

STATE OF FLORIDA
DEPARTMENT
OF
ENVIRONMENTAL PROTECTION



Electric Power Plant Site Certification
Project Analysis Report

Florida Power & Light
West County Energy Center
Unit 3

PA 05-47SA1
DEP OGC Case No. 07-2198
DOAH Case No. 07-5574 EPP
September 15, 2008

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1.0 Summary

1.1 Facilities Overview

1.1.1. Existing Facilities

The West County Energy Center is owned and operated by Florida Power and Light, Inc., and is located on a 220 acre site located in an unincorporated area of western Palm Beach County, just north of the westernmost portion of the Village of Wellington. The site was formerly used for rock mining. The site is bounded on the north by the existing FPL Corbett Substation, on the east by the Palm Beach Aggregates, Inc., private haul road, on the south by the S.R. 80 right-of-way, and on the west by FPL's existing Levee-Midway 500kV electrical transmission line right-of-way. Site access is via S.R. 80.



Figure 1. Location of WCEC



Figure 2. Aerial View, Rendition from NW

There are currently two natural gas-fired combined-cycle generating units being constructed at the site, both of which were approved for construction and operation by the Governor and Siting Board in December of 2006. Each 1250 MW unit will consist of three 250 megawatts (MW) natural gas fired combustion turbines with evaporative inlet cooling systems and with ultra low sulfur light oil as back-up fuel, three supplementary-fired heat recovery steam generators, three 428 MMBTU/hour gas-fired duct burners, three selective catalytic reduction reactors, one 500 MW steam turbine, three 149 feet exhaust stacks, and one 26 cell mechanical draft cooling tower. The two units will be located on approximately 90 acres of the 220 acre site. Additional ancillary equipment at the site includes four 2250 KW emergency generators, two natural gas fired fuel heaters, two diesel fuel storage tanks, two auxiliary steam boilers, and other associated support equipment. Other onsite facilities include a control/administration building, onsite wells, water storage tanks and stormwater ponds. FPL expects to begin HRSG steam blows by the end of 2008, signaling the commencement of commercial operation during 2009.

1.1.2 Proposed Project Description

FPL is proposing to construct and operate a new natural gas-fired combined cycle generating unit providing 1,250 MW (nominal) of electric generation in 2011 (Unit 3). The proposed design for Unit 3 is the same design that was chosen for WCEC Units 1 and 2. The construction of this new unit necessitates certification under the PPSA, as it meets the parameters outlined in 403.506(1), Florida Statutes (F.S.). On December 6, 2007 Florida Power and Light, Inc. (FPL), submitted an application to the Department of Environmental Protection's Siting Coordination Office for certification of Unit 3 at the existing West County Energy Center (WCEC) in Palm Beach County, Florida.

General boundaries of the West County Property can be seen in Figure 2. From below (Figure 3) it can be observed that FPL's West County Energy Center is well under construction. The bank of cooling towers observed in the left-hand photo is seen from a distance and are the predominant features in the right-hand photo.



Figure 3. Aerial images of WCEC site

Unit 3 will benefit from the infrastructure being constructed for Units 1 and 2, since all units will utilize common facilities wherever possible. These include the access roads, L10/L12 Canal inlet structure and on-site intake structure, gas yard, Upper Floridan Aquifer well system, water treatment facilities, Underground Injection Control well system, ultra low sulfur oil storage tanks, administration, control, and warehouse building. These facilities will be upgraded as necessary to accommodate the requirements of Unit 3. The primary source of water for Unit 3 will be reclaimed water.

1.1.3 Natural Gas-Fired Combined Cycle Generating Unit

As stated above, the proposed West County unit is a natural gas-fired combined cycle generating unit. The project consists of one nominal 1,250-MW "3-on-1" combined cycle unit. The "3-on-1" units will consist of three nominal 250-MW "G" Class advanced Combustion Turbines (CTs) and 3 Heat Recovery Steam Generators (HRSGs), which utilize waste heat from the CTs to produce steam to be utilized in a single steam turbine generator. The CTs will be Mitsubishi Power Systems model M501G (see: http://www.mpsHQ.com/products_gasturbines.htm#M501GM701G). Duct burners are proposed for each HRSG and are fired during peak demand periods to achieve the total nominal generating capacity. Duct firing will be limited to an equivalent of 2,880 hours

per CT per year at the maximum firing rate. Figures 4 and 5 below illustrate the profile of the proposed CT and HRSG, and a simplified diagram of a combined cycle generating unit.

