BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION

080203

DOCKET NO. 08_____-EI
FLORIDA POWER & LIGHT COMPANY

IN RE: FLORIDA POWER & LIGHT COMPANY'S PETITION TO DETERMINE NEED FOR WEST COUNTY ENERGY CENTER UNIT 3 ELECTRICAL POWER PLANT

DIRECT TESTIMONY & EXHIBITS OF:

JOHN C. GNECCO IV, P.E.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

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DIRECT TESTIMONY OF JOHN C. GNECCO IV, P.E.

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APRIL 8, 2008

Q. Please state your name and business address.

A. My name is John C. Gnecco IV, P.E. My business address is Florida Power & Light Company, 700 Universe Boulevard, Juno Beach, Florida, 33408.

Q. By who are you employed and what position do you hold?

A. I am employed by Florida Power & Light Company (FPL or the Company) as the Manager of Project Development for Unit 3 at our West County Energy Center (WCEC) site.

Q. Please describe your duties and responsibilities in that position.

A. I have overall responsibility for the development of the West County Energy Center Unit 3 (WCEC 3).

Q. Please describe your education and professional experience.

A. I received a Bachelor of Science in Civil Engineering from Merrimack College in 1980. Additionally I am a Registered Professional Engineer in the State of Florida, a member of the American Society of Civil Engineers and the Structural Engineering Institute.

Throughout the 28 years of my career, I have been involved the development,

design, engineering and construction of electric power plants, in which I have held numerous positions. Over the last 12 years I have been responsible for the design and engineering of a fuel conversion project on two 800 megawatt (MW) units, two advanced combustion turbine simple cycle projects, and six combined cycle (CC) projects which include WCEC 1 & 2, totaling over 9,800 MWs of electrical generating capacity.

Q. What is the purpose of your testimony?

A. I describe the major available generating alternatives which were considered and evaluated by FPL in arriving at the decision to pursue the proposed WCEC 3 generating unit. I describe the site and unit characteristics for the CC generating unit proposed for FPL's WCEC, including the size, type of unit, the heat rate and operating characteristics (i.e., equivalent availability factor, equivalent forced outage rate, capacity factor, and operating costs), the fuel types, the estimated cost of the project, and the projected in-service date. I also discuss FPL's experience with building and operating CC generating units and demonstrate that the assumptions made for the WCEC unit are reasonable and achievable, as well as the construction synergies and efficiencies that will be realized by constructing WCEC 3 for service beginning in 2011 rather than deferring construction to a later time.

Q. Please summarize your testimony.

A. FPL's WCEC 3 will use highly efficient, low-emission CC technology, with which FPL has a great deal of experience building and operating. FPL is confident of the accuracy of its construction cost estimate and projected unit

capabilities.

WCEC is an ideal location for the project because of the existing transmission infrastructure. Additionally, the selection of the Mitsubishi Power Systems (MPS) "G" Class advanced combustion turbine technology provides for a highly efficient plant, the lowest in the state, which also serves to minimize air emissions. This is the same technology which was selected and approved by the Commission for Units 1 and 2 at the WCEC site. The site is also a reclaimed parcel that requires no impact to environmentally sensitive lands which will further minimize environmental impacts. There are no fuel supply, transmission, or other constraints that will interfere with FPL's ability to successfully construct and operate this facility.

Q. Are you sponsoring any exhibits in this case?

A. Yes. I am sponsoring Exhibits JCG-1 through JCG-9, which are attached to my direct testimony.

Exhibit JCG-1	Typical 3x1 CC Unit Process Diagram
Exhibit JCG-2	FPL Operational Combined Cycle Plants & FPL Combined Cycle Construction Projects in Progress
Exhibit JCG-3	WCEC Vicinity Map
Exhibit JCG-4	WCEC Aerial Map
Exhibit JCG-5	WCEC 3 Proposed Power Block Area
Exhibit JCG-6	WCEC 3 Fact Sheet
Exhibit JCG-7	WCEC 3 Overall Water Balance

Exhibit JCG-8 WCEC 3 Expected Construction Schedule

Exhibit JCG-9 WCEC 3 Construction Cost Components

I. OVERVIEW OF COMBINED CYCLE TECHNOLOGY

A. Description of Technology

Q. Please describe the major available generating alternatives which were considered and evaluated by FPL in arriving at the decision to pursue the proposed WCEC 3 generating unit.

A. The major available generating alternatives for consideration include CC technology utilizing advanced combustion turbines (CT), simple cycle technology utilizing advanced CTs, pulverized coal, gas or oil fired steam generator technology, integrated gasification CC technology and nuclear steam generator technology.

Due to permitting uncertainty with any coal based generation, as well as the longer project development and construction timeline for coal projects, the pulverized coal and integrated gasification CC technology options were ruled out as being viable technology options. Nuclear based generation was ruled out based on the estimated time to license and construct the facility, which is estimated to take at least 10 years. Traditional oil or gas fired steam generator technologies were also not considered due to the inherent efficiency

advantages of the CC technology and the cost advantages with the simple cycle technology.

Based on this, FPL selected the CC technology for its self-build options for detailed evaluation.

The detailed evaluation to select the FPL's next planned generating unit (NPGU) included 3 x 1 G CC units; the same technology chosen for WCEC 1 & 2, and 2 x 1 G CC units at two different sites and in two years. Sites considered included WCEC for years 2011 and 2012 and FPL's Martin site for year 2012.

Q. Please describe the combined cycle technology that will be used for the WCEC 3 Project.

A. Referring to Exhibit JCG-1, a CC unit is a combination of CTs, heat recovery steam generators (HRSGs), and a steam-driven turbine generator (STG). Each of the combustion turbines compress outside air into a combustion area where fuel, typically natural gas or light oil, is burned. The hot gases from the burning fuel air mixture drive a turbine, which, in turn, directly rotates a generator to produce electricity. The exhaust gas produced by each turbine, where the temperature is approximately 1,100°F, is passed through a HRSG before exiting the stack at approximately 200°F. The energy extracted by the HRSG produces steam, which is used to drive a STG. The utilization of waste heat from the combustion turbines provides an overall plant efficiency that is

much better than that of the CTs or the conventional STG alone.

