



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

July 24, 2012

Jessica Dalton
Siting Coordination Office
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 48
Tallahassee, FL 32399-2400

**Subject: FPL Port Everglades Energy Center
Power Plant Site Certification Application, PA12-57
Agency Report**

Dear Ms. Dalton:

Enclosed is the South Florida Water Management District's (SFWMD's) agency report on the above subject project, as required by Section 403.526(2)(a)2, F.S., and Chapter 62-17.133, F.A.C. The report was officially approved by the SFWMD's Governing Board for transmittal to the Florida Department of Environmental Protection (FDEP) at their meeting on Thursday, July 19, 2012.

If you have any questions concerning the above, please give me a call at (561) 682-6324.

Sincerely,

7/24/2012

X *Mindy Parrott*

Mindy Parrott, PWS
Lead Environmental Analyst
Regulation Division

Enclosure

Cc: Andy Flajole, FPL

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SFWMD AGENCY REPORT
FOR
PORT EVERGLADES ENERGY CENTER, FLORIDA POWER AND LIGHT COMPANY

PA12-57 /SFWMD ID 120124-18

1 OVERVIEW AND SUMMARY

1.1 Introduction

This Agency Report has been prepared by the South Florida Water Management District (SFWMD) in response to the Site Certification Application (SCA) submitted to the Florida Department of Environmental Protection (DEP) by the Florida Power & Light Company (FPL) for Port Everglades Energy Center (PEEC).

This report contains the SFWMD's conclusions and recommendations to the DEP regarding the Certification of the proposed Port Everglades Energy Center project for inclusion in the DEP Report required by Section 403.507(2)(a)3, F.S., and Rule 62-17.133, F.A.C.

1.2 Statutory Basis

FPL is seeking certification for the Port Everglades Energy Center under the "Florida Electrical Power Plant Siting Act" (PPSA). The PPSA is referred to as "The Siting Act" in this agency report. FPL is also referred to as "Licensee" in this report as issuance of the certification constitutes a license under the Siting Act.

The Siting Act is the state's centralized process for licensing large power plants. One license (the certification) replaces local and state permits. Local governments and state agencies within whose jurisdiction the power plant is to be built participate in the process. Certification addresses permitting, land use and zoning, and property interests. In accordance with the Siting Act, water management districts are identified as "affected agencies" that must participate in the review process. Water management districts are required to prepare a report as to matters within its jurisdiction, including but not limited to, the impact of the proposed electrical power plant on water resources, regional water supply planning, and district-owned lands and works.

For the PEEC, SFWMD is an affected agency having jurisdiction. Since the certification constitutes the sole license of the state and no other state, regional, and local permits or review process are required (including SFWMD Right-of-Way Occupancy, Consumptive Use Permit (CUP), and Environmental Resource Permit (ERP) review processes), the site certification process is the only opportunity that SFWMD will have to review and

propose conditions for the proposed project prior to certification that will be in effect for the life of the project. SFWMD is also one of several formal parties to the current Division of Administrative Hearings (DOAH) proceedings.

1.3 Matters within SFWMD Jurisdiction

In accordance with Siting Act's statutory requirements in Section 403.507(3), Florida Statutes (F.S.), this agency report addresses the proposed project's compliance with non-procedural requirements within SFWMD jurisdiction, recommends approval or denial of the project proposed in the SCA, and proposes conditions of certification on matters with the jurisdiction of SFWMD. SFWMD has broad responsibilities regarding water resources under Florida's Water Resources Act, Chapter 373, F.S., as described below.

SFWMD is a regional governmental agency that oversees the water resources in the southern half of Florida, including all or part of 16 counties from Orlando to the Florida Keys serving a population of more than 7.7 million residents. The SFWMD mission is to manage and protect the water resources of the region by balancing and improving water quality, flood control, natural systems, and water supply.

1.3.1 Protecting and Conserving Water Supplies

Part II of Chapter 373, F.S., provides the exclusive authority for requiring permits for the consumptive use of water. Chapter 373, F.S., enables and directs SFWMD to regulate the use of water within its jurisdictional boundaries. Other than the PPSA, Part II of Chapter 373, F.S., supersedes other laws, ordinances, rules, and regulations of the state, political subdivisions, and municipalities promulgated for the purpose of regulating the consumptive use of water. The purpose of the water use regulatory program is to ensure water uses permitted by SFWMD are reasonable-beneficial, will not interfere with any presently existing legal uses of water, and are consistent with the public interest. Consumptive use of water is broadly defined as any use of water that reduces the supply from which it is withdrawn or diverted, as prescribed in Part II of Chapter 373, F.S.