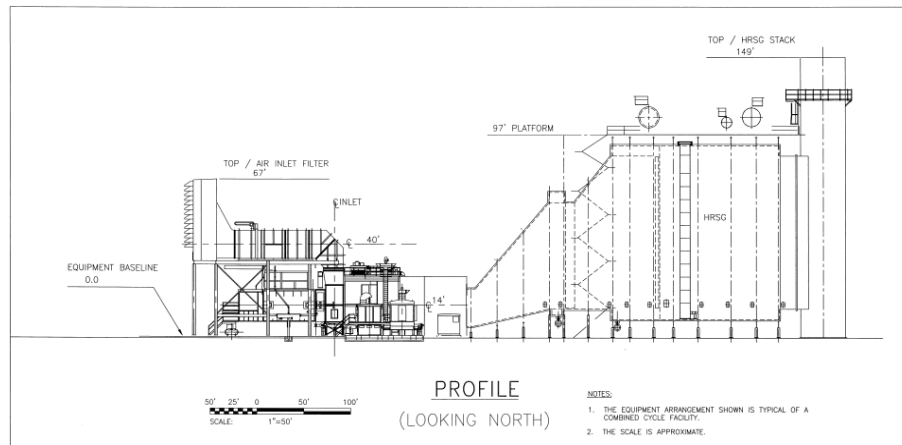


Figure 4. Profile of Combustion Turbine and Heat Recovery Steam Generator (Figure 3.2.0-2. SCA)

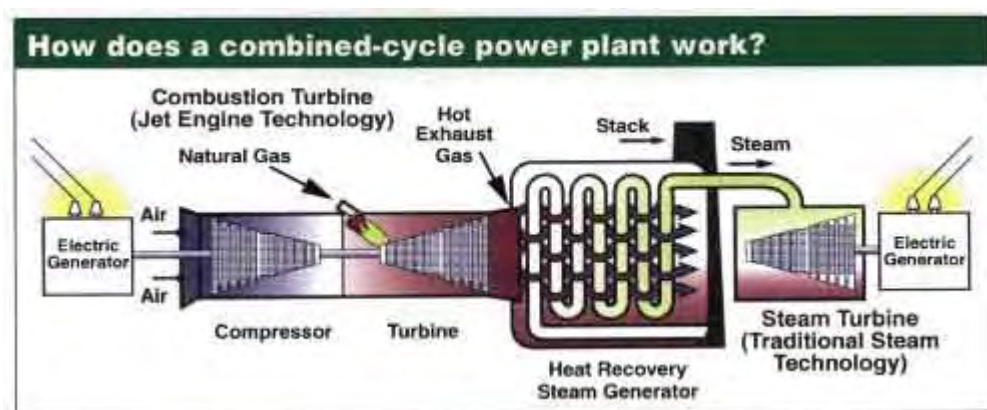


Figure 5. Combined Cycle Generating Unit Diagram (Florida Power & Light)

Each CT unit will utilize evaporative cooling for inlet air cooling. The result is a cooler, more moisture-laden air stream. This allows additional power to be produced more efficiently. Generally, an 8°F average decrease in temperature would result in a 3.0-percent increase in power and an associated 1.2-percent decrease in heat rate for the CT. Thus, while power increases, the production of power is more efficient with concomitant lower emissions per MW-hour generated. The CTs will use natural gas as the primary fuel with ultra low-sulfur distillate "light oil" used as a backup fuel. The HRSG duct burners will fire natural gas only. Gas for Unit 3 will be transported to the site via the existing Gulfstream natural gas system pipeline. Ultra low-sulfur light oil will be trucked to the site and stored in the tanks being constructed for Units 1 and 2. When firing natural gas, NO_x emissions will be controlled using dry low- NO_x (DLN) combustion technology and selective catalytic reduction (SCR). De-mineralized water is utilized during firing of ultra low-sulfur light oil to reduce the combustion temperature and the generation of NO_x emissions from the CT. Water injection and SCR will be used to reduce NO_x emissions when firing ultra low-sulfur light oil. Primary water uses for the project will be for condenser cooling, CT inlet air cooling, NO_x injection water, steam cycle makeup, and service

water. Condenser cooling for the steam cycle portion of the project will be accomplished using a mechanical draft cooling tower. The inlet structure being constructed for Units 1 and 2 will be used for Unit 3, if water from the L10/L12 Canal is available. Reclaimed water will be the primary water source for Unit 3, as long as the reclaimed water meets the quantity and quality requirements necessary to operate WCEC Unit 3. Reclaimed water will be used for cooling system makeup, and may be used for process and service water (including fire protection), and landscape irrigation. Reclaimed water used by WCEC Unit 3 will meet all of the relevant requirements of Chapter 62-610, F.A.C., including but not limited to the requirements for cooling water applications found in Section 62-610.666.