Each CT/HRSG combination is called a "train." The number of CT/HRSG trains used establishes the general size of the STG. In the case of the proposed WCEC 3, three CT/HRSG trains will be connected to one STG, giving rise to the characterization of the project as a "three on one" (3x1) CC unit.

B. Operating Advantages

Q. What level of operating efficiency is anticipated for the WCEC 3 Project?

A. In general, CC plants can be expected to achieve a fuel to electricity conversion rate (heat rate) of less than 7,000 Btu/kWh, as opposed to values in the 10,000 Btu/kWh range for conventional steam-electric generating units. FPL anticipates that the new West County CC unit will achieve an average base heat rate of 6,582 Btu/kWh (based on an average ambient temperature of 75°F) over the life of the project. The proposed WCEC 3 will therefore produce the same amount of energy as a similarly sized conventional steam plant using, on average, one third less fuel. The addition of this highly efficient unit to the FPL system would improve the system heat rate by 1.4 percent, as discussed in FPL witness Rene Silva's testimony.

Q. Are there other operational advantages to combined cycle technology?

A. Yes. Another advantage of the multi-train CC arrangement is that it allows

for greater flexibility in matching unit output to system operating characteristics over time.

C. FPL's History of Building and Operating Combined Cycle Plants

Q. Does FPL have experience in building combined cycle plants?

A. Yes. FPL has extensive experience in building CC plants. FPL's first CC plant (Putnam Units 1 & 2) went into service in 1976. As shown in Exhibit JCG-2, FPL has 8,961 MW (net summer) of CC capacity in service and the addition of WCEC 1 & 2 are scheduled to be completed by June 2009 and June 2010, respectively, adding 2,438 MW.

Q. Please describe FPL's history of operating combined cycle plants.

A. FPL has 8,961 MW (net summer) of CC equipment presently in-service which utilize combustion turbines from various manufacturers. These include 30 General Electric (GE) 7FA turbines, 4 Mitsubishi/Westinghouse 501F turbines and 4 Westinghouse 501B turbines. FPL's expertise with these advanced combustion turbines and FPL's commitment to total operational quality enabled FPL to achieve an operating run of 203 consecutive days at Martin Unit 3 — a world record for F technology GE equipment at that time.

In addition to its CC operating experience, FPL has extensive experience operating simple-cycle combustion turbines, which comprise the "front end" of the CC technology. FPL has operated ten GE 7FA combustion turbines in

simple-cycle mode at its Fort Myers and Martin plant sites in Florida. FPL also has been operating 48 smaller simple-cycle combustion turbine units for approximately 30 years.

Q. Please describe FPL's track record in building and operating combined cycle units.

A. In meeting its obligation to serve, FPL has demonstrated its ability to construct reliable and efficient plants. For example, in 1994 FPL began commercial operation of two new combined cycle units at FPL's Martin plant and, just two years later, FPL was awarded Power Magazine's Power Plant of the Year Award for world-class performance in operation and maintenance (O & M) and availability for those units. In addition, other FPL projects have been recognized on numerous occasions. The Turkey Point Expansion Project (Turkey Point Unit 5) was recognized by Power Engineering magazine as the "Best of the Year" gas-fired project in 2007. Both the Fort Myers Repowering Project and Sanford Repowering Projects were recognized by Power magazine as "Top Plants" of the year in 2003 and 2004, respectively.

To ensure ongoing best-in-class performance in today's highly competitive electricity generating industry, FPL focuses on excellence in people, technology, business and operating processes. FPL promotes a shift team concept in its power plants that emphasizes empowerment, engagement and accountability, with an understanding that each employee has the necessary knowledge, skill and motivation to perform any required task. This

multifunctional, team-driven and well-trained workforce is the key to FPL's ability to consistently meet and often exceed plant performance objectives.

With world-class operational skills from which to draw, the Company maximizes the value of its existing and new assets by employing the best practices that underlie FPL's industry-leading positions. FPL's fossil-fueled fleet continues to achieve an above average availability compared with the U.S. industry average.

Q. Please describe how FPL monitors the operational performance of its power plants.

A. Technology helps FPL optimize plant operations, gain process efficiencies and leverage the deployment of technical skills as demand for services increases. An example is the Company's Fleet Performance and Diagnostics Center (FPDC) in Juno Beach, Florida. The FPDC provides FPL the capability to monitor every fossil-fueled plant in its system. The Company can compare the performance of like components on similar generating units, determine how it can make improvements and prevent problems before they occur. Live video links can be established between the FPDC and plant control rooms to immediately discuss, prevent and solve problems. In 2001, FPL was presented with an Industry Excellence Award from the Southeast Electric Exchange for the FPDC. The proposed WCEC 3 CC project will be connected to the FPDC.

II. WCEC 3 COMBINED CYCLE PROJECT

A. Site Description

Q. Please describe the existing facilities at the WCEC Plant site.

A. The WCEC site is a 220-acre parcel of land located in western Palm Beach County, a vicinity map of the site is presented on Exhibit JCG-3.

As shown on an aerial photograph of the site, Exhibit JCG-4, the construction of the first two units, WCEC 1 & 2 are well underway. Unit 1 is the northern most plant which is furthest along in construction, with Unit 2 located directly to the south. The proposed Unit 3 will be located directly south of Unit 2 where some of the temporary construction facilities are located. Prior to the mobilization for the construction of Units 1 & 2, the site was comprised of lands which were partially reclaimed and restored after mining of lime rock on the northern 50-acres of the site. Generally, the site predominately has been in agricultural use for the past 30 years, with some limited mining of lime rock on the northern 50-acres. Adjacent lands to the east and north have been extensively mined for lime rock for the last 15 years. Current mining of lime rock continues to the northwest of the site.