SFWMD has adopted rules for regulating the consumptive use of water, which are set forth in Chapters 40E-2 and 40E-20, Florida Administrative Code (F.A.C.). The Basis of Review for Water Use Permit Applications (Basis of Review) is incorporated by reference into Chapter 40E-2, F.A.C. The objective of the Basis of Review is to further specify the conditions for issuance used by SFWMD for review and agency action on water use permit applications. Chapter 40E-2.011, F.A.C., states "It is the policy of the District to control all water uses within its boundaries, pursuant to the provisions of Chapter 373, Florida Statutes, and Chapter 62-40 and Title 40E, F.A.C.". A CUP, if issued by SFWMD, authorizes the withdrawal of water from surface and groundwater

supplies for reasonable and beneficial uses. This authority applies to public water supplies, agricultural and landscape irrigation, contamination clean-up, commercial and industrial uses, dewatering and mining activities, and power generation. A CUP does not convey to the permittee any property rights nor any privileges other than those specified in the permit.

SFWMD uses several criteria contained in the Basis of Review for water resource protection. Three mechanisms to protect water supplies for natural systems from consumptive uses which are particularly relevant in this matter include: (1) Minimum Flows and Levels (MFLs), (2) Water Reservations, and (3) Restricted Allocation Area rules.

SFWMD has adopted a rule for dealing with water shortages effectively and in an equitable manner, which is set forth in Chapter 40E-21, F.A.C. The Water Shortage Plan limits water use during times of short supply and applies to all water users including those exempt from permitting pursuant to Rule 40E-2.051, F.A.C. Under the plan, restrictions apply to potable water provided by water utilities; however, it does not apply to users whose source of water is limited solely to treated effluent or seawater.

1.3.2 Environmental Resource Regulation

There is an Operating Agreement between DEP and SFWMD concerning the division of responsibilities for Environmental Resource Permits (ERP) and variances under Chapter 373, Part IV, F.S. In accordance with the Operating Agreement, DEP is responsible for conducting the ERP review and final agency action for power plants, electric distribution and transmission lines, and other facilities related to production, transmission, and distribution of electricity.

2 PROJECT PROPOSAL

2.1 Existing Facilities

The existing Port Everglades power plant consists of four oil and gas-fired generating units that have been operated since the early 1960s, situated within approximately 92.5 acres of land owned by FPL. The power plant site, located in the City of Hollywood in Broward County, is within the mid-port section of Port Everglades. The site is surrounded by port facilities and other industrial activities. Cooling water for the plant from the Intracoastal Waterway (ICW) is obtained via an intake pipe within Port Everglades Slip No. 3, north of the power plant, and is returned to the ICW via a discharge canal to the south and east of the power plant. Water supply for other plant uses, including irrigation, is provided by the City of Fort Lauderdale.

2.2 Proposed Project and Evaluation

The proposed new plant, the Port Everglades Energy Center, will be constructed on approximately 67 acres of the existing site. The facility will be a "3 on 1" combined cycle power plant firing natural gas as a primary fuel and ultra low-sulfur light oil as a backup fuel. The new plant will result in a small increase in power generation over the existing plant (1,250 MW vs. 1,200 MW). According to the SCA, the project will result in significant reduction in use of water and regulated air emissions. The proposed new plant will be interconnected with FPL's existing electrical transmission line network through the existing adjacent system substation. The new plant is scheduled to begin operation in June, 2016.

Decommissioning and dismantling of the existing generating units will be part of the project and will be required prior to the construction of the PEEC. Also included is the construction of associated linear facilities (pipelines) all of which are within Port Everglades property. Dewatering will be necessary as part of construction and dismantlement of existing plant facilities. As part of the SCA, FPL provided a preliminary dewatering plan and a hydrogeologic model. Dewatering would be conducted in three (3) phases over a nine- (9) month period, with water retained on-site. The model indicated that draw-down would be limited to within the plant site and no adverse impacts are anticipated as a result. However, dewatering may be required for other activities and contamination may exist nearby. SFWMD recommends a condition to this Certification requiring post-certification submittal of dewatering plan(s) for review for compliance with Chapters 40E-2 and/ or 40E-20, F.A.C.

The proposed source of cooling water for condenser and auxiliary cooling for the new power generating facilities will continue to be the ICW, which will provide once-through cooling water. This will also be the source of intake screen wash water. This source is exempt from the permitting requirements of Chapter 40-2, F.A.C., since the chloride concentration is greater than the SFWMD's regulatory threshold for seawater (19,000 mg/l).