1.2 Environmental and Social Impacts

The West County Energy Center site is located on a 220 acre site located in an unincorporated area of Western Palm Beach County. The Town of Loxahatchee Groves is located approximately 4.5 miles east of the site. The westernmost portion of the Village of Wellington is located just south of the site. Royal Palm Beach is also located generally east of the site. Other areas such as The Acreage, Deer Run and Indian Trails are populated and unincorporated communities east of but near to the site. The Cities of Belle Glade and Pahokee are adjacent to Lake Okeechobee which is located about 20 miles west to northwest of the WCEC. The closest residence is in the Deer Run subdivision and is approximately 0.7 miles northeast of the northeast corner of the site.

The existing and anticipated land uses adjacent to the site are predominantly agriculture, mining, and additional utility infrastructure. The Directions, Goal, Objectives, and Policies of Palm Beach County's Future Land Use Element reflects the long term planning directions of the Board of County Commissioners (BOCC). Under that Element, the site has a Future Land Use designation of Rural Residential. The BOCC issued a Development Order in 2002 approving use of the site for a power plant, and issued amended Development Orders in 2004 and 2007 reflecting the County's determination that established criteria have been met.

The site was initially identified as a potential site for future electric generation by FPL in its Ten Year Power Plant Site Plan (TYSP) 2004-2013 and has been identified as a preferred site in FPL's 2005, 2006, and 2007 TYSPs. The site has been approved by Palm Beach County for up to 3,800MW (nominal) of electric generation.

Other areas of interest include the Arthur R. Marshall Loxahatchee National Wildlife Refuge's (NWR) northern boundary is located approximately 0.3 mile south of the southernmost site boundary. The Loxahatchee NWR is state-owned land that was established in 1951 as a National Wildlife Refuge and is managed by the U.S. Fish and Wildlife Service (USFWS). The Loxahatchee NWR comprises over 221 square miles. The northern portion of the Loxahatchee NWR closest to the site provides a public access point that includes a boat ramp, dock, and restrooms. The main public access point to the Loxahatchee NWR is located west of Boynton Beach on Lee Road west of U.S. 441, approximately 20 miles southeast of the site. The Refuge offers many recreational opportunities for outdoor enthusiasts, including walking trails, a canoe trail, a bike trail, boat ramps, a fishing platform, observation towers, a butterfly garden, and a Visitors Center. Additionally, the southernmost corner of the J.W. Corbett Wildlife Management Area, operated by the Florida Fish and Wildlife Management Commission, is located approximately 4 miles north of the site.

The nearest Federal Class I Area to the West County site is Everglades National Park which is 102 km to the south of the site. Federal Class I areas are defined by the Clean Air Act and include certain national parks, national wilderness areas, and international parks that were in existence as of August 7, 1977. These areas represent natural conservation of historical landmarks in this country and are protected by more stringent air quality requirements than other regions.

It does not appear that there will be any measurable impacts to the above areas as a direct result of the West County Unit 3 project.

1.2.1 Local Air Quality Impacts

The Department of Environmental Protection's Division of Air Resource Management regulates major air pollution sources in accordance with Florida's Prevention of Significant Deterioration (PSD) program, as defined in Rule 62-212.400, F.A.C. For new major facilities, or for modifications to existing facilities, each registered air pollutant is reviewed for PSD applicability based on emissions thresholds known as Significant Emission Rates (SERs).

The WCEC is a Major Stationary Source with respect to the PSD Rules because it is a fossil fuel fired steam electric plant of more than 250 Btu heat input and has the potential to emit 100 tons per year or more of a PSD pollutant. [Rule 62-210.200(185)(a)1, F.A.C.] Therefore, PSD will apply to each pollutant for which there will be a net emissions greater than its respective significant emission rate.

Air quality dispersion modeling was used to assess the potential impacts on air quality of Unit 3. The air pollutants that were projected to be emitted in significant quantities are PM/PM₁₀, CO, NO_x, SO₂, VOC, and H₂SO₄ (SAM). Although the proposed project is for Unit 3, the Department of Environmental Protection required that the applicant provide an ambient air quality impact analysis for all three units at the site. Modeling analyses were performed to assess the compliance with Ambient Air Quality Standards (AAQS), and Prevention of Significant Deterioration (PSD) Class I and Class II increments. The results of the analyses as demonstrated by the PSD discussion in a subsequent section indicate no violation of AAQS or PSD increments.

Unit 3 air construction permit was issued pursuant to the rules for the prevention of significant deterioration of air quality (PSD permit) on July 30, 2008. The details are available at the following website: <http://www.dep.state.fl.us/Air/permitting/construction/westcounty.htm>

1.2.2 Air Quality Impacts (CO₂ Emissions)

In light of the heightened concerns over global warming and Florida's recent commitment to *The Climate Registry*, it is appropriate to consider carbon dioxide (CO₂) emissions from the proposed project. The following summary is intended to put into perspective the projected CO₂ emissions from the Unit 3 project with respect to global CO₂ emissions and CO₂ emissions from other types of electrical generating facilities.

