

**STATE OF FLORIDA
DEPARTMENT
OF
ENVIRONMENTAL PROTECTION**



**Electrical Power Plant Site Certification
Supplemental Project Analysis Report**

**Florida Power & Light Company
Turkey Point Nuclear Units 6 & 7**

**Easement Requests
Over
Board of Trustees-Owned Lands**

**PA 03-45A3
DEP OGC Case No. 09-3107
DOAH Case No. 09-3575-EPP**

May 24, 2013

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1.0 INTRODUCTION

Florida Power & Light Company (FPL or Applicant) is proposing to construct and operate two nominal 1,100 Megawatt (net) nuclear electrical generating units (Turkey Point Units 6 & 7) at the existing Turkey Point Plant (TPP) site including supporting buildings, facilities, and equipment and associated transmission lines (Project). Construction of any new electrical power plant as defined in Section 403.503(14), Florida Statutes (F.S.), undertaken after October 1, 1973, necessitates certification under the Florida Electrical Power Plant Siting Act (PPSA). On June 30, 2009, FPL submitted a Site Certification Application (SCA) to the Florida Department of Environmental Protection (Department or DEP), Siting Coordination Office (SCO) for the proposed project.

The procedures and requirements for granting or denying a certification to construct and operate an electric power generating facility in the state of Florida are set forth in the PPSA, Sections 403.501-518, F.S., and the Electrical Power Plant Siting Rule, Chapter 62-17, Florida Administrative Code (F.A.C.). The Department has been designated as the lead coordinating agency for the review and evaluation of SCAs and is charged with preparing a Project Analysis Report (PAR) including a recommendation for granting or denying the requested certification and a recommendation of any proposed conditions of certification which the department believes should be imposed. A PAR, prepared as a fulfillment of specific PPSA requirements, that addressed the site and associated facilities (other than the transmission lines) was issued on March 4, 2013. The transmission lines associated with this project for which FPL is also requesting certification were addressed in the Department's Transmission Line PAR issued August 7, 2012. This report is being issued as a supplement to the Plant PAR issued on March 4, 2013 to provide updated information regarding FPL's easement requests associated with the project.

2.0 SITE AND FACILITIES OVERVIEW

The following are general overviews of various project aspects and are as proposed and described in the SCA and additional information submitted by the Applicant. Refer to the PARs issued on August 7, 2012 and March 4, 2013 for more detailed information.

2.1 Site Location

The TPP is an existing electrical generating facility owned and operated by FPL, located on an approximately 9,400-acre site in unincorporated southeastern Miami-Dade County, Florida. (Refer to Figure 1.) Lands surrounding and adjacent to the TPP site are predominantly undeveloped and protected areas consisting largely of mangrove flats. The site is bordered on the west and south by the 13,000-acre FPL Everglades Mitigation Bank (EMB). The South Florida Water Management District Canal L-31E also lies to the west. The site is bordered on the east by Biscayne National Park and Biscayne Bay Aquatic Preserve, with Miami-Dade County Homestead Bayfront Park to the north. The southeastern portion of the property is bounded by state-owned land located on Card Sound. The cities of Homestead and Florida City lay approximately four miles and six miles to the west of the location for Units 6 & 7, respectively. Refer to Figure 1 for site location and some of the nearby geographic features.