Q. Why was the WCEC site selected over other potential sites?

A. In previous site selection studies, FPL has looked at sites located in Miami-Dade County (Levee), Broward County (Andytown), Palm Beach County

(West County, previously identified as Corbett), Martin County (Martin) and St. Lucie County (Midway). The acquisition of the WCEC site in 2004 was significant because the site was acquired with all structural fill in-place, no wetland impacts, all zoning in place and with the necessary transmission interconnection queue requests in place (i.e., "power plant ready").

WCEC is unique in that it has many attributes which make it one of the best power plant sites in Florida. These attributes include:

1. Located in the southeast region of our service territory, which is our load center.
2. Adjacent to our 230kV/500kV transmission system.
3. Currently zoned for power plant development.
4. Access to two major natural gas transmission systems, Florida Gas Transmission (FGT) to the east and Gulfstream to the north.

It is these attributes, along with the ability to utilize synergies with the currently on-going construction of Units 1 and 2 at the WCEC which factored into the selection of WCEC 3 in 2011 as the NPGU.

B. Project Description

Q. Please describe the proposed WCEC 3 project in more detail.

A. The general arrangement of WCEC 3 is shown on Exhibit JCG-5. It will be a 3x1 CC unit consisting of three 230-MW G Class advanced CTs, with dry low-NO_x combustors, and three HRSGs, which will use the waste heat from the CTs to produce steam to be utilized in a new steam turbine generator.

Each CT unit will utilize inlet air evaporative cooling. Evaporative coolers achieve cooling using water to cool the inlet air. This allows additional power to be produced more efficiently. For the MPS Frame G CT, an 8°F average decrease in temperature typically results in a three percent increase in power and an associated 0.5 percent decrease in heat rate. Thus, while power increases, the production of power is more efficient with lower emissions per MWh generated.

The evaporative coolers normally would be utilized when the ambient air temperature is greater than 60°F. Given an average annual temperature for the FPL system of approximately 75°F, the output and heat rate benefits of evaporative cooler operation are included in the base rating of 1,115 MW (net summer) for WCEC 3 and a base operation heat rate of 6,582 Btu/kWh.

Each HRSG will include duct burners. The duct burners can be fired during

peak demand periods to add an additional 104 MW of capacity to the unit at an incremental heat rate of 8,770 Btu/kWh.

WCEC 3, with a summer generating capacity of 1,219 MW (net) from the base operation and duct burning operating mode capabilities described above, will be among the most efficient electric generators in Florida. The unit will have an estimated equivalent availability factor of approximately 97% and an estimated average forced outage rate of approximately 1%. The expected operating characteristics (i.e., equivalent availability factor, equivalent forced outage rate, capacity factor, and operating costs) of WCEC 3 are shown in Exhibit JCG-6. This highly reliable unit will help maintain the system reliability and integrity of FPL and Peninsular Florida.

Q. Please describe the potential air emissions of the WCEC 3 project.

A. Protecting the environment while providing safe, reliable and economic power to customers is of great importance to FPL. FPL will continue to comply with all applicable regulatory standards through construction and operation of WCEC 3.

The use of natural gas and advanced combustion controls will minimize air emissions from the WCEC 3 and ensure compliance with applicable emission-limiting standards. Using natural gas minimizes emissions of sulfur dioxide (SO_2), particulate matter (PM) and other fuel-bound contaminants. Similarly, advanced combustion controls minimize the formation of nitrogen oxides

(NO_x), and the combustor design limits the formation of carbon monoxide and volatile organic compounds. When firing natural gas, NO_x emissions will be controlled using dry low-NO_x combustion technology and selective catalytic reduction (SCR), which will limit NO_x emissions to 2.0 parts per million volume dry (ppmvd) (@ 15% O_2 on natural gas). Water injection and SCR will be used to reduce NO_x emissions during CC operation when firing light oil. These design alternatives maximize control of air emissions consistent with regulatory requirements for emission rates reflecting use of the "best available control technology." Taken together, the design of WCEC 3, as with its sister units, will incorporate features that will make them the most efficient and cleanest non-nuclear baseload generating units in Florida.

Additionally, the selection of WCEC 3 in 2011 will result in the displacement of operating hours of existing, less efficient generation on FPL's system, thereby reducing FPL's total system emissions. FPL witness Silva discusses this in his testimony.

Q. What types of fuel will WCEC 3 be capable of burning?

A. The project will be capable of burning two fuel types: natural gas and light fuel oil. In her direct testimony, FPL witness Heather Stubblefield explains how fuel will be supplied to WCEC 3.

C. Water Supply – Access and Availability

Q. What are the water requirements for the WCEC 3 project, and how will they be met?

A. The overall water balance for WCEC 3 is shown on Exhibit JCG-7. Primary water uses will be for condenser cooling, combustion turbine evaporative coolers, steam cycle makeup and service water. Water also will be used on a limited basis for NO_x control when using light oil. Condenser cooling for the steam cycle portion will be accomplished using mechanical draft cooling towers with make-up water from reclaimed water or, when this source is not available, from deep Floridan Aquifer wells. The reclaimed water will also be used to replace the currently permitted deep Floridan Aquifer wells and surface waters from the adjacent L-10/12 canals which were permitted as part of WCEC 1 & 2.

D. Electric Transmission Interconnection Facilities

Q. How will the WCEC 3 project be interconnected to FPL's transmission network?

A. The unit will connect to a 230-kV system substation via new tie lines which will be located adjacent and to the south of WCEC 3.