Current and Predicted Levels of Carbon Dioxide Emissions

The primary source of CO₂ emissions is the combustion of fossil fuels such as coal, natural gas, and oil. Florida ranks fifth in the nation for CO₂ emissions from fossil fuel combustion,

contributing almost four and one half percent to the nation's total emissions in 2005.¹ Refer to table 1 below for a comparison of 2005 emissions.

Emission Origin	2005 Total CO₂ Emissions (million metric tons)
Texas	663.87
California	390.64
Pennsylvania	277.0
Ohio	269.97
Florida	260.74
United States	5,966.04
World ²	28,193.00

Until recently the United States was the largest emitter of carbon dioxide emissions. According to preliminary estimates China has been the top emitter since 2006.³

The Energy Information Administration predicts emissions of CO₂ will reach almost 8,000 million metric tons in the U.S. by the year 2030.

Carbon Dioxide Emissions associated with West County Energy Center Unit 3

As can be observed from the table below (FPL completeness response SO-1 dated February 14, 2008), the addition of unit 3 at West County Energy Center is expected to add about 3.9 million tons per of CO₂ to the atmosphere annually. However, the addition of this generating unit to the FPL fleet will cause a commensurate decrease in output of less efficient generating units as the new unit displaces their output. Based upon the below table, it appears that on a system-wide basis, FPL will enjoy a net decrease in CO₂ emissions.

The below table states that the estimated total system-wide carbon dioxide (CO₂) emissions reductions during the first 5 years of operation of Unit 3 are approximately 1,852,000 tons per year. This CO₂ emissions reduction value was reported in the SCA which was filed on December 6, 2007, and in the subsequent completeness responses filed February 14, 2008. On April 8, 2008, FPL filed a need petition with the Florida Public Service Commission (FPSC) for Unit 3 which utilized an updated load forecast from the forecast used in the SCA filing. With this updated load forecast, FPL now projects a system-wide total CO₂ emissions reduction during the first 5 years of operation of WCEC Unit 3 of approximately 1,700,000 tons per year.

¹U.S. Environmental Protection Agency, State CO₂ Emissions from Fossil Fuel Combustion 1990-2005. Available at http://epa.gov/climatechange/emissions/state_energyco2inv.html

² U.S. Energy Information Administration. *International Energy Annual 2005* (EIA 2007b)

³ Sci-Tech Today (2006-06-21)

Estimated WCEC 3 CO₂ Emissions and CO₂ Reductions (Tons)
by Generation Type (2012 through 2016)

Generation Type	2012	2013	2014	2015	2016
WCEC Unit 3	3,914,870	3,888,660	3,876,913	3,873,520	3,906,709
Estimated Reductions:					
800 MW FS Units	(1,963,273)	(2,090,378)	(2,259,544)	(1,878,649)	(2,061,032)
400 MW FS Units	(813,856)	(852,427)	(907,529)	(666,211)	(786,145)
300 MW FS Units	(98,589)	(82,409)	(65,281)	(31,694)	(78,797)
220 MW (and less) FS Units	(96,168)	(90,089)	(94,633)	(52,995)	(110,973)
250/500 MW CC Units	(614,946)	(626,812)	(566,182)	(535,279)	(616,667)
Repowered (CC) Units	(1,337,022)	(1,284,360)	(1,215,120)	(1,412,152)	(1,488,874)
1,100 MW CC Units	(229,458)	(186,640)	(195,261)	(258,684)	(237,546)
1,250 MW CC Units	(201,688)	(173,985)	(167,196)	(159,322)	(156,115)
Other*	(390,045)	(424,992)	(435,321)	(497,787)	(228,140)
Total Est. Reduction w/WCEC	(1,830,174)	(1,923,432)	(2,029,153)	(1,619,253)	(1,857,579)
Average Est. Reduction w/WCEC			(1,851,918)		

* "Other" includes simple cycle units, purchase power, and partial plant ownership.

Legend: FS = fossil steam; CC = combined cycle.

According to testimony received by the Public Service Commission (see: <http://www.psc.state.fl.us/library/filings/08/02692-08/02692-08.pdf>), a "decrease in FPL's system CO₂ emission rate has been occurring since 2000 with the addition of conversion projects and advanced combined cycle plants. The decrease in CO₂ emissions will continue with WCEC 3. From 2000 through 2006, FPL's system generation increased from 98,700 gigawatthours (GWh) to 116,300 GWh, an increase of about 18 percent. In contrast, the CO₂ emission rates decreased from 1,269 MWh to 1,079 MWh, a decrease of about 15 percent. The addition of WCEC 3, among other measures, will continue FPL's major efforts to reduce CO₂ emissions in FPL's system toward reaching the Florida CO₂ reduction goals stated in Governor's Crist's Executive Orders."