The proposed source of process and service water for combustion turbine inlet air cooling, nitrogen oxide injection, steam cycle makeup, and fire protection, as well as potable water for employee use, and landscape irrigation will be the City of Fort Lauderdale.

FPL evaluated the use of Surficial aquifer wells for landscape irrigation as part of the SCA. The salinity of the groundwater at this location is too high to be used for that purpose, other than from a narrow shallow zone. To obtain fresh water, in excess of 15 very shallow wells would be required to provide the volume needed. Use of wells was determined to be unfeasible.

In the SCA, FPL indicates it would evaluate using reclaimed water for process and irrigation uses if the City of Hollywood or the City of Fort Lauderdale builds a pipeline to deliver reclaimed to the PEEC site and if the reclaimed water meets FPL's water quantity

and quality requirements. However, FPL states that use of reclaimed water for cooling water is not economically feasible because it would require the construction of cooling towers and reduce the energy generated at the facility.

SFWMD staff has reviewed the Site Certification Application with respect to current SFWMD statutes and rules. Based on the information contained in the SCA and the additional submittals, and assuming compliance with the intent of the SFWMD recommended certification conditions, staff is of the opinion that the proposed project can be constructed and operated consistent with the applicable statutes and rules.

3 RECOMMENDED CONDITIONS OF CERTIFICATION

It is the recommendation of SFWMD staff that DEP incorporate the following conditions into the Recommended Conditions of Certification for the Port Everglades Energy Center project.

A. LEGAL/ADMINISTRATIVE CONDITIONS

1. GENERAL

a. Responsible Entity

The Licensee shall be responsible for compliance with the Certification Conditions. If contractual rights, duties, or obligations are transferred under this Certification, notice of such transfer or assignment, including the identification of the entity responsible for compliance with the Certification, shall immediately be submitted to the Florida Department of Environmental Protection and the SFWMD by the previous certification holder (Licensee) and the Assignee. Any assignment or transfer shall carry with it the full responsibility for the limitations and conditions of this Certification. The previous Licensee shall be responsible for informing the Assignee of all authorized facilities and uses and the conditions under which they were authorized. The previous Licensee shall remain liable for corrective actions that may be required as a result of any violations prior to transfer or assignment of any contractual rights, duties, or obligations under this Certification. Reference: Sections 373.044, 373.113, 373.223, and 373.342, F.S.; Rules 40E-2.091, 40E-2.301, 40E-2.38I, 40E-3.101(1), and 40E-6.351, F.A.C.

b. Minimum Standards

This Certification is based on the Licensee's submitted information to the SFWMD which reasonably demonstrates that harm to the site water resources will not be caused by the authorized activities. The plans, drawings and design specifications submitted by the Licensee shall be considered the minimum standards for compliance. Reference: Sections 373.219, 373.223, 373.229, 373.308, and 373.316, F.S.; Rules 40E-2.091, 40E-2.301, 40E-2.381, and 40E-3.500-531.

c. Compliance Requirements

This project must be constructed, operated and maintained in compliance with and meet all non-procedural requirements set forth in Chapter 373, F.S., and Chapters 40E-2 (Consumptive Use), 40E-3 (Water Wells), and 40E-20 (General Water Use Permits), F.A.C.

d. Off-site Impacts

It is the responsibility of the Licensee to ensure that harm to the water resources does not occur during the construction, operation, and maintenance of the project. Reference: Sections 373.223 and 373.309, F.S.; Rules 40E-2.091, 40E-2.381, 40E-3.301(3), and 40E-3.301(4), F.A.C.

e. Liability

The Licensee shall hold and save the SFWMD harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment and/or use of any system authorized by this Certification, to the extent allowed under Florida law. Reference: Section 373.223, F.S.; Rules 40E-2.091, and 40E-2.381, F.A.C.

f. Construction, Operation, and Maintenance Responsibilities

The Licensee shall be responsible for the construction, operation, and maintenance of all facilities installed for the proposed project. Reference: Section 373.309, F.S.; Rule 40E-3.301, F.A.C.

g. Access

SFWMD representatives shall be allowed reasonable escorted access to the power plant site, the water withdrawal facilities and any associated facilities to inspect and observe any activities associated with the construction of the proposed project in order to determine compliance with the conditions of this Certification. The Licensee shall not refuse entry or access to any SFWMD representative who, upon reasonable notice, requests entry for the purpose of the above noted inspection and presents appropriate credentials. Reference: Sections 373.223 and 373.319, F.S.; Rules 40E-2.091, 40E-2.301, 40E-2.381, and 40E-3.461, F.A.C.