E. Proposed Construction Schedule

Q. What is the proposed construction schedule for the WCEC 3 project?

A. A summary of construction milestone dates is shown on Exhibit JCG-8. FPL will begin construction upon receipt of the necessary federal and state certifications and permits. The expected construction duration for the WCEC 3 project is 24 months, based on the Company's experience constructing Martin Units 3 & 4, Fort Myers, Sanford, Martin Unit 8, Manatee Unit 3 and Turkey Point Unit 5 plants, and the rate of progress for the current construction project of WCEC 1 & 2. Therefore, with a planned in-service date of June 2011 for WCEC 3, the Company anticipates that construction must commence on or before June 1, 2009.

Q. What is the current status of the certifications and permits required to begin construction of WCEC 3?

A. The 220-acre site currently has all the necessary zoning approvals, which includes Zoning Petition DOA/EAC 2007-1182 (Resolution R-2007-2144) with Palm Beach County. The project's site certification application was submitted on December 6, 2007, and was deemed complete by the Florida Department of Environmental Protection (FDEP) on March 7, 2008. The project will not require a Land Use Hearing because Palm Beach County issued a determination on land use and zoning consistency which was not disputed. As of April 8, 2008, the Company is awaiting issuance of the FDEP Staff Analysis Report prior to a public hearing, which is expected to occur by

the end of 2008. Final approval with the Governor and Cabinet, who sit as the Siting Board, is expected to occur in February 2009. The project's air permit application is currently under review by FDEP.

F. Estimated Construction Costs

Q. What does FPL estimate that the WCEC 3 will cost?

A. The current expected installed cost for WCEC 3 is $864.7 million (2011 dollars). This cost includes $735.8 million for the power block, $41.6 million for the transmission interconnection and integration (including generator step-up transformers) and $87.3 million in allowances for funds used during construction (AFUDC) to an in-service date of June 2011.

The components of the total plant costs are shown in Exhibit JCG-9.

Q. Are these estimated costs for WCEC 3 the same as the estimated costs published in the 2007 Request for Proposals for 2011/2012 Capacity Needs (RFP)?

A. Yes. The costs are the same as what was provided in the Table VI-1 of the RFP.

Q. Does FPL anticipate any construction synergies and efficiencies by constructing WCEC 3 for service beginning in 2011 rather than deferring construction to a later date?

A. Yes. FPL anticipates that adding WCEC 3 in June 2011 will result in savings

of $70 million in construction costs due to the efficiencies gained by building the unit in a continuous sequence with WCEC 1 & 2, rather than deferring construction to 2012. These cost savings are a result of not having to remobilize the construction team and construction facilities, being able to share construction supervision and management between multiple units, and being able to exercise options on equipment which were included in the original WCEC 1 & 2 procurement contracts, and construction escalation costs. In addition, construction of WCEC 3 in 2011 provides for greater assurance of water availability for the project.

III. CONSEQUENCES OF DELAY

Q. What consequences with respect to licensing and construction of WCEC 3 would be likely if the need determination for the project was delayed?

A. FPL has set an in-service date of June 2011 for WCEC 3. The unit has an overall projected 24-month construction schedule, which dictates that construction begins on or before June 1, 2009. Consistent with this schedule for commencing construction, FPL needs to receive a site certification for the project by the end of February 2009, with the air permit concurrently or shortly after site certification. This remains a realistic timetable for the site certification, but with less than three months between the expected date upon which all approvals would be received and the actual date that construction must begin to support a June 2011 in-service date. It is important that the

FDEP receive all agency reports (including the Commission's Need Determination) in a timely matter.

If the start of construction of the project is delayed beyond June 1, 2009, the introduction of efficient and cost-effective capacity and energy would be delayed to the detriment of FPL's customers. The delay would result in customers not receiving cost-savings benefits and greenhouse gas emission reductions described in the testimonies of FPL witnesses Silva, Sim and Kennard Kosky. In addition, as explained in the testimonies of these witnesses, delaying the project would not permit FPL the opportunity to consider converting existing facilities, which, if conducted, in turn would permit FPL to achieve the aggressive 2017 greenhouse gas emission goals stated in the Governor's Executive Orders, among other benefits.

IV. CONCLUSION

Q. What level of confidence does FPL have in the cost projection and construction schedule for the unit discussed herein?

A. In establishing the construction schedule and capital cost estimate for the unit, FPL has drawn upon its design and construction experience in Florida. FPL is confident that its current design philosophy and construction processes will allow the Company to complete the power block and associated transmission interconnections on schedule and in accordance with the expected

1 construction costs.

