ORIGINAL

CALPINE

OSPREY ENERGY CENTER

Petition for Determination of Need for the Osprey Energy Center

Exhibits

Submitted by

CALPINE CONSTRUCTION FINANCE COMPANY, L.P.

PETITION FOR DETERMINATION OF NEED
FOR THE OSPREY ENERGY CENTER

EXHIBITS

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EXECUTIVE SUMMARY

General Description of the Osprey Energy Center

Calpine Construction Finance Company, L.P. ("Calpine"), a public utility subject to the jurisdiction of the Federal Energy Regulatory Commission ("FERC") under the Federal Power Act, an electric utility under Section 366.02(2), Florida Statutes, and a regulated electric company under Sections 403.503(4) and (13), Florida Statutes, applies for the Commission's determination of need for the Osprey Energy Center (the "Osprey Project" or the "Project"), a natural gas-fired combined cycle generating plant that will be located in the City of Auburndale, Polk County, Florida. The Osprey Project will have 527 megawatt ("MW") of net generating capacity at average ambient site conditions, excluding duct-firing and power augmentation. The Project is expected to commence commercial operation in the second quarter of 2003.

Calpine initially planned to develop the Osprey Energy Center as a competitive wholesale (or "merchant") plant, consistent with the Commission's need determination order approving the Duke New Smyrna Beach Power Project.[1] Calpine's primary business purpose in developing the Osprey Energy Center has been, and continues to be, to provide clean, cost-effective power to other Florida utilities for the benefit of their ratepayers. Accordingly, in keeping with

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[1] 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 FPSC 3:401, ("Duke New Smyrna"), rev'd sub nom. Tampa Electric Co. v. Garcia, 2000 WL 422871 (Fla. 2000), motions for rehearing pending (hereinafter Tampa Electric Co. v. Garcia).

the Supreme Court's opinion in Tampa Electric Co. v. Garcia, Calpine is willing to commit the full output of the Project to Florida utilities that serve retail customers in Florida. In endeavoring to fulfill this commitment, Calpine is diligently pursuing discussions (which Calpine believes will lead to active negotiations) toward contractual arrangements committing the full output of the Osprey Project to serve the needs of Florida retail electric customers. Calpine is pursuing such discussions with the Florida Municipal Power Agency, Reedy Creek Improvement District, and other utilities that provide service to retail customers in Florida. All of the Project's output is expected to be sold to other Peninsular Florida utilities for resale to their retail customers in Peninsular Florida.

The Project will include two advanced technology combustion turbine generators, two matched heat recovery steam generators that include duct-firing capability for increased output, and one steam turbine generator. The Project is expected to have a heat rate of approximately 6,800 British thermal units ("Btu") per kilowatt-hour ("kWh"), based on the Higher Heating Value ("HHV") of natural gas at average ambient site conditions. The Project will meet or exceed all applicable environmental requirements. The Project's primary sources of makeup water to the cooling towers will be supplied by reclaimed water from the City of Auburndale and on-site groundwater wells.

Calpine's current projections indicate that the Project will operate approximately 8,000 hours per year, with projected

generation of approximately 4.2 million to 4.5 million megawatt-hours ("MWH") per year (average ambient temperature, excluding duct-firing and power augmentation).

The Project will be interconnected to the Peninsular Florida transmission grid at the Tampa Electric Company ("TECO") Recker Substation located adjacent to the east boundary of the Project site. The Project will be fueled by natural gas, which will be delivered through a new trans-Florida pipeline to be constructed by Gulfstream Natural Gas System, L.L.C. ("Gulfstream") pursuant to a 20-year firm gas transportation agreement. Gulfstream will obtain all necessary permits for and construct the natural gas lateral pipeline to connect the main Gulfstream pipeline to the Project.

Ownership and Management

The Osprey Energy Center will be developed by Calpine Construction Finance Company, L.P., which will own the Project. Calpine Construction Finance Company, L.P. is a wholly-owned subsidiary of Calpine Corporation. Environmental engineering for the Project will be performed by Calpine and Golder Associates, Inc. Construction of the Project will be overseen by Calpine. The Osprey Energy Center will be managed by Calpine. Calpine plans to sell the power produced by the Project at wholesale to other Peninsular Florida utilities for resale to their retail electric customers in Peninsular Florida.

Site Description and Location

The Osprey Energy Center will be located in the City of Auburndale, Polk County, Florida, on approximately 19.5 acres

situated approximately 1.5 miles south of downtown Auburndale and approximately 37 miles east of Tampa Bay. The site was formerly a citrus grove and is currently unused. Land uses adjacent to the site include the TECO Recker Substation and existing TECO 230 kV transmission lines, the existing Auburndale Power Plant, which is a 150 MW natural gas-fired cogeneration plant (with oil back-up fuel) owned by Auburndale Power Partners, the Auburndale Memorial Park cemetery, commercial and industrial businesses, and two small residential enclaves. Access to the site will be from West Derby Avenue, a two-lane county collector road. The Project has been planned and designed to be consistent with the City of Auburndale's zoning category and comprehensive plan future land use designation applicable to utility uses.

Description of the Power Plant and Related Facilities

The power plant will consist of two advanced technology Siemens-Westinghouse Model 501F combustion turbine generators ("CTGs") in combined-cycle configuration. Each CTG will be connected to a heat recovery steam generator ("HRSG") producing steam for a single steam turbine generator ("STG"). The net electrical output of the plant will be 527 MW at average ambient site conditions, excluding duct-firing and power augmentation. The Project will include the capability to duct-fire the HRSGs to increase steam production and power output. Duct-firing is a process whereby gas burners are placed within the HRSGs to increase gas temperature and generate more steam, thus increasing power generation from the STG. The Project will also include the

capability for power augmentation. Power augmentation is accomplished by injecting steam from the HRSGs into the gas turbines for the purpose of increasing mass flow through the CTGs, thereby increasing the electrical power output from the CTGs. The Project will utilize state-of-the-art dry low-NO_x[2] combustion technology and selective catalytic reduction ("SCR") to minimize NO_x emissions.

The Osprey Energy Center will be connected to the Peninsular Florida transmission grid at the existing TECO Recker 230 kV substation. Gas will be delivered through a 16-inch lateral pipeline from the new Gulfstream pipeline. Process and makeup water will be supplied from the City of Auburndale's Allred Municipal Wastewater Treatment Plant and from on-site groundwater wells, and wastewater will be returned to the Allred treatment facilities. The City of Auburndale will obtain the necessary permits for the new pipelines for delivery of the reclaimed water to and return of wastewater from the Project; these pipelines will be paid for by Calpine.

Fuel Supply

The Project will be fueled by natural gas, which will be delivered via firm transportation service on the Gulfstream pipeline. The natural gas will be supplied to Gulfstream pipeline receipt points by various natural gas commodity producers and suppliers.

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[2]"NO_x" is used to refer generically to the oxides of nitrogen produced in the combustion process.

Project Costs and Financing

The Osprey Energy Center's direct construction cost is expected to be approximately $194.8 million, reflecting a cost of approximately $355 per kW of installed capacity (based on 548 MW at ISO). The Project will be constructed and brought into commercial service with a combination of equity and debt. Calpine will provide the equity and the debt will be supplied from Calpine's "construction revolver," a form of revolving credit account with several investment banks used to fund the debt portion of the construction and development costs of multiple Calpine projects.

I. INTRODUCTION

The purpose of the Petition for Determination of Need (the "Petition") submitted by Calpine Construction Finance Company, L.P. is to obtain the Florida Public Service Commission's ("FPSC" or "Commission") affirmative determination of need for the Osprey Energy Center, a 527 MW natural gas-fired combined cycle generating plant that will be located in the City of Auburndale, Polk County, Florida.

The Commission's determination of need pursuant to Section 403.519, Florida Statutes, is part of the comprehensive permitting process for the Project under the Florida Electrical Power Plant Siting Act, Sections 403.501 through 403.518, Florida Statutes (the "Siting Act"). Under Section 403.519, the Commission is to consider the following factors when making its decision whether to grant a determination of need for a power plant subject to the Siting Act:

1. the need for electric system reliability and integrity;
2. the need for adequate electricity at a reasonable cost;
3. whether the proposed plant is the most cost-effective alternative available for serving an identified need for power;
4. conservation measures taken by, or reasonably available to, the affected utility or utilities which might mitigate the need for the proposed plant; and
5. other matters within the Commission's jurisdiction that the Commission deems relevant to its determination.

Calpine's Petition and these Exhibits demonstrate that the Osprey Energy Center satisfies all relevant criteria under Section 403.519 and all relevant criteria under Rule 25-22.081, Florida

Administrative Code. The Project will provide a power supply resource with proven, reliable, highly efficient, highly available, and environmentally favorable technology. As a competitive wholesale power plant offering capacity and energy to other utilities in Peninsular Florida at negotiated, market-based prices, the output of which no utility is obligated to buy, the Project will provide a cost-effective power supply resource for meeting the needs of other utilities in Peninsular Florida.

The Project will also contribute meaningfully to the reliability of the power supply system in Peninsular Florida, lower the cost of electricity generation in Peninsular Florida, enhance the overall efficiency of electricity production in Peninsular Florida, and improve the environmental profile of electricity generation in Florida.

Section II of these Exhibits describes the applicant and primarily affected utility, Calpine. Section III describes technical aspects of the Project, including the site, generating technology, operational reliability and related information, major systems, associated facilities, fuel supply, and the schedules for permitting and constructing the Project. Section IV describes Calpine's and Peninsular Florida's need for the Project, including the energy efficiency and environmental benefits that the Project will provide. Section V describes the cost-effectiveness of the Project, and Section VI addresses the adverse consequences on power supply reliability, on power supply costs, and on Florida's

environment of delaying the construction and operation of the Osprey Energy Center.

II. THE APPLICANT

The applicant and primarily affected utility for the Commission's determination of need is Calpine Construction Finance Company, L.P. This section of the Exhibits describes the organization and ownership structure of the Osprey Energy Center and of the applicant. Other utilities that enter into contractual arrangements to purchase the Project's output will also be primarily affected utilities within the meaning of the Commission's rules and orders. Calpine and those utilities will furnish appropriate descriptive information regarding those utilities at the same time that the contracts or other evidence of the Project's output commitment to serving those utilities' needs are submitted to the Commission.

A. Overview and Project Structure.

Calpine Construction Finance Company, L.P. ("Calpine") will be the owner of the Osprey Energy Center. Calpine is a FERC jurisdictional, FERC-regulated wholesale public utility and an electric utility under Section 366.02(2), Florida Statutes, that will sell the Project's capacity and energy at wholesale to other utilities. Calpine is an electric utility under Florida law and thus a proper applicant pursuant to Section 403.519, Florida Statutes. Calpine is an electric utility because it is a regulated electric company authorized to engage in the business of generating, transmitting, or distributing electric energy in the state. Fla. Stat. §§ 403.503(4), (13) (1999). Calpine is also an electric utility pursuant to Section 366.02, Florida Statutes,

because it is an investor-owned electric utility which owns, maintains, or operates an electric generation, transmission, or distribution system within the state.

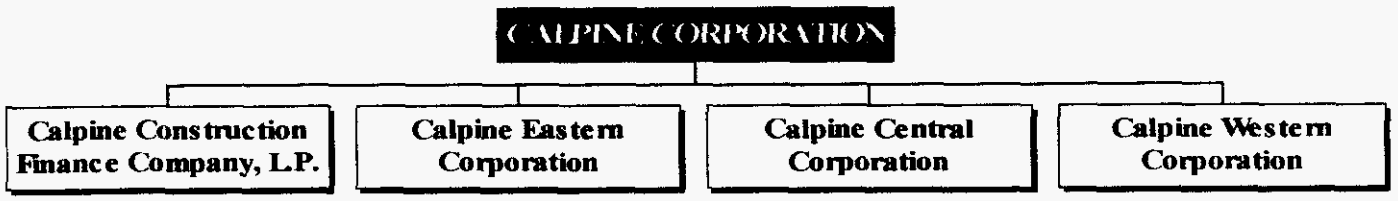
Calpine Construction Finance Company, L.P. is the developer of the Project, and in that role will negotiate the various contracts and perform other activities necessary for the Project's development and construction. The Project will be constructed and brought into commercial service solely with funding arranged by Calpine. Calpine anticipates that the Project will be financed with a combination of equity and debt that will be used to pay the development and construction costs. Calpine has retained Golder Associates, Inc. to provide engineering support and environmental licensing and permitting services for the Project. The natural gas fuel supply for the Project will be provided by natural gas marketing companies or producers to receipt points on the new trans-Florida natural gas pipeline to be constructed by Gulfstream Natural Gas System, L.L.C.

B. **Calpine Construction Finance Company, L.P.**

Calpine Construction Finance Company, L.P., a Delaware Limited Partnership, is a wholly-owned subsidiary of Calpine Corporation, a Delaware corporation. See Figure 1.

Calpine is a public utility under Section 201 of the Federal Power Act. 16 USCA §§824(b)(1)&(e)(1994). By order issued on February 23, 2000, FERC approved Calpine's tariff to sell wholesale power at market-based rates. In Re: Calpine Construction Finance

FIGURE 1
CALPINE CONSTRUCTION FINANCE COMPANY, L.P.
OWNERSHIP STRUCTURE



Company, L.P., 90 FERC ¶61,164 (February 23, 2000). A copy of the order is included in Appendix A to these Exhibits.

Calpine is the developer of the Osprey Energy Center. In that role, Calpine is arranging for the permitting of the Project, for the engineering, procurement, and construction of the Project, for the Project's fuel supply, and for other services necessary to bring the Project to commercial operation.

Calpine's business strategy is to focus on building clean, environmentally responsible, efficient, natural gas-fired combined cycle power plants.

C. **Calpine Corporation**.

Calpine Corporation, a Delaware corporation, is the parent corporation of Calpine Construction Finance Company, L.P. Calpine Corporation is headquartered in San Jose, California with regional offices in Boston, Massachusetts, Tampa, Florida, Houston, Texas, and Pleasanton, California. Founded over 15 years ago, Calpine Corporation is a leading independent power company engaged in the development, acquisition, ownership and operation of power generation facilities, and the sale of electricity predominantly in the United States. Calpine Corporation currently owns, has ownership interest in, or is developing or constructing a total of 73 generating assets (25 existing gas-fired and 19 existing geothermal projects, 14 projects under construction, and 15 projects under development) having a combined nominal capacity of 20,243.50 MW with Calpine Corporation's net ownership interest in these assets totaling 16,947 MW. Calpine Corporation's 25

operating gas-fired generating plants are located in California (7 plants), New Jersey (3 plants), New York (4 plants), Pennsylvania (2 plants), Texas (3 plants), and 1 plant each in Florida, Illinois, Massachusetts, Oklahoma, Virginia and Washington. Calpine Corporation has a 50 percent ownership interest in Auburndale Power Partners' Auburndale Power Plant, which is immediately adjacent to the Osprey Project site. Calpine Corporation's geothermal power generating units have approximately 880 MW of capacity. Table 1 presents a summary of Calpine Corporation's current portfolio of generating assets.

Calpine Corporation is a vertically integrated company that has a full competency set that enables it to develop, finance, construct, own, and operate, on a long-term basis, power plants across the United States. As part of the above competencies, Calpine Corporation possesses the asset management, power marketing, risk management, and fuel management capabilities required for the long-term sustainable and reliable operation of a diverse set of generating assets. Additionally, Calpine Corporation has recently completed the acquisition of gas reserves in the Sacramento basin. The acquisition of additional gas reserves is part of Calpine Corporation's long-term business strategy.

TABLE 1
CALPINE CORPORATION
PORTFOLIO OF GENERATING ASSETS

Gas Fired Power Plants	Nameplate Capacity (megawatts)	Calpine Interest Percentage	Calpine Net Interest (megawatts)
Agnews San Jose, CA	29.0	20%	5.8
Auburndale Auburndale, FL	150.0	50%	75.0
Bayonne Bayonne, NJ	165.0	7.5%	12.4
Bethpage Hicksville, NY	57.0	100%	57.0
Clear Lake Pasadena, TX	412.0	100%	412.0
Dighton Dighton, MA	169.0	50%	84.5
Gilroy Gilroy, CA	120.0	100%	120.0
Gordonsville Gordonsville, VA	240.0	50%	120.0
Grays Ferry Philadelphia, PA	150.0	40%	60.0
Greenleaf 1 Yuba City, CA	49.5	100%	49.5
Greenleaf 2 Yuba City, CA	49.5	100%	49.5
Kennedy Jamaica, NY	107.0	100%	107.0
King City King City, CA	120.0	100%	120.0
Lockport Lockport, NY	184.0	11.36%	20.9
Morris Morris, IL	1,677.0	80%	1,341.6
Newark Newark, NJ	58.0	80%	46.4
Parlin Parlin, NJ	122.0	80%	97.6
Pasadena Pasadena, TX	240.0	100%	240.0

TABLE 1 (continued)

Philadelphia Philadelphia, PA	22.0	66.4%	14.6
Pittsburg Pittsburg, CA	70.0	100%	70.0
Pryor Pryor, OK	110.0	80%	88.0
Stony Brook Stony Brook, NY	40.0	100%	40.0
Sumas Sumas, WA	125.0	70%	87.5
Texas City Texas City, TX	450.0	100%	450.0
Watsonville Watsonville, CA	28.5	100%	28.5

Geothermal Power Plants	Nameplate Capacity (megawatts)	Calpine Interest Percentage	Calpine Net Interest (megawatts)
Aidlin Middletown, CA	20.0	55%	11.0
Bear Canyon Middletown, CA	20.0	100%	20.0
Calistoga Middletown, CA	67.0	100%	67.0
Lake County (2 power plants) Middletown, CA	150.0	100%	150.0
Sonoma Middletown, CA	60.0	100%	60.0
Sonoma County (12 power plants) Middletown, CA	544.0	100%	544.0
West Ford Flat Middletown, CA	27.0	100%	27.0

Under Construction	Nameplate Capacity (megawatts)	Calpine Interest Percentage	Calpine Net Interest (megawatts)
Aries Pleasant Hill, MO	600.0	50%	300.0
Baytown Baytown, TX	800.0	100%	800.0
Channel Houston, TX	560.0	100%	560.0

TABLE 1 (continued)

Delta Pittsburg, CA	880.0	50%	440.0
Hidalgo Edinburg, TX	500.0	78.5%	392.5
Los Medanos Pittsburg, CA	500.0	100%	500.0
Lost Pines I Austin, TX	545.0	50%	272.5
Magic Valley Edinburg, TX	730.0	100%	730.0
Pasadena Expansion Pasadena, TX	545.0	100%	545.0
Rumford Rumford, ME	265.0	66.7%	176.8
South Point Bullhead City, AZ	545.0	100%	545.0
Sutter Yuba City, CA	545.0	100%	545.0
Tiverton Tiverton, RI	265.0	62.8%	166.4
Westbrook Westbrook, ME	520.0	100%	520.0

Under Development	Nameplate Capacity (megawatts)	Calpine Interest Percentage	Calpine Net Interest (megawatts)
Acadia Eunice, LA	1,000.0	50%	500.0
Blue Heron Indian River County, FL	1,080.0	100%	1,080.0
Calgary Energy Centre Calgary, Alberta	250.0	100%	250.0
Decatur Decatur, AL	700.0	100%	700.0
Freestone Energy Center Freestone County, TX	1,000.0	100%	1,000.0
Fremont Energy Center Fremont, Ohio	540.0	100%	540.0
Hermiston Hermiston, OR	540.0	100%	540.0

TABLE 1 (continued)

Hillabee Tallapoosa County, Ala	700.0	100%	700.0
Lone Oak Lowndes County, Miss.	800.0	100%	800.0
Metcalf San Jose, CA	600.0	50%	300.0
Ontelaunee Ontelaunee, PA	545.0	100%	545.0
Osprey Auburndale, FL	540.0	100%	540.0
Towantic Oxford, CT	500.0	100%	500.0
Wawayanda Middletown, NY	540.0	100%	540.0
West Phoenix Phoenix, AZ	545.0	50%	272.5

III. DESCRIPTION OF THE OSPREY ENERGY CENTER

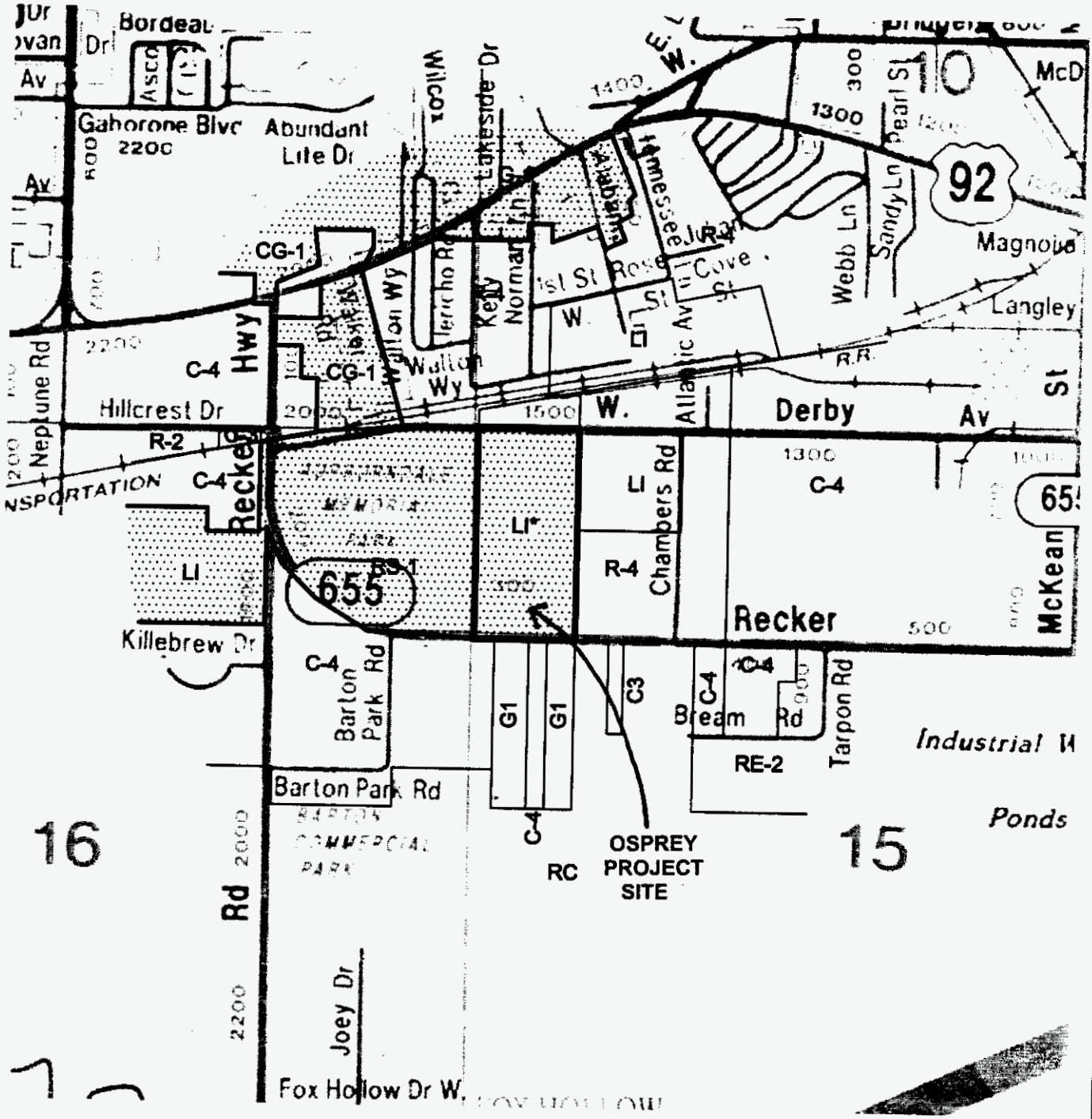
This section of the Exhibits describes the Osprey Energy Center, including the Project's location, site arrangement, major systems and facilities, associated facilities, capital costs and financing, fuel supply, operational reliability, permitting and construction schedules, and operation and maintenance plan.

A. Site Location and Land Use Designation.

The Osprey Energy Center site will be located in the City of Auburndale, in Polk County, Florida, on approximately 19.5 acres situated approximately 1.5 miles southwest of downtown Auburndale and approximately 37 miles east of Tampa Bay. The site is a non-producing citrus grove zoned "Light Industry" and is currently unused. Land uses adjacent to the site include the TECO Recker Substation and 230 kV transmission line; the existing Auburndale Power Plant, which is a 150 MW natural gas-fired (with oil backup fuel) cogeneration plant owned by Auburndale Power Partners; two small residential enclaves; a cemetery; and commercial and industrial businesses. Access to the site will be from West Derby Avenue, a two-lane county collector road. A map of the site location is included here as Figure 2.

B. Site Arrangement.

A drawing of the expected layout of the generators, cooling towers and water processing and storage facilities is shown in Figure 3, the site plan for the Project. The general arrangement of the power plant on the Project site is shown in Figure 4, the



Auburndale Zoning Districts
- LI Light Industry
- RS-1 Single Family Residentual
- GI General Industrial

Polk County Zoning Disticts
- C-3 Regional Commercial
- C-4 Heavy Commercial
- GI General Industrial
- R-4 Residentual
- RC Rural Conservation
- RE-2 Rural Estates

* Site has been annexed. Zoning designation is based on Auburndale District

REFERENCE

City of Auburndale Zoning Map
Polk County Zoning Map, Feb., 2000

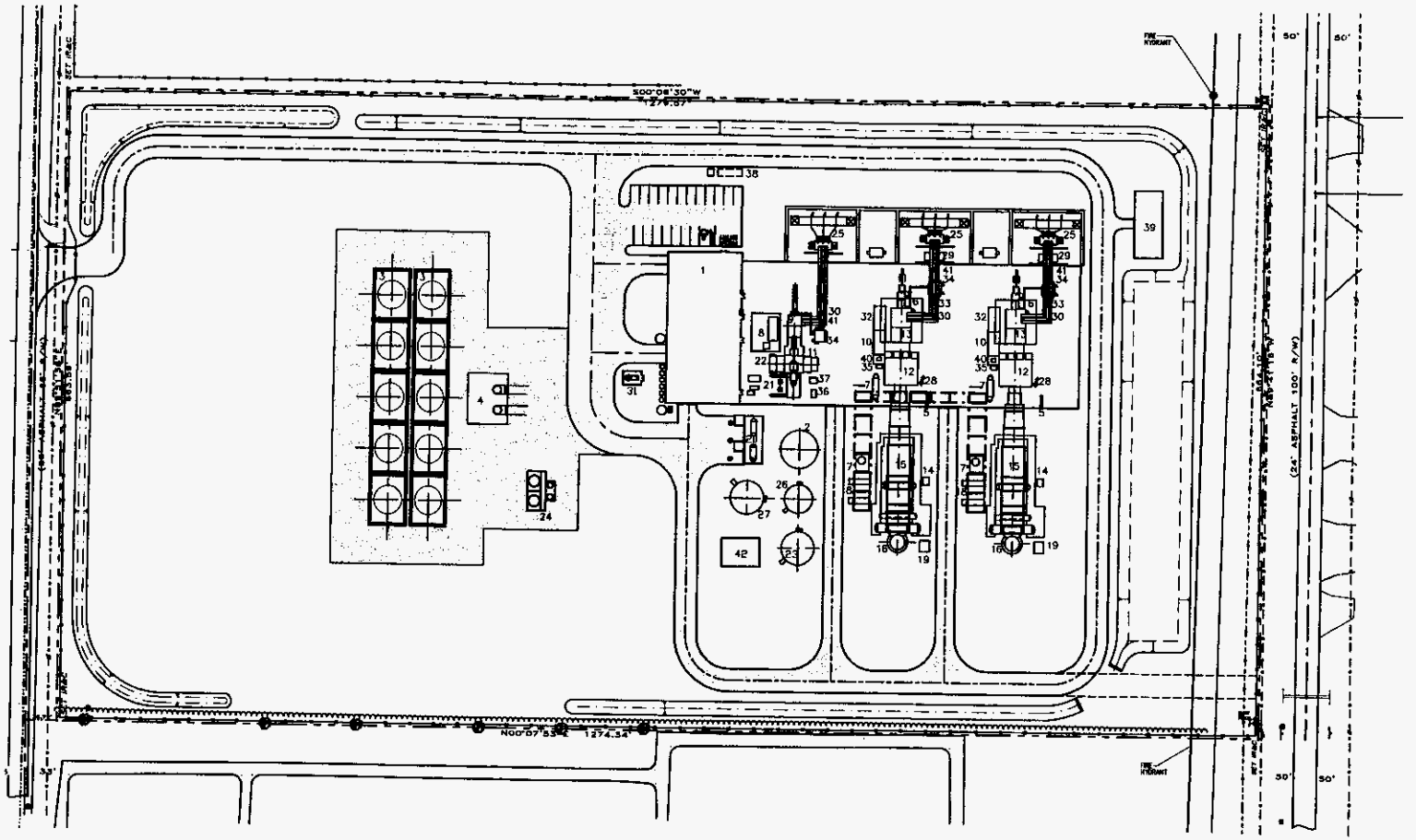
0 500' 1000'
SCALE

Golder Associates
Tampa, Florida

FIGURE 2
SITE LOCATION RELATIVE TO LOCAL LANDMARKS AND ZONING DESIGNATIONS

Client / Project
Calpine Construction Finance Company, L.P.
Osprey Energy Center

CAD BY: CDT	SCALE: 1"=1000'	Job No. 993-9570
CHK BY: CA	DATE: 02/08/00	FIGURE
REV BY: -	FILE No.: fig2_2_2-2.dwg	



Legend

1. ADMINISTRATION AND MAINTENANCE BUILDING
2. SERVICE WATER TANK
3. COOLING TOWER
4. CIRCULATING WATER PUMPS
5. FUEL GAS HEATER
6. COMBUSTION TURBINE AIR INLET FILTER
7. KETTLE BOILER
8. LUBE OIL SKID
9. ST GENERATOR
10. CT MECHANICAL PACKAGE
11. STEAM TURBINE
12. COMBUSTION TURBINE
13. CT GENERATOR
14. AMMONIA INJECTION SKID
15. HEAT RECOVERY STEAM GENERATOR
16. HRSG STACK
17. HRSG BLOWDOWN TANK
18. BOILER FEED PUMP HOUSE
19. CEMS
20. AMMONIA STORAGE TANKS
21. CONDENSATE PUMPS
22. CONDENSER
23. DEMINERALIZED WATER STORAGE TANK
24. WET SURFACE AIR COOLER
25. GENERATOR STEP-UP TRANSFORMER
26. WASTEWATER TANK
27. RAW WATER STORAGE TANK
28. FUEL GAS SCRUBBER
29. UNIT AUX. TRANSFORMER
30. ISO-PHASE BUS DUCT
31. STANDBY GENERATOR
32. ELECTRICAL EQUIPMENT PACKAGE
33. GENERATOR VT & SURGE CUBICLE
34. GENERATOR EXCITATION SKID
35. COMPRESSOR WATER WASH SKID
36. STEAM JET AIR EJECTORS
37. GLAND STEAM CONDENSER
38. OIL/WATER SEPARATOR
39. GAS METER BUILDING
40. HYDRAULIC SKID
41. EXCITATION TRANSFORMER
42. CENTRAL PUMP HOUSE