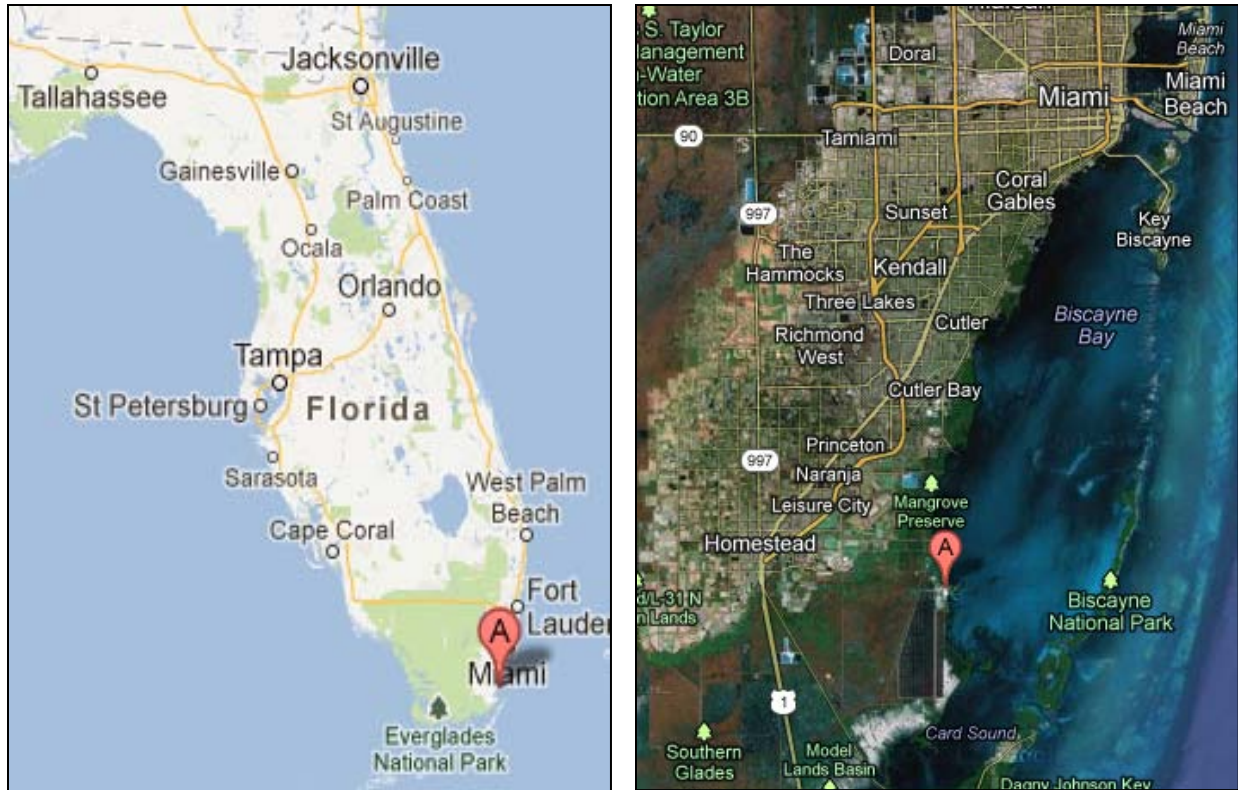


Figure 1. TPP Property Location Maps (2013 Google – TerraMetrics)

2.2 Existing Facilities Overview

The existing TPP includes two nominal 400 megawatt (MW) oil and/or gas fossil-fired steam generating units (Units 1 and 2), two nominal 800 MW pressurized water reactor nuclear units (Units 3 and 4), and one nominal 1,150 MW natural gas-fired combined cycle unit (Unit 5). Also included on the TPP site are the following support facilities: service buildings, an administration building, training building and parking areas, fuel oil storage tanks, water treatment facilities, circulating water intake and outfall structures to the cooling canals, wastewater treatment basins, a system substation, and the 5,900-acre cooling canal system/industrial wastewater treatment facility. The five existing units and supporting equipment (excluding the cooling canal system) occupy approximately 200 acres of the approximately 9,400 acre TPP site. Refer to Figure 2 for the TPP site boundary and site layout.

