW of installed capacity (based on 608 MW). The Project will have a net thermal operating efficiency of 48.0 percent. The Project's direct construction cost and its heat rate efficiencies compare favorably to those of other new gas-fired, combined cycle power plants proposed for Florida.

B. Cost-Effectiveness to DESL

35. As described more fully in the Exhibits, DESL has considered various generating technologies and configurations of combined cycle power plants and has determined that the proposed combined cycle power plant represents the most cost-effective alternative for DESL to meet its projected wholesale power sales commitments. Further, both VHC's busbar cost comparisons of potential generation technologies and LGC's UPLAN model results confirm that the proposed technology for the Project is the most cost-effective alternative of current commercially available base load generating technologies. DESL has not issued a Request for Proposals ("RFP") to evaluate supply-side generating alternatives prior to filing this Petition with the Commission. The Commission has determined that Rule 25-22.082, Florida Administrative Code, which requires investor-owned electric utilities to evaluate supply-side alternatives to their next generating units by issuing a RFP prior to filing a petition for determination of need, is not applicable to merchant wholesale electric utilities such as DESL. See In re: Petition for determination of need for an electrical power plant in Okeechobee County by Okeechobee Generating Company, L.L.C., 99 F.P.S.C. 219, 227, Docket No. 991462-EU, Order No. PSC-99-2438-PAA-EU (Dec. 13, 1999). DESL has, however, extensively reviewed the cost and relative efficiencies of other supply-side alternatives and has determined the Project is the most cost-effective alternative for Peninsular Florida and for DESL.

ENERGY CONSERVATION

36. As a wholesale merchant utility, DESL is not in a position to, and does not engage directly in, end-user energy conservation programs. Indeed, the Commission has recognized that conservation obligations of wholesale merchant utilities like DESL are limited. See In re: Joint Petition for Determination of Need for an Electrical Power Plant in Volusia County by the Utilities Commission, City of New Smyrna Beach, Florida, and Duke Energy New Smyrna Beach Power Company Ltd., L.L.P., 99 F.P.S.C. 3:401, 439, Docket No. 981042-EM, Order No. PSC-99-0535-FOF-EM (March 22, 1999).³ Nonetheless, the Project meets the overall goals of the Florida Energy Efficiency and Conservation Act ("FEECA") because the Project contributes directly and significantly to the increased efficiency and cost-effectiveness of electricity production and natural gas use. § 366.81, Fla. Stat. (1999). The Project does so by using state-of-the-art generation technology. Thereby, the project provides wholesale electricity customers with a proper benchmark to compare the cost-effectiveness of supply-side additions with demand-side alternatives, The Project will have a primary energy conversion efficiency of approximately 48.0, which is significantly better than almost all existing utility generating capacity in Florida, better than most cogeneration facilities, and as good as or better than the vast majority of other Florida utilities' proposed new gas-fired, combined cycle capacity. To the extent that the Project, with its average heat rate of 7,096 Btu/kWh (HHV) at ambient site conditions with no duct firing, and 7,351 Btu per kWh (HHV) at ambient site conditions with duct firing,

³ DESL, as a wholesale merchant utility, is not required to have conservation goals pursuant to Section 366.82(2), Florida Statutes.

displaces generation from less efficient gas-fired units, the Project will result in substantial increases in the efficiency of natural gas use. Moreover, 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. §§ 366.81, 366.82(2), Fla. Stat. (1999).

37. In addition, the Project's capacity and energy will be economically and environmentally preferable to other supply-side alternatives. Thus, future cost-effective conservation measures would likely displace other supply-side alternatives, rather than displace the capacity and energy available from the Project.

CONSEQUENCES OF DELAY

38. Delaying the construction and operation of the Project will result in lower reserve margins for Peninsular Florida for each month 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.

39. 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. The DESL Project provides a source of low cost generation to Florida's retail-serving electric utilities, thereby reducing the costs to the ratepayers of such utilities. Although actual purchase prices will depend on negotiations between

DESL and its wholesale customers, the output of the Project can reasonably be expected to provide significant power cost savings to DESL's wholesale customers and to their retail customers (again reasonably assuming that such savings are passed through to those retail customers). Delaying the Project's operation will deprive those customers, and the State of Florida, of these savings.

40. Delaying the Project's construction and operation will also deprive the State of the environmental benefits of the Project's operations. More specifically, delaying the Project will postpone reductions in air pollutant 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. Delay would also prolong the disposal of effluent by the FPUA into deep injection wells on a barrier island and postpone the efficient use of such effluent in the Project's operations.

41. Finally, delaying the construction of the Project will delay positive economic impacts that will be realized by St. Lucie County. The Project will employ approximately 25 people during operation, with an annual payroll of \$1.5 million. During construction, the Project will provide between 150 and 300 jobs over an 18-month period. These jobs will create a multiplier effect in spending in St. Lucie County that will benefit local residents. The Project will also add a significant tax base to the County. Thus, if the Project is delayed, St. Lucie County and its residents would be deprived of the economic benefits that the Project will bring to the St. Lucie County area.

DISPUTED ISSUES OF MATERIAL FACT

42. DESL is not aware of any disputed issues of material fact at this time. However, Section 403.519 requires the Commission to address the following issues as part of this need determination proceeding: (1) the need for system reliability and integrity, (2) the need for adequate electricity at a reasonable cost, (3) cost-effectiveness and (4) conservation issues.

CONCLUSION

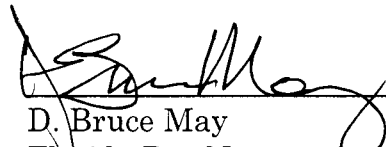
43. The proposed DESL Project meets the needs of Peninsular Florida for system reliability and integrity, and for reliable electricity at a reasonable cost. The Project will contribute to the reliability of electric supply in Peninsular Florida by enhancing reserve margins in 2003 and thereafter. The 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 Florida ratepayer 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. Unlike conventional rate-based plants built and operated by traditional retail-serving utilities, all of the investment, market, and operating risks of the Project will be borne by DESL, DENA and Duke Energy. Given the relative economics of current generating plants in Florida and the Southeast, DESL expects that virtually all of the Project's output will be sold at wholesale to Florida utilities serving retail ratepayers in Florida and to power marketers. Finally, the Project is consistent with, and promotes the goals of, FEECA. Accordingly, the Commission

should grant the requested determination of need for the DESL Project as described herein.

WHEREFORE, Duke Energy St. Lucie, L.L.C., respectfully requests that the Commission:

- (a) grant this Petition for an affirmative determination of need for the St. Lucie Generating Project; and
- (b) grant such other relief as the Commission deems appropriate.

Respectfully submitted this 22nd day of May, 2000.



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