Efficiency and Fuel Considerations

Emissions of CO₂ directly relate to the quantity of combusted fossil fuel. The more fuel consumed, the more carbon released into the atmosphere. As technologies improve, electric generating facilities of all types are constructed with greater and greater efficiencies. Higher efficiency units require less fuel for equal amounts of energy production. This translates to fewer overall carbon emissions from the more efficient units.

Carbon emissions are also dependent upon the types of fuels combusted. To produce the same amount of energy, more CO₂ is released when burning coal, than when burning fuel oil or natural gas. "Coal combustion emits almost twice as much CO₂ per unit of energy as does the combustion of natural gas, whereas the amount from crude oil combustion falls between coal and natural gas." Carbon emission factors for different fuel types are shown in Figure 6 below as the amount of CO₂ emitted per heat energy unit (lb/MMBtu).

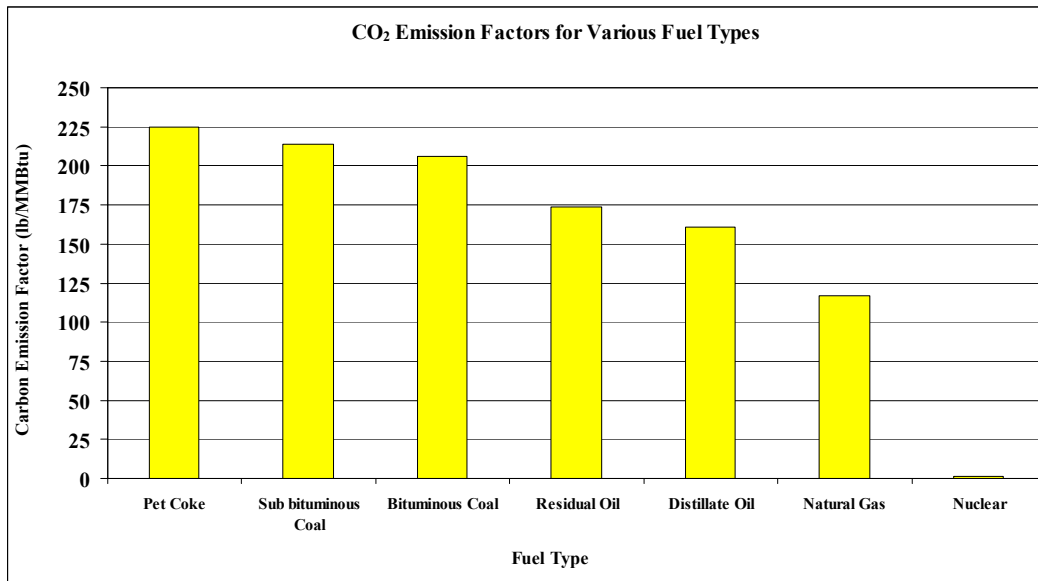


Figure 6. Carbon Dioxide Emission Factors (Energy Information Administration)

1.2.3 Water Usage

Cooling Water

Reclaimed water is the preferred cooling water supply option for the Unit 3. If for any reason reclaimed water cannot meet the quality or quantity requirements for plant operations, the UFA and/or potable water supplied by Palm Beach County will be used as backup water sources for the Unit 3 cooling water system. Stormwater runoff that collects in onsite retention ponds may be recycled by pumping the water to the cooling towers, thus eliminating runoff to surface waters and minimizing water demands on other sources. FPL may use excess water from the L-10/L-12 Canal for cooling or process water for Unit 3 as a backup source, as long as the withdrawals from this source do not exceed the previously authorized allocation for Units 1 and 2.

Process Water

Process water used in the power plant requires significantly more treatment than cooling water, but the quantities of water required are much less. Therefore, fresh water sources are preferred because the treatment costs and the quantity of waste generated are less. The primary source for process water will be reclaimed water. The primary source for service water will be water from Palm Beach County. If for any reason reclaimed water cannot meet the quality or quantity requirements for plant operations, potable water supplied by Palm Beach County and/or UFA water will be used as backup water sources for the Unit 3 process water system.

Potable Water

The potable water for Unit 3 will be supplied by the WCEC potable water system. The source water for this system will be the surficial aquifer or Palm Beach County. No additional potable water allocation is required for Unit 3.

Landscape Irrigation Water

Landscape irrigation will be supplied from reclaimed water or from storm water.