N

120' 0 120'

scale feet

Golder Associates — Tampa, Florida

Client / Project
Calpine Construction Finance Company, L.P.
Osprey Energy Center

FIGURE 3
Site Plan

CAD BY:	CDT	SCALE:	1"=120'	Job No.	993-9570
CHK BY:	RAZ	DATE:	03/08/00	FIGURE	
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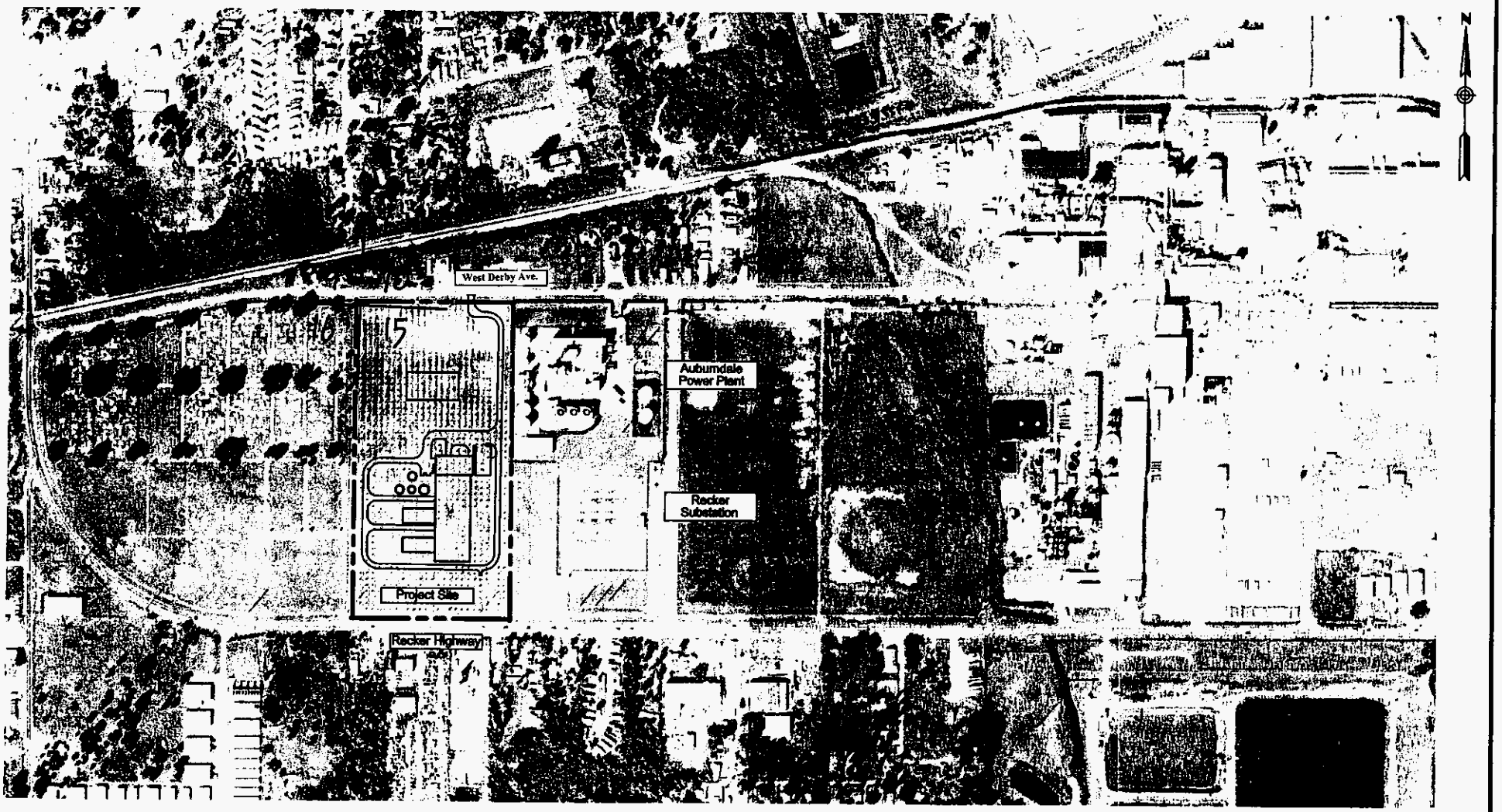


400' 0 400'
scale feet

Golder Associates
Tampa, Florida

Client / Project
Calpine Construction Finance Copany, L.P.
Osprey Energy Center

FIGURE 4
PLOT PLAN

CAD BY: CDT	SCALE: 1"=400'	Job No. 993-9570
CHK BY: RAZ	DATE: 03/02/00	FIGURE
REV BY: —	FILE No.: plot-plan.dwg	

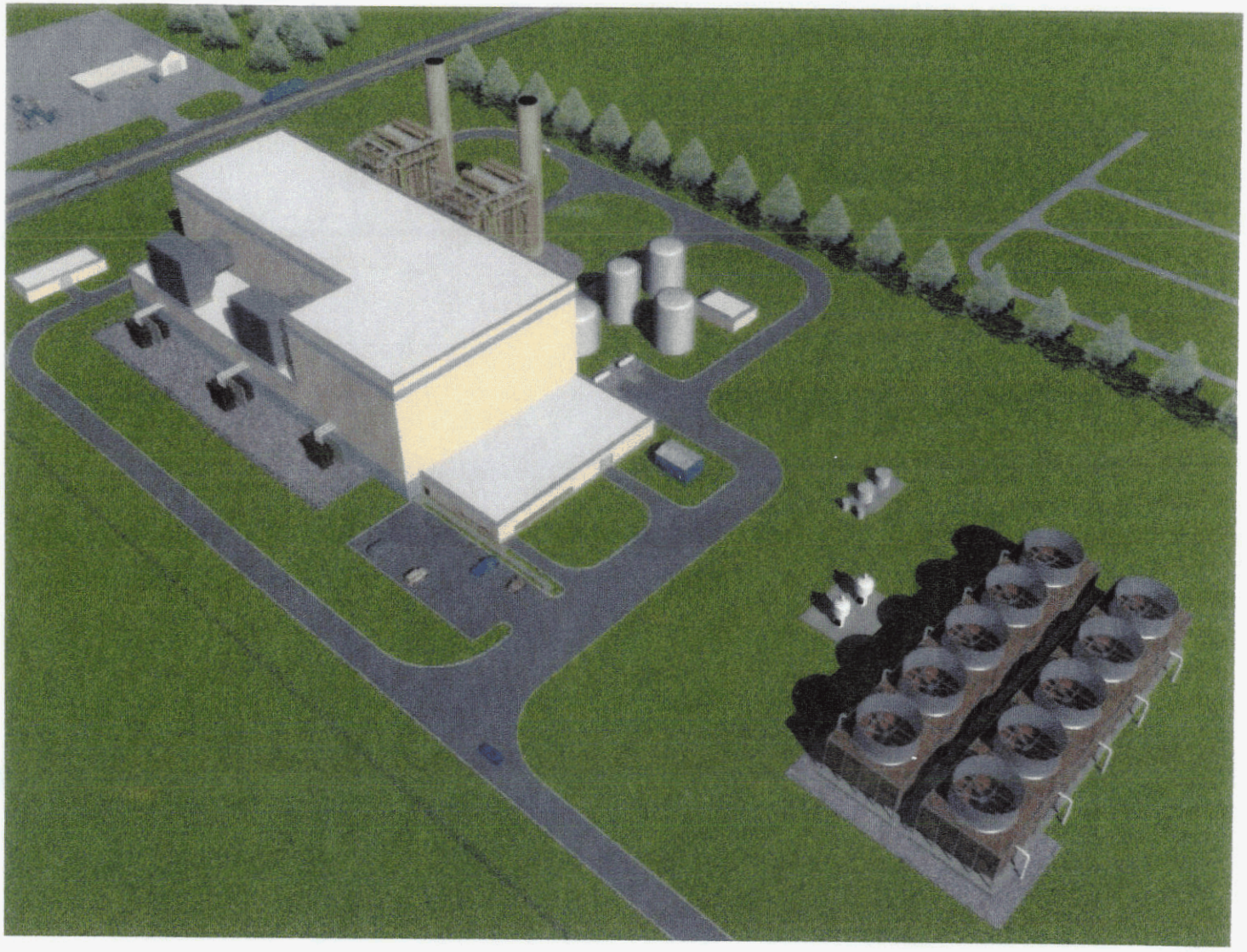
plot plan for the Project. An artist's computer-generated rendering of the Osprey Project is presented in Figure 5.

C. **Description of Major Systems and Facilities.**

The Project will produce 527 MW at average ambient temperature, excluding duct-firing and power augmentation, and is rated at 506 MW at summer peak conditions and 587 MW at winter peak conditions (also without power augmentation or duct-firing). The power block will consist of two advanced-technology, dry low-NO_x combustion turbine generators with the capability to use power augmentation to increase the CTGs' power output, two matched heat recovery steam generators that include duct-firing capability to increase the steam generation capability of the HRSGs, and one steam turbine generator rated for the full steam production capacity (including duct-firing) of the HRSGs. Figure 6 depicts the cycle of a gas-fired combined cycle power plant with a single combustion turbine and a single heat recovery steam generator.[3] Figure 7 presents a one-line electrical diagram for the Project. The Project will be interconnected to the Peninsular Florida bulk transmission grid at the TECO Recker Substation and associated 230 kV transmission line located adjacent to the east boundary of the site.

The Osprey Project will utilize a combination of reclaimed water and well water for its process and makeup water supply. Reclaimed water will be supplied from the City of Auburndale's

[3] The Project will have two combustion turbines and two heat recovery steam generators.



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Client / Project

Calpine Construction Finance Company, L.P.
Osprey Energy Center

FIGURE 5
PERSPECTIVE RENDITION

CAD BY:	CDT	SCALE:	NTS	Job No.	993-9570
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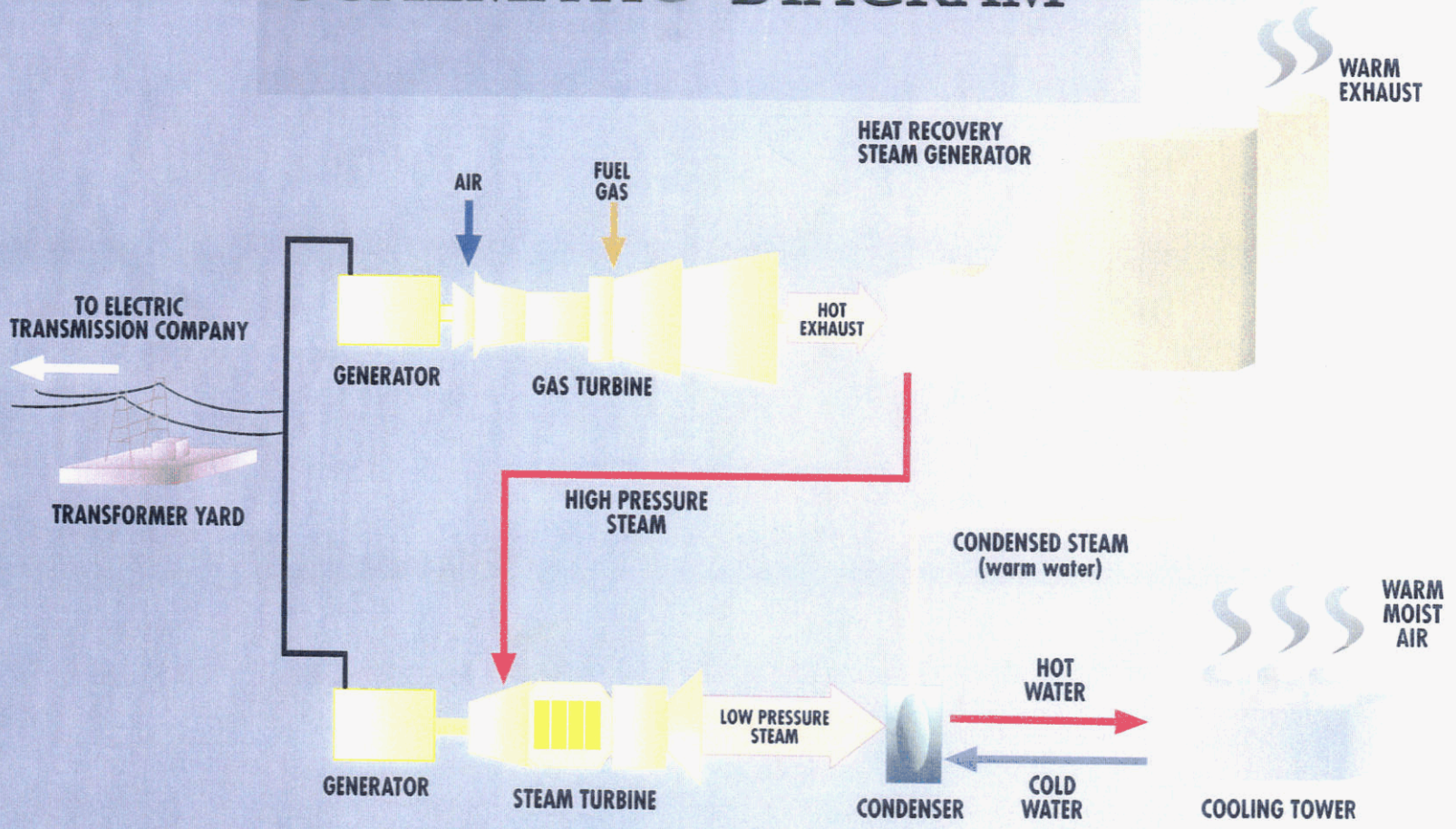
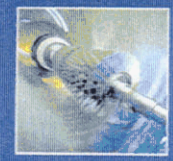
REV BY:	–	FILE No.:	fig1_3_3-1.dwg		

FIGURE 6
COMBINED-CYCLE GENERATION
SCHEMATIC DIAGRAM



CALPINE EASTERN



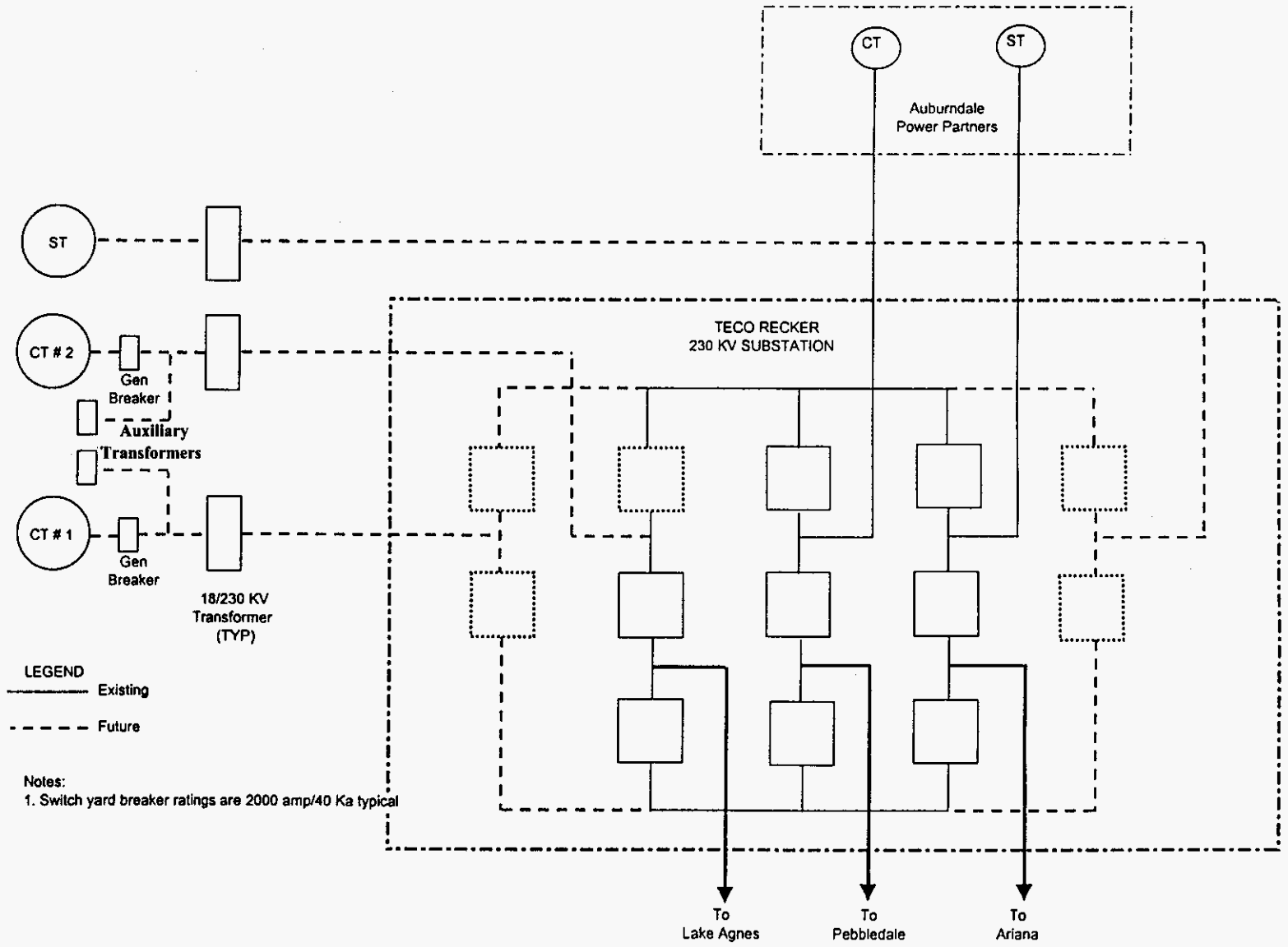


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FIGURE 7
STATION ONE-LINE
ELECTRICAL DIAGRAM

Client / Project

Calpine Construction Finance Company, L.P.
Osprey Energy Center

CAD BY:	CDT	SCALE:	NTS	Job No.	993-9570
CHK BY:	RAZ	DATE:	03/07/00	FIGURE	3.1.0-3
REV BY:	-	FILE No.:	fig3_1_0-3.dwg		

Allred Wastewater Treatment Plant. The Project will require the construction of reclaimed water pipelines to intertie with the City of Auburndale's wastewater treatment facilities. The pipelines to the Allred wastewater treatment facilities will be approximately one mile in length and will be constructed in existing public rights-of-way. Additionally, other minor pipeline modifications will be made to enhance discharge capability. The reclaimed water supply and return pipelines will run along the north Recker Highway right-of-way to the Osprey Project site boundary. The City of Auburndale will obtain the necessary permits for the water and wastewater pipelines. The remainder of the Osprey Project's water supply will be provided by new on-site wells withdrawing water from the Upper Floridan aquifer. The Project's preliminary water balance for average conditions is shown in Figure 8, and the preliminary water balance for summer peak conditions is shown in Figure 9.

The Osprey Energy Center is expected to have an estimated Equivalent Availability Factor of approximately 94.5 percent, and, based on production simulation analyses of the Project's operations within the Peninsular Florida bulk power supply system, an average capacity factor of approximately 91 percent. The Project's direct construction cost is projected to be approximately $194.8 million, or approximately $355 per kW of installed capacity (based on 548 MW output at ISO temperature and humidity conditions).

The Project has been designed with careful consideration of environmental issues and has a responsible environmental profile.

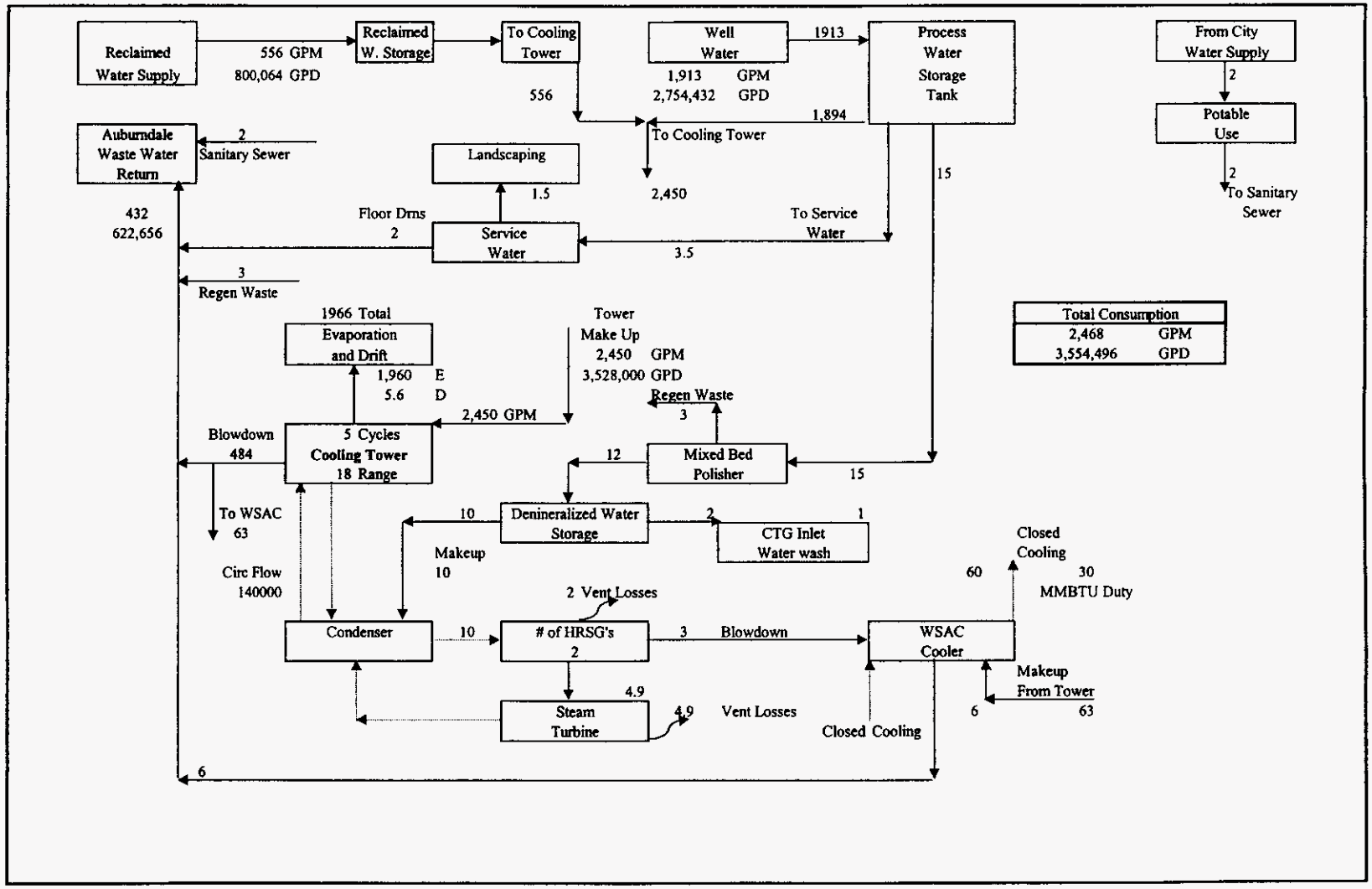

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FIGURE 8
AVERAGE DAILY WATER BALANCE
(Preliminary)

Client / Project

Calpine Construction Finance Company, L.P.
Osprey Energy Center

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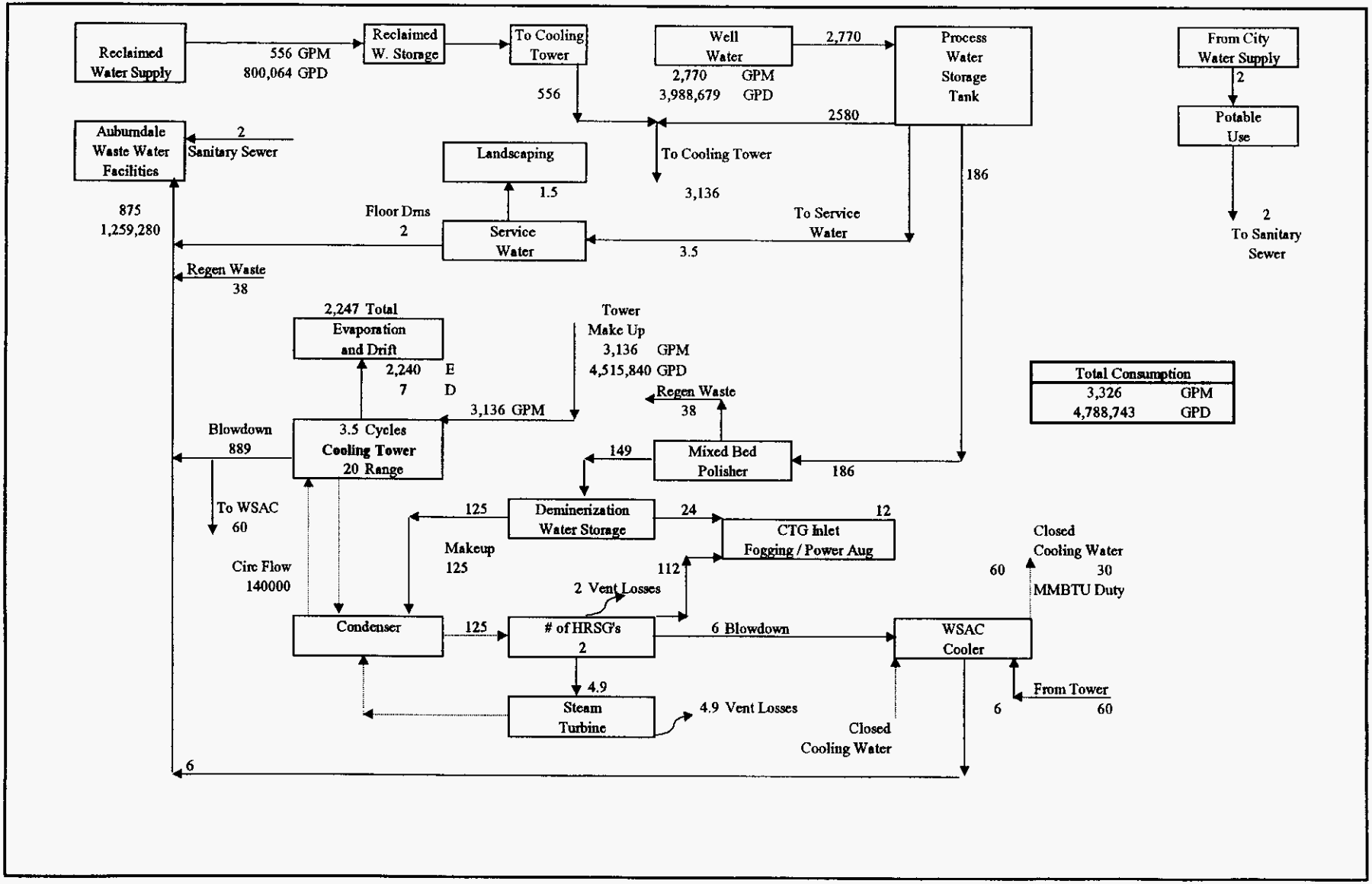

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FIGURE 9
MAXIMUM DAILY WATER BALANCE-SUMMER PEAK
(Preliminary)

Client / Project

Calpine Construction Finance Company, L.P.
Osprey Energy Center

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CHK BY:	RAZ	DATE:	03/01/00		
REV BY:	–	FILE No.:	fig3_5_0-2.dwg		3.5.0-2

The Project will be designed to control NO_x emissions using Best Available Control Technology ("BACT") measures, including state-of-the-art dry low-NO_x combustion technology and selective catalytic reduction ("SCR"). The Project will meet NO_x emission levels no greater than 4.0 ppmvd, corrected to 15 percent oxygen. Both the use of clean-burning natural gas and good combustion practices will minimize sulfur dioxide, carbon monoxide, and volatile organic compound emissions and ensure that such emissions stay within permitted limits. See Table 2 of these Exhibits.

More detailed plant performance and emissions data for the Project are shown in Table 3 of these Exhibits. An overall schematic diagram of the power generation cycle is presented in Figure 10.

D. **Transmission Facilities**.

The Osprey Energy Center will be electrically interconnected to the Peninsular Florida bulk transmission grid at TECO's Recker Substation, which is located adjacent to the east boundary of the Project site. The Recker Substation is tied to the transmission grid by three 230 kV transmission lines: one line that interconnects to the Lake Agnes 230 kV Substation, one line that interconnects with the Pebbledale Substation via the Crews Lake Substation, and one line that interconnects with the Ariana Substation. The Peninsular Florida transmission grid in the region of the Osprey Energy Center is shown in Figure 11.[4]

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[4] This information regarding transmission facilities and studies is provided to the Commission for informational purposes only. No transmission facilities are proposed in the Site

TABLE 2

OSPREY ENERGY CENTER
PROJECT PROFILE

Expected Plant Capacity:

a.	Average ambient rating (74°F, 80% R.H.):	527 MW
b.	Summer (95°F, 80% R.H.):	506 MW
	With Duct-firing & Power Augmentation:	588 MW
c.	Winter (32°F, 38% R.H.):	587 MW
	With Duct-firing & Power Augmentation:	675 MW
d.	ISO (59°F, 60% R.H.):	548 MW

Project Energy Production: Approximately 4,300,000 MWH/year (not including duct-firing or power augmentation)

Technology Type: Two Siemens-Westinghouse 501F advanced firing temperature technology combustion turbines, two heat recovery steam generators, and one steam turbine generator in combined cycle configuration

Anticipated Construction Schedule:

a.	Project release date:	June	2001
b.	Construction mobilization date:	August	2001
c.	Commercial in-service date:	2nd quarter	2003

Fuel Use: Approximately 90 million Standard Cubic Feet of natural gas/day, annual average conditions (74°F, 80% R.H.), full load

Air Pollution Control Strategy: Dry low-NOx burners and SCR

Cooling Method: Wet Cooling Tower

Total Site Area: 19.5 acres (approximate)

Construction Status: Planned

Certification Status: Need Determination Petition and Site Certification Application filed.

Status with Federal Agencies: FERC has issued its order granting Calpine market-based rate authority.