h. Post Certification Information Submittals

Information submitted to the SFWMD subsequent to Certification, in compliance with the conditions of this Certification, shall be for the purpose of the SFWMD determining the

Licensee's compliance with the Certification conditions and the non-procedural criteria contained in Chapters 40E-2, and 40E-20, F.A.C., as applicable, prior to the commencement of the subject construction, operation and/or maintenance activity covered thereunder. Reference: Rule 62-17.191, F.A.C.

i. Enforcement

The SFWMD may confer with DEP to request DEP to take any and all lawful actions that are necessary to enforce any condition of this Certification based on the authorizing statutes and rules of the SFWMD. Reference: Sections 373.223, 373.319, 373.603, and 403.514, F.S.; Rules 40E-2.091, 40E-2.301, 40E-2.381, and 40E-3.461, F.A.C.

2. PROCESSING OF INFORMATIONAL REQUESTS

a. Completeness and Sufficiency Review

At least ninety (90) days prior to the commencement of construction of any portion of the project, the Licensee shall submit to SFWMD staff, for a completeness and sufficiency review, any pertinent additional information required under the SFWMD's conditions of Certification for that portion proposed for construction. If SFWMD staff does not issue a written request for additional information within thirty (30) days, the information shall be presumed to be complete and sufficient. Reference: Sections 373.219 and 373.342, F.S.

b. Compliance Review and Confirmation

Within sixty (60) days of the determination by SFWMD staff that the additional information is complete and sufficient, the SFWMD shall determine and notify the Licensee in writing whether the proposed activities conform to SFWMD rules, as required by Chapters 40E-2, 40E-3, and 40E-20, F.A.C., and the Conditions of Certification. If necessary, the SFWMD shall identify what items remain to be addressed. No construction activities shall begin until the SFWMD has determined either in writing, or by failure to notify the Licensee in writing, that the activities are in compliance with the applicable SFWMD criteria. Reference: Sections 373.219 and 373.342, F.S.

c. Revisions to Site Specific Design Authorizations

The Licensee shall submit, consistent with the provisions of Condition A.2., any proposed revisions to the site specific design authorizations specified in this Certification to the SFWMD for review and approval prior to implementation. The submittal shall include all the information necessary to support the proposed request, including detailed drawings, calculations and/or any other applicable data. Such requests may be included as part of the appropriate additional information submittals required by this Certification provided they are clearly identified as a requested amendment or modification to the previously authorized design. Reference: Sections 373.085, 373.219, 373.223, 373.313,

and 373.342, F.S.; Rules 40E-2.091, 40E-2.301, and 40E-3.461, F.A.C.

d. Dispute Resolution

Since this Certification is the only form of permit required from any agency, it is understood that the Licensee and the SFWMD shall strive to resolve disputes by mutual agreement. Reference: Sections 373.044, 373.085, 373.113, and 373.129, F.S.; Rule 40E-1.601, F.A.C.

e. Objections

Objections to modifications of the terms and conditions of this Certification shall be resolved through the process established in Section 403.516, F.S.

f. Changes to Information Requirements

The SFWMD and the Licensee may jointly agree to vary the informational requirements. Reference: Sections 373.085 and 373.229, F.S.; Rules 40E-2.101(1) and 40E-3.101(2), F.A.C.

B. WATER USE CONDITIONS

1. GENERAL

a. Water Shortage Compliance

In the event of a declared water shortage, the Licensee must comply with any water withdrawal reductions ordered by the SFWMD in accordance with the Water Shortage Plan, Chapter 40E-21, F.A.C. Reference: Section 373.246, F.S.; Rule 40E-2.381, F.A.C.

b. Interference with Existing Legal Uses

The Licensee shall mitigate interference with existing legal uses, in existence at the time of issuance of the Certification Order, caused in whole or in part by the Licensee's withdrawals, consistent with the approved mitigation plan. As necessary to offset the interference, mitigation may include pumpage reduction, replacement of the impacted individual's equipment, relocation of wells, change in withdrawal source, or other means. Interference to an existing legal use is defined as an impact that occurs under hydrologic conditions equal to or less severe than a 1 in 10 year drought event that results in the:

- (1) Inability to draw water consistent with the provisions of the permit, such as when remedial structural or operational actions not materially authorized by existing permits must be taken to address the interference;

- (2) Change in the quality of water pursuant to primary State Drinking Water Standards to the extent that the water can no longer be used for its authorized purpose, or such change is imminent; or
- (3) Inability of an existing legal user to meet its permitted demands without exceeding the permitted allocation.