1.2.4 Wastewater Disposal

Unit 3 will be designed to avoid direct discharge to surface waters in the same manner as Units 1 and 2. Non-contact storm-water runoff in the power block area will be routed to the onsite storm-water retention ponds. Non-contact storm-water outside the power block will also be collected and routed to a storm-water pond, designed to meet federal, state, regional, and local requirements. All non-hazardous wastewaters will be treated as appropriate and discharged to the boulder zone of the lower Floridan aquifer (injection zone) through the UIC well system.

1.2.5 Solid and Hazardous Waste Disposal

Solid Waste

Solid wastes will be generated by the project but generally in small quantities. Solid wastes will be limited to municipal solid waste and infrequent replacement of inlet air filters. Solids from water pre-treatment process will also be generated. An approved solid waste disposal contractor will dispose of all solid wastes.

Hazardous Waste

Potential hazardous waste associated with the Project combined with WCEC Units 1 and 2 will be less than 100 kg/month and may include chemical cleaning of the boilers, spent solvents, HRSG chemical cleaning wastes and other wastes. Any wastes, if hazardous, will be collected onsite and disposed of by a licensed hazardous waste contractor. Hazardous waste will be managed according to applicable rules and regulations.

1.2.6 Transportation Impacts

The site is located north of State Road 80 (also known as Southern Boulevard, U.S. Highway 441 and U.S. Highway 98). State Road 80 is a major east-west corridor that traverses the middle of Palm Beach County. State Road 80 in the vicinity of the site is a four-lane, divided, major arterial highway. Access to the site for Unit 3 is from State Road 80 by a private road constructed by PBA. This road is the same as for Units 1 and 2. FPL also has a service road to the Corbett Substation along the 500-kilovolt transmission corridor on the west side of the site, which will serve as an alternative access to the site.

The latest Average Annual Daily Traffic (April 30, 2007) for Station 0019, which is the closest traffic count station to the east of the project entrance, is 5,800 in an eastbound direction and 6,100 in a westbound direction. These counts represent an overall 6-percent increase in eastbound traffic and a 3-percent increase in westbound traffic since the initial WCEC submittal in 2005.

2.0 SITE CERTIFICATION PROCESS

2.1 PSC Agency Report - Determination of Need

FPL has demonstrated a reliability need for additional resource capacity in 2013. Significantly, the company decided that unique economic opportunities and site-specific circumstances made it more cost effective to build WCEC 3 for operation in 2011 and perform the conversions at Cape Canaveral and Riviera by 2013 and 2014. FPL contended that it will not be able to perform the conversions of Cape Canaveral and Riviera without approval of the proposed WCEC 3. As such, the three projects were proposed as a package. FPL chose gas-fired combined cycle units as its resource option to meet its capacity needs. This decision was made primarily because coal and nuclear generation have longer construction times and would not be able to provide the additional capacity in the time needed. This approach will maintain FPL's reserve margin above 20 percent throughout the period.

In its Final Order, the Commission stated “FPL has demonstrated that its plan to build WCEC 3 and convert its existing Cape Canaveral and Riviera plants meets all of the requirements of Section 403.519, F.S. The new and converted units will provide nearly 2,300 MW of capacity needed through 2017, and ensure a 20 percent reserve margin. The assessments of various combinations of timings and generating resources used reasonable assumptions in demonstrating the proposed projects would provide adequate electricity at reasonable cost and, in fact, were the most cost-effective alternative. FPL demonstrated that use of all identified cost-effective conservation and reasonably available renewable generation will not provide the capacity or demand reduction necessary to mitigate the need for these projects. Therefore, we approve the three need determinations and exemption from the Bid Rule for the two conversions.”

According to 403.519(3) “The commission shall be the sole forum for the determination of this matter, which accordingly shall not be raised in any other forum or in the review of proceedings in such other forum. In making its determination, the commission shall take into account the need for electric system reliability and integrity, the need for adequate electricity at a reasonable cost, the need for fuel diversity and supply reliability, whether the proposed plant is the most cost-effective alternative available, and whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available. The commission shall also expressly consider the conservation measures taken by or reasonably available to the applicant or its members which might mitigate the need for the proposed plant and other matters within its jurisdiction which it deems relevant. The commission's determination of need for an electrical power plant shall create a presumption of public need and necessity and shall serve as the commission's report required by s. 403.507(4). An order entered pursuant to this section constitutes final agency action.”

The PSC’s report is attached as Appendix II-1.

2.2 Palm Beach County Agency Report

In a letter dated August 15, 2008 Palm Beach County provided a summary as required under Section 403.507(2)(a) 3., Florida Statutes (F.S), regarding the West County Unit 3 Project proposed by Florida Power & Light Co.