2 **Q. Does this conclude your testimony?**

3 A. Yes.

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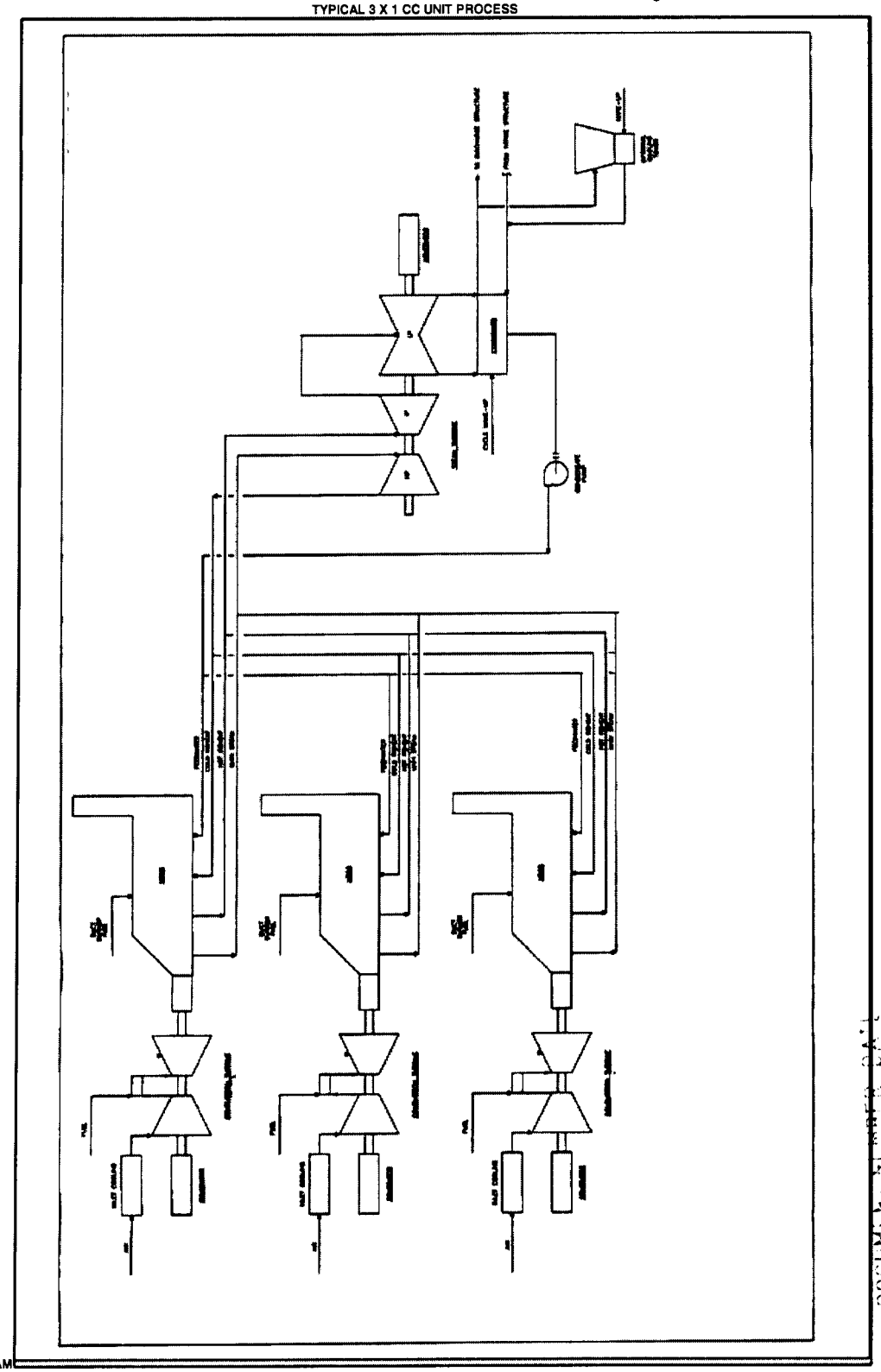
Typical 3x1 CC Unit Process Diagram
Exhibit JCG-1, Page 1 of 1

TYPICAL 3 X 1 CC UNIT PROCESS



DIAGRAM

FPL OPERATIONAL COMBINED CYCLE POWER PLANTS

Facility	Location	In-Service Year	Technology	Summer Capacity (MW)	Primary Fuel
Turkey Point Unit 5	FL	2007	4 x 1 combined cycle	1,144	Natural gas
Martin Unit 8	FL	2005	4 x 1 combined cycle	1,107	Natural gas
Manatee Unit 3	FL	2005	4 x 1 combined cycle	1,107	Natural gas
Sanford Unit 4	FL	2003	4x1 combined cycle	940	Natural gas
Fort Myers Unit 2	FL	2002	6x2 combined cycle	1,423	Natural gas
Sanford Unit 5	FL	2002	4x1 combined cycle	940	Natural gas
Martin Unit 3	FL	1994	2x1 combined cycle	471	Natural gas
Martin Unit 4	FL	1994	2x1 combined cycle	472	Natural gas
Lauderdale Unit 4	FL	1993	2x1 combined cycle	430	Natural gas
Lauderdale Unit 5	FL	1993	2x1 combined cycle	429	Natural gas
Putnam Unit 1	FL	1976	2x1 combined cycle	249	Natural gas
Putnam Unit 2	FL	1976	2x1 combined cycle	249	Natural gas
Total Combined Cycle Capacity In Operation - Summer (net) →				8,961	

FPL COMBINED CYCLE CONSTRUCTION PROJECTS IN PROGRESS

Project	Technology	Summer Capacity (MW)	Primary Fuel
West County Unit 1	3x1 combined cycle	1,219	Natural gas
West County Unit 2	3 x 1 combined cycle	1,219	Natural gas
Total Combined Cycle Capacity In Construction - Summer (net) →		2,438	