Reference: Section 373.223, F.S.; Rules 40E-2.091, 40E-2.301, and 40E-2.381, F.A.C.

c. Harm to Existing Off-Site Land Uses

The Licensee shall mitigate harm to existing off-site land uses caused by the Licensee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the SFWMD will require the Licensee to modify withdrawal rates or mitigate the harm. Harm, as determined through reference to these Conditions of Certification includes:

- (1) Significant reduction in water levels on the property to the extent that the designed function of the water body and related surface water management improvements are damaged, not including aesthetic values. The designed function of a water body is identified in the original permit or other government authorization issued for the construction of the water body. In cases where a permit was not required, the designed function shall be determined based on the purpose for the original construction of the water body (e.g., fill for construction, mining, drainage canal, etc.);
- (2) Damage to agriculture, including damage resulting from reduction in soil moisture resulting from consumptive use;
- (3) Land collapse or subsidence caused by reduction in water levels associated with consumptive use.

Reference: Sections 373.223, F.S.; Rules 40E-2.091, 40E-2.301, and 40E-2.381, F.A.C.

d. Harm to Natural Resources

The Licensee shall mitigate harm to natural resources caused by the Licensee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the SFWMD will require the Licensee to modify withdrawal rates or mitigate the harm. Harm, as determined through reference to these Conditions of Certification includes:

- (1) Reduction in ground or surface water levels that results in harmful lateral movement of the fresh water/salt water interface;

- (2) Reduction in water levels that harm the hydroperiod of wetlands;
- (3) Significant reduction in water levels or hydroperiod in a naturally occurring water body such as a lake or pond;
- (4) Harmful movement of contaminants in violation of state water quality standards; or
- (5) Harm to the natural system including damage to habitat for rare or endangered species.

Reference: Sections 373.223, F.S.; Rules 40E-2.091, 40E-2.301, and 40E-2.381, F.A.C.

2. SITE SPECIFIC DESIGN AUTHORIZATIONS/REQUIREMENTS

a. Dewatering Activities

Prior to commencement of construction of those portions of the project that involve dewatering activities, the Licensee shall submit a detailed plan for any such activities to the SFWMD for a determination of compliance with the non-procedural requirements of Chapters 40E-2, 40E-3 and 40E-20, F.A.C., in effect at the time of certification. The following information, referenced to NGVD where appropriate, shall be submitted:

- (1) A detailed site plan which shows the location(s) for each proposed dewatering area;
- (2) The method(s) used for each dewatering operation;
- (3) The maximum depth for each dewatering operation;
- (4) The location and specifications for all proposed wells and/or pumps associated with each dewatering operation;
- (5) The duration of each dewatering operation;
- (6) The discharge method, route, and location of receiving waters generated by each dewatering operation, including the measures (Best Management Practices) that will be taken to prevent water quality problems in the receiving water(s);
- (7) An analysis of the impacts of the proposed dewatering operations on any existing on and/or off-site legal users, wetlands, or existing groundwater contamination plumes;

- (8) The location of any infiltration trench(es) and/or recharge barriers; and
- (9) All plans must be signed and sealed by a Professional Engineer or a Professional Geologist registered in the State of Florida.

Reference: Sections 373.229 and 373.308, F.S.; Rules 40E-2.091, 40E-2.301, and 40E-3.500-531, F.A.C.

b. Alternative Water Supplies

If a reliable source of reclaimed water becomes available at the project site to provide water for non-cooling uses, the Licensee shall conduct a feasibility evaluation in accordance with Section 3.2.3.2 of the Basis of Review For Water Use Permit Applications in the SFWMD, in effect at the time of certification, to determine the environmental, technical, and economic feasibility of utilizing reclaimed water. If the feasibility evaluation demonstrates that the use of reclaimed water is feasible, the Licensee shall provide the SFWMD with a schedule for implementation of reclaimed water use, for the SFWMD's review and approval, within 90 days of such notification.

c. Water Conservation Plan

The licensee shall comply with the Water Conservation Plan submitted as Appendix 10.10 and amended April 2012 in the Site Certification Application, including:

- (1) Conducting an audit of the amount of water needed in the Licensee's operational processes. The following measures shall be implemented within one year of audit completion if found to be cost effective in the audit:
 - (a) Implementation of a leak detection and repair program;
 - (b) Implementation of a recovery/recycling or other program providing for technological, procedural or programmatic improvements to the Licensee's facilities; and
 - (c) Use of processes to decrease water consumption.
- (2) Development and implementation of an employee awareness program concerning water conservation.

Reference: Sections 373.223, F.S.; Rules 40E-2.091, 40E-2.301, and 40E-2.381, F.A.C.