The Board of County Commissioners (BCC) originally approved the 220-acre parcel, which now represents the site of the WCEC, for a power plant use in June 2002 through issuance of a Development Order Resolution No. R-2002-0009. In 2004, the BCC approved a Development Order Amendment (DOA) that more specifically addressed FPL's proposed three unit WCEC (Resolution No. R-2004-0401, Control No. 1989-052). The County approved a final site plan, for WCEC Units 1 and 2, on June 28, 2006.

On November 29, 2007, the BCC approved another DOA, which proposed an increase in the authorized maximum nominal electrical output for the three units at the WCEC site from 3300 to 3800 megawatts (Resolution No. R-2007-2144). After FPL filed the Site Certification Application (SCA) to the State of Florida for the WCEC Unit 3 Project in December 2007, the County issued its determination that the Project and the WCEC site are consistent with County land use plans and zoning requirements pursuant to Section 403.50655, F.S. On January 30, 2008, the County held an informational public meeting concerning the Project as suggested by F.S. Section 403.50663. A Final site plan, for WCEC Unit 3, was approved on May 24, 2008.

These local development approvals reflect the County's determinations that the WCEC as it was presented, is consistent with Palm Beach County's Comprehensive Plan, is in compliance with the County's Unified Land Development Code, its procedures and guidelines, other applicable ordinances, and also subject to the letter dated July 3, 2008 (with attachments) to Joe Verdone, Attorney, from Rebecca Caldwell, Building Official, PBC Building Division (attached).

Palm Beach County recommends approval of the WCEC Unit 3 Project provided that it complies, and remains compliant with the conditions contained within the Development Order as amended and as set forth in the approved final site plan.

The County's August 15th submittal is attached as Appendix II-2

2.3 Department of Community Affairs Agency Report

In a letter dated August 15, 2008 (attached as Appendix II-3) the Department of Community Affairs provided their agency report, identifying no issues of concern. The Department previously identified an issue during its review of FPL's West County Site Certification Application (SCA) for Units 1 and 2 in a letter dated October 25, 2005 and again as a preliminary issue for Unit 3 of this facility on June 16, 2008.

Existing Condition of Certification XXXIV on Emergency Management for Units 1 and 2 requires that the applicant prepare a West County Energy Center hurricane preparation and recovery plan and submit the plan to DCA and the applicable County department no later than completion of building construction code compliance review by Palm Beach County. The Department of Community Affairs understands that the applicant is currently in the process of finalizing for submittal to DCA and PBC the West County Energy Center hurricane preparation and recovery plan in accordance with the requirement. DCA requires that following the Unit 3 certification, the plan will be updated as necessary to include the third unit at the site.

2.4 Department of Transportation Agency Report

In a letter dated August 13, 2008 the Florida Department of Transportation (DOT) recommended approval of the proposed West County Energy Center power plant expansion. This recommendation was made contingent upon the conditions of Section VI being addressed. The DOT provided a list of those Conditions within the subject letter (attached as Appendix II-4).

2.5 South Florida Water Management District Agency Report

In a letter dated August 15, 2008 the South Florida Water Management District (SFWMD) issued its final agency report on the subject project, as required by Section 403.526, F.S. The report (attached as Appendix II-5) was officially approved by the SFWMD's Governing Board for transmittal to the Florida Department of Environmental Protection (FDEP) at their meeting on Thursday, August 15, 2008.

The SFWMD is recommending approval of the proposed project, subject to compliance with the SFWMD's Recommended Certification Conditions which were attached as pages 4 through 9 of the Impact Assessment Report.

2.6 Department of State – Division of Historical Resources

In an e-mail dated August 12, 2008 the DHR reaffirmed the letter forwarded to DEP on January 7, 2008 indicating that they had no concerns with the approval of this project. Specifically, DHR indicated that based on the information provided in the referenced application, it is the opinion of this agency that there are no historic properties in the area of potential affect for the proposed energy center expansion.

2.7 Treasure Coast Regional Planning Council Agency Report

On August 6, 2008 DEP received the agency report for the FPL West County Energy Center Unit 3 which was adopted by the Treasure Coast Regional Planning Council (TCRPC) on July 18, 2008.

TCRPC concluded that the WCEC Unit 3 is inconsistent with the Strategic Regional Policy Plan. Specifically, TCRPC indicated that the proposed project is inconsistent with: Regional Goal 9.1: Decrease vulnerability of the Region to fuel price increases and supply interruptions; Regional Strategy 9.1.1: Reduce the Region's reliance on fossil fuels; Regional Goal 6.3: Protection of water quality and quantity; Regional Goal 6.9: Protection and sustainability of the Everglades Ecosystem; Regional Policy 2.1.2.3: Locate infrastructure investments in areas designated as existing or future cities, towns and villages; and Policy 15.1.3.4: Give high priority to infill projects in order to assist in discouraging suburban sprawl and encouraging sustainable economic development. Furthermore, the proposed facility is not consistent with implementing the Governor's Executive Order 07-127 calling for utilities to produce at least 20 percent of their electricity from renewable sources with a strong focus on solar and wind energy.