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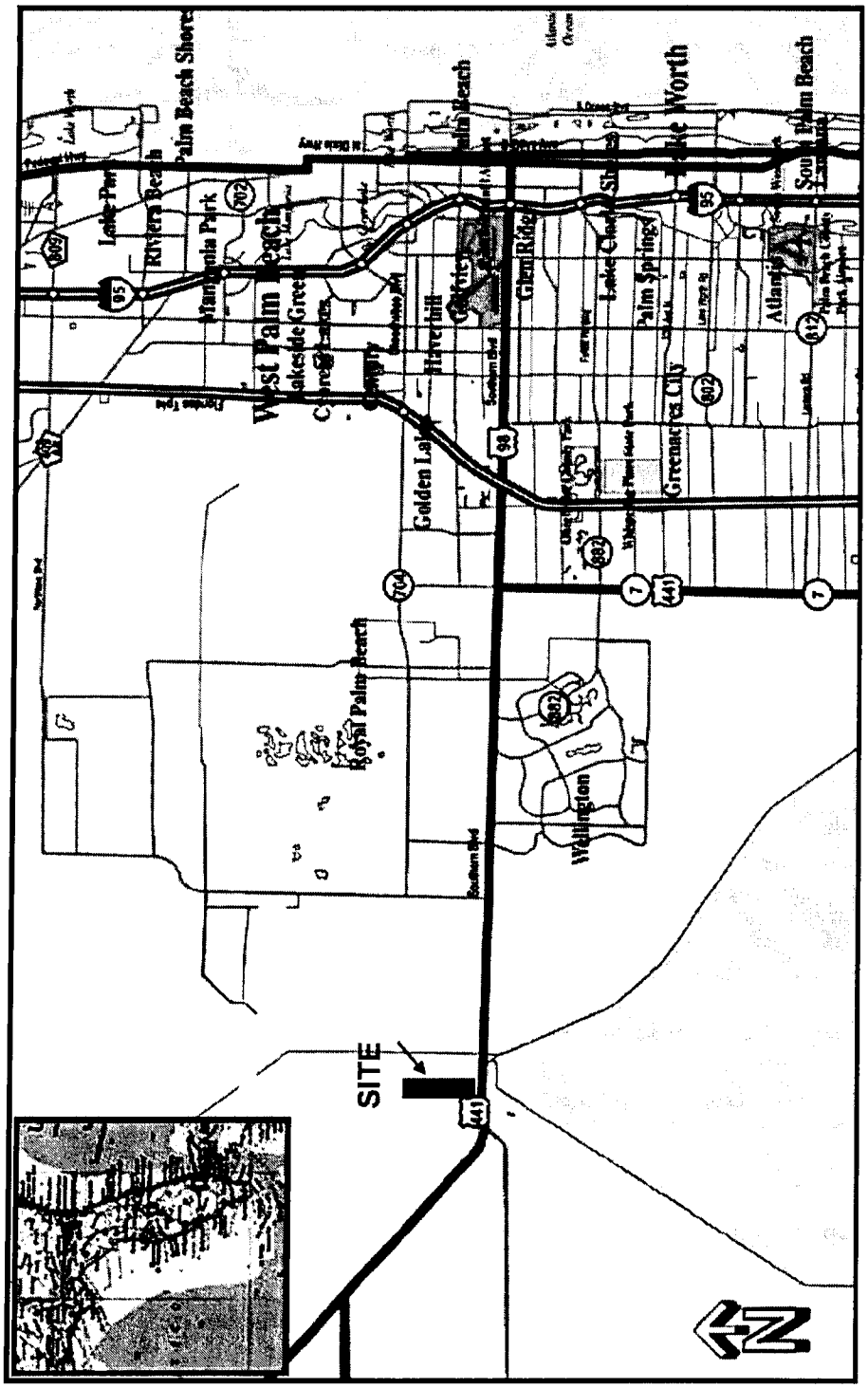
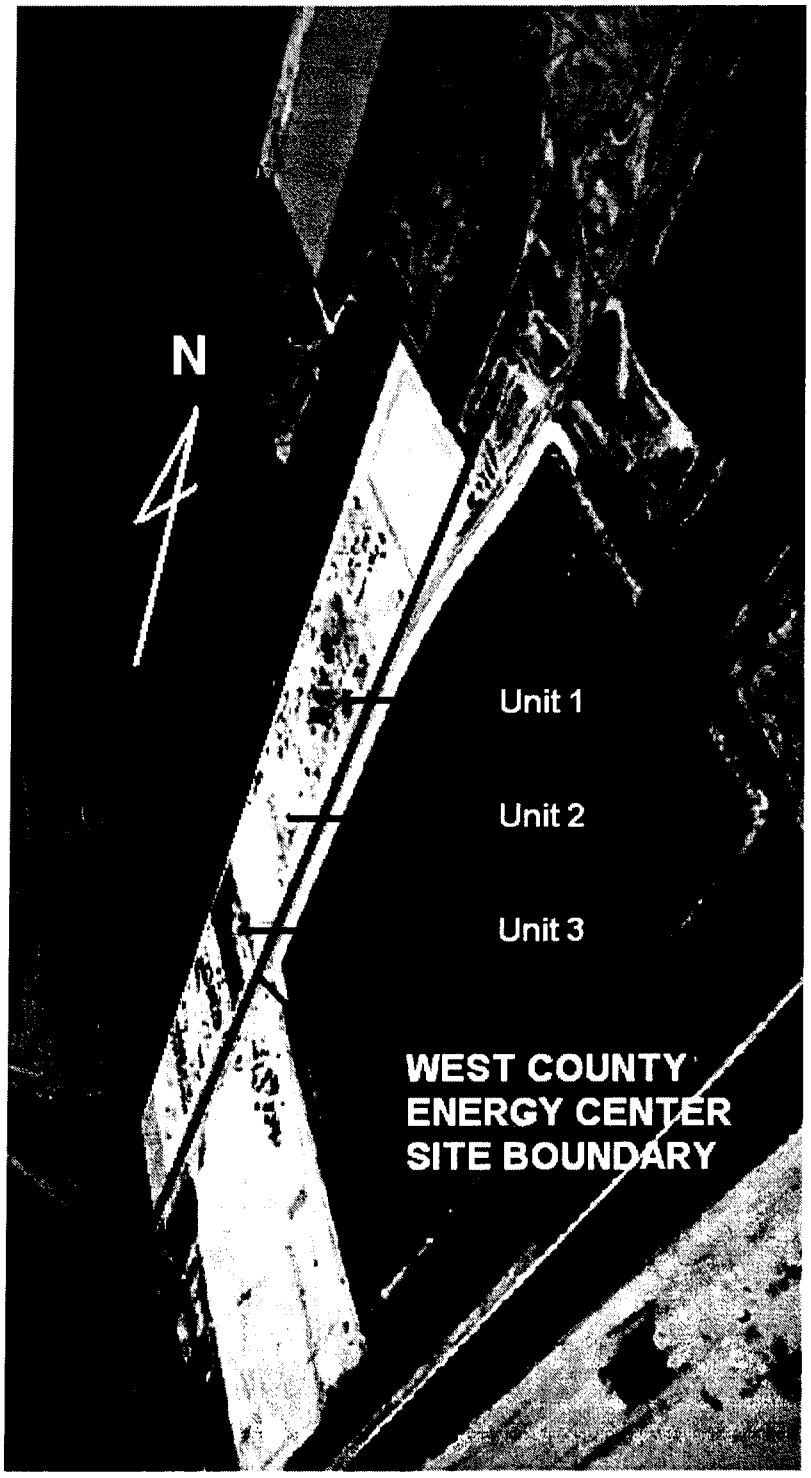
West County Energy Center Vicinity Map
Exhibit JCG-3, Page 1 of 1