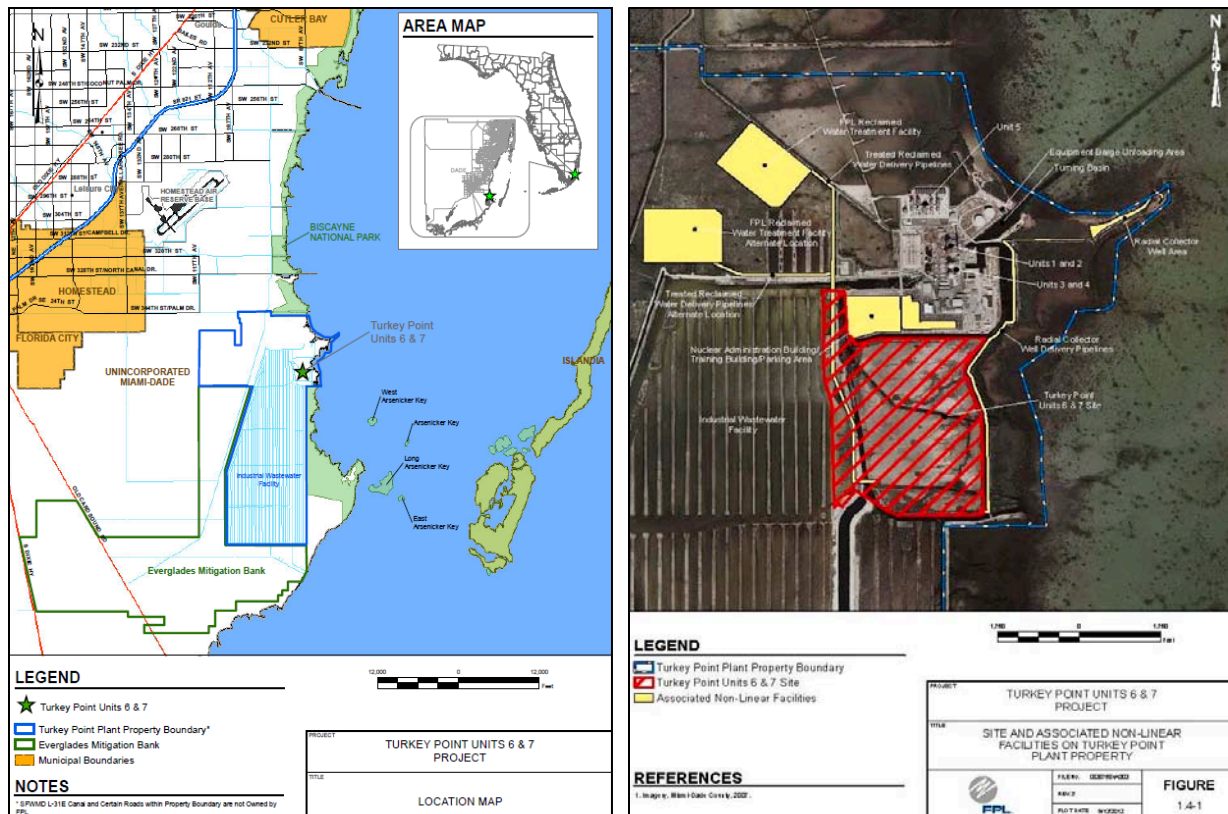


Figure 2. TPP Site Boundary and Site Layout (FPL SCA Figs. 3.1.1-1 Rev 1 & 1.4-1 Rev 2)

2.3 Proposed Project Description

FPL plans to construct and operate two Westinghouse Advanced Passive 1000 (AP1000) Pressurized Water Reactors and supporting equipment within the existing TPP site. The new units (Units 6 & 7) will be located on approximately 300 acres directly south of existing nuclear Units 3 and 4 in the northeast portion of the existing industrial wastewater facility. Refer to Figure 3 for an aerial photo of the proposed Units 6 & 7 plant area and conceptual illustration of the completed units with existing Units 1 through 5 in the background.



Figure 3. Aerial of Units 6 & 7 Site and Conceptual Illustration (Looking Northeast) Depicting the Completed Units and Immediate Supporting Structures (FPL SCA Figs. 4.2-1 & 4.2-3)

A request by FPL to make the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees) a Party to the Turkey Point 6 & 7 Certification Proceeding was granted by the Administrative Law Judge on October 3, 2012. The PPSA specifically authorizes the Siting Board to direct the issuance of easements over land owned by any agency which is a party to the certification hearing. See Section 403.509(6), F.S.

The following sections include a brief description of the easements requested by FPL and the status of each.

FPL has proposed to use a system of radial collector wells (RCWs) as a back-up source of makeup water to the circulating water system (CWS) for Units 6 & 7 when the primary source (reclaimed water) is unavailable in sufficient quality or quantity. There will be four RCWs. Three of the wells will be sufficient to meet the needs of the CWS. An additional fourth well would be installed as a backup.

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On February 15, 2013 public notice was sent to Audubon of Florida and Biscayne National Park regarding the submerged lands easement for the portions of the RCW laterals located beneath Biscayne Bay Aquatic Preserve. Comments were received from Biscayne National Park. A report regarding this easement (attached as Appendix I), including comments received, was forwarded by the DEP Southeast District Office Environmental Resources Program to the Division of State Lands, Bureau of Public Land Administration's Submerged Lands Section in Tallahassee (Division of State Lands) for review on April 3, 2013. District staff remarked, "As the project is located beneath the bay bottom, it is not anticipated that submerged resources shall be impacted as a result of the project, however any environmental impacts that may result from the project shall be fully mitigated and accounted for in the site certification license.' The following language is an excerpt from the Conclusions included in the DEP Southeast District Office report:

"Because the activity for which the proposed public easement is in the public interest, and is not prohibited by the Extreme Hardship requirement, the DEP Southeast District recommends that the Siting Board include language in the Order of Certification for the Turkey Point 6 & 7 project to issue the requested public easement, subject to Conditions."