TABLE 2

OSPREY ENERGY CENTER
PROJECT PROFILE
(CONTINUED)

Projected Unit Performance Data:

Planned Outage Factor (POF):	3.5%
Forced Outage Factor (FOF):	2.0%
Equivalent Availability Factor (EAF):	94.5%
Estimated Annual Average Capacity Factor (%):	91.0%

Average Net Operating Heat Rate (ANOHR): 6800 Btu/kWh (HHV) (74°F, 80°R.H.) expected

Project Unit Financial Data (per Calpine Corporation):

Book Life (years):	35 years
Direct Construction Cost:	Approx. $194.8 million
AFUDC Amount:	Not applicable
Escalation ($/kW):	Not applicable
Fixed O&M ($/kW per year):	Proprietary
Variable O&M (4/MWH):	Proprietary
K-Factor:	Not applicable
Project Life:	35 years

Expected Plant Air Emissions:
NO_x: 4.0 ppmvd @15% O_2
SO_2: 20.8 lbs/hour
CO: 10 ppm

New Transmission Lines Required: None

Gas Pipeline Required: None

Water Requirements:
(Including Reclaimed Water)
Approx. 4.79 MGD summer peak Conditions (95°F, 80 R.H.), (with power augmentation and duct-firing)
Approx. 3.55 MGD average (74°F, 80 R.H.), (without power augmentation or duct-firing)

Wastewater Discharge:
1.259 MGD summer peak conditions (with power augmentation and duct-firing)
.622 MGD average (5 cycles of concentration without power augmentation and duct-firing)

TABLE 3
OSPREY ENERGY CENTER
Estimated Plant Performance and Emissions Data

Percent Load		100%	100%	100%	100%	75%	75%	75%	75%	60%	60%	60%	60%	100%
Ambient Temperature	F	95	74	59	32	95	74	59	32	95	74	59	32	95
Ambient Relative Humidity	%	80%	80%	60%	50%	80%	80%	60%	60%	80%	80%	60%	60%	80%
Net Cycle Power	MW	506	527	548	587	369	390	411	442	302	329	356	375	588
Net Cycle LHV Heat Rate	BTU/kW-hr	6,139	6,100	6,089	6,042	6,585	6,465	6,365	6,225	6,900	6,675	6,449	6,368	6,501
Net Gas Turbine Power	MW	334	347	362	387	233	249	265	286	186	199	211	228	367
Net Steam Cycle Power	kW	172,252	180,050	186,434	197,551	135,440	140,236	145,032	156,478	115,959	130,196	144,432	147,173	220,400
Adjusted Cycle LHV Eff.	%	55.0	56.3	56.0	56.4	52.0	53	53.6	54.8	49.5	51	52.9	53.5	52.5
CTG fuel flow (lb/h)- total for two CTGs	lb/hr	144,560	151,830	159,100	168,920	115,920	122,200	128,480	131,660	99,780	104830	109,880	114,300	159,680
CTG heat input, LHV basis (mmBtu/h)- total for two CTGs	MMBtu/hr	3,034	3,186	3,338	3,544	2,432	2,526	2,619	2,762	2,093	2,199	2,306	2,398	3,350
Duct burner heat input, LHV basis (mmBtu/h)- each burner	MMBtu/hr													250
CTG exhaust gas flow (lb/h)- total for two CTGs (two duct burners when on)	lb/hr	6,575,699	6,896,966	7,218,233	7,578,580	5,997,900	6,182,046	6,366,192	6,617,298	5,081,835	5,218,053	5,354,272	5,539,920	6,995,275
CTG exhaust gas composition (% by volume)														
Nitrogen	%	72.64	73.50	74.37	74.82	72.97	73.82	74.68	75.13	72.93	73.75	74.56	75.04	68.31
Argon	%	0.91	0.92	0.93	0.94	0.92	0.93	0.94	0.94	0.92	0.93	0.94	0.94	0.86
Oxygen	%	12.13	12.32	12.51	12.53	13.10	13.25	13.41	13.42	12.99	13.03	13.07	13.15	9.85
Carbon dioxide	%	3.70	3.72	3.74	3.79	3.26	3.30	3.34	3.39	3.31	3.40	3.49	3.52	4.26
Water	%	10.62	9.53	8.44	7.92	9.76	8.70	7.64	7.12	9.86	8.90	7.94	7.36	16.73
NOx as NO2 (lb/h)- total for two stacks	lb/hr	50.4	53.0	55.5	58.9	40.4	41.9	43.5	45.9	34.8	36.5	38.3	39.8	62.9
based on ppmvd @ 15% O2	ppm	4	4	4	4	4	4	4	4	4	4	4	4	4
CO (lb/h)- total for two stacks	lb/hr	78	86	86	90	62	64	66	70	266	279	292	304	279
based on ppmvd @ 15% O2	ppm	10	10	10	10	10	10	10	10	50	50	50	50	29
VOC as CH4 (lb/h)- total for two stacks	lb/hr	9.9	10.4	10.9	11.5	14.8	15.3	15.9	16.7	12.7	13.3	14.0	14.5	24.8
based on ppmvd @ 15% O2	ppm	2.3	2.3	2.3	2.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.6
SO2 (lb/h)- total for two stacks	lb/hr	18.8	19.8	20.7	22.0	15.1	15.7	16.3	17.2	13.0	13.7	14.3	14.9	23.9
Particulates as PM10 (lb/h)- total for two stacks	lb/hr	38.0	40.1	42.2	44.5	33.8	35.1	36.4	38.0	28.7	29.8	30.9	32.1	45.6
HRSG exit gas velocity (ft/s) based on 19 ft diameter stack	ft/s	55.2	57.6	60.0	62.9	50.2	51.5	52.8	54.8	42.5	43.5	44.5	45.9	60.0

FIGURE 10
OSPREY ENERGY CENTER
CYCLE SCHEMATIC DIAGRAM

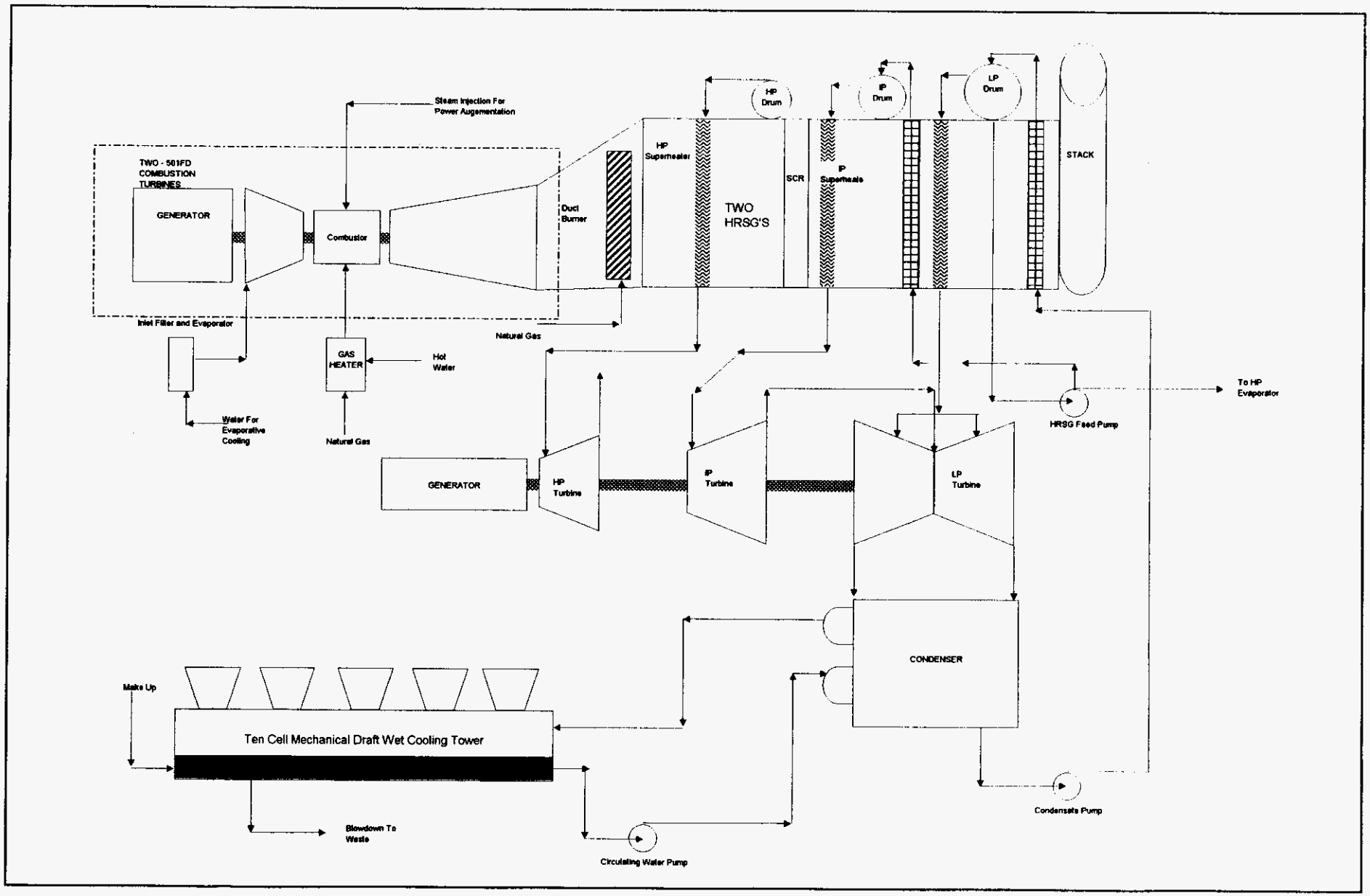
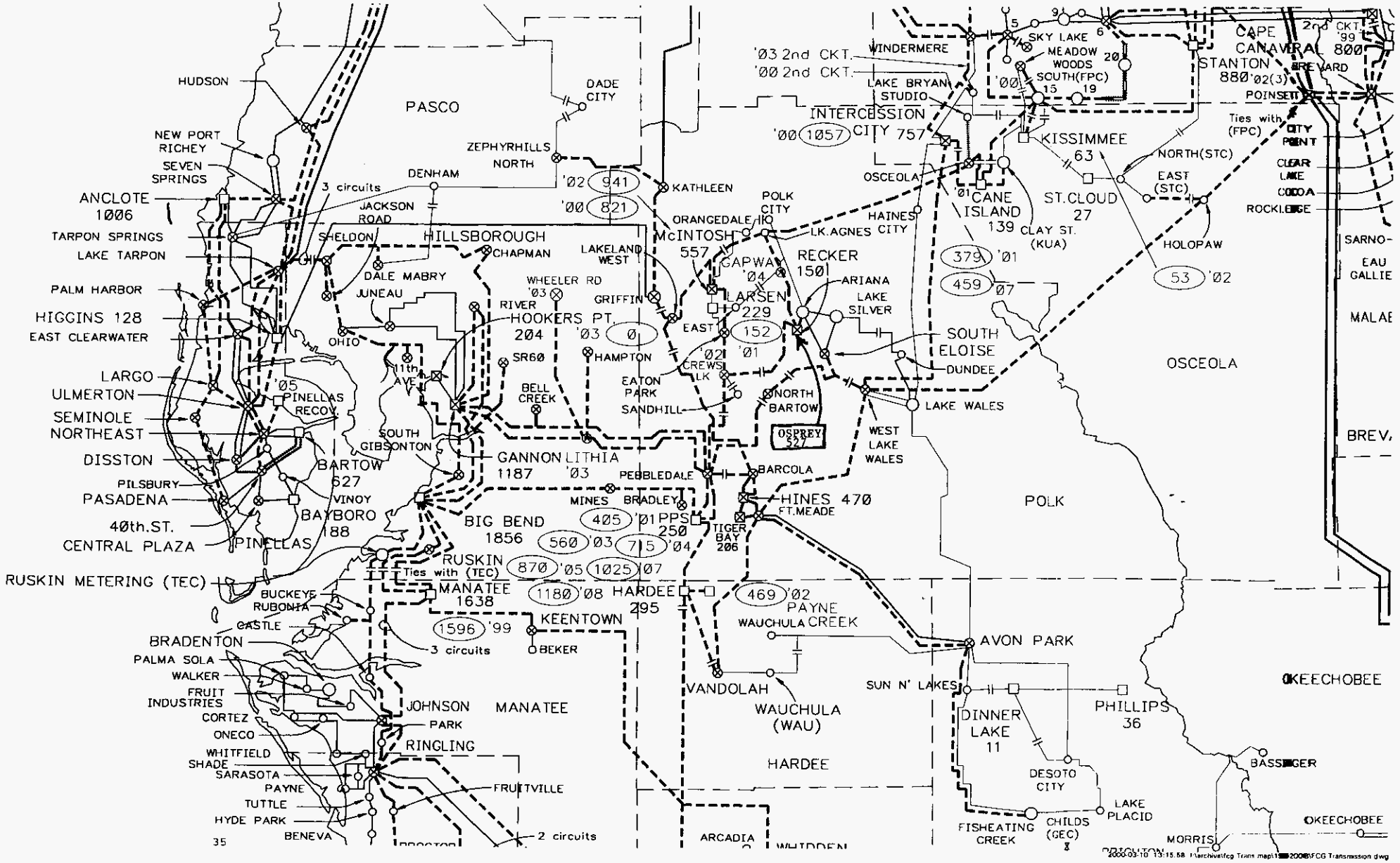


FIGURE 11
REGIONAL TRANSMISSION MAP
OF WEST CENTRAL FLORIDA



Transmission system impact studies prepared for Calpine included load flow analyses, transient stability analyses, and short circuit analyses. The transmission system impact studies indicate that, with certain upgrades of transmission facilities, the existing Peninsular Florida transmission grid will accommodate the delivery of the Osprey Project's net output for use in Peninsular Florida, regardless which Florida utilities purchase and receive the Project's output.[5] The studies also indicate that, under normal operating conditions, i.e., with all facilities in service, the Project will not materially burden the transmission system or violate any transmission constraints or contingencies in Peninsular Florida. Figure 12 depicts projected load flows in the vicinity of the Osprey Project, with the Project in service, in the summer of 2004.[6]

The transmission upgrades referenced above have not been finalized but may include: (1) upgrading the conductor (to accommodate more power) and poles (to accommodate the heavier conductor) on a 1.4-mile section of the Recker to Crews Lake transmission line; (2) upgrading all conductor on the 6.3-mile

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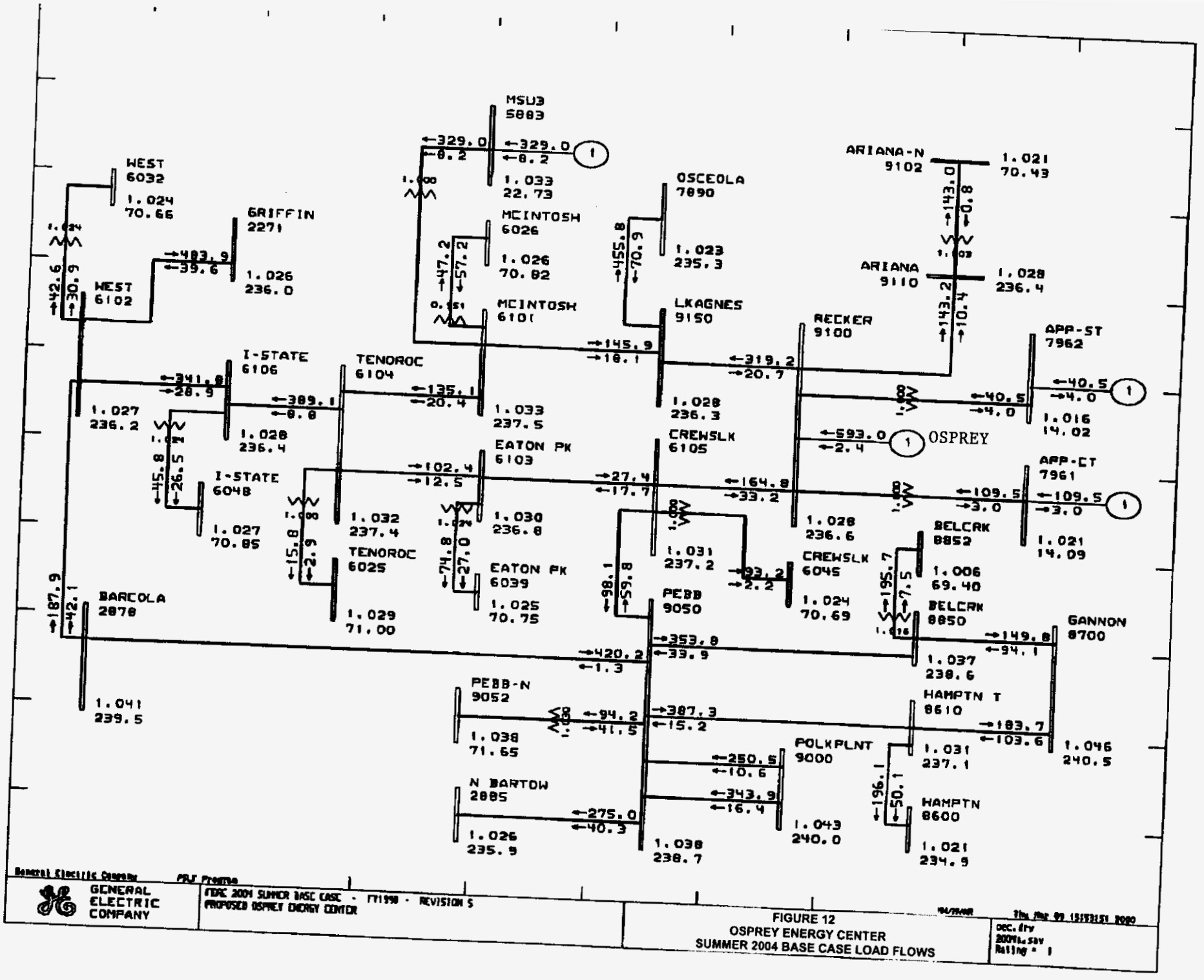
Certification Application for the Osprey Energy Center.

[5] Arrangements for the transmission of the Osprey Project's power to other Florida utilities, including Calpine's obligations to pay for any required transmission upgrades, will be made pursuant to TECO's transmission tariffs.

[6] The Osprey Project's output value shown in Figure 12 is 593 MW, which differs slightly from the maximum summer output level of 588 MW shown in Table 3. This difference resulted from the transmission load flow studies being performed using the preliminary summer output level for the Project.


MSU3
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1.033
22.73
WEST
6032
1.024
70.66
GRIFFIN
2271
1.026
236.0
WEST
6102
1.027
236.2
MCINTOSH
6026
1.026
70.82
MCINTOSH
6101
OSCEOLA
7890
1.023
235.3
LKAGNES
9150
1.028
236.3
ARIANA-N
9102
1.021
70.43
ARIANA
9110
1.028
236.4
RECKER
9100
APP-ST
7962
1.016
14.02
I-STATE
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236.4
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EATON PK
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OSPREY
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APP-CT
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BELCRK
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PEBB
9050
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8850
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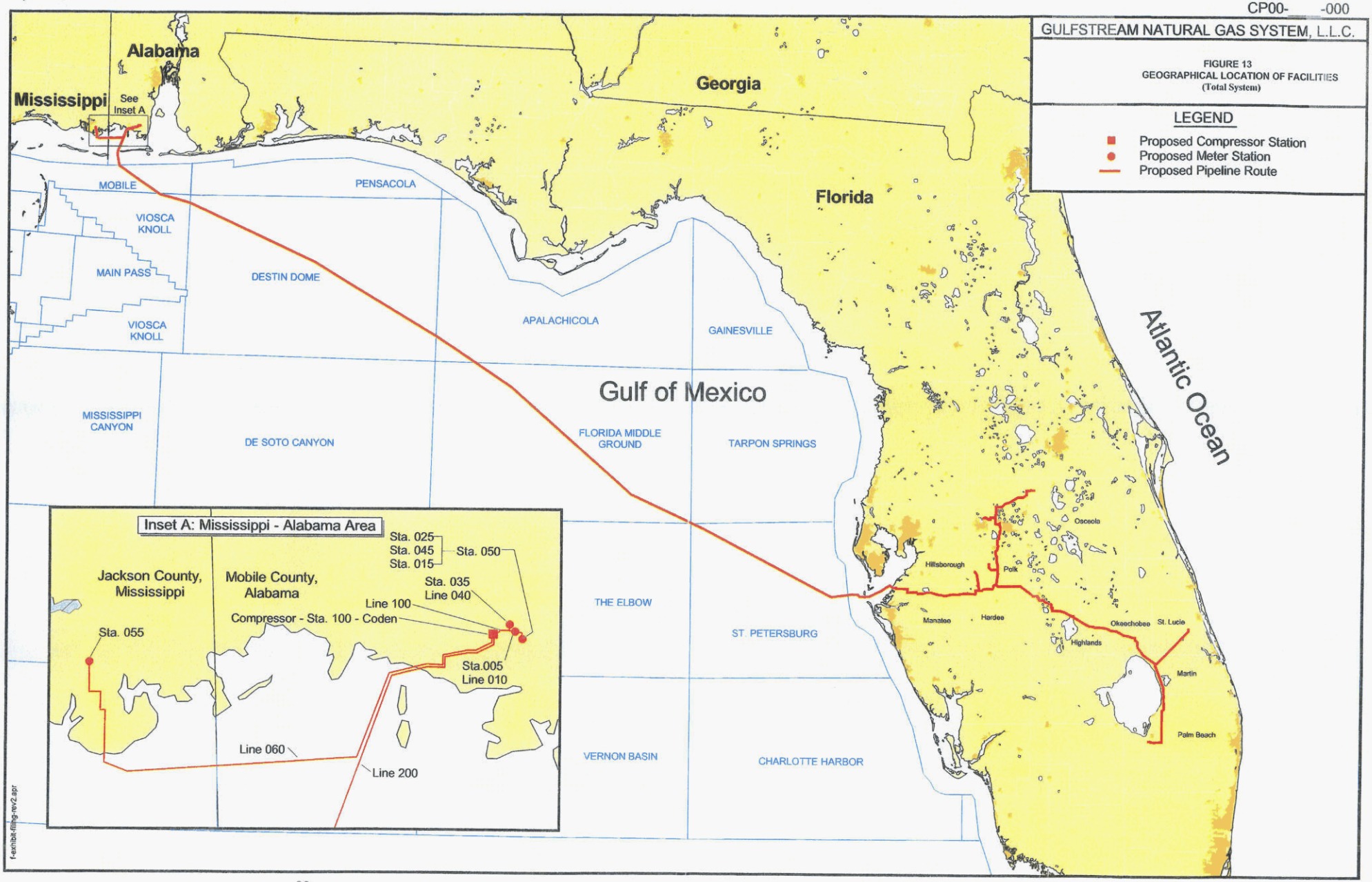
238.6
GANNON
8700
BARCOLA
2878
1.041
239.5
PEBB-N
9052
1.038
71.65
HAMPTN T
8610
1.031
237.1
1.046
240.5
POLKPLNT
9000
1.043
240.0
N BARTOW
2885
1.026
235.9
HAMPTN
8600
1.021
234.9
1.038
238.7
GENERAL ELECTRIC COMPANY
FDEC 2004 SUMMER BASE CASE - FT1998 - REVISION 5
PROPOSED OSPREY ENERGY CENTER
FIGURE 12
OSPREY ENERGY CENTER
SUMMER 2004 BASE CASE LOAD FLOWS

Crews Lake to Pebbledale line, and upgrading the poles on approximately 3.2 miles of that line; and (3) upgrading the transformation capacity at TECO's Ariana Substation. The Ariana upgrades, which will be negotiated and implemented pursuant to TECO's transmission tariffs, may include adding cooling capacity to the existing 150 MVA transformer at the Ariana Substation, adding another 150 MVA transformer, or other measures.

Calpine expects to be represented on the Florida Reliability Coordinating Council.

E. Associated Facilities.

Natural gas will be provided to the Project through the trans-Florida pipeline being developed by Gulfstream Natural Gas System, L.L.C. Gulfstream will obtain all necessary permits for this pipeline in separate proceedings. The pipeline will run from the Mobile Bay area of Alabama and Mississippi across the Gulf of Mexico to its landfall on the southeastern shore of Tampa Bay. From there, the pipeline will run east and southeast to delivery points in west-central, central, and southeast Florida. See Figure 13. In the vicinity of the Osprey Project, the Gulfstream pipeline will run generally north through Polk County. See Figures 13 and 14. A 16-inch diameter lateral pipeline will be constructed by Gulfstream from Station number 430 to the boundary of the Osprey Energy Center site. Figure 15 is a map of the Gulfstream pipeline's route in the local vicinity of the Project. The pipeline pressure at the Calpine site is guaranteed by Gulfstream



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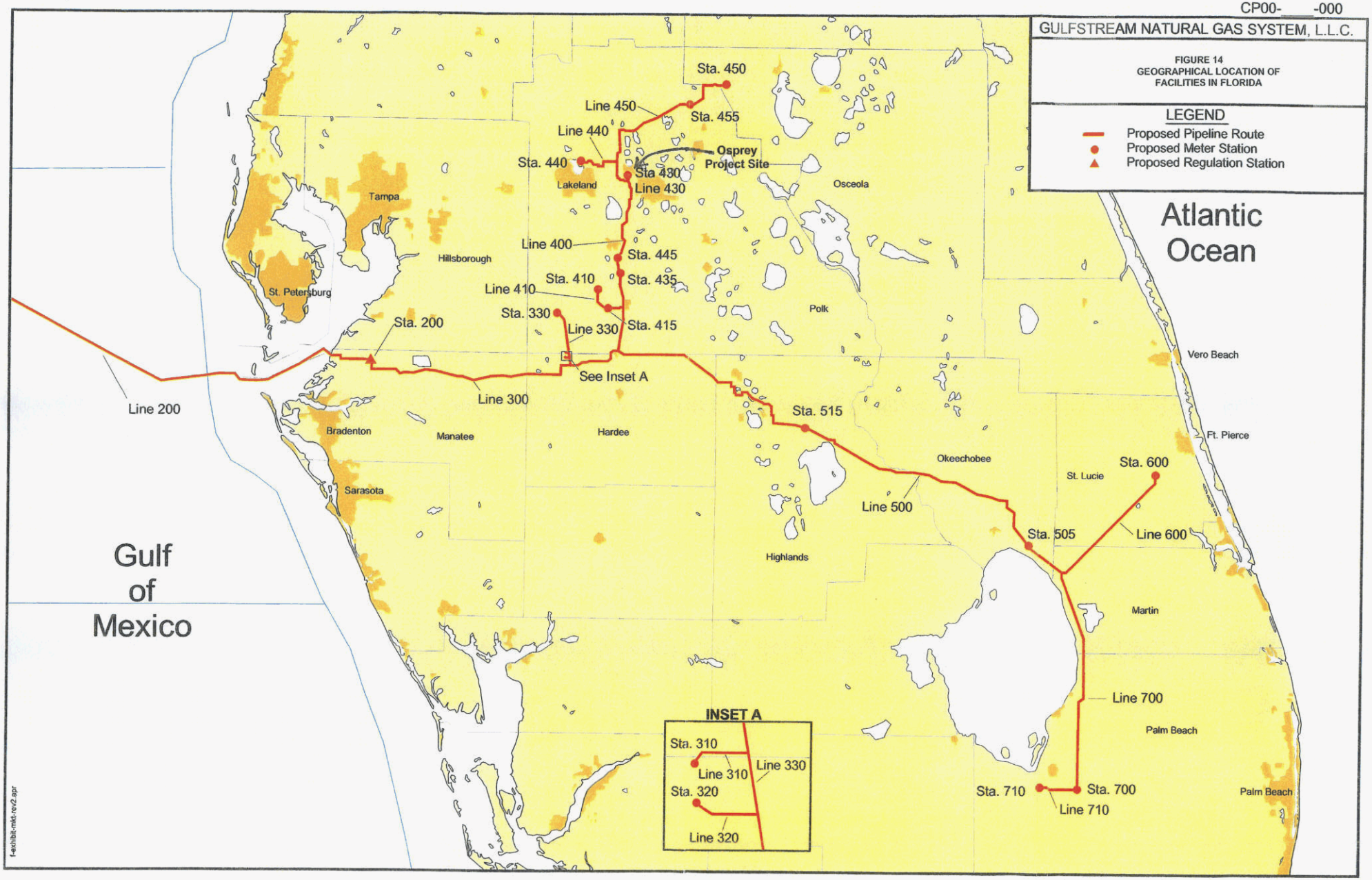
GULFSTREAM NATURAL GAS SYSTEM, L.L.C.
FIGURE 14
GEOGRAPHICAL LOCATION OF
FACILITIES IN FLORIDA
LEGEND
Proposed Pipeline Route
Proposed Meter Station
Proposed Regulation Station
Atlantic Ocean
Gulf of Mexico
Sta. 450
Line 450
Sta. 455
Line 440
Sta. 440
Osprey Project Site
Sta. 430
Line 430
Lakeland
Osceola
Tampa
Line 400
Sta. 445
Hillsborough
Sta. 410
Sta. 435
Line 410
St. Petersburg
Polk
Sta. 330
Line 330
Sta. 415
Sta. 200
See Inset A
Line 200
Line 300
Vero Beach
Sta. 515
Bradenton
Manatee
Hardee
Ft. Pierce
Okeechobee
Sta. 600
St. Lucie
Sarasota
Line 500
Sta. 505
Line 600
Highlands
Martin
Line 700
Palm Beach
INSET A
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Line 330
Sta. 320
Line 320
Sta. 710
Sta. 700
Line 710
Palm Beach
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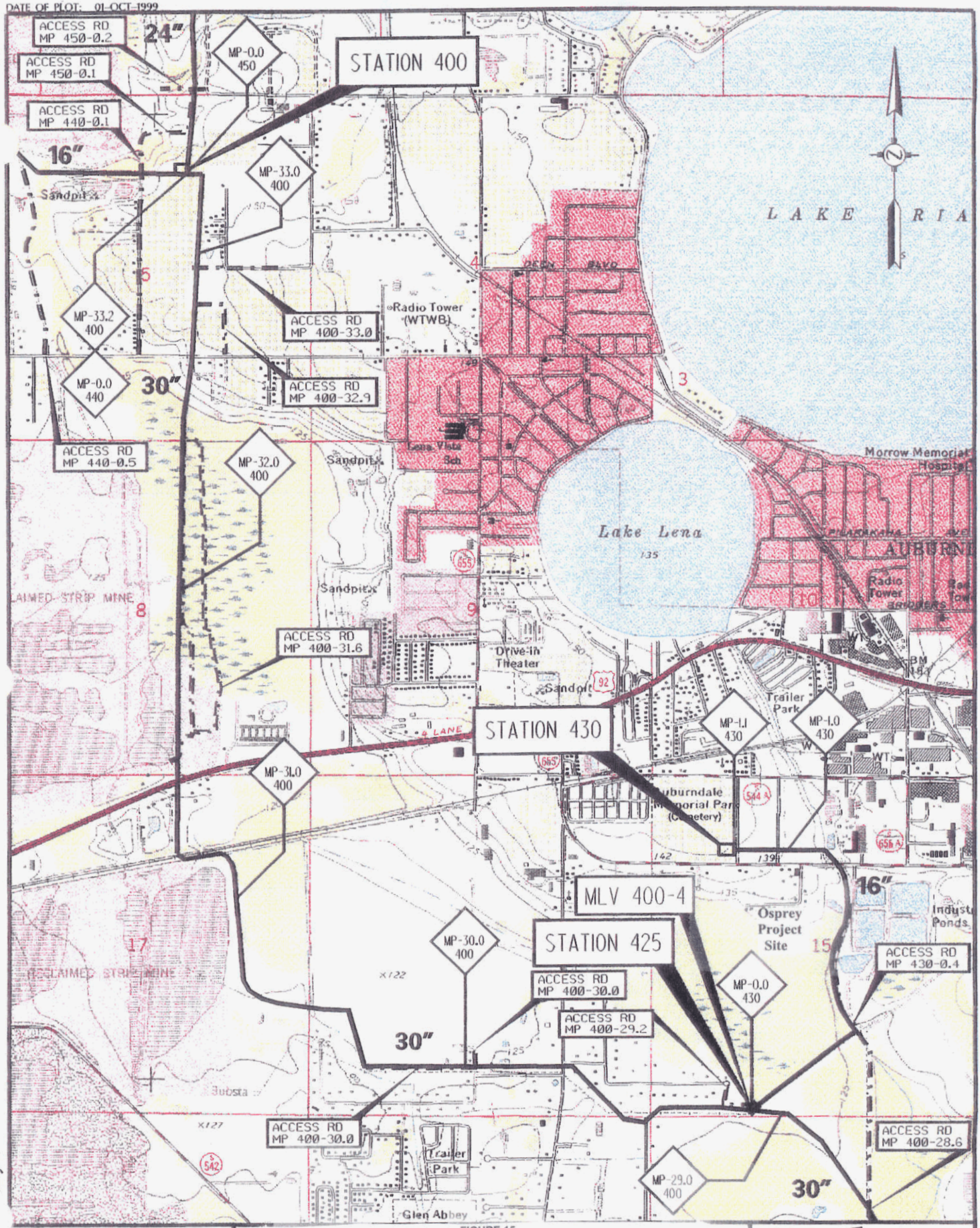


LOCATION MAP

FIGURE 15
GULFSTREAM NATURAL GAS SYSTEM, L.L.C.
GEOGRAPHICAL LOCATION OF FACILITIES
(Auburndale/Osprey Area)

LOC.	POLK COUNTY, FLORIDA		REV. 0
CKD. BY	ENG.	DATE 10-15-99	W.O.
DRN. BY	SCALE 1"=2000'	DWG. NO. 9 of 9	

Gulfstream Natural Gas System

to be a minimum of 650 psig.[7] Gas transportation for the Project will be pursuant to an executed Precedent Agreement between Calpine East Fuels, L.L.C. and Gulfstream. Pursuant to the Precedent Agreement, Gulfstream has committed to provide firm gas transportation service to operate the Project for a term of 20 years with renewal provisions beyond the initial term. A copy of the Precedent Agreement, redacted to protect confidential, proprietary business information, is included as Appendix B to these Exhibits.