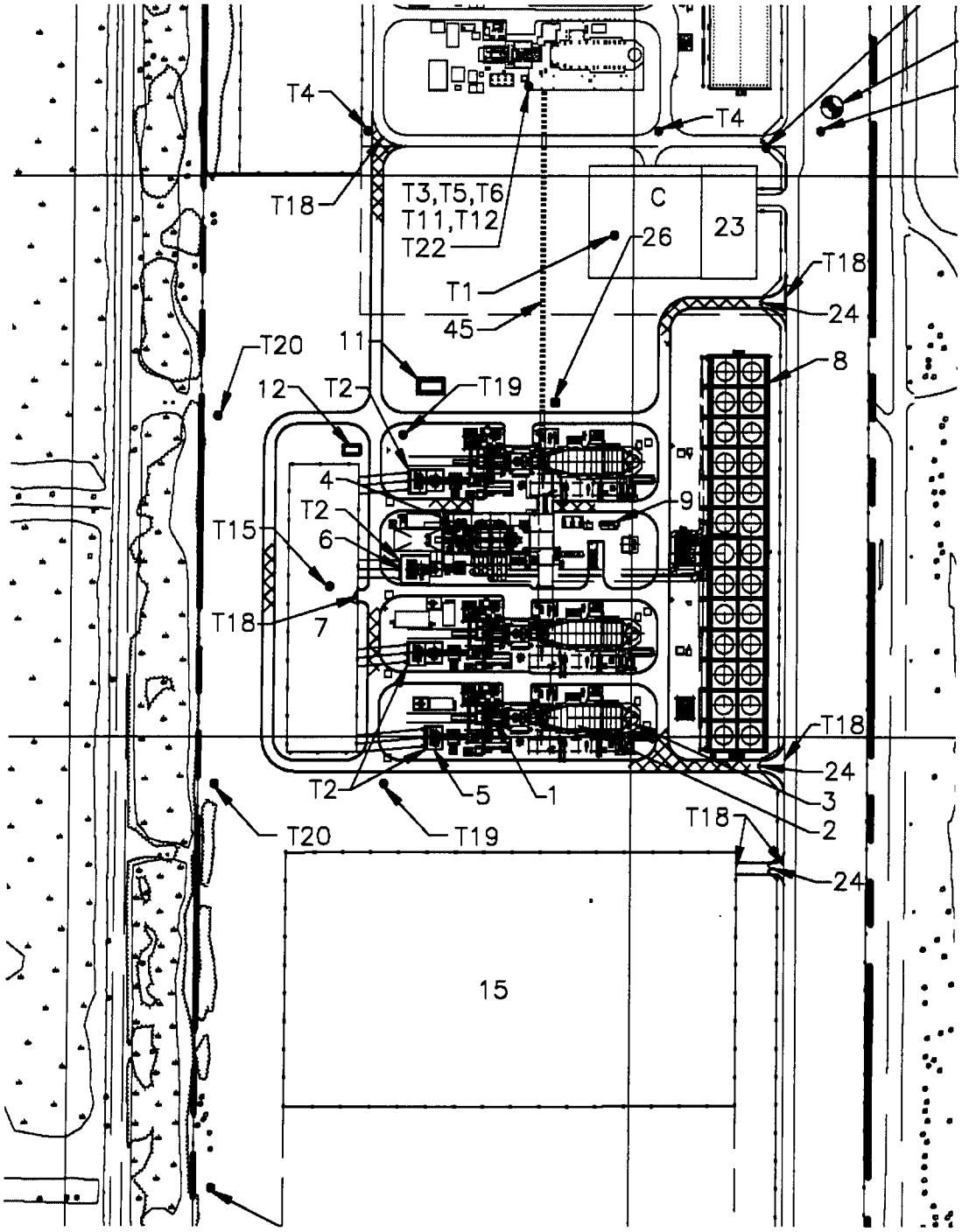
WCEC VICINITY MAP



WCEC AERIAL MAP



WCEC 3 PROPOSED POWER BLOCK AREA



WCEC 3 FACT SHEET

Generation Technology - "Three on One" (3x1) Combined Cycle Configuration:

- Three (3) MPS 501G Combustion Turbines w/ Evaporative Coolers
- Three (3) Heat Recovery Steam Generators with Duct Burners and Selective Catalytic Reduction System for NO_x Control
- One (1) Single-Reheat Steam Turbine

Expected Plant Peak Capacity:

Summer (95°F / 50% RH)	1,219 MW
Winter (35°F / 60% RH)	1,335 MW

Projected Unit Performance Data:

Average Forced Outage Rate (EFOR)	1.1%
Average Scheduled Maintenance Outages	1 wk/yr (2.1% POF)
Average Equivalent Availability Factor (EAF)	96.8%
Base Average Net Operating Heat Rate @ 75°F / 60% RH	6,582 Btu/kWh (HHV)
Annual Fixed O&M – incremental (2011 dollars)	$3.65/kW-yr
Variable O&M – excluding fuel (2011 dollars)	$0.48/MWh

Fuel Type and Base Load Typical Usage @ 75°F:

Primary Fuel	Natural Gas
Natural Gas Consumption	7,200,000 scf/hr
Backup Fuel	Light Oil
Light Oil Consumption	48,000 gal/hr