Staff within the DEP Division of State Lands have reviewed FPL's submitted information and the Southeast District report and have concluded that the Turkey Point 6 & 7 Project, including the need for the RCW system as a backup water supply, is in the public interest. Specific conditions requiring FPL to monitor for impacts to the Biscayne Bay Aquatic Preserve as a result of construction and/or operation of the RCW system have been included in the Proposed Conditions of Certification (attached as Appendix II). Additionally, if adverse impacts are identified as a result of the monitoring, pursuant to the Conditions of Certification FPL shall be required to evaluate, abate or mitigate such impacts. Updates to the Specific Conditions governing the construction and operation of the RCW system are shown as strikethrough/underline in the attached document.

Considering the above, the Division of State Lands recommends that the Siting Board direct the Board of Trustees to issue a sovereignty submerged lands public easement for the portions of the RCW system laterals that extend beyond FPL's property below the Biscayne Bay Aquatic Preserve.

3.2 Miami River Electrical Transmission Line Easement

The Turkey Point Project will require new electrical transmission lines in order to connect the new power plant units to the Florida electrical grid system. Approximately 2,200 megawatts (MW) of new generation will be delivered to the system as a result of this project. New lines are proposed to connect the Clear Sky substation located on FPL's Turkey Point plant property to existing FPL transmission substations in other areas of Miami-Dade County.

The Eastern Preferred Corridor (shown in Figure 5 below) will accommodate the 230-kilovolt (kV) transmission line that will connect the proposed Clear Sky substation on the Turkey Point Site to the existing FPL Davis substation and then to the existing Miami substation. A sovereignty submerged lands public easement will be required for the transmission line's subaqueous crossing of the Miami River within this corridor. Refer to Figure 6 for the location of the section of the Eastern Preferred Corridor that crosses the Miami River. The transmission

subaqueous crossing will be constructed within this area if the FPL Eastern Preferred corridor is approved in the Certification process.