Reclaimed water will be provided to the Project from the City of Auburndale's Allred Municipal Wastewater Treatment Plant (the "Allred Plant"). New pipelines will be required to connect the Project to the Allred Plant and the City of Auburndale's wastewater treatment facilities. The new pipelines (one supplying reclaimed water to the Project and one returning process water to the Allred facilities) will be approximately one mile in length and will be constructed in existing public rights-of-way. The reclaimed water supply and return pipelines will run along the north Recker Highway right-of-way to the Project site. The City of Auburndale will obtain all necessary permits for the water supply and process water return pipelines in separate proceedings, and these pipelines will be paid for by Calpine.

[7] Details of the natural gas transportation arrangements are provided for informational purposes only. Permitting of the pipeline will be sought by Gulfstream in a separate proceeding.

F. **Capital Cost of the Osprey Energy Center.**

The direct construction cost of the Osprey Energy Center is expected to be approximately $194.8 million. The natural gas pipeline will be constructed by Gulfstream at its expense.

G. **Project Financing.**

The Project will be constructed and brought into commercial service with a combination of equity and debt, with the debt being structured by Calpine through its construction revolver.

H. **Fuel Supply.**

The fuel for the Project will be natural gas. Pursuant to the executed Precedent Agreement between Calpine East Fuels, L.L.C. and Gulfstream, Gulfstream will provide firm gas transportation service for sufficient gas volumes to meet the Project's total fuel requirements. Natural gas fuel supply for the Project will be provided to Gulfstream receipt points by natural gas marketing companies or producers. Calpine will procure the natural gas supply for the Osprey Energy Center through an optimized combination of short-term contract purchases, long-term contract purchases, and spot market purchases. Specifically, Calpine will purchase natural gas from producers and marketing companies that have access to those natural gas treatment plants, processing plants, and interstate natural gas transmission systems with supply located in the vicinity of Mobile Bay, Alabama, and Pascagoula, Mississippi. In addition, Gulfstream proposes interconnections with the Mobile Bay Pipeline (Koch), the Destin Pipeline, the Dauphin Island Gathering Pipeline, the Mobile Bay Processing

Partners' Plant (DIGS Plant), the Williams Plant, and the Mobil Mary Ann Plant. The ultimate capacity of the proposed Gulfstream system will be more than one billion cubic feet per day. The Project's natural gas suppliers will be responsible for delivery into the Gulfstream pipeline system.

I. **Projected Operational Reliability.**

The combined cycle generating unit is high efficiency generation technology with high reliability and availability rates. With a heat rate of 6800 Btu per kWh (based on the Higher Heating Value of natural gas) at ambient site conditions, the net thermal efficiency is expected to be approximately 50.2 percent. The Project is estimated to have an Equivalent Availability Factor of 94.5 percent, which is based on an estimated Forced Outage Rate of 2.0 percent per year and a Planned Outage Rate of 3.5 percent per year. Based on production simulation analyses of the Osprey Project's operations within the Peninsular Florida power supply system, the Project is expected to operate at an annual average Capacity Factor of approximately 91 percent. Basic operational reliability information for the Project is shown on the Project Profile. See Table 2 above.

J. **Project Schedule.**

Conceptual engineering for the Project is complete. An in-depth site review has been completed. No areas of jurisdictional wetland vegetation were found on the site. No threatened or endangered species were found on the site. Detailed design and engineering for the Project are scheduled to begin in late 2000.

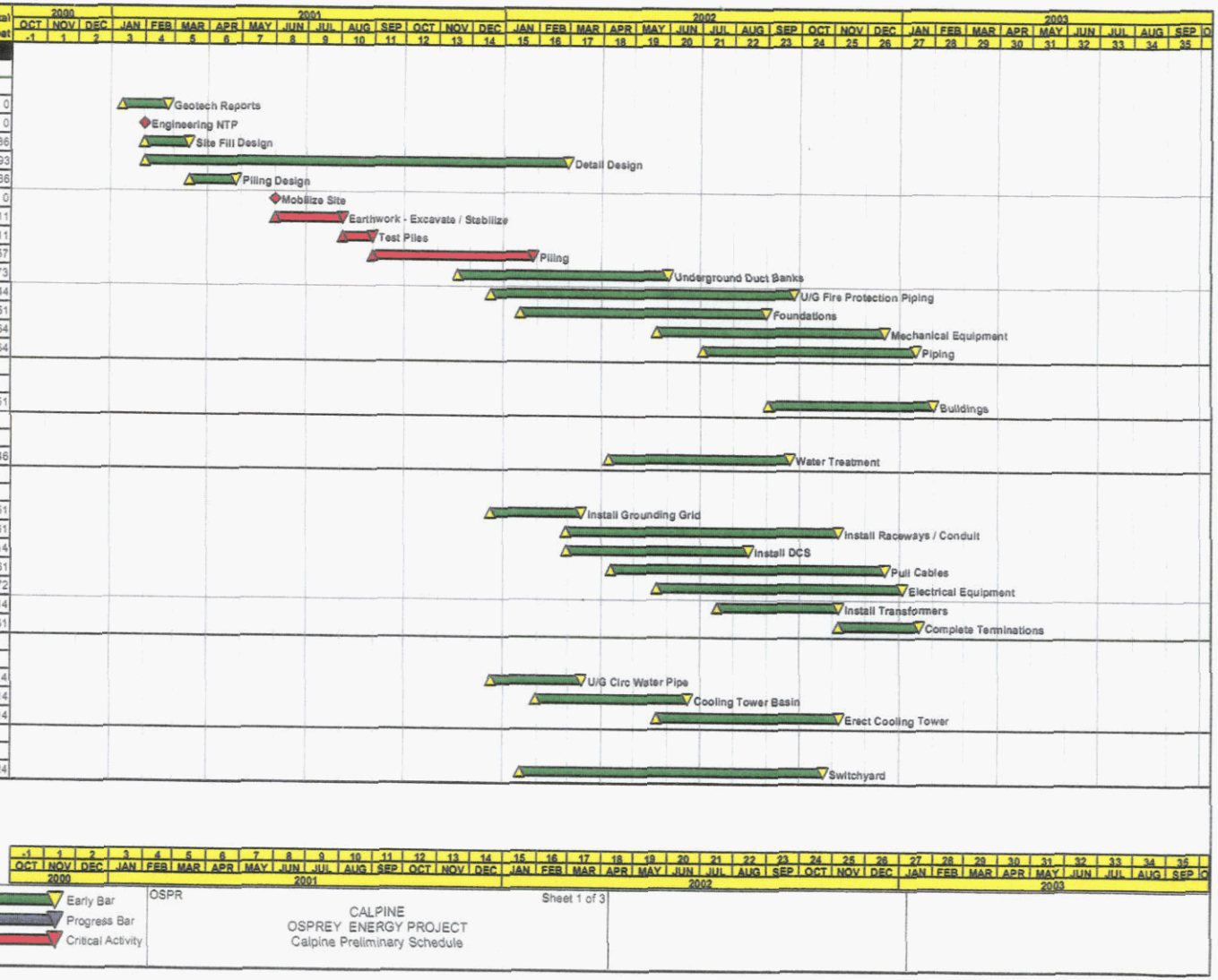
Two Siemens-Westinghouse Model 501F combustion turbines have been secured by deposit. Full release of the combustion turbines has already occurred and these components are in a delivery queue. Full release of the heat recovery steam generators and the steam turbine generators is projected to occur before construction begins. An engineering services provider has been selected and contract negotiations will be concluded at the appropriate time. A separate construction contract will be awarded (following bid solicitation and evaluation) to a contractor who will procure the balance of plant equipment. This contract will be awarded prior to the issuance of the site certification, which is expected in August 2001. The Project is scheduled to achieve commercial in-service status by the second quarter of 2003. The Project engineering and construction schedule is depicted in Figure 16.

K. **Regulatory and Permitting Schedules**.

Calpine filed its Petition and these accompanying Exhibits for the Project with the Commission on June 19, 2000, and the need determination hearing is expected to be held in October 2000. The Commission's order is expected in December 2000. Calpine filed the Site Certification Application ("SCA") for the Project on March 16, 2000, and the Department of Environmental Protection issued its notice that the SCA was complete on March 31, 2000. The only agency that has filed comments indicating that the application is insufficient is the Southwest Florida Water Management District. Calpine is in the process of responding to the District's remaining questions; Calpine's responses will be submitted by June 30, 2000.

FIGURE 16
OSPREY ENERGY CENTER
PRELIMINARY PROJECT SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur	Total Float
General Plant					
Balance of Plant					
Balance of Plant					
0900	Geotech Reports	11JAN01	21FEB01	30	0
1000	Engineering NTP	01FEB01*		0	0
1010	Site Fill Design	01FEB01	14MAR01	30	36
1030	Detail Design	01FEB01	27FEB02	280	393
1020	Piling Design	15MAR01	25APR01	30	36
1200	Mobilize Site	01JUN01*		0	0
1210	Earthwork - Excavate / Stabilize	01JUN01	02AUG01	45	111
1220	Test Piles	03AUG01	30AUG01	20	111
1230	Piling	31AUG01	27JAN02	150	157
1240	Underground Duct Banks	19NOV01	31MAY02	140	173
1260	U/G Fire Protection Piping	19DEC01	24SEP02	200	244
1250	Foundations	16JAN02	30AUG02	163	151
1260	Mechanical Equipment	22MAY02	17DEC02	150	164
1270	Piping	03JUL02	14JAN03	140	164
Buildings					
Balance of Plant					
1300	Buildings	02SEP02	31JAN03	110	151
Chemical / Water Treatment					
Balance of Plant					
1400	Water Treatment	08APR02	20SEP02	120	246
Instrument & Electrical					
Balance of Plant					
1500	Install Grounding Grid	19DEC01	12MAR02	60	151
1510	Install Raceways / Conduit	27FEB02	05NOV02	160	161
1520	Install DCS	27FEB02	13AUG02	120	214
1540	Pull Cables	10APR02	17DEC02	180	161
1530	Electrical Equipment	22MAY02	02JAN03	162	172
1560	Install Transformers	17JUL02	05NOV02	80	214
1550	Complete Terminations	06NOV02	17JAN03	53	161
Cooling Tower					
Balance of Plant					
1600	U/G Circ Water Pipe	19DEC01	12MAR02	60	214
1610	Cooling Tower Basin	30JAN02	18JUN02	100	214
1620	Erect Cooling Tower	22MAY02	05NOV02	120	214
Switchyard					
Balance of Plant					
1800	Switchyard	16JAN02	22OCT02	200	224



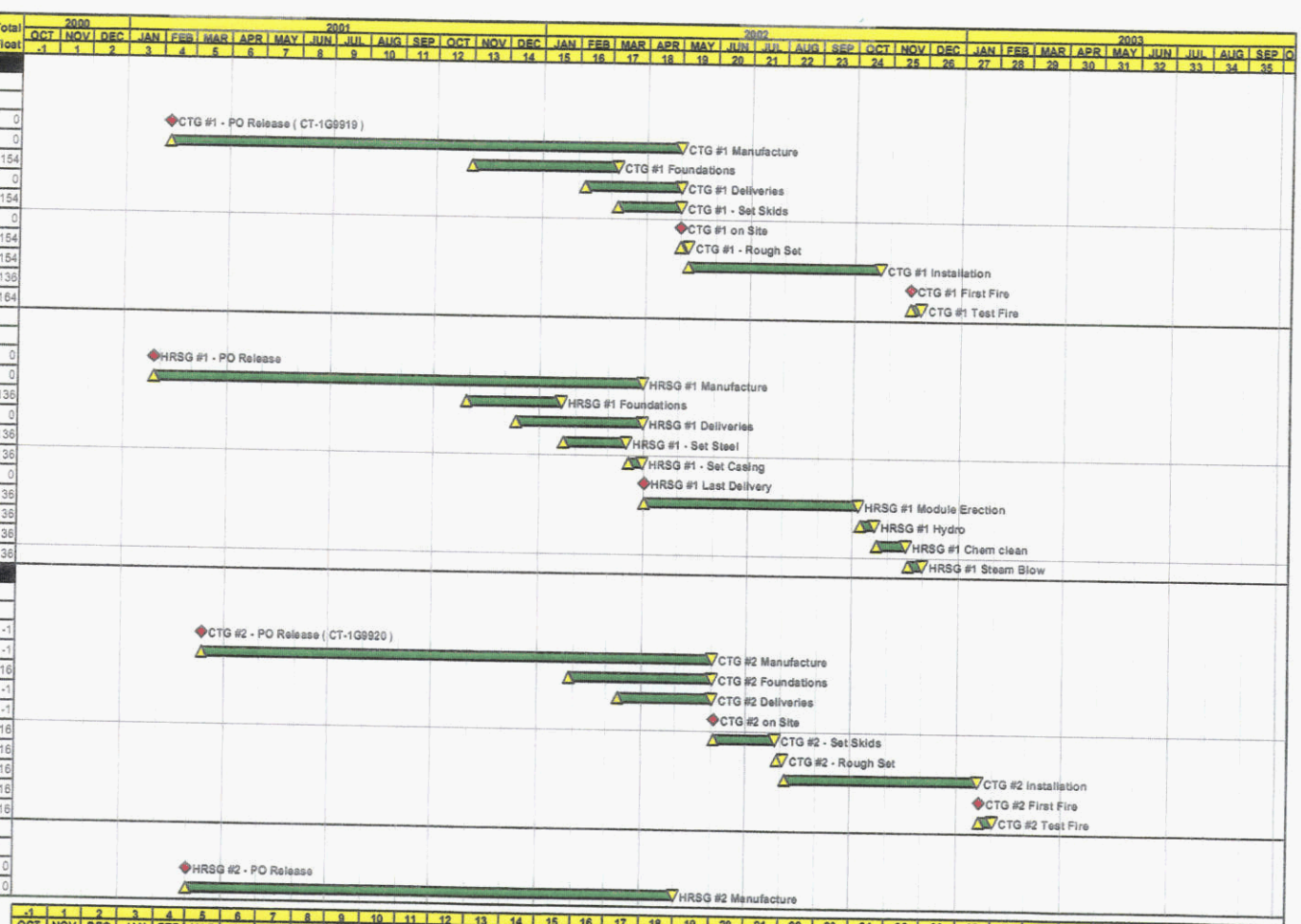
Start Date	01JAN99
Finish Date	28MAR03
Data Date	30JAN00
Run Date	07MAR00 14:33

Early Bar
Progress Bar
Critical Activity

OSPR
Sheet 1 of 3
CALPINE
OSPREY ENERGY PROJECT
Calpine Preliminary Schedule

FIGURE 16
OSPREY ENERGY CENTER
PRELIMINARY PROJECT SCHEDULE
(continued)

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur	Total Float
Train One					
Combustion Turbine					
Combustion Turbine					
102000	CTG #1 - PO Release (CT-1G9919)	07FEB01		0	0
102010	CTG #1 Manufacture	07FEB01	30APR02	320	0
102020	CTG #1 Foundations	31OCT01	05MAR02	90	154
102030	CTG #1 Deliveries	06FEB02	30APR02	60	0
102040	CTG #1 - Set Skids	06MAR02	30APR02	40	154
102050	CTG #1 on Site	01MAY02*		0	0
102060	CTG #1 - Rough Set	01MAY02	07MAY02	5	154
102070	CTG #1 Installation	08MAY02	22OCT02	120	154
102080	CTG #1 First Fire	18NOV02		0	136
102090	CTG #1 Test Fire	18NOV02	26NOV02	7	164
Heat Recovery Steam Generator (HRSG)					
HRSG - Steam Side					
103000	HRSG #1 - PO Release	26JAN01		0	0
103010	HRSG #1 Manufacture	26JAN01	29MAR02	306	0
103020	HRSG #1 Foundations	29OCT01	18JAN02	60	136
103030	HRSG #1 Deliveries	10DEC01	29MAR02	80	0
103040	HRSG #1 - Set Steel	21JAN02	15MAR02	40	136
103050	HRSG #1 - Set Casing	18MAR02	29MAR02	10	136
103060	HRSG #1 Last Delivery	01APR02*		0	0
103070	HRSG #1 Module Erection	01APR02	04OCT02	135	136
103080	HRSG #1 Hydro	07OCT02	18OCT02	10	136
103090	HRSG #1 Chem clean	21OCT02	15NOV02	20	136
103100	HRSG #1 Steam Blow	18NOV02	29NOV02	10	136
Train Two					
Combustion Turbine					
Combustion Turbine					
202000	CTG #2 - PO Release (CT-1G9920)	12MAR01		0	-1
202010	CTG #2 Manufacture	12MAR01	31MAY02	320	-1
202020	CTG #2 Foundations	26JAN02	31MAY02	90	116
202030	CTG #2 Deliveries	11MAR02	31MAY02	60	-1
202050	CTG #2 on Site	03JUN02*		0	-1
202040	CTG #2 - Set Skids	03JUN02	26JUL02	40	116
202060	CTG #2 - Rough Set	29JUL02	02AUG02	5	116
202070	CTG #2 Installation	05AUG02	17JAN03	120	116
202080	CTG #2 First Fire	20JAN03		0	116
202090	CTG #2 Test Fire	20JAN03	31JAN03	10	116
Heat Recovery Steam Generator (HRSG)					
HRSG - Steam Side					
203000	HRSG #2 - PO Release	01MAR01		0	0
203010	HRSG #2 Manufacture	01MAR01	30APR02	304	0



Start Date 01JAN99
Finish Date 28MAR03
Data Date 30JAN00
Run Date 07MAR00 14:33

Early Bar
Progress Bar
Critical Activity

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CALPINE
OSPREY ENERGY PROJECT
Calpine Preliminary Schedule

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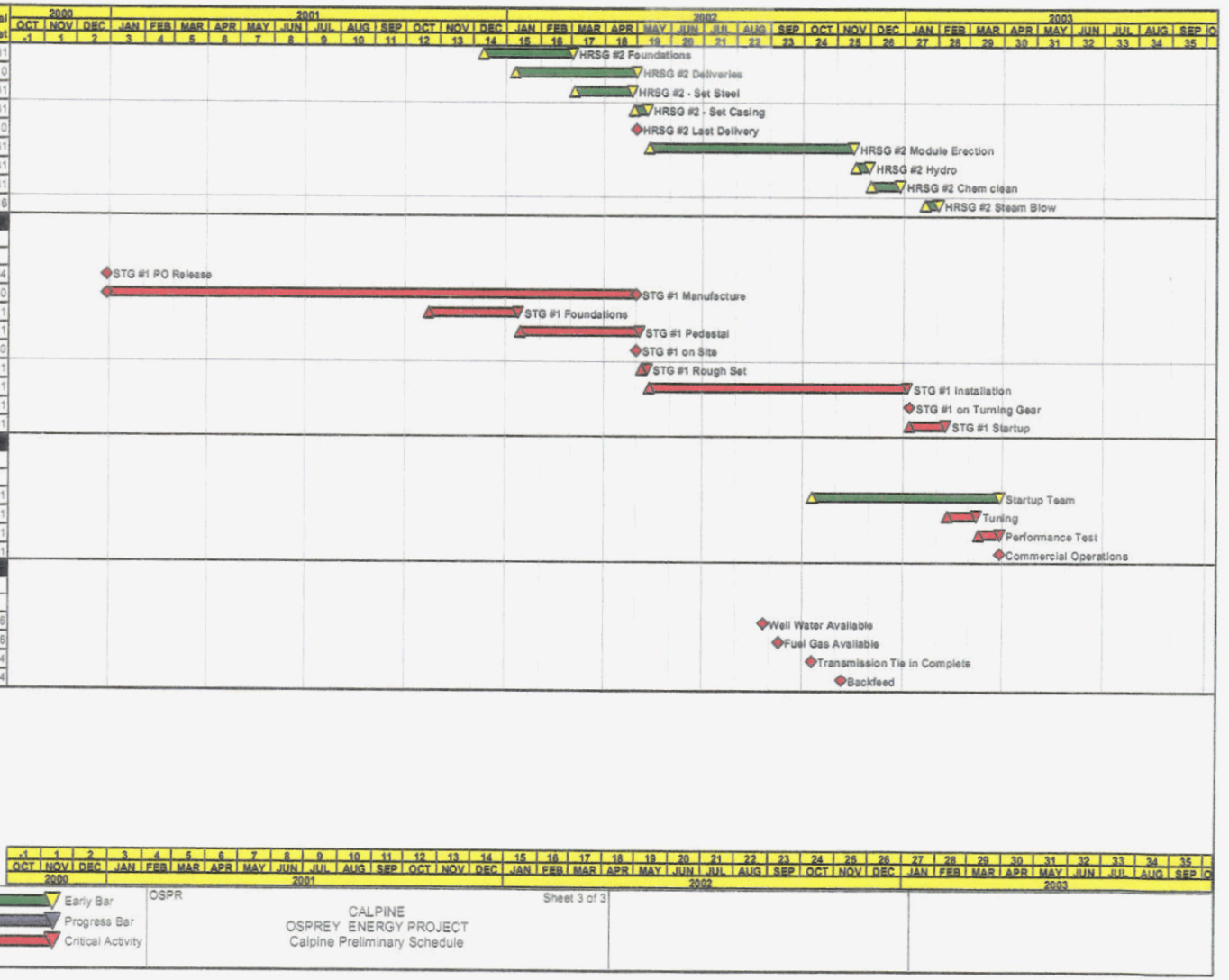
FIGURE 16
OSPREY ENERGY CENTER
PRELIMINARY PROJECT SCHEDULE
(continued)

Activity ID	Activity Description	Early Start	Early Finish	Orig Dur	Total Float
203020	HRSG #2 Foundations	10DEC01	01MAR02	60	131
203030	HRSG #2 Deliveries	09JAN02	30APR02	80	0
203040	HRSG #2 - Set Steel	04MAR02	28APR02	40	131
203050	HRSG #2 - Set Casing	29APR02	10MAY02	10	131
203060	HRSG #2 Last Delivery	01MAY02*		0	0
203070	HRSG #2 Module Erection	13MAY02	15NOV02	135	131
203080	HRSG #2 Hydro	18NOV02	29NOV02	10	131
203090	HRSG #2 Chem clean	02DEC02	27DEC02	20	131
203100	HRSG #2 Steam Blow	20JAN03	31JAN03	10	116
Train Three					
Steam Turbine					
Steam Turbine					
104000	STG #1 PO Release	29DEC00*		0	-184
104010	STG #1 Manufacture	29DEC00	30APR02	348	0
104020	STG #1 Foundations	22OCT01	11JAN02	60	111
104030	STG #1 Pedestal	14JAN02	03MAY02	80	111
104040	STG #1 on Site	01MAY02*		0	0
104050	STG #1 Rough Set	06MAY02	10MAY02	5	111
104060	STG #1 Installation	13MAY02	03JAN03	170	111
104070	STG #1 on Turning Gear	06JAN03		0	111
104080	STG #1 Startup	06JAN03	07FEB03	25	111
Startup					
Balance of Plant					
Balance of Plant					
5000	Startup Team	09OCT02	28MAR03	123*	111
5010	Tuning	10FEB03	07MAR03	20	111
5020	Performance Test	10MAR03	28MAR03	15	111
5030	Commercial Operations		28MAR03	0	111
Linears					
Linears					
Balance of Plant					
1710	Well Water Available	26AUG02		0	266
1700	Fuel Gas Available	09SEP02		0	256
1720	Transmission Tie in Complete	09OCT02		0	234
1730	Backfeed	06NOV02		0	214



Start Date 01JAN99
Finish Date 28MAR03
Data Date 30JAN00
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Early Bar
Progress Bar
Critical Activity

OSPR
CALPINE
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Calpine Preliminary Schedule
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The land use hearing is expected to be held in September 2000, and the site certification hearing is expected to be held in March 2001. Final certification by the Siting Board is expected by August 2001. Details of the site certification schedule are shown in Figure 17 of these Exhibits.

L. **Operations and Maintenance Plan.**

The Siemens-Westinghouse Model 501F turbines that will be used in the Project are extremely reliable. The Project's forced outage rate is expected to average only 2.0 percent per year. The maintenance or planned outage rate is expected to average approximately 3.5 percent per year. The Siemens-Westinghouse Model 501F turbines have an 8,000 hour maintenance cycle. A minor inspection, referred to as a combustor inspection, will be conducted at the end of each 8,000 hours of operation. A slightly more detailed inspection, referred to as a hot gas inspection, along with the combustor inspection, will be conducted at the end of 16,000 hours of operation. A major inspection will be conducted at 40,000 hours of operation. This cycle will be repeated for the life of the equipment. Combustor and hot gas inspections take approximately 7 days and 14 days respectively, and a major inspection will take approximately 21 days. Thus, the annual availability factor for the Osprey Energy Center is expected to average approximately 94.5 percent over the life of the Project.

FIGURE 17

PRELIMINARY SCHEDULE OF SITE CERTIFICATION APPLICATION FOR CALPINE'S OSPREY ENERGY CENTER
DOAH Case No. 00-1288EPP
OGC Case No. 00-0740

Deadlines	Activities
March 20, 2000	Calpine's Site Certification Application (SCA), including application for Prevention of Significant Deterioration (PSD) permit, filed with DEP Siting Coordination Office (SCO)
March 28, 2000	SCO requests Division of Administrative Hearings (DOAH) to appoint Administrative Law Judge (Judge)
March 30, 2000	Calpine delivers SCA to all individuals and agencies on Distribution List (attached)
March 31, 2000	SCO determines that Calpine's SCA is complete
April 12, 2000	Calpine publishes notice of filing SCA
April 17, 2000 or 18 days after the SCA is deemed complete	DEP publishes notice in the Florida Administrative Weekly (FAW) that Calpine filed its SCA
April 30, 2000 or 30 days after receiving SCA	Agencies deliver sufficiency questions to SCO and Calpine
May 10, 2000	DEP issues Notice of Intent, Technical Evaluation, and BACT Determination for Calpine's PSD permit application
May 19, 2000	SCO delivers sufficiency determination to DOAH and Calpine
June 6, 2000 or 60 days after receipt of SCA	Agencies deliver Preliminary Statement of Issues to SCO and Calpine
June 30, 2000	Calpine provides additional information to SCO and agencies

FIGURE 17 (Continued)

July 28, 2000 or 45 days before land use hearing	Calpine publishes notice of land use hearing; DEP publishes notice in the FAW concerning the land use hearing
July 30, 2000	Agencies deliver second set of sufficiency questions, if any, to SCO and Calpine
August 30, 2000	Calpine responds to agencies' second set of sufficiency questions, if any
September 12, 2000	Judge conducts land use hearing in Polk County
September 18, 2000	Transcript for land use hearing filed with DOAH
October 6, 2000	Calpine and other parties file Proposed Recommended Orders with DOAH concerning land use hearing
October 15, 2000	PSC need determination hearing
November 1, 2000	Agency reports (except PSC) submitted to SCO and Calpine
November 21, 2000	Judge issues Recommended Order concerning land use issues
December 15, 2000	PSC Order on need determination petition
January 15, 2001	DEP delivers Staff Analysis Report to Judge and Calpine
January 21, 2001	Hearing before Siting Board concerning Recommended Order on land use issues
January 30, 2001 or 45 days before certification hearing	Calpine publishes Notice of Certification Hearing; DEP publishes notice in the FAW concerning the certification hearing
March 15, 2001	Certification Hearing held by Judge in Polk County
March 25, 2001	Transcript for certification hearing filed with DOAH

FIGURE 17 (Continued)

April 25, 2001	Calpine and other parties file Proposed Recommended Orders at DOAH concerning certification hearing
June 25, 2001	Judge issues Recommended Order concerning certification hearing
July 25, 2001	DEP publishes notice in FAW concerning Siting Board hearing on certification issues
August 25, 2001	Hearing before Siting Board concerning Recommended Order on certification issues
August 30, 2001	Final order issued by Siting Board; PSD permit issued by DEP

IV. NEED FOR THE OSPREY ENERGY CENTER

The Osprey Energy Center will provide total net generation capability of 506 MW at summer peak conditions (95°F.) and 587 MW at winter peak conditions (32°F.) without power augmentation or duct-firing. The new capacity produced by the Project will meet the power supply needs of Calpine Construction Finance Company, L.P., and will significantly increase the reliability of power supply in Peninsular Florida.