Expected Base Load Air Emissions Per Train @ 75°F:	**Natural Gas**	**Light Oil**
NO_x (@ 15% O_2)	2.0 ppmvd	10 ppmvd
CO	4.1 ppmvd	8 ppmvd
PM_{10}	7.0 lb/hr	35.0 lb/hr
SO_2	13.7 lb/hr	3.3 lb/hr

Water Balance:

- Primary Water Source- Reclaimed Water
- Annual average consumptive use for West County Unit 3 is approximately 7.34 MGD.
- Process wastewater deep well injected

Linear Facilities:

- One (1) Gulfstream gas lateral will serve the site.
- No light oil pipeline – light oil delivered to site by truck

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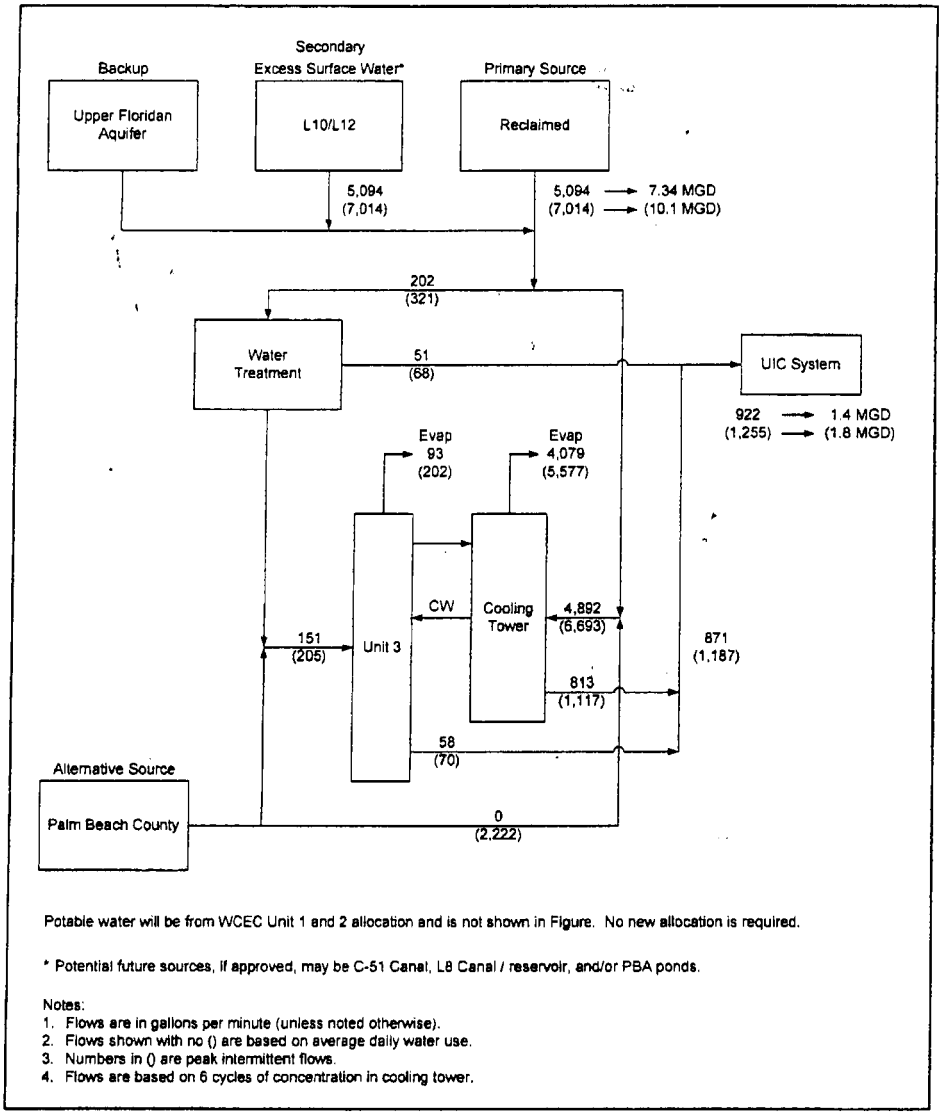
West Count Energy Center Overall Water Balance
Exhibit JCG-7, Page 1 of 1

WCEC OVERALL WATER BALANCE



Potable water will be from WCEC Unit 1 and 2 allocation and is not shown in Figure. No new allocation is required.

* Potential future sources, if approved, may be C-51 Canal, L8 Canal / reservoir, and/or PBA ponds.

Notes:
1. Flows are in gallons per minute (unless noted otherwise).
2. Flows shown with no () are based on average daily water use.
3. Numbers in () are peak intermittent flows.
4. Flows are based on 6 cycles of concentration in cooling tower.

WCEC 3

EXPECTED CONSTRUCTION SCHEDULE

	Unit 3	
Milestone	**Begin**	**End**
Initiate sequence of HRSG orders (LNTP x 4)	Apr 08	Dec 08
Initiate sequence of CT orders (LNTP x 4)	Aug 07	Jun 08
Issue LNTP for steam turbine	Jul 07	Nov 08
Receive approvals necessary to begin construction	-	Mar 09
Site preparation & foundations	Jun 09	Feb 10
Balance of Plant	Jun 09	Dec 10
Erect HRSGs	Oct 09	
Erect CTs	Feb 10	
Erect steam turbine	Apr 10	
Startup	Jan 11	May 11
Commercial Operation	-	Jun 11

LNTP= Limited Notice to Proceed

WEST COUNTY UNIT 3
PLANT CONSTRUCTION COST COMPONENTS

	Unit 3 (2011$)
Power Block	$735.8
Land	$0
Transmission Interconnect & Integration	$41.6
Gulfstream Infrastructure Upgrades	$0
AFUDC	$87.3
Total Plant Cost	$864.7