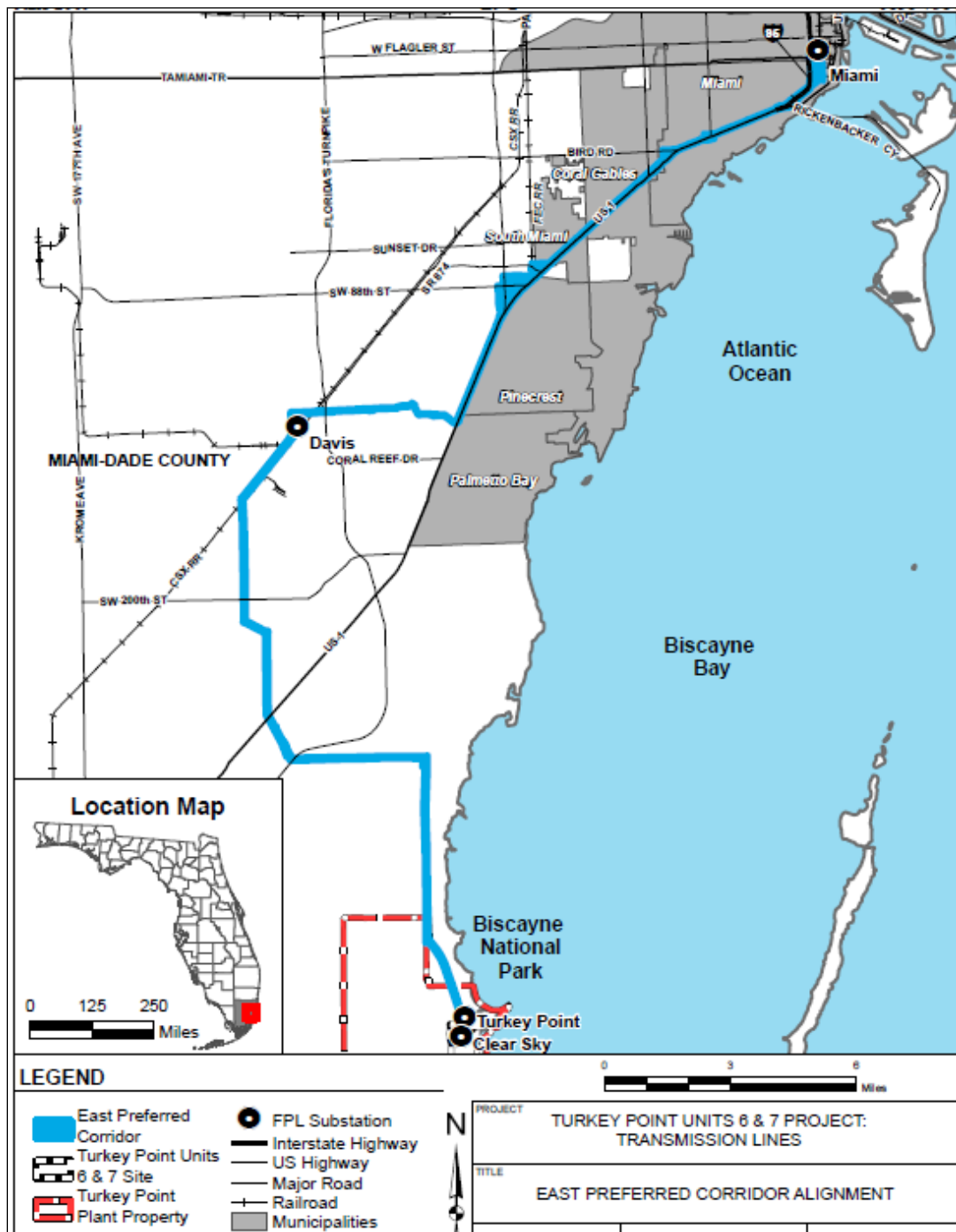


Figure 5 - Eastern Preferred Corridor (FPL Turkey Point 6 & 7 SCA Application Figure E9.2.0-1)



Figure 6. Location of Eastern Preferred Corridor Miami River Crossing (FPL Additional Information Submitted to DEP SED, April 11, 2013)

On April 4, 2013 FPL submitted to the DEP Southeast District Office additional information required for obtaining a submerged lands easement for the transmission subaqueous crossing of the Miami River. On April 19, 2013 notices were sent to 1,860 property owners regarding the transmission river crossing. Updates to Specific Conditions governing the installation of the subaqueous transmission lines are shown as strikethrough/underline in the attached Proposed Conditions of Certification. On May 24, 2013 the DEP Southeast District Office Environmental Resources Program forwarded its report addressing this easement (attached as Appendix III) to the Division of State Lands recommending that the Siting Board include language in the Order of Certification directing the Board of Trustees to issue the requested public easement. The report is currently under review.

3.3 Upland Easement for FPL West Preferred Transmission Line Corridor

As stated above, the Turkey Point Project will require new electrical transmission lines in order to connect the new power plant units to the Florida electrical grid system. The FPL proposed West Preferred transmission corridor and associated access-only corridor laterals include an approximately 4-acre parcel of state-owned uplands. This parcel is adjacent to an existing, fee-owned, FPL transmission line right-of-way through previously mined areas located northwest of the intersection of Doral Boulevard and the Homestead Extension of the Florida Turnpike in the vicinity of the Department of Corrections South Florida Reception Center and Metro West Detention Center. Refer to Figure 7. According to FPL, this proposed easement is not located on state-owned natural resource lands, and is not currently managed for the conservation and protection of natural resources. The property is the subject of a commercial mining lease issued to Old Castle Southern Group on February 13, 2012, and assigned to Vecellio & Grogan, Inc. on November 14, 2012. It should be understood that the Board of Trustees cannot approve the easement unless the current lessee approves.

On April 29, 2013, FPL submitted information to the Division of State Lands in support of its request that the Siting Board direct the Board of Trustees to issue a private upland easement for an electric transmission line on these state-owned uplands. FPL's submittal is attached as Appendix IV and is currently under review by division staff. The size of the proposed easement is such that the Division of State Lands has delegation of authority to approve unless determined to be of Heightened Public Concern. Additionally, the applicant will be required to pay market value for the easement into the Internal Improvement Trust Fund.

4.0 FINDINGS

- **Biscayne Bay Radial Collector Well Laterals** - Division of State Lands recommends that the Siting Board direct the Board of Trustees to issue a sovereignty submerged lands public easement for the portions of the RCW system laterals that extend beyond FPL's property below the Biscayne Bay Aquatic Preserve.
- **Miami River Transmission Crossing** - On May 24, 2013 the DEP Southeast District Office Environmental Resources Program forwarded its report addressing the Miami River transmission crossing easement to the Division of State Lands recommending that the Siting Board include language in the Order of Certification directing the Board of Trustees to issue the requested public easement. The report is currently under review by Division staff.
- **Uplands Transmission Crossing** - On April 29, 2013, FPL submitted information to the Division of State Lands in support of its request that the Siting Board direct the Board of Trustees to issue a private upland easement for an electric transmission line on these state-owned uplands. FPL's submittal is currently under review by Division staff.

DONE AND ISSUED this 24th day of May 2013, at Tallahassee



Cindy Mulkey
Program Administrator, Siting Coordination Office