A. Power Supply Needs of Peninsular Florida.

Peninsular Florida's firm winter peak demand is projected to increase from approximately 36,000 MW in 1999-2000 to more than 44,000 MW in 2008-2009. See Table 4. Peninsular Florida's total winter peak demand is projected to increase from approximately 40,000 MW to approximately 48,000 MW in the same period. See Table 8. Peninsular Florida's firm summer peak demand is projected to increase from approximately 34,000 MW in 1999 to more than 41,000 MW in 2008. See Table 4 of these Exhibits. Peninsular Florida's total summer peak demand is projected to increase from approximately 37,000 MW to approximately 44,000 MW over the same period. See Table 7. Net Energy for Load in Peninsular Florida is projected to increase from approximately 186,000 GWH in 1999 to approximately 230,000 GWH in 2008 and to approximately 248,000 GWH in 2012. See Table 5. As of January 1, 2000, total Peninsular Florida existing generating capacity was approximately 39,121 MW for the winter and 37,272 MW for the summer. See Table 6. Tables 7 and 8 present projected capacity and reserve margin information

TABLE 4

PENNINSULAR FLORIDA, HISTORICAL AND PROJECTED SUMMER AND WINTER FIRM PEAK DEMANDS

1999-2012

ACTUAL PEAK DEMAND (MW)

	1991	1992	1993	1994	1995	1996	1997	1998
SUMMER	27,662	28,930	29,748	29,321	31,801	32,315	32,924	37,153
WINTER	28,179	27,215	28,149	32,618	34,552	34,762	30,932	35,907

PROJECTED FIRM PEAK DEMAND (MW)

	1999	2000	2001	2002	2003	2004	2005	2006
SUMMER	34,023	34,703	35,380	36,157	36,988	37,804	38,638	39,597
WINTER	35,977	36,819	37,793	38,749	39,663	40,566	41,450	42,476

PROJECTED FIRM PEAK DEMAND (MW)

	2007	2008	2009	2010	2011	2012
SUMMER	40,443	41,266	42,181	43,117	44,073	45,050
WINTER	43,374	44,286	45,274	46,284	47,316	48,372

Data Source:
Florida Reliability Coordinating Council,
1991-2008 values, 1999 Regional Load & Resource Plan, Peninsular Florida, July 1999.
2009-2012 values extrapolated at the FRCC projected average annual compound growth rates for 2005-2008.

TABLE 5

PENINSULAR FLORIDA, HISTORICAL AND PROJECTED NET ENERGY FOR LOAD AND NUMBER OF CUSTOMERS

1991-2012

ACTUAL NET ENERGY FOR LOAD (GWH)

	1991	1992	1993	1994	1995	1996	1997	1998
ENERGY	146,786	147,728	153,269	159,353	168,982	173,327	175,534	187,868
LOAD FACTOR	59.46%	58.13%	58.82%	55.77%	55.83%	56.76%	60.86%	57.72%
CUSTOMERS	6,155,380	6,269,358	6,410,797	6,550,760	6,687,155	6,812,603	6,948,888	7,091,803

PROJECTED NET ENERGY FOR LOAD (GWH)

	1999	2000	2001	2002	2003	2004	2005	2006
ENERGY	186,374	196,094	200,772	203,922	208,800	213,424	217,791	222,299
LOAD FACTOR	59.25%	60.63%	60.64%	60.08%	60.10%	59.89%	59.98%	59.74%
CUSTOMERS	7,232,307	7,375,121	7,518,019	7,657,962	7,795,163	7,930,202	8,062,647	8,194,144

PROJECTED NET ENERGY FOR LOAD (GWH)

	2007	2008	2009	2010	2011	2012
ENERGY	226,565	230,447	234,645	238,924	243,289	247,742
LOAD FACTOR	59.63%	59.24%	59.16%	58.93%	58.70%	58.31%
CUSTOMERS	8,325,881	8,458,099	8,594,181	8,732,452	8,872,947	9,015,703

Data Source:
Florida Reliability Coordinating Council,
1991-1999 Energy values, 1999 Regional Load & Resource Plan, Peninsular Florida, July 1999.
2000-2012 Energy values obtained from PROMOD IV(R) analyses prepared by Slater Consulting.
Load factor values were calculated from these energy values and the peak demand values in Table 4.
1991-2008 Customer values, 1999 Regional Load & Resource Plan, Peninsular Florida, July 1999.
2009-2012 Customer values extrapolated at the FRCC projected average annual compound growth rates for 2005-2008.

TABLE 6

PENINSULAR FLORIDA
SUMMARY OF EXISTING CAPACITY
AS OF JANUARY 1, 2000

UTILITY	NET CAPABILITY SUMMER	NET CAPABILITY WINTER
FLORIDA KEYS ELECTRIC COOPERATIVE ASSOC., INC 1/	22	22
FLORIDA MUNICIPAL POWER AGENCY 2/	488	513
FLORIDA POWER CORPORATION 2/	7,659	8,267
FLORIDA POWER & LIGHT COMPANY 2/	16,444	17,234
FORT PIERCE UTILITIES AUTHORITY 1/	119	119
GAINESVILLE REGIONAL UTILITIES 2/	550	563
CITY OF HOMESTEAD 1/	60	60
JACKSONVILLE ELECTRIC AUTHORITY 2/	2,629	2,734
UTILITY BOARD OF THE CITY OF KEY WEST 1/	52	52
KISSIMMEE UTILITY AUTHORITY 2/	172	188
CITY OF LAKELAND 2/	614	649
CITY OF LAKE WORTH UTILITIES 1/	95	105
UTILITIES COMMISSION OF NEW SMYRNA BEACH 2/	24	24
OCALA ELECTRIC UTILITY 1/	11	11
ORLANDO UTILITIES COMMISSION 2/	1,024	1,071
REEDY CREEK IMPROVEMENT DISTRICT 1/	48	49
SEMINOLE ELECTRIC COOPERATIVE INC. 2/	1,331	1,345
CITY OF ST. CLOUD 1/	22	21
CITY OF TALLAHASSEE 2/	429	449
TAMPA ELECTRIC COMPANY 2/	3,469	3,608
CITY OF VERO BEACH 1/	150	155
TOTALS		
FRCC UTILITIES EXISTING CAPACITY	35,412	37,239
NON-UTILITY GENERATING FACILITIES (FIRM)	1,763	1,763
NON-UTILITY GENERATING FACILITIES (NON-FIRM)	97	119
TOTAL PENINSULAR FLORIDA EXISTING CAPACITY	**37,272**	**39,121**

Data Source:
Florida Reliability Coordinating Council
1/ 1999 Regional Load & Resource Plan, Peninsular Florida, July 1999
2/ The net capability values for the summer and winter of 2000 were taken from Schedule 1 of the respective utilities' ten-year site plans filed in April 2000.

TABLE 7
SUMMARY OF PENINSULAR FLORIDA CAPACITY, DEMAND, AND RESERVE MARGIN AT TIME OF SUMMER PEAK WITHOUT OSPREY ENERGY CENTER

Year	INSTALLED CAPACITY (MW)	NET CONTRACT FIRM INTERCHG (MW)	PROJECTED FIRM NET TO GRID FROM NUG (MW)	TOTAL AVAILABLE CAPACITY (MW)	TOTAL PEAK DEMAND (MW)	RESERVE MARGIN W/O EXERCISING LOAD MGMT. & INT. (MW)	% OF PEAK	LOAD MGMT. & INT. (MW)	FIRM PEAK DEMAND (MW)	RESERVE MARGIN WITH EXERCISING LOAD MGMT. & INT. (MW)	% OF PEAK
1999	36,125	1,640	2,076	39,841	36,788	3,053	8.30	2,765	34,023	5,818	17.10
2000	36,664	1,755	2,076	40,495	37,541	2,954	7.87	2,838	34,703	5,792	16.69
2001	39,047	1,682	2,076	42,805	38,223	4,582	11.99	2,843	35,380	7,425	20.99
2002	41,372	1,658	2,055	45,085	38,959	6,126	15.72	2,802	36,157	8,928	24.69
2003	44,148	1,566	2,055	47,769	39,781	7,988	20.08	2,793	36,988	10,781	29.15
2004	45,646	1,566	2,055	49,267	40,593	8,674	21.37	2,789	37,804	11,463	30.32
2005	46,002	1,566	2,045	49,613	41,433	8,180	19.74	2,795	38,638	10,975	28.40
2006	47,590	1,566	1,912	51,068	42,398	8,670	20.45	2,801	39,597	11,471	28.97
2007	48,363	1,566	1,906	51,835	43,252	8,583	19.84	2,809	40,443	11,392	28.17
2008	49,547	1,566	1,891	53,004	44,066	8,938	20.28	2,800	41,266	11,738	28.44

1/ 476 MW OF DUKE-NEW SMYRNA CAPACITY ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2002
2/ 514 MW OF OKEECHOBEE GENERATING PROJECT ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2003
3/ 777 MW OF OLEANDER POWER PROJECT ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2002
4/ INSTALLED CAPACITY INCLUDES UPDATED ADDITIONS FROM THE 2000 TEN-YEAR SITE PLANS OF FPL, FPC, & TECO

SUMMARY OF PENINSULAR FLORIDA CAPACITY, DEMAND, AND RESERVE MARGIN AT TIME OF SUMMER PEAK WITH OSPREY ENERGY CENTER, 506 MW IN 2003

Year	INSTALLED CAPACITY (MW)	NET CONTRACT FIRM INTERCHG (MW)	PROJECTED FIRM NET TO GRID FROM NUG (MW)	TOTAL AVAILABLE CAPACITY (MW)	TOTAL PEAK DEMAND (MW)	RESERVE MARGIN W/O EXERCISING LOAD MGMT. & INT. (MW)	% OF PEAK	LOAD MGMT. & INT. (MW)	FIRM PEAK DEMAND (MW)	RESERVE MARGIN WITH EXERCISING LOAD MGMT. & INT. (MW)	% OF PEAK
1999	36,125	1,640	2,076	39,841	36,788	3,053	8.30	2,765	34,023	5,818	17.10
2000	36,664	1,755	2,076	40,495	37,541	2,954	7.87	2,838	34,703	5,792	16.69
2001	39,047	1,682	2,076	42,805	38,223	4,582	11.99	2,843	35,380	7,425	20.99
2002	41,372	1,658	2,055	45,085	38,959	6,126	15.72	2,802	36,157	8,928	24.69
2003	44,654	1,566	2,055	48,275	39,781	8,494	21.35	2,793	36,988	11,287	30.52
2004	46,152	1,566	2,055	49,773	40,593	9,180	22.61	2,789	37,804	11,969	31.66
2005	46,508	1,566	2,045	50,119	41,433	8,686	20.96	2,795	38,638	11,481	29.71
2006	48,096	1,566	1,912	51,574	42,398	9,176	21.64	2,801	39,597	11,977	30.25
2007	48,869	1,566	1,906	52,341	43,252	9,089	21.01	2,809	40,443	11,898	29.42
2008	50,053	1,566	1,891	53,510	44,066	9,444	21.43	2,800	41,266	12,244	29.67

1/ 476 MW OF DUKE-NEW SMYRNA CAPACITY ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2002
2/ 514 MW OF OKEECHOBEE GENERATING PROJECT ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2003
3/ 506 MW OF OSPREY ENERGY CENTER ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2003
4/ 777 MW OF OLEANDER POWER PROJECT ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2002
5/ INSTALLED CAPACITY INCLUDES UPDATED ADDITIONS FROM THE 2000 TEN-YEAR SITE PLANS OF FPL, FPC, & TECO
SOURCES: Florida Reliability Coordinating Council, 1999 Regional Load & Resource Plan, Peninsular Florida, July 1999
Calpine Construction Finance Company, L.P.

TABLE 8
SUMMARY OF PENINSULAR FLORIDA CAPACITY, DEMAND, AND RESERVE MARGIN AT TIME OF WINTER PEAK WITHOUT OSPREY ENERGY CENTER

Year	INSTALLED CAPACITY (MW)	NET CONTRACT FIRM INTERCHG (MW)	PROJECTED FIRM NET TO GRID FROM NUG (MW)	TOTAL AVAILABLE CAPACITY (MW)	TOTAL PEAK DEMAND (MW)	RESERVE MARGIN W/O EXERCISING LOAD MGMT. & INT. (MW)	% OF PEAK	LOAD MGMT. & INT. (MW)	FIRM PEAK DEMAND (MW)	RESERVE MARGIN WITH EXERCISING LOAD MGMT. & INT. (MW)	% OF PEAK
1999/00	37,803	1,772	2,129	41,704	39,989	1,715	4.29	4,012	35,977	5,727	15.92
2000/01	39,662	1,694	2,129	43,485	40,929	2,556	6.24	4,110	36,819	6,666	18.10
2001/02	41,952	1,671	2,129	45,752	41,865	3,887	9.28	4,072	37,793	7,959	21.06
2002/03	44,146	1,566	2,108	47,820	42,808	5,012	11.71	4,059	38,749	9,071	23.41
2003/04	47,543	1,566	2,108	51,217	43,726	7,491	17.13	4,063	39,663	11,554	29.13
2004/05	48,892	1,566	2,098	52,556	44,651	7,905	17.70	4,085	40,566	11,990	29.56
2005/06	50,233	1,566	1,965	53,764	45,553	8,211	18.03	4,103	41,450	12,314	29.71
2006/07	50,823	1,566	1,959	54,348	46,600	7,748	16.63	4,124	42,476	11,872	27.95
2007/08	52,584	1,566	1,944	56,094	47,502	8,592	18.09	4,128	43,374	12,720	29.33
2008/09	52,555	1,566	1,944	56,065	48,441	7,624	15.74	4,155	44,286	11,779	26.60

1/ 548 MW OF DUKE-NEW SMYRNA CAPACITY ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2002/03
2/ 561 MW OF OKEECHOBEE GENERATING PROJECT ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2003/04
3/ 910 MW OF OLEANDER POWER PROJECT ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2002/03
4/ INSTALLED CAPACITY INCLUDES UPDATED ADDITIONS FROM THE 2000 TEN-YEAR SITE PLANS OF FPL, FPC, & TECO

SUMMARY OF PENINSULAR FLORIDA CAPACITY, DEMAND, AND RESERVE MARGIN AT TIME OF WINTER PEAK WITH OSPREY ENERGY CENTER, 587 MW IN 2003/04

Year	INSTALLED CAPACITY (MW)	NET CONTRACT FIRM INTERCHG (MW)	PROJECTED FIRM NET TO GRID FROM NUG (MW)	TOTAL AVAILABLE CAPACITY (MW)	TOTAL PEAK DEMAND (MW)	RESERVE MARGIN W/O EXERCISING LOAD MGMT. & INT. (MW)	% OF PEAK	LOAD MGMT. & INT. (MW)	FIRM PEAK DEMAND (MW)	RESERVE MARGIN WITH EXERCISING LOAD MGMT. & INT. (MW)	% OF PEAK
1999/00	37,803	1,772	2,129	41,704	39,989	1,715	4.29	3,784	35,977	5,727	15.92
2000/01	39,662	1,694	2,129	43,485	40,928	2,557	6.25	3,955	36,819	6,666	18.10
2001/02	41,952	1,671	2,129	45,752	41,865	3,887	9.28	4,078	37,793	7,959	21.06
2002/03	44,146	1,566	2,108	47,820	42,808	5,012	11.71	4,153	38,749	9,071	23.41
2003/04	48,130	1,566	2,108	51,804	43,726	8,078	18.47	4,232	39,663	12,141	30.61
2004/05	49,479	1,566	2,098	53,143	44,651	8,492	19.02	4,307	40,566	12,577	31.00
2005/06	50,820	1,566	1,965	54,351	45,553	8,798	19.31	4,335	41,450	12,901	31.12
2006/07	51,410	1,566	1,959	54,935	46,600	8,335	17.89	4,365	42,476	12,459	29.33
2007/08	53,171	1,566	1,944	56,681	47,502	9,179	19.32	4,392	43,374	13,307	30.68
2008/09	53,142	1,566	1,944	56,652	48,441	8,211	16.95	4,415	44,286	12,366	27.92

1/ 548 MW OF DUKE-NEW SMYRNA CAPACITY ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2002/03
2/ 561 MW OF OKEECHOBEE GENERATING PROJECT ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2003/04
3/ 587 MW OF OSPREY ENERGY CENTER ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2003/04
4/ 910 MW OF OLEANDER POWER PROJECT ADDED TO THE INSTALLED CAPACITY COLUMN STARTING IN 2002/03
5/ INSTALLED CAPACITY INCLUDES UPDATED ADDITIONS FROM THE 2000 TEN-YEAR SITE PLANS OF FPL, FPC, & TECO

SOURCES: Florida Reliability Coordinating Council, 1999 Regional Load & Resource Plan, Peninsular Florida, July 1999
Calpine Construction Finance Company, L.P.

for Peninsular Florida, with and without the capacity of the Osprey Energy Center.

The Osprey Energy Center will provide reliable and cost-effective power to utilities that provide retail service in Peninsular Florida. Peninsular Florida needs more than 14,000 MW of new generation capacity in order to maintain installed generation reserve margins between 6.2% and 18.1% for the winters of 2000/2001 through 2008/2009. (See Table 8.) The Project will contribute meaningfully to Peninsular Florida's summer and winter reserve margins and to cost-effective power supply.

Data extracted from the 1999 Regional Load & Resource Plan, dated July, 1999, prepared by the Florida Reliability Coordinating Council (the "FRCC 1999 Resource Plan"), updated with proposed generating plant information contained in the ten-year site plans filed in April 2000, show that without the Osprey Energy Center, Peninsular Florida's summer reserve margins in 2003 through 2008 will range from 19.7 percent to 21.4 percent, without exercising load management and interruptible capabilities. If the Project's output is sold under contract to other Florida utilities in lieu of their constructing planned generation, then the reserve margins should be approximately the same with the Project as without it. With the Project added into the Peninsular Florida power supply system as an additional resource, i.e., above the resources already planned, the summer reserve margins will be improved by approximately 1.3 percent in each year, e.g., from 20.0 percent to 21.3 percent in 2003. The annual summer reserve margins for

Peninsular Florida, with and without the Project's capacity, are shown in Table 7.

Similarly, data presented in the FRCC 1999 Resource Plan, updated with proposed generating plant information contained in the ten-year site plans submitted in April 2000, show that without the Osprey Energy Center, Peninsular Florida's winter reserve margins in 2003/2004 through 2008/2009 will range from 15.7 percent to 18.1 percent, without exercising load management and interruptible capabilities. With the Osprey Energy Center, the winter reserve margins will be improved by approximately 1.3 percent in each year, e.g., from 17.13 percent without Osprey to 18.47 percent with Osprey in 2003/2004. Winter reserve margins for Peninsular Florida, with and without the Project's capacity, and with and without exercising load management and interruptible resources, are shown in Table 8.

Based on production simulation analyses of the Osprey Energy Center's operations within the Peninsular Florida power supply system the Project is expected to operate at an average annual capacity factor of approximately 91 percent from 2003 through 2012, reflecting approximately 8,000 operating hours per year and approximately 4.2 million to 4.5 million MWH per year of net generation based on operations without duct-firing. See Table 9. Sensitivity analyses based on specified changes in fuel price forecasts and in Peninsular Florida load growth assumptions are shown in Tables 10 and 11, respectively.

Calpine projects that all of the sales from the Project will

TABLE 9

OSPREY ENERGY CENTER
SUMMARY OF PROJECTED OPERATIONS
2003-2012

Year	PROJECTED GENERATION (GWH)	ANNUAL CAPACITY FACTOR %
2003	2,681	96.3%
2004	4,486	93.8%
2005	4,376	91.7%
2006	4,368	91.6%
2007	4,419	92.6%
2008	4,339	90.7%
2009	4,251	89.1%
2010	4,407	92.4%
2011	4,152	87.0%
2012	4,504	94.1%

Source: PROMOD IV(R) analyses prepared by Slater Consulting.
Note: The Project is scheduled to come into service on June 1, 2003. The annual capacity factor reported for 2003 is calculated on the basis of the Project's operations for the period June 1 - December 31, 2003.

TABLE 10

OSPREY ENERGY CENTER
SUMMARY OF PROJECTED OPERATIONS, 2003-2012
HIGHER NATURAL GAS PRICE SENSITIVITY ANALYSIS

Year	PROJECTED GENERATION (GWH)	ANNUAL CAPACITY FACTOR %
2003	2,677	96.1%
2004	4,458	93.2%
2005	4,358	91.3%
2006	4,329	90.7%
2007	4,389	92.0%
2008	4,268	89.2%
2009	4,174	87.5%
2010	4,314	90.4%
2011	4,070	85.3%
2012	4,415	92.3%

Source: PROMOD IV(R) analyses prepared by Slater Consulting.

Notes: (1) The Project is scheduled to come into service on June 1, 2003. The annual capacity factor reported for 2003 is calculated on the basis of the Project's operations for the period June 1 - December 31, 2003.

(2) The Base Case fuel price projections were developed by Slater Consulting based on actual data and the U. S. Energy Information Administration's 2000 Annual Energy Outlook Reference Case Forecast, but with the natural gas price escalations moderated to be more in keeping with the Standard & Poor's DRI forecast, which was included in the EIA's publication as a comparison forecast. The fuel prices for this sensitivity case were the same as for the Base Case except that the prices of natural gas were projected to escalate at the growth rates projected in the EIA Reference Case

TABLE 11

OSPREY ENERGY CENTER
SUMMARY OF PROJECTED OPERATIONS
LOAD GROWTH SENSITIVITY ANALYSES, 2003-2012

	LOW LOAD GROWTH		BASE CASE		HIGH LOAD GROWTH	
Year	PROJECTED GENERATION (GWH)	ANNUAL CAPACITY FACTOR %	PROJECTED GENERATION (GWH)	ANNUAL CAPACITY FACTOR %	PROJECTED GENERATION (GWH)	ANNUAL CAPACITY FACTOR %
2003	2,587	92.9%	2,681	96.3%	2,686	96.5%
2004	4,556	95.2%	4,486	93.8%	4,499	94.0%
2005	4,365	91.5%	4,376	91.7%	4,389	92.0%
2006	4,355	91.3%	4,368	91.6%	4,303	90.2%
2007	4,238	88.8%	4,419	92.6%	4,535	95.0%
2008	4,508	94.2%	4,339	90.7%	4,114	86.0%
2009	4,150	87.0%	4,251	89.1%	4,453	93.3%
2010	4,468	93.6%	4,407	92.4%	4,353	91.2%
2011	4,295	90.0%	4,152	87.0%	4,365	91.5%
2012	4,317	90.2%	4,504	94.1%	4,550	95.1%

Source: PROMOD IV(R) analyses prepared by Slater Consulting.
Assumptions: The Base Case scenario was developed by Slater Consulting based on actual data and consideration of published sources, including the 1999 FRCC Regional Load & Resource Plan and Florida utilities' 2000 ten-year site plans. The Low Load Growth scenario reflects growth rates 0.5 percent per year less than in the Base Case. The High Load Growth scenario reflects growth rates 1.0 percent per year greater than in the Base Case.

be made to other Florida utilities for resale to their retail electric customers in Peninsular Florida.[8]

The advanced technology, natural gas-fired combined cycle design of the Project is consistent with the type of capacity being added by many other Peninsular Florida utilities. Table 12, which presents data from utility ten-year site plans and other published sources, shows that from 1999 through 2008, other Peninsular Florida utilities are projecting the addition of nearly 7,000 MW of

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[8] As stated above and in the Petition, in keeping with the Florida Supreme Court's initial opinion in Tampa Electric Co. v. Garcia, Calpine intends and expects to develop this Project based on appropriate contractual arrangements with one or more Peninsular Florida retail-serving utilities, thereby confirming that the full output of the Project will be committed to providing service to retail electric customers in Florida. If, pursuant to changes in applicable law, Calpine becomes legally able to develop the Osprey Project as a competitive wholesale (or "merchant") power plant, either in whole or in part, Calpine believes that all or virtually all of the Project's output would be sold to other utilities in Peninsular Florida for resale to their retail electric customers. There are several reasons why this is expected to be the case. First, in the Southeastern Electric Reliability Council ("SERC") region, which consists of Georgia, Alabama, North Carolina, South Carolina, Virginia, Tennessee, and parts of Kentucky and Mississippi, the wholesale market clearing price for electricity is typically lower than in Florida. Second, new competitive wholesale capacity using gas-fired combined cycle technology is currently being installed in the SERC region; the presence of this new, efficient capacity in SERC will limit exports from Florida. Third, the cost of fuel transportation to generating facilities in the SERC region is less than to Florida. Fourth, electricity generated in Florida would have to incur the expense of transmission wheeling to other markets, e.g., SERC or other markets farther away from Florida, an expense that electricity generated in those other markets would avoid. Fifth, transmission export capacity at the Georgia/Florida interface is limited. Moreover, the site of the Project was chosen because it is centrally located in Peninsular Florida with ready access to the transmission network via TECO's 230kV Recker Substation. The Project's location will best accommodate sales to the Florida wholesale market, i.e., to Peninsular Florida's other utilities.

TABLE 12
COMPARISON OF PENINSULAR FLORIDA
PLANNED AND PROPOSED GENERATING UNITS

PLANNED & PROPOSED UTILITY/UNIT 1/	IN-SERVICE YEAR	SUMMER CAPACITY MW	WINTER CAPACITY MW	PRIMARY FUEL	ALTERNATE FUEL	HEAT RATE (Btu/kWH)	EQUIVALENT AVAILABILITY FACTOR %	TOTAL INSTALLED COST ($/KW) 3/	DIRECT CONSTRUCTION COST ($/KW) 3/	TECHNOLOGY TYPE
DUKE/NSBPP 2/	2002	476	548	GAS	NONE	6,832	96	N/A	$325	COMBINED CYCLE
OLEANDER 3/	2002	777	910	GAS	NO. 2	9,700	97	N/A	$235	COMBUSTION TURBINE
OSPREY ENERGY 2/	2003	506	587	GAS	NONE	6,800	94	N/A	$355	COMBINED CYCLE
OKEECHOBEE 2/	2003	508	552	GAS	NO. 2	6,650	93	N/A	$345	COMBINED CYCLE
FPL/MARTIN CT	2001	298	362	GAS	NO. 2	10,450	98	$371	$323	COMBUSTION TURBINE
FPL/FT.MYERS	2002	930	1,073	GAS	NONE	6,830	96	$557	$502	COMB. CYCLE/REPOWER
FPL/SANFORD 4-5	2002	1,132	1,342	GAS	NONE	6,860	96	$703	$591	COMB. CYCLE/REPOWER
FPL/FT.MYERS CT	2003	298	362	GAS	NO. 2	10,450	98	$378	$323	COMBUSTION TURBINE
FPL/MARTIN 5-6	2006	788	858	GAS	NO. 2	6,346	96	$679	$484	COMBINED CYCLE
FPL/UNSITED	2007	394	429	GAS	NO. 2	6,830	96	$783	$552	COMBINED CYCLE
FPL/UNSITED	2008	394	429	GAS	NO. 2	6,830	96	$798	$552	COMBINED CYCLE
FPL/UNSITED	2009	394	429	GAS	NO. 2	6,830	96	$812	$552	COMBINED CYCLE
TALLAH/PURDOM 8	2000	233	262	GAS	NO. 2	6,940	NR	$483	$434	COMBINED CYCLE
FPC/INTRCSS 12-14	2000	240	282	GAS	NO. 2	13,272	91	NOT REPORTED	NOT REPORTED	COMBUSTION TURBINE
FPC/HINES 2	2003	495	567	GAS	NO. 2	7,306	91	NOT REPORTED	NOT REPORTED	COMBINED CYCLE
FPC/HINES 3	2005	495	567	GAS	NO. 2	7,306	91	NOT REPORTED	NOT REPORTED	COMBINED CYCLE
FPC/HINES 4	2007	495	567	GAS	NO. 2	7,306	91	NOT REPORTED	NOT REPORTED	COMBINED CYCLE
FPC/HINES 5	2009	495	567	GAS	NO. 2	7,306	91	NOT REPORTED	NOT REPORTED	COMBINED CYCLE
TECO/POLK 2	2000	155	180	GAS	NO. 2	10,580	94	NOT REPORTED	NOT REPORTED	COMBUSTION TURBINE
TECO/POLK 3	2002	155	180	GAS	NO. 2	10,580	94	NOT REPORTED	NOT REPORTED	COMBUSTION TURBINE
TECO/BAYSIDE 1	2003	698	796	GAS	NO. 2	7,080	91	NOT REPORTED	NOT REPORTED	COMBINED CYCLE
TECO/BAYSIDE 2	2004	711	802	GAS	NO. 2	7,050	91	NOT REPORTED	NOT REPORTED	COMBINED CYCLE
TECO/POLK 4-6	2005	465	540	GAS	NO. 2	10,580	94	NOT REPORTED	NOT REPORTED	COMBUSTION TURBINE
TECO/UNSITED	2009	155	180	GAS	NO. 2	10,580	94	NOT REPORTED	NOT REPORTED	COMBUSTION TURBINE
GVLLE/J.R. KELLY	2001	110	110	GAS	NO. 2	8,000	84	$375	$368	COMBINED CYCLE
SEC/PAYNE CRK 4/	2002	488	572	GAS	NO. 2	6,170	93	$412	$378	COMBINED CYCLE
FMPA-KUA CANE 3	2001	244	267	GAS	NO. 2	6,815	92	$430	$320	COMBINED CYCLE
LKLAND McINTSH 5	2002	337	384	GAS	NO. 2	6,523	91	$749	$671	COMBINED CYCLE
LKLAND McINTSH 4	2004	288	288	PET.COKE	COAL	8,452	81	$1,617	$1,317	PRESSURE FLUID BED
LKLAND McINTSH 6	2009	32	46	GAS	NO. 2	10,624	98	$992	$742	COMBUSTION TURBINE
JEA KENNEDY CT 7	2000	149	186	GAS	NO. 2	11,120	97	NOT REPORTED	$261	COMBUSTION TURBINE
JEA BANDY CT 1-3	2001	149	186	GAS	NO. 2	11,120	97	NOT REPORTED	$264	COMBUSTION TURBINE
JEA NORTHSID 1-2	2002	265	265	PET. COKE	COAL	9,946	90	NOT REPORTED	$658	CIRCULATING FLUID BED

DATA SOURCES:

1/ TOTAL INSTALLED COST AND DIRECT CONSTRUCTION COST DATA ARE REPORTED DIRECTLY FROM THE INDIVIDUAL UTILITY'S 2000 TEN-YEAR SITE PLAN, SCHEDULE 9.

2/ DUKE/NSBPP, OSPREY ENERGY CENTER, AND OKEECHOBEE GENERATING CO. DATA ARE BASED ON INFORMATION FROM NEED DETERMINATION AND TEN-YEAR SITE PLAN FILINGS AND INCLUDE THE COSTS OF DIRECTLY ASSOCIATED TRANSMISSION LINES. HEAT RATE IS CALCULATED BASED ON HIGHER HEATING VALUE (HHV).

3/ OLEANDER POWER PROJECT DATA IS BASED ON INFORMATION FILED IN THE APRIL 2000 TEN-YEAR SITE PLAN, AND INCLUDES THE COST OF DIRECTLY ASSOCIATED TRANSMISSION LINES.

4/ SEMINOLE ELECTRIC COOPERATIVE'S HEAT RATE FOR THE PAYNE CREEK UNIT 3 IS REPORTED BASED ON LOWER HEATING VALUE (LHV).

gas-fired combined cycle capacity.

The above-referenced analyses of the projected operations of the Osprey Energy Center in the Peninsular Florida power supply system were prepared using the PROMOD IV® computer model. PROMOD IV® is a widely known and widely used probabilistic model that simulates the operations of electric power systems. PROMOD IV® is primarily used as a production costing model and can also be used to evaluate electric system reliability. A brief description of PROMOD IV® is included in Appendix C to these Exhibits. PROMOD IV® can be used to prepare utility fuel budget forecasts, evaluate the economics and operations of proposed generating capacity additions, project utility operating costs, estimate the prices of firm power and energy in defined markets, project hourly marginal energy costs, and calculate avoided energy and capacity costs.

The inputs to PROMOD IV® include generating unit data for existing and planned power plants in a defined power supply system, fuel consumption and fuel cost data, load and other utility system data, and data regarding transactions within the system. The primary outputs are individual utility or system production costs, generation by unit, fuel usage, and reliability information. PROMOD IV® utilizes computationally efficient algorithms that yield results identical to those that would be produced with direct specification of values for all availability states of all units in a power supply system.

B. **Power Supply Needs of Calpine Construction Finance Company, L.P.**

Calpine's business purpose with respect to the Osprey Energy Center is to develop the Project to provide reliable, competitively priced, environmentally clean power in the Florida wholesale market without risk to Florida's retail electric customers. Calpine is developing the Project consistent with the policies of the Federal Energy Regulatory Commission and the Florida Public Service Commission to increase wholesale competition so that electric consumers may enjoy the benefits of competitively priced generation. Accordingly, Calpine needs the Project to participate as a competitive supplier in the Florida wholesale power market. The addition of the Project will help create a robust, competitive wholesale power market in Florida.

C. **Utility-Specific Need.**

Calpine originally intended to develop the Osprey Energy Center as a competitive wholesale power plant (or "merchant" plant) consistent with the Commission's decision in the Duke New Smyrna Beach need determination case.[9] While Calpine believes that the Commission's original decision in Duke New Smyrna was correct, Calpine recognizes that Florida continues to need additional power

[9] 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 FPSC 3:401, ("Duke New Smyrna") rev'd sub nom. Tampa Electric Co. v. Garcia, 2000 WL 422871 (Fla. 2000), motions for rehearing pending (hereinafter Tampa Electric Co. v. Garcia). In Duke New Smyrna, the Commission defined a "merchant" power plant as a plant with no rate base and no captive retail customers. Duke New Smyrna, 99 FPSC at 3:407.

supply resources and is, accordingly, actively endeavoring to develop the Osprey Project within the scope of the Florida Supreme Court's decision in Tampa Electric Co. v. Garcia.[10] In keeping with the Supreme Court's statement that site certification under the Power Plant Siting Act is available only for a power plant the full output of which is committed to serving retail customers in Florida, Calpine is willing to commit that, as a condition of its determination of need for and as a condition of certification of the Osprey Energy Center, it will commit the full output of the Osprey Project to be sold to utilities that serve Florida electric customers at retail rates.

As the first element of it efforts in this regard, Calpine is diligently pursuing discussions (which Calpine believes will lead to active negotiations) toward contractual arrangements committing the output of the Osprey Project to serve the needs of Florida retail electric customers. Calpine is pursuing such discussions with several Florida utilities, including the Florida Municipal Power Agency, Reedy Creek Improvement District, and other utilities that provide service to retail customers in Florida. Calpine contemplates that these contracts would include a commitment to the purchasing utility or utilities of the full generation output of

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[10] In the event that the Florida Supreme Court grants rehearing as requested by the Commission and by other parties, or in the event that other developments enable Calpine to lawfully develop the Osprey Energy Center as a competitive wholesale facility, Calpine reserves the right to amend its Petition to request an affirmative determination of need on the basis of the Osprey Project being such a competitive power plant. Calpine will, of course, honor all contractual power sales commitments that it may enter into in accord with the terms thereof.

the Osprey Energy Center for a minimum initial term of 3 to 5 years, with renewal options. Such minimum terms are appropriate both for Calpine and for purchasing utilities in light of current market conditions and potential advances in generating technology. To the extent that Calpine obtains contracts, or letters of intent to enter into contracts, for the Osprey Project's output, Calpine will submit those documents to the Commission promptly, e.g., as supplemental exhibits to the Petition or as exhibits to Calpine's witnesses' testimonies. To the extent that Calpine does not obtain contracts or other demonstrable commitments (binding on Calpine) to provide the output of the Project to Florida utilities in time for adequate review in the hearing in this case, Calpine requests that the Commission grant the requested need determination subject to a specific condition, on the need determination and on the site certification for the Project, that before construction can commence, Calpine must demonstrate to the Commission that it has appropriate contractual arrangements confirming that the Project's output will be provided to Florida retail-serving utilities for the benefit of their retail customers.[11]

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[11] The Commission has imposed conditions on its determinations of need in several cases. See, e.g., In Re: Petition for Determination of Need for a Proposed Electrical Power Plant and Related Facilities in Polk County by Tampa Electric Company, 92 FPSC 3:19, 21; In Re: Petition of Florida Power & Light Company to Determine Need for Electrical Power Plant - Martin Expansion Project, 90 FPSC 6:268; In Re: Petition of Seminole Electric Cooperative, Inc., TECO Power Services Corporation and Tampa Electric Company for a Determination of Need for Proposed Electric Power Plant, 89 FPSC 12:262. These cases and their applicability to this need determination proceeding are discussed in detail below in the section titled "Affirmative Determination of Need Subject to Conditions."

On a preliminary basis, Table 13 shows that seven Peninsular Florida utilities have projected needs for approximately 9,000 MW of additional generating capacity for which those utilities do not appear to have filed permit applications. In addition, Calpine has identified the possibility of offering cost-effective power from the Project to utilities that have power purchase agreements with out-of-state utilities.[12] Calpine believes that it can offer firm capacity and energy to certain utilities at rates that will be significantly cost-effective as compared to those utilities' current contract rates. The Commission should note that such arrangements could have the added benefit of freeing up additional, valuable Georgia-Florida interface capacity that would allow for additional power to be imported into Florida for economic and emergency purposes.

D. **Energy Efficiency and Environmental Impacts**.

Pursuant to Section 403.519, the Commission is charged to consider conservation measures that are available to mitigate the need for a proposed power plant subject to the Siting Act and to consider other matters within its jurisdiction that it deems relevant to its decision. As a wholesale utility, Calpine does not

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[12] Calpine is not in any way asking the Commission to order any of the identified utilities to execute a power purchase contract with Calpine for the Osprey Project's output. Calpine is offering this information as evidence of the need for the Project and as evidence of Calpine's bona fide efforts to develop the Project within the Commission's precedents and within the scope of the Florida Supreme Court's initial opinion in Tampa Electric Co. v. Garcia.

TABLE 13

PENINSULAR FLORIDA UTILITIES' IDENTIFIED BUT UNCOMMITTED CAPACITY NEEDS, 2003-2009

UTILITY	MW NEED	TYPE OF CAPACITY	IN-SERVICE YEAR	FIELD CONSTRUCTION START DATE
OUC	481	Combined Cycle	2003	9/2001
	146	Combustion Turbine	2007	6/2006
Lakeland	288	Pressurized Fluidized Bed Coal	2004	6/2002
	32	Combustion Turbine	2009	10/2008
JEA	158	Combustion Turbine	2003	6/2003
	240	Combined Cycle	2006	6/2006
	158	Combustion Turbine	2009	6/2009
Seminole	153	Combustion Turbine	2002	11/2000
	244	Combined Cycle	2004	6/2002
	153	Combustion Turbine	2005	6/2003
	244	Combined Cycle	2006	11/2004
	153	Combustion Turbine	2007	6/2005
FPL	298	Combustion Turbine	2003	2002
	788	Combined Cycle	2006	2004
	394	Combined Cycle	2007	2005
	394	Combined Cycle	2008	2006
	394	Combined Cycle	2009	2007
FPC	495	Combined Cycle	2003	8/2000
	495	Combined Cycle	2005	8/2002
	495	Combined Cycle	2007	8/2004
	495	Combined Cycle	2009	8/2006
TECO	698	Combined Cycle	2003	10/2001
	711	Combined Cycle	2004	8/2002
	465	Combustion Turbine	2005	1/2003
	155	Combustion Turbine	2006	1/2004
	155	Combustion Turbine	2008	1/2006
	155	Combustion Turbine	2009	1/2007
Total MW	**9,037**			

Source: 2000 Ten-Year Site Plans

engage in end-use conservation programs. The utilities to whom Calpine will sell the Osprey Project's output generally do have conservation programs and conservation goals approved by the Commission, however, and Calpine takes as given that those utilities' power supply needs are net of the effects of those conservation programs.

This is not the end of the energy conservation analysis, however. The Commission is charged under the Florida Energy Efficiency and Conservation Act, Sections 366.08-.85 and 403.519, Florida Statutes, with developing and adopting conservation goals, and that statute contains express statements of legislative intent with respect to energy efficiency. Specifically, Section 366.81 provides that

> The Legislature further finds and declares that ss. 366.80-366.85 and 403.519 are to be liberally construed in order to meet the complex problems of . . . increasing the overall efficiency and cost-effectiveness of electricity and natural gas production and use; . . . and conserving expensive resources, particularly petroleum fuels.

The Osprey Project will specifically promote the achievement of these goals. Tables 14.A and 14.B present the heat rates (measured in Btu per kWh, a direct measure of a power plant's energy efficiency) and the estimated dispatch costs (as modeled in the PROMOD IV® analyses performed for Calpine) for most of the power plants in Peninsular Florida. With regard to cost-effectiveness, Table 14.B shows that, comparing the units' annual average dispatch costs, calculated on an as-dispatched basis, the Osprey Project has a lower dispatch cost than approximately 35,000

TABLE 14.A

EFFICIENCY AND COST-EFFECTIVENESS OF PENINSULAR FLORIDA GENERATING UNITS, 2003

Plant	Unit	Summer Capacity (MW)	Average Annual Heat Rate (Btu/kwh)	Average Annual Dispatch Cost ($/MWh)
Nuclear				
CRYSTAL	3	805	Must Run at Maximum Available Capacity	
STLUCIE	1	839	Must Run at Maximum Available Capacity	
STLUCIE	2	839	Must Run at Maximum Available Capacity	
TURKEYPT	3	697	Must Run at Maximum Available Capacity	
TURKEYPT	4	697	Must Run at Maximum Available Capacity	
Coal and Petroleum Coke				
BIG BEND	1	421	9,968	30.32
BIG BEND	2	421	9,974	30.59
BIG BEND	3	428	9,957	28.72
BIG BEND	4	442	9,944	26.93
CRYSTAL	1	386	9,679	25.62
CRYSTAL	2	488	9,596	25.27
CRYSTAL	4	714	9,095	23.67
CRYSTAL	5	697	9,092	23.40
DEERHAVN	2	228	10,607	25.00
GANNON	1	0	9,689	31.24
GANNON	2	0	9,671	31.19
GANNON	6	362	10,225	35.21
MCINTOSH	3	338	9,093	23.66
NORTHSID	1	265	9,753	23.34
NORTHSID	2	265	13,160	29.43
SCHERER	4	846	9,950	24.54
SEMINOLE	1	638	10,043	26.39
SEMINOLE	2	638	10,043	26.28
ST JOHNS	1	624	9,179	22.26
ST JOHNS	2	638	9,258	22.88
STANTON	1	442	9,776	24.74
STANTON	2	446	9,080	22.94

New Gas Combined Cycle

BAYSIDE	1	707	7,236	29.48
BRANDY B	4	482	7,176	29.77
CANE IS	3	263	6,883	27.75
FT MYERS	3	1446	7,145	29.14
HINES EC	1	470	7,055	28.38
HINES EC	2	0	6,860	29.03
KELLEY	4	113	8,363	37.10
N SMYRNA	1	525	6,855	27.67
OKEECHOB	1	263	6,857	27.45
OKEECHOB	2	263	6,857	27.45
OSPREY	1	525	6,853	27.75
PAYNECRK	3	525	6,885	27.78
PURDOM	8	263	6,882	27.72
SANFORD	14	964	7,206	29.35
SANFORD	15	964	7,209	29.36

Other Units

ANCLOTE	1	503	11,132	71.14
ANCLOTE	2	503	10,742	67.77
AVONPKGT	1	29	No Significant Output	
AVONPKGT	2	29	No Significant Output	
BARTOW	1	115	9,980	39.22
BARTOW	2	117	9,986	39.83
BARTOW	3	208	9,980	38.88
BARTOWGT	1	46	No Significant Output	
BARTOWGT	2	46	No Significant Output	
BARTOWGT	3	46	No Significant Output	
BARTOWGT	4	49	No Significant Output	
BAYBROGT	1	47	No Significant Output	
BAYBROGT	2	47	No Significant Output	
BAYBROGT	3	47	No Significant Output	
BAYBROGT	4	47	No Significant Output	
BGBENDGT	1	12	No Significant Output	
BGBENDGT	2	61	11,635	74.93
BGBENDGT	3	61	11,635	74.97
BRANDY B	1	0	11,252	57.02
BRANDY B	2	0	11,146	56.70
BRANDY B	3	153	11,334	56.04
CANE GT	1	30	11,166	51.15
CANE ISL	2	108	9,585	42.40
CAPECNVR	1	405	9,436	40.78

CAPECNVR	2	408	9,442	40.97
CUDJOE D	1	5	No Significant Output	
CUTLER	5	71	11,719	45.21
CUTLER	6	144	11,732	45.20
DEBARYGT	1	54	No Significant Output	
DEBARYGT	2	54	11,730	76.41
DEBARYGT	3	54	No Significant Output	
DEBARYGT	4	54	No Significant Output	
DEBARYGT	5	54	No Significant Output	
DEBARYGT	6	54	No Significant Output	
DEBARYGT	7	88	11,890	77.29
DEBARYGT	8	88	11,890	77.26
DEBARYGT	9	88	11,880	76.98
DEBARYGT	10	88	11,880	77.22
DEERHAVN	1	85	10,612	45.58
DRHVN GT	1	18	14,471	68.51
DRHVN GT	2	18	14,471	68.76
DRHVN GT	3	75	14,471	68.22
EVERGL T	1	35	17,121	73.98
EVERGL T	2	35	17,121	73.98
EVERGL T	3	35	17,121	73.78
EVERGL T	4	35	17,121	73.46
EVERGL T	5	35	17,121	73.89
EVERGL T	6	35	17,121	73.52
EVERGL T	7	35	17,121	73.31
EVERGL T	8	35	17,121	73.90
EVERGL T	9	35	17,121	73.50
EVERGL T	10	35	17,121	73.64
EVERGL T	11	35	17,121	73.00
EVERGL T	12	35	No Significant Output	
EVERGLDS	1	221	9,549	38.50
EVERGLDS	2	221	9,556	38.63
EVERGLDS	3	375	9,949	39.74
EVERGLDS	4	410	9,919	39.68
FTMYER T	1	54	No Significant Output	
FTMYER T	2	54	No Significant Output	
FTMYER T	3	54	No Significant Output	
FTMYER T	4	54	No Significant Output	
FTMYER T	5	54	No Significant Output	
FTMYER T	6	54	No Significant Output	
FTMYER T	7	54	No Significant Output	
FTMYER T	8	54	No Significant Output	
FTMYER T	9	54	No Significant Output	
FTMYER T	10	54	No Significant Output	
FTMYER T	11	54	No Significant Output	

FTMYER T	12	54	No Significant Output	
FTMYERCT	13	153	11,310	52.57
FTMYERCT	14	153	11,316	52.62
GANNONGT	1	12	No Significant Output	
HANSELCC	2	48	9,818	46.06
HANSELIC	8	3	9,300	43.22
HANSELIC	14	2	9,300	43.24
HANSELIC	15	2	9,300	43.22
HANSELIC	16	2	9,300	43.22
HANSELIC	17	2	9,300	43.22
HANSELIC	18	2	No Significant Output	
HANSELIC	19	3	No Significant Output	
HANSELIC	20	3	9,300	43.25
HARDEE	1	224	7,300	34.55
HARDEECT	1	74	9,732	45.23
HIGGNSGT	1	29	No Significant Output	
HIGGNSGT	2	29	No Significant Output	
HIGGNSGT	3	35	No Significant Output	
HIGGNSGT	4	35	No Significant Output	
HOOKERS	1	0	No Significant Output	
HOOKERS	2	0	No Significant Output	
HOOKERS	3	0	No Significant Output	
HOOKERS	4	0	No Significant Output	
HOOKERS	5	0	No Significant Output	
HOPKINGT	1	12	14,029	60.59
HOPKINGT	2	24	13,597	63.57
HOPKINS	1	75	11,349	47.05
HOPKINS	2	238	10,627	41.83
IND RIVR	1	88	10,034	42.40
IND RIVR	2	201	9,980	39.60
IND RIVR	3	319	10,469	41.66
INDRVRGT	1	37	11,540	52.53
INDRVRGT	2	37	11,540	52.44
INDRVRGT	3	108	11,100	50.87
INDRVRGT	4	108	11,100	50.86
INTER GT	1	47	No Significant Output	
INTER GT	2	47	No Significant Output	
INTER GT	3	47	No Significant Output	
INTER GT	4	47	No Significant Output	
INTER GT	5	47	No Significant Output	
INTER GT	6	47	No Significant Output	
INTER GT	7	83	12,210	79.26
INTER GT	8	83	No Significant Output	
INTER GT	9	83	No Significant Output	
INTER GT	10	83	12,030	78.21

INTER GT	11	143	12,030	77.68
INTER GT	12	76	12,567	59.59
INTER GT	13	76	12,572	59.63
INTER GT	14	76	12,529	59.48
IVEY IC	1	4	9,300	42.70
IVEY IC	2	5	9,300	42.71
IVEY IC	3	9	12,280	54.19
IVEY IC	4	6	12,280	54.19
IVEY IC	5	4	9,300	42.71
IVEY IC	6	18	9,300	42.70
KELLY	7	23	16,572	69.15
KELLY GT	1	14	No Significant Output	
KELLY GT	2	14	No Significant Output	
KELLY GT	3	14	No Significant Output	
KENEDYGT	3	54	No Significant Output	
KENEDYGT	4	54	No Significant Output	
KENEDYGT	5	54	No Significant Output	
KENEDYGT	7	153	11,360	56.16
KING	5	8	10,484	42.58
KING	6	17	12,857	51.79
KING	7	32	12,824	54.87
KING	8	50	12,708	52.50
KING DSL	1	5	No Significant Output	
KING GT	9	23	10,500	51.08
LARSEN	8	102	10,610	42.99
LARSENGT	2	10	No Significant Output	
LARSENGT	3	10	No Significant Output	
LAUDER T	1	36	15,908	66.55
LAUDER T	2	35	15,908	66.40
LAUDER T	3	35	15,908	66.48
LAUDER T	4	35	15,908	66.55
LAUDER T	5	35	15,908	66.55
LAUDER T	6	35	15,908	66.50
LAUDER T	7	35	15,908	66.62
LAUDER T	8	35	15,908	66.66
LAUDER T	9	35	15,908	66.63
LAUDER T	10	35	15,908	66.55
LAUDER T	11	35	15,908	66.65
LAUDER T	12	35	15,908	66.62
LAUDER T	13	35	16,227	67.85
LAUDER T	14	35	16,227	67.91
LAUDER T	15	35	16,227	68.04
LAUDER T	16	35	16,227	68.02
LAUDER T	17	35	16,227	67.93
LAUDER T	18	35	16,227	68.11

LAUDER T	19	35	16,227	67.99
LAUDER T	20	35	16,227	68.07
LAUDER T	21	35	16,227	68.17
LAUDER T	22	32	16,227	68.30
LAUDER T	23	32	16,227	68.26
LAUDER T	24	35	16,227	68.18
LAUDERCC	4	440	7,645	32.94
LAUDERCC	5	440	7,650	33.37
MANATEE	1	819	9,964	39.68
MANATEE	2	819	9,909	39.51
MARATHON	1	8	No Significant Output	
MARATHON	2	5	9,300	42.70
MARATHON	3	8	12,280	54.20
MARTIN	1	814	8,905	36.38
MARTIN	2	816	8,943	36.17
MARTINCC	3	445	7,232	31.20
MARTINCC	4	445	7,235	31.08
MARTINCT	1	153	11,268	52.60
MARTINCT	2	153	11,272	52.60
MCINT GT	1	17	15,000	65.42
MCINT IC	1	5	No Significant Output	
MCINTOSH	1	87	10,814	43.89
MCINTOSH	2	103	10,272	41.03
MCINTOSH	5	310	7,266	30.24
NORTH GT	3	52	No Significant Output	
NORTH GT	4	52	No Significant Output	
NORTH GT	5	52	No Significant Output	
NORTH GT	6	52	No Significant Output	
NORTHSID	3	505	9,690	40.75
OLEAN GT	1	153	11,289	52.60
OLEAN GT	2	153	11,315	52.70
OLEAN GT	3	153	11,298	52.66
OLEAN GT	4	153	11,323	52.72
OLEAN GT	5	153	11,331	52.76
PHILLIPS	1	17	13,500	55.48
PHILLIPS	2	17	13,500	55.44
POLK CT	2	153	11,379	54.97
POLK CT	3	153	11,349	54.94
POLKIGCC	1	250	10,081	29.98
PURDOM	7	48	16,965	69.28
PURDOMGT	1	12	No Significant Output	
PURDOMGT	2	12	No Significant Output	
PUTNAMCC	1	249	9,113	39.34
PUTNAMCC	2	249	9,114	39.35
REEDYCRK	1	35	10,400	46.03

RIOPINGT	1	15	No Significant Output	
RIVIERA	3	290	9,728	37.23
RIVIERA	4	290	9,730	37.52
SANFORD	3	153	8,876	40.06
SEM CT	1	153	11,331	54.92
SMITH	1	7	18,796	75.10
SMITH	2	7	18,804	75.08
SMITH	3	22	17,069	72.34
SMITH	4	32	17,100	72.46
SMITH D	1	9	No Significant Output	
SMITH CC	1	32	10,400	48.78
SMITH GT	1	26	No Significant Output	
SMITH ST	1	3	No Significant Output	
SMITH ST	2	2	No Significant Output	
SMITH ST	3	6	No Significant Output	
ST CLOUD	1	4	No Significant Output	
ST CLOUD	2	6	No Significant Output	
ST CLOUD	3	6	No Significant Output	
ST CLOUD	4	12	10,696	72.95
STOCK DS	1	9	9,300	65.25
STOCK DS	2	9	9,300	64.87
STOCK GT	1	21	No Significant Output	
STOCK GT	2	16	No Significant Output	
STOCK GT	3	16	No Significant Output	
STOCK IC	1	6	9,300	65.25
SUWAN GT	1	54	No Significant Output	
SUWAN GT	2	54	No Significant Output	
SUWAN GT	3	54	No Significant Output	
SUWANNEE	1	33	11,724	51.08
SUWANNEE	2	32	11,739	51.16
SUWANNEE	3	80	11,748	51.20
SWOOPEIC	1	5	No Significant Output	
TIGERBAY	1	194	7,551	32.39
TURKEYIC	1	14	No Significant Output	
TURKEYPT	1	410	9,407	39.50
TURKEYPT	2	400	9,396	39.64
TURNERGT	1	15	No Significant Output	
TURNERGT	2	15	No Significant Output	
TURNERGT	3	65	No Significant Output	
TURNERGT	4	65	No Significant Output	
UNIV FLA	1	36	11,166	50.34
VERO BCH	1	13	13,057	52.65
VERO BCH	2	13	8,927	36.67
VERO BCH	3	33	13,060	54.16
VERO BCH	4	56	11,745	48.64
VERO BCH	5	35	11,168	45.67

NUGs		
AGRICHEM	1	6
AS-AVAIL	1	63
BAY CTY	1	11
BIOENRGY	1	10
BROWARDS	1	54
BROWARDS	2	56
CARGILL	2	15
CEDARBAY	1	250
CFRBIOGN	1	74
DADE CTY	1	43
ELDORADO	1	114
FLASTONE	1	133
HILLSBOR	1	26
INDIANTN	1	330
LAKE CTY	1	13
LAKECOGN	1	110
LFC JEFF	1	9
LFC MADS	1	9
MULB-FPC	1	79
ORANGE	1	22
ORLANDO	1	79
PALMBCH	1	44
PASCO	1	109
PASCOCTY	1	23
PINELLAS	1	40
PINELLAS	2	15
RIDGE	1	40
ROYSTER	1	31
TAMPACTY	1	19
JEA-QFs		17
External Purchases		
ENTERGY	1	23
SOUTHERN CO.		1615

Source: PROMOD IV(R) analyses prepared by Slater Consulting.

TABLE 14.B

EFFICIENCY AND COST-EFFECTIVENESS OF PENINSULAR FLORIDA GENERATING UNITS, 2008

Plant	Unit	Summer Capacity (MW)	Average Annual Heat Rate (Btu/kwh)	Average Annual Dispatch Cost ($/MWh)
Nuclear				
CRYSTAL	3	805	Must Run at Maximum Available Capacity	
STLUCIE	1	839	Must Run at Maximum Available Capacity	
STLUCIE	2	839	Must Run at Maximum Available Capacity	
TURKEYPT	3	697	Must Run at Maximum Available Capacity	
TURKEYPT	4	697	Must Run at Maximum Available Capacity	
Coal and Petroleum Coke				
BIG BEND	1	421	10,030	34.18
BIG BEND	2	421	9,999	35.66
BIG BEND	3	428	9,998	32.59
BIG BEND	4	442	9,980	30.79
CRYSTAL	1	386	9,684	28.39
CRYSTAL	2	488	9,600	28.08
CRYSTAL	4	714	9,124	26.56
CRYSTAL	5	697	9,121	26.11
DEERHAVN	2	228	10,610	28.61
MCINTOSH	3	336	9,100	27.00
MCINTOSH	4	288	8,492	24.21
NORTHSID	1	265	9,790	26.37
NORTHSID	2	265	13,440	34.16
SCHERER	4	846	9,969	27.53
SEMINOLE	1	638	10,094	30.00
SEMINOLE	2	638	10,079	29.63
ST JOHNS	1	624	9,203	25.59
ST JOHNS	2	638	9,284	25.48
STANTON	1	442	9,783	27.74
STANTON	2	446	9,086	26.04

New Gas Combined Cycle				
BAYSIDE	1	707	7,221	34.22
BAYSIDE	2	715	7,189	34.09
BRANDY B	4	482	7,252	34.78
CANE IS	3	263	6,918	32.28
FT MYERS	3	1446	7,206	33.98
GREEN CC	1	263	6,867	32.15
HINES EC	1	470	7,110	33.13
HINES EC	2	525	6,889	32.25
HINES EC	3	525	6,903	32.25
HINES EC	4	525	6,907	32.32
KELLEY	4	113	8,519	43.47
MARTINCC	5	366	6,916	32.49
MARTINCC	6	366	6,918	32.47
N SMYRNA	1	525	6,879	32.20
OKEECHOB	1	263	6,862	32.13
OKEECHOB	2	263	6,863	32.14
OSPREY	1	525	6,873	32.16
PAYNECRK	3	525	6,922	32.33
PURDOM	8	263	6,895	32.29
SANFORD	14	964	7,276	34.24
SANFORD	15	964	7,281	34.25
SEMIN CC	4	263	6,898	32.26
SEMIN CC	5	263	6,902	32.27
UNKNOWCC	1	368	6,864	32.14
UNKNOWCC	2	368	6,880	32.25
Other Units				
ANCLOTE	1	503	11,594	90.21
ANCLOTE	2	503	11,405	89.42
BARTOW	1	115	9,975	46.31
BARTOW	2	117	10,000	47.16
BARTOW	3	208	9,974	46.21
BARTOWGT	1	46	No Significant Output	
BARTOWGT	2	46	No Significant Output	
BARTOWGT	3	46	No Significant Output	
BARTOWGT	4	49	No Significant Output	
BGBENDGT	1	12	No Significant Output	
BGBENDGT	2	61	No Significant Output	
BGBENDGT	3	61	No Significant Output	
BRANDY B	3	153	11,483	66.07
CANE GT	1	30	11,166	59.39
CANE ISL	2	108	9,580	49.23

CAPECNVR	1	405	9,446	48.35
CAPECNVR	2	408	9,444	48.41
CUDJOE D	1	5	No Significant Output	
CUTLER	5	71	11,721	52.54
CUTLER	6	144	11,730	52.30
DEBARYGT	1	54	No Significant Output	
DEBARYGT	2	54	No Significant Output	
DEBARYGT	3	54	No Significant Output	
DEBARYGT	4	54	No Significant Output	
DEBARYGT	5	54	No Significant Output	
DEBARYGT	6	54	No Significant Output	
DEBARYGT	7	88	No Significant Output	
DEBARYGT	8	88	No Significant Output	
DEBARYGT	9	88	No Significant Output	
DEBARYGT	10	88	No Significant Output	
DEERHAVN	1	85	10,598	52.87
DRHVN GT	1	18	No Significant Output	
DRHVN GT	2	18	No Significant Output	
DRHVN GT	3	75	No Significant Output	
EVERGL T	1	35	No Significant Output	
EVERGL T	2	35	No Significant Output	
EVERGL T	3	35	No Significant Output	
EVERGL T	4	35	No Significant Output	
EVERGL T	5	35	No Significant Output	
EVERGL T	6	35	No Significant Output	
EVERGL T	7	35	No Significant Output	
EVERGL T	8	35	No Significant Output	
EVERGL T	9	35	No Significant Output	
EVERGL T	10	35	No Significant Output	
EVERGL T	11	35	No Significant Output	
EVERGL T	12	35	No Significant Output	
EVERGLDS	1	221	9,543	44.85
EVERGLDS	2	221	9,552	44.83
EVERGLDS	3	375	9,898	45.91
EVERGLDS	4	410	9,894	45.92
FTMYER T	1	54	No Significant Output	
FTMYER T	2	54	No Significant Output	
FTMYER T	3	54	No Significant Output	
FTMYER T	4	54	No Significant Output	
FTMYER T	5	54	No Significant Output	
FTMYER T	6	54	No Significant Output	
FTMYER T	7	54	No Significant Output	
FTMYER T	8	54	No Significant Output	
FTMYER T	9	54	No Significant Output	
FTMYER T	10	54	No Significant Output	
FTMYER T	11	54	No Significant Output	

FTMYER T	12	54	No Significant Output	
FTMYERCT	13	153	11,356	61.53
FTMYERCT	14	153	11,355	61.50
GANNONGT	1	12	No Significant Output	
HANSELCC	2	48	9,767	53.02
HANSELIC	8	3	9,300	50.41
HANSELIC	14	2	9,300	50.40
HANSELIC	15	2	9,300	50.41
HANSELIC	16	2	9,300	50.41
HANSELIC	17	2	9,300	50.41
HANSELIC	18	2	No Significant Output	
HANSELIC	19	3	No Significant Output	
HANSELIC	20	3	9,300	50.41
HARDEE	1	224	7,300	39.98
HARDEECT	1	74	9,732	52.52
HOPKINGT	1	12	No Significant Output	
HOPKINGT	2	24	No Significant Output	
HOPKINS	1	75	11,401	54.91
HOPKINS	2	238	10,636	48.47
IND RIVR	1	88	10,023	49.02
IND RIVR	2	201	9,972	45.76
IND RIVR	3	319	10,465	48.35
INDRVRGT	1	37	11,540	61.22
INDRVRGT	2	37	11,540	61.11
INDRVRGT	3	108	11,100	59.16
INDRVRGT	4	108	11,100	59.22
INTER GT	1	47	No Significant Output	
INTER GT	2	47	No Significant Output	
INTER GT	3	47	No Significant Output	
INTER GT	4	47	No Significant Output	
INTER GT	5	47	No Significant Output	
INTER GT	6	47	No Significant Output	
INTER GT	7	83	No Significant Output	
INTER GT	8	83	No Significant Output	
INTER GT	9	83	No Significant Output	
INTER GT	10	83	No Significant Output	
INTER GT	11	143	No Significant Output	
INTER GT	12	76	12,577	69.21
INTER GT	13	76	12,647	69.54
INTER GT	14	76	12,680	69.70
IVEY IC	1	4	9,300	50.60
IVEY IC	2	5	9,300	50.60
IVEY IC	3	9	No Significant Output	
IVEY IC	4	6	No Significant Output	
IVEY IC	5	4	9,300	50.59
IVEY IC	6	18	9,300	50.58

KELLY	7	23	16,949	82.10
KELLY GT	1	14	No Significant Output	
KELLY GT	2	14	No Significant Output	
KELLY GT	3	14	No Significant Output	
KENEDYGT	3	54	No Significant Output	
KENEDYGT	4	54	No Significant Output	
KENEDYGT	5	54	No Significant Output	
KENEDYGT	7	153	11,405	65.70
KING	5	8	10,477	49.46
KING	6	17	12,919	60.91
KING	7	32	12,944	64.19
KING	8	50	12,721	61.21
KING DSL	1	5	No Significant Output	
KING GT	9	23	10,500	59.28
LARSEN	8	102	10,610	49.92
LARSENGT	2	10	No Significant Output	
LARSENGT	3	10	No Significant Output	
LAUDER T	1	36	No Significant Output	
LAUDER T	2	35	No Significant Output	
LAUDER T	3	35	No Significant Output	
LAUDER T	4	35	No Significant Output	
LAUDER T	5	35	No Significant Output	
LAUDER T	6	35	No Significant Output	
LAUDER T	7	35	No Significant Output	
LAUDER T	8	35	No Significant Output	
LAUDER T	9	35	No Significant Output	
LAUDER T	10	35	No Significant Output	
LAUDER T	11	35	No Significant Output	
LAUDER T	12	35	No Significant Output	
LAUDER T	13	35	No Significant Output	
LAUDER T	14	35	No Significant Output	
LAUDER T	15	35	No Significant Output	
LAUDER T	16	35	No Significant Output	
LAUDER T	17	35	No Significant Output	
LAUDER T	18	35	No Significant Output	
LAUDER T	19	35	No Significant Output	
LAUDER T	20	35	No Significant Output	
LAUDER T	21	35	No Significant Output	
LAUDER T	22	32	No Significant Output	
LAUDER T	23	32	No Significant Output	
LAUDER T	24	35	No Significant Output	
LAUDERCC	4	440	7,667	38.21
LAUDERCC	5	440	7,680	38.95
MANATEE	1	819	9,860	46.72
MANATEE	2	819	9,695	45.91
MARATHON	1	8	No Significant Output	

MARATHON	2	5	9,300	50.59
MARATHON	3	8	12,280	64.23
MARTIN	1	814	8,943	42.12
MARTIN	2	816	9,005	42.56
MARTINCC	3	445	7,263	36.26
MARTINCC	4	445	7,265	36.26
MARTINCT	1	153	11,334	61.48
MARTINCT	2	153	11,336	61.46
MCINT GT	1	17	No Significant Output	
MCINT IC	1	5	No Significant Output	
MCINTOSH	1	87	10,810	50.89
MCINTOSH	2	103	10,280	47.54
MCINTOSH	5	310	7,478	35.72
NORTH GT	3	52	No Significant Output	
NORTH GT	4	52	No Significant Output	
NORTH GT	5	52	No Significant Output	
NORTH GT	6	52	No Significant Output	
NORTHSID	3	505	9,645	50.16
OLEAN GT	1	153	11,373	61.57
OLEAN GT	2	153	11,362	61.51
OLEAN GT	3	153	11,363	61.42
OLEAN GT	4	153	11,367	61.49
OLEAN GT	5	153	11,358	61.47
PHILLIPS	1	17	13,500	65.77
PHILLIPS	2	17	13,500	65.94
POLK CT	2	153	11,358	64.09
POLK CT	3	153	11,394	64.23
POLK CT	4	153	11,428	64.41
POLK CT	5	153	11,303	63.82
POLK CT	6	153	11,318	63.90
POLKIGCC	1	250	10,256	35.45
PURDOM	7	48	18,979	88.83
PURDOMGT	1	0	No Significant Output	
PURDOMGT	2	12	No Significant Output	
PUTNAMCC	1	249	9,112	45.66
PUTNAMCC	2	249	9,116	45.70
REEDYCRK	1	35	10,400	53.11
RIVIERA	3	290	9,727	44.25
RIVIERA	4	290	9,732	44.15
SANFORD	3	153	8,881	46.81
SEM CT	1	153	11,391	64.23
SEM CT	2	153	11,446	64.50
SEM CT	3	153	11,412	64.37
SMITH	1	7	No Significant Output	
SMITH	2	7	No Significant Output	
SMITH	3	22	16,799	82.68

SMITH	4	32	16,685	82.14
SMITH D	1	9	No Significant Output	
SMITH CC	1	32	10,400	56.26
SMITH GT	1	26	No Significant Output	
SMITH ST	1	3	No Significant Output	
SMITH ST	2	2	No Significant Output	
SMITH ST	3	6	No Significant Output	
ST CLOUD	1	4	No Significant Output	
ST CLOUD	2	6	No Significant Output	
ST CLOUD	3	6	No Significant Output	
ST CLOUD	4	12	No Significant Output	
STOCK DS	1	9	No Significant Output	
STOCK DS	2	9	No Significant Output	
STOCK GT	1	21	No Significant Output	
STOCK GT	2	16	No Significant Output	
STOCK GT	3	16	No Significant Output	
STOCK IC	1	6	No Significant Output	
SUWAN GT	1	54	No Significant Output	
SUWAN GT	2	54	No Significant Output	
SUWAN GT	3	54	No Significant Output	
SWOOPEIC	1	5	No Significant Output	
TIGERBAY	1	194	7,583	37.30
TURKEYIC	1	14	No Significant Output	
TURKEYPT	1	410	9,405	46.86
TURKEYPT	2	400	9,415	46.88
TURNERGT	3	65	No Significant Output	
TURNERGT	4	65	No Significant Output	
UNIV FLA	1	36	11,166	58.49
VERO BCH	1	13	13,138	61.81
VERO BCH	2	13	8,931	42.63
VERO BCH	3	33	13,239	63.81
VERO BCH	4	56	11,788	56.85
VERO BCH	5	35	11,186	53.24

NUGs

AS-AVAIL	1	63
BAY CTY	1	11
BROWARDS	1	54
BROWARDS	2	56
CARGILL	2	15
CEDARBAY	1	250
CFRBIOGN	1	74
DADE CTY	1	43
ELDORADO	1	114
HILLSBOR	1	26

INDIANTN	1	330
LAKE CTY	1	13
LAKECOGN	1	110
LFC JEFF	1	9
LFC MADS	1	9
MULB-FPC	1	79
ORANGE	1	22
ORLANDO	1	79
PALMBCH	1	44
PASCO	1	109
PASCOCTY	1	23
PINELLAS	1	40
PINELLAS	2	15
RIDGE	1	40
ROYSTER	1	31
TAMPACTY	1	19
JEA-QFs		17

External Purchases

ENTERGY	1	23
SOUTHERN CO.		1615

Source: PROMOD IV(R) analyses prepared by Slater Consulting.

MW of the fossil-fueled generating capacity that is projected to be serving Peninsular Florida in 2008. Table 14.B shows that on a pure energy efficiency basis, the Osprey Project is more efficient than approximately 43,400 MW (97.4 percent) of the fossil-fueled generating capacity projected to be serving Peninsular Florida in 2008.

Table 15 presents data from the PROMOD IV® analyses that show the energy efficiency gains that the Project will provide if it is added into the Peninsular Florida power supply system in addition to all existing and currently planned units. In this scenario, the Project would reduce the average heat rate of all Peninsular Florida power supply by approximately 31 to 48 Btu per kWh over the 2004-2012 period. The Project would thus result in a net saving of 8 to 10 trillion Btu (8,000,000 to 10,000,000 MMBtu) of primary energy that would have been used to provide electricity in Peninsular Florida. (Of course, if the Project is built in lieu of another resource, then its energy efficiency effect will be the difference between the Osprey Project's heat rate and the "avoided" unit's heat rate, adjusted for impacts on total generation in the State.) Tables 16.A and 16.B present data showing the impacts of adding the Osprey Project into the Peninsular Florida power supply system on the total consumption of each major generating fuel type -- coal, natural gas, No. 2 oil, and No. 6 oil.

Directly associated with these reductions in primary fuel consumption are reductions in total SO_2 and NO_x emissions. Using data from the PROMOD IV® analyses, Table 17 shows the impacts of

TABLE 15

PENINSULAR FLORIDA, IMPACTS OF OSPREY ENERGY CENTER ON AVERAGE ELECTRICITY GENERATION HEAT RATES AND TOTAL FUEL CONSUMPTION, 2003-2012

	Average Heat Rate (btu/kwh)			Total Primary Energy (1000*mmbtu)		Osprey Net Energy
Year	Without Osprey	With Osprey	Difference	Without Osprey	With Osprey	Savings (1000*mmbtu)
2003	8,849.8	8,824.2	25.6	1,847,851	1,842,503	5,348
2004	8,763.7	8,715.5	48.1	1,870,376	1,860,108	10,268
2005	8,726.5	8,688.7	37.8	1,900,565	1,892,324	8,241
2006	8,649.6	8,605.0	44.6	1,922,806	1,912,882	9,924
2007	8,588.6	8,546.6	42.0	1,945,869	1,936,361	9,508
2008	8,552.3	8,515.7	36.6	1,970,843	1,962,420	8,423
2009	8,514.4	8,479.8	34.6	1,997,870	1,989,741	8,129
2010	8,520.5	8,489.2	31.2	2,035,751	2,028,287	7,464
2011	8,527.8	8,493.0	34.9	2,074,730	2,066,244	8,486
2012	8,548.0	8,511.1	36.9	2,117,702	2,108,569	9,133

Source: PROMOD IV(R) analyses prepared by Slater Consulting.

TABLE 16.A

PENINSULAR FLORIDA, FUEL CONSUMPTION IMPACTS OF OSPREY ENERGY CENTER, 2003-2012

(All Values in MMBtu)

	Nuclear			Coal and Other Solid Fuels			Natural Gas			No. 6 Oil			No. 2 Oil		
Year	Without Osprey	With Osprey	Difference	Without Osprey	With Osprey	Difference	Without Osprey	With Osprey	Difference	Without Osprey	With Osprey	Difference	Without Osprey	With Osprey	Difference
2003	295,404	295,404	0	767,031	763,308	3,723	664,690	669,592	(4,902)	117,061	110,831	6,230	3,665	3,368	297
2004	321,616	321,616	0	754,221	739,948	14,273	704,428	719,227	(14,799)	86,944	76,578	10,366	3,167	2,739	428
2005	316,996	316,996	0	745,666	735,189	10,477	745,144	757,938	(12,794)	89,404	79,378	10,026	3,355	2,823	532
2006	303,928	303,928	0	744,882	728,293	16,589	787,223	803,005	(15,782)	84,091	75,187	8,904	2,682	2,469	213
2007	312,117	312,117	0	712,377	704,843	7,534	829,027	842,173	(13,146)	89,833	74,902	14,931	2,515	2,326	189
2008	326,697	326,697	0	712,088	698,006	14,082	859,206	873,317	(14,111)	70,179	62,003	8,176	2,673	2,397	276
2009	294,962	294,962	0	713,153	709,191	3,962	896,749	905,004	(8,255)	90,315	78,139	12,176	2,691	2,445	246
2010	321,069	321,069	0	713,814	703,700	10,114	913,830	924,653	(10,823)	84,860	76,703	8,157	2,178	2,162	16
2011	316,945	316,945	0	719,159	711,118	8,041	936,074	946,767	(10,693)	100,146	89,226	10,920	2,406	2,188	218
2012	331,247	331,247	0	727,954	716,651	11,303	949,324	959,913	(10,589)	106,063	98,206	7,857	3,114	2,552	562

Source: PROMOD IV(R) analysis prepared by Slater Consulting.

TABLE 16.B

PENINSULAR FLORIDA, FUEL CONSUMPTION
IMPACTS OF OSPREY ENERGY CENTER, 2003-2012

(All Values in Gwh)

	Nuclear			Coal and Other Solid Fuels			Natural Gas			No. 6 Oil			No. 2 Oil		
Year	Without Osprey	With Osprey	Difference	Without Osprey	With Osprey	Difference	Without Osprey	With Osprey	Difference	Without Osprey	With Osprey	Difference	Without Osprey	With Osprey	Difference
2003	28,539	28,539	0	79,578	79,118	460	87,847	88,974	(1,127)	11,955	11,329	626	359	330	29
2004	31,071	31,071	0	78,349	76,893	1,456	94,350	96,906	(2,556)	8,901	7,857	1,044	309	271	38
2005	30,625	30,625	0	77,584	76,442	1,142	99,615	101,870	(2,255)	9,188	8,164	1,024	324	275	49
2006	29,362	29,362	0	77,578	75,835	1,743	106,045	108,715	(2,670)	8,625	7,735	890	264	244	20
2007	30,153	30,153	0	74,190	73,439	751	112,389	114,710	(2,321)	9,186	7,687	1,499	248	231	17
2008	31,562	31,562	0	74,139	72,642	1,497	116,932	119,289	(2,357)	7,204	6,389	815	262	237	25
2009	28,496	28,496	0	74,264	73,846	418	121,968	123,656	(1,688)	9,250	8,035	1,215	263	241	22
2010	31,018	31,018	0	74,293	73,221	1,072	124,355	126,292	(1,937)	8,686	7,851	835	207	204	3
2011	30,620	30,620	0	74,864	73,946	918	126,941	129,019	(2,078)	10,223	9,120	1,103	227	204	23
2012	32,001	32,001	0	75,772	74,656	1,116	128,450	130,433	(1,983)	10,808	10,022	786	293	239	54

Source: PROMOD IV(R) analysis prepared by Slater Consulting.

TABLE 17

PENINSULAR FLORIDA, EMISSIONS IMPACTS OF OSPREY ENERGY CENTER, 2003-2012

(All Values in 1000's lbs)

	Sulfur Dioxide		Nitrogen Oxides	
Year	Without Osprey	With Osprey	Without Osprey	With Osprey
2003	766,615	760,268	466,300	461,530
2004	692,919	665,306	437,633	422,506
2005	702,969	668,229	434,468	421,924
2006	674,289	649,816	429,526	417,507
2007	655,185	636,092	418,136	407,588
2008	634,800	605,206	405,095	395,506
2009	658,855	645,603	423,700	413,602
2010	682,085	658,021	425,672	416,868
2011	696,995	685,802	432,675	425,307
2012	729,415	695,287	451,069	437,974

Source: PROMOD IV(R) analyses prepared by Slater Consulting.

the Osprey Project on the emissions of these two major pollutants from electricity generation in Florida. Generally, over the study period, the Project is expected to reduce total SO_2 emissions from the generation of Peninsular Florida's electricity supply by 5 to 17 tons per year and reduce total NO_x emissions by 3.5 to 7.5 tons per year.

E. Strategic Considerations.

The Project is also consistent with strategic factors that may be considered in developing power plants from Calpine's perspective and in evaluating proposed power plants from the Commission's perspective considering the State as a whole. The Project will be fueled by domestically produced natural gas, rather than by an imported fuel that is subject to delivery interruption due to political or other events. The Project will also provide a significant impetus to the construction of a second major trans-Florida natural gas pipeline. The Project has a low installed cost relative to similar projects and a highly efficient heat rate, assuring its long-term economic viability. As a competitive wholesale power plant, constructed solely at the expense of Calpine, the Osprey Project will provide power with limited risk to Florida electric customers (only the risk for any firm capacity payments that might be required under a power purchase agreement) and will impose little or no obligation on either Florida utilities or their customers (again, only the risk associated with fixed firm

capacity payments, if any).[13] The Project's gas-fired combined cycle technology is exceptionally clean environmentally, protecting against risks associated with future changes in environmental regulations while improving the overall environmental profile of electricity generation in Florida.

[13] Again, if, pursuant to applicable law, Calpine is able to develop the Project as a competitive wholesale facility without prior contractual commitments, there would be no risk imposed on any Florida retail-serving utilities or on any of those utilities' retail customers.

V. COST-EFFECTIVENESS OF THE OSPREY ENERGY CENTER

The Osprey Energy Center is the most cost-effective alternative available to Peninsular Florida for meeting the future power supply needs of utilities and their retail and wholesale electric customers. The Project is also the most cost-effective alternative available to Calpine for meeting its anticipated wholesale sales obligations. Moreover, based on its highly efficient heat rate and low direct construction cost, the Project is demonstrably cost-effective relative to virtually all other gas-fired combined cycle power plants proposed for Florida over the next ten years. Accordingly, the Project is expected to provide cost-effective power to Peninsular Florida.

A. Cost-Effectiveness to Peninsular Florida Electric Customers.

Calpine is committed to providing the Project's output to Florida utilities for the benefit of their retail customers. The Project will be cost-effective to Peninsular Florida utilities and retail electric customers because it will provide a necessarily cost-effective option for retail-serving utilities to obtain needed capacity and energy for resale to their customers, and because it will thus help to hold down wholesale power costs. This will hold true whether Calpine enters advance contractual arrangements for the sale of the Project's output or, pursuant to applicable law, develops the Project without such advance arrangements. The Osprey Project will necessarily be cost-effective because no retail-serving utility nor any retail customers or group of customers, has

to buy any of the Project's capacity or energy, and because no utility could reasonably or rationally be expected to pay more than its short-run incremental cost for a short-term purchase nor more than its long-run incremental cost for a long-term purchase from the Project. Because the Project's output will be sold only at wholesale to other utilities for use within Florida, such sales will necessarily be at cost-effective prices to the purchasing utilities. (If the prices for purchases from the Project exceed the cost of other power supply alternatives, utilities will simply obtain needed power elsewhere and not purchase power from the Project.) Thus, the Project will necessarily provide an economic power supply to the purchasing utilities and their retail ratepayers.

Additionally, the Project's costs and efficiency compare favorably to other gas-fired combined cycle generating units planned or proposed by other utilities in Peninsular Florida. Table 12, which presents data from the FRCC 1999 Resource Plan and from the utilities' 2000 ten-year site plans and other published sources, shows that of all the new gas-fired combined cycle power plants proposed by Peninsular Florida utilities, only the Cane Island 3 unit, a joint project of the Florida Municipal Power Agency and the Kissimmee Utilities Authority, the Duke Energy New Smyrna Beach Power Project, the Okeechobee Generating Company Project, Gainesville Kelly Project, and Seminole Electric Cooperative's Payne Creek Project are expected to have direct construction costs comparable to those of the Osprey Energy Center.

The other combined cycle plants with generally comparable heat rates reflect direct construction costs, on a dollars-per-kW basis, significantly greater than those of the Project.

Assuming economically rational, cost-minimizing behavior by Florida's retail-serving utilities, it is reasonable to conclude that these utilities will only buy power from the Project when it is cost-effective for them to do so, i.e., when it is less expensive for them to buy power from the Project than to generate it themselves or to buy from another supplier. Reasonably assuming that the cost of power purchased from the Project is passed directly through to the purchasing utilities' ratepayers, i.e., that it is passed through the utilities' fuel and purchased power cost recovery charges and not subjected to any markup or diverted to other wholesale purchasers for a profit, such purchases will necessarily be cost-effective to those ratepayers. This is because the retail-serving Peninsular Florida utilities are not obligated to buy--nor subject to being forced to buy--the Project's output. Similarly, as distinguished from traditional regulatory treatment, Florida electric customers are not vulnerable to being required to pay for either the capital or operating costs of the Project, unless their retail-serving utilities contract for power from the Project. Even then, as distinguished from traditional utility-built generation, Florida customers will only pay for power that they actually use from the Project, i.e., power that their retail-serving utilities rationally choose to buy and resell to them as a cost-saving measure compared to other power supply options.

Finally, the presence and operation of the Osprey Energy Center will suppress wholesale power prices in Peninsular Florida. Analyses performed for Calpine by Slater Consulting, Inc. using the PROMOD IV® model indicate that the Project is expected to reduce total Peninsular Florida electricity generation costs and to suppress wholesale prices by about $0.50 to $0.90 per MWH, yielding total estimated power supply cost reductions of approximately $800 million (NPV at a 10 percent discount rate) over the first ten years of the Project's operation. See Table 18 of these Exhibits. The estimated wholesale price suppression effects and production cost savings from the Osprey Energy Center under fuel price and load growth sensitivity cases are shown in Tables 19.A, 19.B, and 19.C.

B. Cost-Effectiveness to Calpine Construction Finance Company, L.P.

The Osprey Energy Center also represents the most cost-effective alternative available to Calpine Construction Finance Company, L.P. for meeting its anticipated wholesale power commitments. Table 20 shows the generating alternatives evaluated by Calpine. Screening analyses conducted for Calpine by R.W. Beck & Associates considered gas-fired and oil-fired combustion turbines, gas-fired and oil-fired combined cycle units, gas-fired steam generation units, conventional pulverized coal steam units, nuclear steam units, renewable energy, and integrated coal gasification combined cycle units.

Table 21 presents the results of cost screening analyses for these various technologies. These evaluations clearly indicate that

TABLE 18

PENINSULAR FLORIDA, SUMMARY OF PROJECTED WHOLESALE ENERGY COST SAVINGS DUE TO OSPREY ENERGY CENTER, BASE CASE, 2003-2012

YEAR	FRCC NET ENERGY FOR LOAD (GWH)	AVERAGE ANNUAL MARGINAL ENERGY COST WITH OSPREY ($/MWH)	AVERAGE ANNUAL MARGINAL ENERGY COST WITHOUT OSPREY ($/MWH)	ESTIMATED WHOLESALE PRICE SUPPRESSION ($/MWH)	ESTIMATED SAVINGS FROM OSPREY ($MILLION)	CUMULATIVE NPV @ 10% 2000 DOLLARS ($MILLION)
2003	208,800	32.76	33.27	0.51	106	80
2004	213,424	31.84	32.42	0.58	124	165
2005	217,791	32.85	33.68	0.83	181	277
2006	222,299	33.23	33.85	0.62	138	355
2007	226,565	33.63	34.46	0.83	188	451
2008	230,447	34.22	34.77	0.55	127	510
2009	234,645	35.65	36.49	0.84	197	594
2010	238,924	36.69	37.35	0.66	158	655
2011	243,289	38.58	39.49	0.91	221	732
2012	247,742	40.08	40.98	0.90	223	803

Source: PROMOD IV(R) analysis prepared by Slater Consulting.

TABLE 19.A

PENINSULAR FLORIDA, SUMMARY OF PROJECTED WHOLESALE ENERGY COST SAVINGS DUE TO OSPREY ENERGY CENTER, HIGHER FUEL PRICE SENSITIVITY CASE, 2003-2012

YEAR	FRCC NET ENERGY FOR LOAD (GWH)	AVERAGE ANNUAL MARGINAL ENERGY COST WITH OSPREY ($/MWH)	AVERAGE ANNUAL MARGINAL ENERGY COST WITHOUT OSPREY ($/MWH)	ESTIMATED WHOLESALE PRICE SUPPRESSION ($/MWH)	ESTIMATED SAVINGS FROM OSPREY ($MILLION)	CUMULATIVE NPV @ 10% 2000 DOLLARS ($MILLION)
2003	208,800	32.83	33.31	0.48	100	75
2004	213,424	31.93	32.47	0.54	115	154
2005	217,791	32.98	33.86	0.88	192	273
2006	222,299	33.62	34.26	0.64	142	353
2007	226,565	34.36	35.20	0.84	190	451
2008	230,447	35.32	35.86	0.54	124	509
2009	234,645	37.07	37.91	0.84	197	593
2010	238,924	38.62	39.32	0.70	167	657
2011	243,289	40.77	41.70	0.93	226	736
2012	247,742	42.49	43.44	0.95	235	811

Source: PROMOD IV(R) analyses prepared by Slater Consulting.

Note: The Base Case fuel price projections were developed by Slater Consulting based on actual data and the U. S. Energy Information Administration's 2000 Annual Energy Outlook Reference Case Forecast, but with the natural gas price escalations moderated to be more in keeping with the Standard & Poor's DRI forecast, which was included in the EIA's publication as a comparison forecast. The fuel prices for this sensitivity case were the same as for the Base Case except that the prices of natural gas were projected to escalate at the growth rates projected in the EIA's Reference Case Forecast.

TABLE 19.B

PENINSULAR FLORIDA, SUMMARY OF PROJECTED WHOLESALE ENERGY COST ESTIMATES DUE TO OSPREY ENERGY CENTER, LOW LOAD GROWTH SENSITIVITY CASE, 2003-2012

YEAR	FRCC NET ENERGY FOR LOAD (GWH)	AVERAGE ANNUAL MARGINAL ENERGY COST WITH OSPREY ($/MWH)	AVERAGE ANNUAL MARGINAL ENERGY COST WITHOUT OSPREY ($/MWH)	ESTIMATED WHOLESALE PRICE SUPPRESSION ($/MWH)	ESTIMATED SAVINGS FROM OSPREY ($MILLION)	CUMULATIVE NPV @ 10% 2000 DOLLARS ($MILLION)
2003	205,684	32.40	32.69	0.29	60	45
2004	209,187	30.98	31.59	0.61	128	132
2005	212,400	31.98	32.72	0.74	157	230
2006	215,713	32.26	32.89	0.63	136	306
2007	218,754	32.45	33.01	0.56	123	369
2008	221,389	32.87	33.47	0.60	133	431
2009	224,295	34.01	34.65	0.64	144	492
2010	227,242	34.88	35.43	0.55	125	540
2011	230,238	36.47	37.13	0.66	152	593
2012	233,280	37.37	38.17	0.80	187	653

Source: PROMOD IV(R) analyses prepared by Slater Consulting.

Note: This Low Load Growth scenario reflects growth rates 0.5 percent per year less than in the Base Case.

TABLE 19.C

PENINSULAR FLORIDA, SUMMARY OF PROJECTED WHOLESALE ENERGY COST SAVINGS DUE TO OSPREY ENERGY CENTER, HIGH LOAD GROWTH SENSITIVITY CASE, 2003-2012

YEAR	FRCC NET ENERGY FOR LOAD (GWH)	AVERAGE ANNUAL MARGINAL ENERGY COST WITH OSPREY ($/MWH)	AVERAGE ANNUAL MARGINAL ENERGY COST WITHOUT OSPREY ($/MWH)	ESTIMATED WHOLESALE PRICE SUPPRESSION ($/MWH)	ESTIMATED SAVINGS FROM OSPREY ($MILLION)	CUMULATIVE NPV @ 10% 2000 DOLLARS ($MILLION)
2003	215,127	34.11	34.58	0.47	101	76
2004	222,089	33.36	34.21	0.85	189	205
2005	228,900	34.92	35.95	1.03	236	351
2006	235,976	35.89	36.64	0.75	177	451
2007	242,907	36.55	37.44	0.89	216	562
2008	249,539	37.88	38.90	1.02	255	681
2009	256,627	40.12	41.10	0.98	251	788
2010	263,921	42.23	43.23	1.00	264	889
2011	271,429	46.23	47.68	1.45	394	1027
2012	279,162	48.98	50.42	1.44	402	1155

Source: PROMOD IV(R) analyses prepared by Slater Consulting.

Note: This High Load Growth scenario reflects growth rates 1.0 percent per year greater than in the Base Case.

TABLE 20

OSPREY ENERGY CENTER
GENERATING ALTERNATIVES EVALUATED

GENERATING TECHNOLOGIES CONSIDERED

COMBUSTION TURBINE-OIL

COMBUSTION TURBINE-GAS

COMBINED CYCLE-GAS

COMBINED CYCLE-OIL

PULVERIZED COAL STEAM

CONVENTIONAL GAS STEAM

COAL GASIFICATION-COMBINED CYCLE

NUCLEAR STEAM

RENEWABLE ENERGY

TABLE 21

OSPREY ENERGY CENTER
COST-EFFECTIVENESS ANALYSES OF ALTERNATIVE GENERATION TECHNOLOGIES

Comparison of Generation Alternatives

Technology Type	Levelized Life-Cycle Cost at Assumed Capacity Factor (2000 $/MWh)		
	Peaking Operation (10% CF)	Intermediate Oper. (50% CF)	Base Load Oper. (90% CF)
Combined Cycle - Gas Fired	$ 98 - 118	$ 37 - 45	$ 30 - 37
Combined Cycle - Oil Fired	111 - 134	50 - 61	43 - 53
Simple Cycle - Gas Fired	85 - 116	52 - 73	45 - 68
Simple Cycle - Oil Fired	110 - 144	71 - 101	64 - 97
Steam - Coal	200 - 220	52 - 59	35 - 42
Steam - Gas	124	53	45
Steam - Nuclear	283	61	36
IGCC Technology	196 - 245	49 - 61	32 - 40
Renewable Energy	121 - 1072	67 - 240	47 - 147

Source: R. W. Beck and Associates.

the best choice for Calpine and Peninsular Florida, considering economics, cost-effectiveness, reliability, long-term flexibility, and strategic factors is gas-fired combined cycle capacity. This is borne out by the fact that other Florida utilities are planning to add similar capacity, and by the fact that this type of unit is the technology of choice, for base-load applications, for the majority of new power plant capacity planned in the United States.

VI. CONSEQUENCES OF DELAY

Delaying the construction and operation of the Osprey Energy Center will adversely affect the reliability of the Peninsular Florida bulk power supply system, will adversely affect the availability in Peninsular Florida of adequate electricity at a reasonable cost, will adversely affect the cost-effectiveness of electricity generation in Peninsular Florida, and will adversely affect the environment of Florida.

A. Reliability Consequences of Delay.

The Osprey Energy Center will be a highly reliable and highly efficient gas-fired combined cycle power plant. It will use proven, state-of-the-art technology. The Project's high reliability--an Equivalent Availability Factor greater than 94 percent--assures its contributions to improving the reserve margins and reliability of the Peninsular Florida power supply system.

Tables 7 and 8 demonstrate that the Project will improve Peninsular Florida's summer and winter reserve margins by approximately 1.1 to 1.3 percent in each year beginning with the Project's in-service date in the second quarter of 2003 and continuing throughout the period covered in the FRCC 1999 Resource Plan.

The presence of this additional capacity -- 506 MW at summer peak, 587 MW at winter peak -- will improve reliability and reduce Peninsular Florida's exposure to outages due to extreme weather or unanticipated events such as major generation outages. The presence

of this capacity will mean that, in an extreme cold weather event, approximately 587 MW (32° F. ambient conditions without duct-firing) of load will be served that would not otherwise be served. This means that the Project would enable Florida's retail-serving utilities to maintain service to approximately 115,000 to 165,000 residential customers (or equivalent load), assuming a coincident peak demand of 3.5 kW to 5 kW per household) during such conditions. The Project's enhanced capacity from duct-firing and power augmentation would enable Florida retail-serving utilities to maintain service to another 16,000 to 25,000 households.

If the Osprey Energy Center is not constructed and brought into commercial operation in 2003 as proposed, these reliability benefits will be lost, and Florida electric customers will be exposed to a greater probability of service interruption than they would experience if the Project were built as proposed by Calpine.

B. **Power Supply Cost Consequences of Delay**.

The Osprey Energy Center will be a highly reliable, and highly efficient gas-fired combined cycle power plant using proven technology. The Project's high efficiency assures its contributions to reducing wholesale power supply costs in Peninsular Florida. The Project will reduce the total cost of electricity generation in Peninsular Florida and will reduce power supply costs to those specific utilities that purchase the Project's output, thereby reducing the retail electric rates paid by those utilities' customers.

The presence of the Osprey Energy Center will reduce generation costs and will also suppress wholesale power prices, to at least some degree, in Peninsular Florida. This is the simple economic result of an increase in supply, i.e., an outward shift in the supply curve for bulk power. Even at nominal differences in the wholesale cost of power with and without the Project, the savings can be expected to be substantial. Moreover, the Project will provide real, tangible economic benefits--real reductions in the amount of primary fuels used to generate the same amounts of electricity--to Florida and to society in general by virtue of the Project's more efficient use of fuel.

If the Osprey Energy Center is not constructed and brought into commercial operation in 2003 as planned and sought, these economic benefits will be lost, and Florida electric customers will pay more for their power service than they would otherwise, and more for that service than they have to.

C. **Environmental Consequences of Delay**.

The Osprey Energy Center will be a high-efficiency, state-of-the-art, natural gas-fired combined cycle electric generating facility. Because of its high efficiency and the use of clean-burning natural gas as its fuel, the Project will bring net air emissions benefits to Florida. The Project will displace production from older, less efficient and less environmentally desirable power plants, e.g., less efficient oil-fired steam generating plants, less efficient gas-fired steam generating units, and combustion turbine plants fired by oil or gas. This displacement will result in

substantial savings in primary fuel consumption for electricity generation (see Tables 16.A and 16.B), thus resulting in reduced air emissions from power production in Florida. See Table 17.

The projections prepared for Calpine indicate that the Project's generation will generally displace production from older steam generating units fired by heavy fuel oil and natural gas, which generally have heat rates in the range of 10,000 to 11,000 Btu per kWh. Regardless of the type of primary fuel displaced, the Project's operations will result in significant fuel savings; because of its better heat rate, the Project uses approximately 35 percent less primary fuel energy (Btu) than conventional steam generation units to produce the same amount of electricity.

In addition, under reasonable assumptions regarding the types of marginal fuels displaced by the Osprey Energy Center's operations, and reasonably assuming that the displaced oil-fired and gas-fired generation will not be sold outside Florida, the Project's operations are expected to improve the overall environmental profile of electricity generation in Florida. When the Project's output displaces generation using heavy fuel oil, there will be significant reductions in emissions of SO_2, NO_x, and CO, and measurable reductions in CO_2 emissions. Even when the Project displaces gas-fired steam generation, there will be reductions in emissions due to the Project's better heat rate, newer turbine design, and emissions controls, resulting in lower emissions of NO_x, SO_2, and CO, and measurable reductions in CO_2 emissions. If the Project is not constructed and brought into commercial operation in 2003 as

planned and sought, these environmental benefits will be lost, and pollution from electric generation in Florida will be significantly greater than it would otherwise be.

APPENDICES

APPENDIX A

FERC ORDER GRANTING MARKET-BASED RATE AUTHORITY TO CALPINE CONSTRUCTION FINANCE COMPANY, L.P.

90 FERC ¶ 61,164

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

February 23, 2000

Docket Nos. ER00-939-000
ER00-1049-000
ER00-1115-000

Skadden, Arps, Slate, Meagher & Flom LLP
ATTN: Victor A. Contract, Esq.
Attorney for Lake Worth Generation L.L.C.
1440 New York Avenue, N.W.
Washington, D.C. 20005

Dynegy Inc.
ATTN: Daniel A. King, Esq
Attorney for Calcasieu Power, LLC
Suite 510-A
805 15th Street, N.W.
Washington, D.C. 20005-2207

Davis Wright Tremaine LLP
ATTN: Steven F. Greenwald, Esq.
Attorney for Calpine Construction Finance Company, L.P.
Suite 600
One Embarcadero Center
San Francisco, California 94111-3834

Dear Sirs:

You submitted for filing with the Commission rate schedules under which applicants will engage in wholesale electric power and energy transactions at market-based rates. Your submittals, as modified below, comply with the Commission's requirements for market-based rates and are accepted for filing. They are designated and made effective as indicated in Appendix A to this order.

Calpine Construction Finance Company, L.P. (Calpine) requests authority to engage in the sale of certain ancillary services (listed in its proposed rate schedule) at market-based rates into the markets administered by the California ISO, the New England Power Pool markets administered by ISO New England, Inc., the New York Power Pool markets administered by the New York Independent System Operator, and into the

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Pennsylvania-New Jersey-Maryland Interchange Energy Market. [1] We will grant this request. [2]

Any waivers or authorizations requested by the applicants are granted to the extent specified in Appendix B to this order. Waiver of the prior or advance notice requirements, if requested, is granted to the extent specified in Appendix A. The applicants must comply with the reporting requirements and other requirements specified in Appendix B to this order. [3]

The codes of conduct submitted by the applicants are accepted if consistent with Appendix C, which reflects requirements adopted in previous Commission orders. Any code of conduct inconsistent with Appendix C is rejected and in such case Appendix C has been designated as the applicant's code of conduct. The codes of conduct submitted by the applicants covered by this order are consistent with Appendix C.

Calcasieu Power, L.L.C.'s (Calcasieu) proposed rate schedule fails to include a prohibition on power sales to affiliates, absent prior Commission approval under section

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[1]Calpine also proposes to provide Replacement Reserve service at market-based rates. The Commission has determined that Replacement Reserve service is not an ancillary service, and the granting of market-based rate authority for sales of energy and capacity includes the granting of market-based rate authority for Replacement Reserve service. See, e.g., AES Redondo Beach, L.L.C., et al., 85 FERC ¶ 61,123 at 61,452, 61,464 (1998), order on reh'g, 87 FERC ¶ 61,208 (1999) (AES).

[2]See AES; New England Power Pool, 85 FERC ¶ 61,379 (1998), reh'g pending; Central Hudson Gas & Electric Corporation, et al., 86 FERC ¶ 61,062, order on reh'g, 88 FERC ¶ 61,138 (1999); Atlantic City Electric Company, et al., 86 FERC ¶ 61,248, clarified, 86 FERC ¶ 61,310 (1999).

[3]On May 27, 1999, the Commission issued an order in which it modified the reporting requirements for long-term transactions applicable to public utilities without ownership or control over generation or transmission facilities that are authorized to sell power at market-based rates (power marketers). Southern Company Services, et al., 87 FERC ¶ 61,214 (1999), reh'g pending (Southern). Specifically, with respect to any long-term transaction agreed to by a power marketer after 30 days from the date of issuance of a final order in the Southern case, the power marketer must file a service agreement with the Commission within 30 days after service commences, rather than reporting transactions thereunder in its quarterly transaction summaries.

205 of the Federal Power Act (FPA), 16 U.S.C. § 824d (1994). Calcasieu is directed, within 30 days of the date of this order, to revise its rate schedule accordingly.

Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (1999), an entity's filing of a timely notice of intervention or a timely, unopposed motion to intervene in a proceeding makes it a party to that proceeding.

Should an applicant or any of its affiliates deny, delay, or require unreasonable terms, conditions, or rates for natural gas fuel or services to a potential electric competitor in bulk power markets, then that electric competitor may file a complaint with the Commission that could result in the applicant's or its affiliate's authority to sell power at market-based rates being suspended.[4]

Sales of accounts receivable are not dispositions of jurisdictional facilities and are not within the scope of section 203 of the FPA. To the extent an applicant seeks a case-specific finding on this or any related point, it may file a petition for a declaratory order with the Commission.

Calcasieu and Lake Worth Generation L.L.C. (Lake Worth) seek Commission approval to reassign transmission capacity. We find their requests to be consistent with our requirements.

Lake Worth and Calcasieu must inform the Commission of the dates service commences.

By direction of the Commission.

Linwood A. Watson, Jr.,
Acting Secretary.

[4] See, e.g., Louisville Gas & Electric Co., 62 FERC ¶ 61,016 at 61,148 (1993).

APPENDIX A

Applicants are hereby informed of the following rate schedule designations:

Lake Worth Generation L.L.C.
Docket No. ER00-939-000
Rate Schedule Designation
Effective Date: Date Service Commences

Designation	Description
FERC Electric Tariff, Original Volume No. 1, Original Sheet No. 1	Market-Based Rate Tariff

Calcasieu Power, LLC
Docket No. ER00-1049-000
Rate Schedule Designations
Effective Date: Date Service Commences

Designation	Description
FERC Electric Tariff, Original Volume No. 1 Original Sheet Nos. 1-2	Market-Based Rate Tariff and Code of Conduct

Calpine Construction Finance Company, L.P.
Docket No. ER00-1115-000
Rate Schedule Designation
Effective Date: March 14, 2000

Designation	Description
FERC Electric Tariff, Original Volume No. 1 Original Sheet Nos. 1-2	Market-Based Rate Tariff

APPENDIX B

(1) If requested, waiver of Parts 41, 101, and 141 of the Commission's regulations, with the exception of 18 C.F.R. §§ 141.14, .15 (1999), is granted. Licensees remain obligated to file the Form No. 80 and the Annual Conveyance Report.

(2) Within 30 days of the date of this order, any person desiring to be heard or to protest the Commission's blanket approval of issuances of securities or assumptions of liabilities by those applicants who have sought such approval should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. §§ 385.211 and 385.214.

(3) Absent a request to be heard within the period set forth in Paragraph (2) above, if the applicants have requested such authorization, the applicants are hereby authorized to issue securities and assume obligations or liabilities as guarantor, indorser, surety, or otherwise in respect of any security of another person; provided that such issue or assumption is for some lawful object within the corporate purposes of the applicants, compatible with the public interest, and reasonably necessary or appropriate for such purposes.

(4) If requested, until further order of this Commission, the full requirements of Part 45 of the Commission's regulations, except as noted below, are hereby waived with respect to any person now holding or who may hold an otherwise proscribed interlocking directorate involving the applicants. Any such person instead shall file a sworn application providing the following information:

(a) full name and business address; and

(b) all jurisdictional interlocks, identifying the affected companies and the positions held by that person.

(5) The Commission reserves the right to modify this order to require a further showing that neither the public nor private interests will be adversely affected by continued Commission approval of the applicants' issuances of securities or assumptions of liabilities, or by the continued holding of any affected interlocks.

(6) If requested, waiver of the provisions of Subparts B and C of Part 35 of the Commission's regulations, with the exception of sections 35.12(a), 35.13(b), 35.15 and 35.16, is granted for transactions under the rate schedules at issue here.

(7) (a) Applicants who own generating facilities may file umbrella service agreements for short-term power sales (one year or less) within 30 days of the date of commencement of short-term service, to be followed by quarterly transaction summaries of specific sales (including risk management transactions if they result in actual delivery of electricity). For long-term transactions (longer than one year), applicants must submit the actual individual service agreement for each transaction within 30 days of the date of commencement of service. To ensure the clear identification of filings, and in order to facilitate the orderly maintenance of the Commission's files and public access to documents, long-term transaction service agreements should not be filed together with short-term transaction summaries. For applicants who own, control or operate facilities used for the transmission of electric energy in interstate commerce, prices for generation, transmission and ancillary services must be stated separately in the quarterly reports and long-term service agreements.

(b) Applicants who do not own generating facilities must file quarterly reports detailing the purchase and sale transactions undertaken in the prior quarter (including risk management transactions if they result in actual delivery of electricity). Applicants who are power marketers should include in their quarterly reports only those risk management transactions that result in the actual delivery of electricity.

(8) The first quarterly report filed by an applicant in response to Paragraph (7) above will be due within 30 days of the end of the quarter in which the rate schedule is made effective.

(9) Each applicant must file an updated market analysis within three years of the date of this order, and every three years thereafter. The Commission reserves the right to require such an analysis at any time. The applicants must also inform the Commission promptly of any change in status that would reflect a departure from the characteristics the Commission has relied upon in approving market-based pricing. These include, but are not limited to: (a) ownership of generation or transmission supplies; or (b) affiliation with any entity not disclosed in the applicants' filing that owns generation or transmission facilities or inputs to electric power production, or affiliation with any entity that has a franchised service area. Alternatively, the applicants may elect to report such changes in conjunction with the updated market analysis required above. Each applicant must notify the Commission of which option it elects in the first quarterly report filed pursuant to Paragraph (7) above.

APPENDIX C

[APPLICANT]
SUPPLEMENT NO. _ TO RATE SCHEDULE NO. _

STATEMENT OF POLICY
AND CODE OF CONDUCT
WITH RESPECT TO THE RELATIONSHIP BETWEEN
[POWER MARKETER] AND [PUBLIC UTILITY]

Marketing of Power

1. To the maximum extent practical, the employees of [Power Marketer] will operate separately from the employees of [Public Utility].

2. All market information shared between [Public Utility] and [Power Marketer] will be disclosed simultaneously to the public. This includes all market information, including but not limited to, any communication concerning power or transmission business, present or future, positive or negative, concrete or potential. Shared employees in a support role are not bound by this provision, but they may not serve as an improper conduit of information to non-support personnel.

3. Sales of any non-power goods or services by [Public Utility], including sales made through its affiliated EWG's or QF's, to [Power Marketer] will be at the higher of cost or market price.

4. Sales of any non-power goods or services by the [Power Marketer] to [Public Utility] will not be at a price above market.

Brokering of Power

To the extent [Power Marketer] seeks to broker power for [Public Utility]:

5. [Power Marketer] will offer [Public Utility's] power first.

6. The arrangement between [Power Marketer] and [Public Utility] is non-exclusive.

7. [Power Marketer] will not accept any fees in conjunction with any Brokering services it performs for [Public Utility].

APPENDIX B

PRECEDENT AGREEMENT BETWEEN CALPINE EAST FUELS, L.L.C. AND GULFSTREAM NATURAL GAS SYSTEM, L.L.C.

PRECEDENT AGREEMENT

This Precedent Agreement ("Agreement"), is made and entered into as of this 8th day of October, 1999, by and between Calpine East Fuels, L.L.C., a Delaware limited liability company ("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 and southeastern Mississippi 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 Polk County, Florida ("Plant") which Shipper plans to have in-service on or before 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. Notice of Intent to Proceed. This Agreement is subject to (i) the outcome of an open season for the Gulfstream Project, and (ii) the determination by Gulfstream, in the exercise of its sole discretion, whether or not to proceed with the filing and prosecution of application(s) for the governmental and regulatory authorization(s) described in Paragraph 2 below. Within a reasonable time following execution and delivery of this Agreement by Shipper, Gulfstream will proceed with the filing and prosecution of such application(s) with respect to the Gulfstream Project. To facilitate Gulfstream's ability to develop the Gulfstream Project, Shipper will refrain from committing to obtain any transportation service(s) from other person(s) which service(s) would be in lieu of the 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 request that the FERC issue a preliminary determination on the non-environmental aspects of the Gulfstream Project. 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. 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, at the sole discretion of Shipper, the filing of an intervention or other pleading in support of the Gulfstream Project. If the FERC determines that information related to Shipper's markets, 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; provided that Gulfstream will use reasonable best efforts to obtain a protective order from the FERC for any commercially sensitive or confidential information identified by Shipper.

3. Shipper's Regulatory Authorizations.

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 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. 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 and subject to

the 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), 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. Shipper and Gulfstream agree to execute, within ten (10) business days after the date each Party gives the other Party written notice that each of the conditions precedent imposed on behalf of such Party in Paragraph 6 hereof has been satisfied or waived by such Party, 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 date Shipper plans to place the Plant in-service no less than months prior to such date (the "Plant In-Service Date"); provided that Shipper shall give Gulfstream timely written notice thereafter of any change(s) to the Plant In-Service Date which change(s) shall not delay the Plant In-Service Date by more than months and, if such written notice is provided, the date specified therein shall become

the new Plant In-Service Date; and further provided that the Plant In-Service Date shall be no later than . 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. Nothing in this Subparagraph 4(b) shall modify or otherwise change Shipper's right, as set forth in Subparagraph 5(b), to terminate this Agreement or the Service Agreement, as the case may be, if Gulfstream does not commence service on or before

(c) Notice of Commencement of Transportation Service(s). 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 be the later to occur of (1) June 1, 2002 or (2) the Plant In-Service Date (the "Commencement Date"). As of the Commencement 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.

(d) Test Gas

5. Construction of Facilities.

(a) Design and Construction. Upon execution and delivery of this Agreement by 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. 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) Limitation of Liability. Gulfstream will neither be liable to Shipper nor will this Agreement or the Service Agreement be subject to cancellation (except as hereinafter provided) 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; provided, however, 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. If Gulfstream is unable to commence the transportation service(s) for Shipper as contemplated herein by the Plant In-Service Date which shall not be earlier than . Shipper, in its sole discretion, will have the option not to commence the transportation service(s) until and, in that event, applicable charges under the Service Agreement will not commence until .

If Gulfstream is unable to commence the transportation service(s) for Shipper by four (4) months prior to the Plant In Service Date, Shipper, in its sole discretion, will have the option to terminate this Agreement and will have no further liability to Gulfstream.

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:

(b) Conditions Precedent Imposed On Behalf Of Shipper:

7. Rates and Rate Design Methodology. Shippers electing a negotiated rate agree to pay such rate without regard to any action or determination of the FERC with respect to Gulfstream's FERC-approved, filed rates. Shippers electing recourse rates agree to pay such rates, subject to changes determined by the 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.

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 corporate 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 5(b) or Paragraph 9(a) above, then this Agreement will terminate by its express terms on the Commencement Date, 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.

10. Assignment. This Agreement shall be binding upon Gulfstream, Shipper and their respective successors and assigns; provided, however, that neither Party shall assign this Agreement or any rights or obligations hereunder without first obtaining the prior written consent of the other Party (which consent shall not be unreasonably withheld), the consent of Gulfstream's lenders if required, and any necessary governmental and regulatory authorizations. Nothing contained herein shall prevent Gulfstream from pledging, mortgaging or assigning its rights as security for its indebtedness and Gulfstream may assign to the pledgee or mortgagee (or to a trustee for a holder of such indebtedness) any monies due or to become due under the Service Agreement. Subject

to the provision of adequate credit support in Gulfstream's and, if required, Gulfstream's Lenders, reasonable judgment, Shipper may assign this Agreement to any direct or indirect subsidiary or affiliate of Shipper. Shipper may also assign this Agreement as security for financing to any person or persons providing debt or equity financing to Shipper to provide funds for the development, design, construction and operation of the Plant.

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:

Calpine East Fuels, L.L.C.
Michael D. Petit
Director of Fuels Management - Eastern Region

The Pilot House, 2nd Floor
Lewis Wharf
Boston, Massachusetts 02110
Telephone: 617-723-7200 ext. 106
Facsimile: 617-723-7635

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. Each Party agrees that any and all claims, demands and causes of action that it may bring against the other Party shall be limited to the assets of the other Party. Execution of this Agreement does not bind any Member of Gulfstream or any of its affiliates (or Shipper or any of its affiliates) or require any Member of Gulfstream or any of its affiliates (or Shipper or any of its affiliates) to undertake any obligation in connection with this Agreement. Accordingly, each Party waives its rights to proceed against, in the case of Shipper, the Members of Gulfstream or any of their respective affiliates or in the case of Gulfstream, any of Shipper's 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. As used in this

Paragraph 13, the term "affiliates" means with respect to a Party, a person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with such Party.

14. No Third Person Beneficiary. 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 the terms and conditions of this Agreement, or any confidential or proprietary information, whether written or verbal, disclosed by either Party at any time in connection with the transaction contemplated herein and clearly designated at the time of disclosure as confidential or proprietary, 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 reasonable effort to maintain the confidentiality of this Agreement, including, without limitation, seeking a protective order). The provisions of this Paragraph 18 shall not apply to any bank, lender or financial institution providing funds to Gulfstream in connection with the financing of the Gulfstream Project or to Shipper in connection with the financing of Shipper's Plant (in which case, the Party making the disclosure shall advise the other

Party prior to such disclosure and, if requested by the other Party, shall use every reasonable effort to maintain the confidentiality of this Agreement). 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.

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.

GULFSTREAM NATURAL GAS SYSTEM, L.L.C.

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

CALPINE EAST FUELS, L.L.C.

By: _____
Name: Robert K. Alff
Title: Vice President
East Coast Region

Attachment 1

FORM OF AGREEMENT
Rate Schedule FTS

Date: _____,__ Contract No._____

SERVICE AGREEMENT

This AGREEMENT is entered into by Gulfstream Natural Gas System, L.L.C. ("Transporter") and Calpine East Fuels, L.L.C. ("Shipper").

WHEREAS, Shipper has requested Transporter to transport Gas on its behalf and Transporter represents that it is willing to transport Gas under the terms and conditions of this Agreement.

NOW, THEREFORE, Transporter and Shipper agree that the terms below, together with the terms and conditions of Transporter's applicable Rate Schedule and General Terms and Conditions of Transporter's FERC Gas Tariff constitute the transportation service to be provided and the rights and obligations of Shipper and Transporter.

1. AUTHORITY FOR TRANSPORTATION SERVICE WILL BE UNDER SECTION 284G.

2. RATE SCHEDULE: FTS

3. CONTRACT DATA:

   Note: List Receipt Point(s), Delivery Point, MDQ, MHQ, Receipt Point MDQ and delivery pressure on Exhibit A.

   Such Contract Quantities shall be reduced for scheduling purposes, but not for billing purposes, by the Contract Quantities that Shipper has released through Transporter's capacity release program for the period of any release.

4. TERM:

   This Agreement shall be effective on the Plant In-Service Date.

Transporter will stand ready to provide firm transportation service(s) to Shipper pursuant to the provisions of this Agreement, and Shipper will pay to Transporter all applicable charges provided for in this Agreement. If Gulfstream is unable to commence the transportation service(s) for Shipper as contemplated herein by the Plant In-Service Date which shall not be earlier than November 1, 2002, Shipper, in its sole discretion, will have the option not to commence the transportation service(s) until November 1, 2003, and, in that event, applicable charges under the Service Agreement will not commence until November 1, 2003.

This Agreement shall remain in force and effect for a primary term of 20 years

5. RATES:

6. INCORPORATION BY REFERENCE:

The provisions of Transporter's applicable Rate Schedule and the General Terms and Conditions of Transporter's FERC Gas Tariff are specifically incorporated herein by reference and made a part hereof.

7. NOTICES:

All notices can be given by telephone or other electronic means, however, such notice shall be confirmed in writing at the addresses below or through Transporter's EBB. Shipper or Transporter may change the addresses below by written notice to the other without the necessity of amending this Agreement:

TRANSPORTER:

Gulfstream Natural Gas System, L.L.C.
500 Renaissance Center
Detroit, MI 48243
Attention: Gas Control (Nominations)
Volume Management (Statements)
Cash Control (Payments)
System Marketing (All Other Matters)

SHIPPER:

Calpine East Fuels, L.L.C.
Michael D. Petit
Director of Fuels Management - Eastern Region
The Pilot House, 2nd Floor
Lewis Wharf
Boston, Massachusetts 02110
Telephone: 617-723-7200 ext 106
Facsimile: 616-723-7635

INVOICES AND STATEMENTS:

Same as above

NOMINATIONS:

Same as above

8. FURTHER AGREEMENT:

This Agreement shall be binding upon Transporter, Shipper and their respective successors and assigns; provided, however, that neither Party shall assign this Agreement or any rights or obligations hereunder without first obtaining the prior written consent of the other Party (which consent shall not be unreasonably withheld), the consent of Transporter's lenders if required, and any necessary governmental and regulatory authorizations. Nothing contained herein shall prevent Transporter from pledging, mortgaging or assigning its rights as security for its indebtedness and Transporter may assign to the pledgee or mortgagee (or to a trustee for a holder of such indebtedness) any monies due or to become due under this Agreement. Subject to the provision of adequate credit support in Transporter's and, if required, Transporter's Lenders, reasonable judgment, Shipper may assign this Agreement to any direct or indirect subsidiary or affiliate of Shipper. Shipper may also assign this Agreement as security for financing to any person or persons providing debt or equity financing to Shipper to provide funds for the development, design, construction and operation of the Plant (as such term is defined in the Precedent Agreement).

9. OPERATIONAL FLOW ORDERS:

Transporter has the right to issue an effective Operational Flow Order pursuant to Section 13 of the General Terms and Conditions.

10. SPECIFICATION OF NEGOTIATED RATE (See Exhibit B):

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their respective Officers or Representatives thereunto duly authorized to be effective as of the date stated above.

Calpine East Fuels, L.L.C.SHIPPER:_____

TRANSPORTER: Gulfstream Natural Gas System, L.L.C.

By: _____
Title: _____
Date: _____

By: _____
Title: _____
Date: _____

EXHIBIT A

FORM OF AGREEMENT
Transporter's Rate Schedule FTS
(Continued)

BETWEEN GULFSTREAM NATURAL GAS SYSTEM AND CALPINE EAST FUELS, L.L.C.

CONTRACT NUMBERS: _____

CONTRACTED CAPACITY: Dth/d

ORIGINAL CONTRACT DATE: _____

AMENDMENT DATE: _____

Primary Delivery Points: Shipper's . when constructed and placed in-service or other plants that Calpine or its affiliates own or operate along the primary path.

Total Delivery Point MDQ: Dth/d

MHQ at Primary Delivery Point: of MDQ . Shipper may vary the flow rate at any of the Primary Delivery Points from per hour to Dth per hour, as long as the cumulative hourly flow rate at Primary Delivery Points does not exceed (1) Dth per hour and (2) the quantities nominated and scheduled for the day under this Agreement. In addition, the cumulative hourly flow rate under the firm Service Agreements between Shipper and Transporter may not exceed per hour at .

Minimum Delivery Pressure: *650 psig*

Contract Number/ Primary Route	Primary Receipt Point (1)	Primary Receipt Point MDQ

(1) All receipt points added in the Mobile Bay, Alabama area will be available to Shipper. Gulfstream will use reasonable best efforts to obtain interconnections with DIGS Process Plant, Mobil's Maryann Plant, Williams Process Plant, Mobile Bay Pipeline, Destin Pipeline and WGP-Transco.

EXHIBIT B

STATEMENT OF NEGOTIATED RATES

Shipper	Contract Number	Contract Term	Rate Schedule	Reservation Charge	Commodity Charge	Receipt Points	Delivery Points	Quantity	
		20yrs				See Ex .A	See Ex.A		Dth/d

APPENDIX C

DESCRIPTION OF PROMOD IV®

DESCRIPTION OF PROMOD IV®

The Projected operations of the Osprey Energy Center in the Peninsular Florida power supply system were analyzed using the PROMOD IV® computer model. PROMOD IV® is a widely known and widely used probabilistic computer model that simulates the operations of electric power systems. PROMOD IV® is primarily used as a production costing model and can also be used to evaluate electric system reliability. PROMOD IV® can be used to prepare utility fuel budget forecasts, evaluate the economics and operations of proposed generating capacity additions, project utility operating costs, estimate the prices of firm power and energy in defined markets, project hourly marginal energy costs, and calculate avoided energy and capacity costs.

The inputs to PROMOD IV® include generating unit data for existing and planned power plants in a defined power supply system (in this case Peninsular Florida), fuel consumption and fuel cost data, load and other utility system data, and data regarding transactions within the system. The primary outputs are individual utility or system production costs, generation by unit, fuel usage, other unit characteristics, and reliability information. PROMOD IV® utilizes computationally efficient algorithms that yield results identical to those that would be produced with direct specification of values for all availability states of all units in a power supply system.