On page 8 of their submittal, the Council offered seven recommendations to be considered should the Siting Board ultimately approve the project. The Council's report is attached as Appendix II-6.

2.8 Florida Fish and Wildlife Conservation Commission

On August 11, 2008 the Department received an email from the Florida Fish and wildlife Conservation Commission (FWC). As indicated in its email, the FWC "has no objections to the approval of the project as the site was previously cleared for the construction of Units 1 and 2 and the addition of Unit 3 would have no additional impacts on the area's fish and wildlife resources."

2.9 Department of Environmental Protection Agency Report

According to an e-mail received on August 25th from the Department of Environmental Protection's Southeast District Office, no changes to the existing Conditions of certification are required, and the facility has no outstanding compliance violations.

2.10 Public Comments

Based upon a review of the file, three comments were received from members of the public following the December 6, 2007 application filing. All three comments were received between February 26, 2008 and March 17, 2008 and were in opposition to the proposed project.

2.11 Loxahatchee National Wildlife Refuge (LNWR)

Although not required by Statute, the Department sought input from the LNWR. Via e-mail received on August 11, 2008 the LNWR indicated that they had no comments and "neither recommend approval nor denial for the Energy Center expansion."

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 Construction Impacts

Construction of the proposed facilities necessary to implement the Unit 3 addition would have the following impacts:

- 1) The power block area for Unit 3 will occupy approximately 30 acres while approximately 45 acres will be used for the new electrical switchyard and construction facilities. Prior to construction of WCEC Units 1 and 2, the entire site was cleared of vegetation, graded, and filled by the previous landowner to a nominal elevation of 25 feet NGVD. WCEC Units 1 and 2 are currently under construction at the 220-acre Site.
- 2) The Project is expected to benefit the economies of Palm Beach County and surrounding areas. Direct benefits from the project include employment opportunities created by the construction and operation of the project. Construction of WCEC Unit 3 is anticipated to begin in 2009 and conclude in 2011. The peak construction workforce is estimated to be about 1,000 people with an average construction workforce estimated at 350 employees over a 2-year period. Construction employment during the period November 2009 through October 2010 will average about 475 workers and management staff. Employment opportunities will result from construction job opportunities as well as jobs indirectly generated through the purchase of goods and services in the area. Additionally, an addition of approximately 10 to 15 full-time equivalent jobs will be created for the operation of WCEC Unit 3.
- 3) Traffic control will be implemented as necessary at the intersection during the morning arrivals and afternoon departures of peak construction traffic to maintain an adequate level-of-service pursuant to Rule 14-94 F.A.C. Traffic control will be handled by a traffic management specialist(s) (e.g., local off-duty police officers) hired for the peak construction period. This impact is considered to be temporary and will occur during the portion of the construction period when construction employment is at its peak.

3.2 Operational Impacts

- 1) Completion of the West County Unit 3 addition will increase the use of the facility.
- 2) Although this project will generate CO₂ emissions, the addition of the unit to FPL's fleet will have the effect of offsetting higher CO₂ emitting units, causing an overall net decrease of CO₂.
- 3) Reclaimed water is the prime source for Unit 3.

3.3 Agency Conclusions

The following table includes the recommendations of approval or denial from each of the affected agencies.

AGENCY	APPROVAL	DENIAL
PUBLIC SERVICE COMMISSION	√	
PALM BEACH COUNTY	√	
DEPARTMENT OF COMMUNITY AFFAIRS	√	
DEPARTMENT OF TRANSPORTATION	√	
SOUTH FLORIDA WATER MANAGEMENT DISTRICT	√	
DEPARTMENT OF STATE DIV OF HISTORICAL RESOURCES	√	
TREASURE COAST REGIONAL PLANNING COUNCIL		
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION	√	
DEPARTMENT OF ENVIRONMENTAL PROTECTION	√	

3.4 Overall Recommendation

The Department's recommendation is, at least in part, based upon recommendations included in the agencies' reports required by 403.507(2)(a), F.S. Neither the failure of any agency to submit a report nor the inadequacy of a report, are grounds to deny or condition certification {403.507(6), F.S.}

In accordance with 403.507(2)(a)5, "Each regional planning council shall prepare a report containing recommendations that address the impact upon the public of the proposed electrical power plant, based on the degree to which the electrical power plant is consistent with the applicable provisions of the strategic regional policy plan adopted pursuant to chapter 186 and other matters within its jurisdiction." In this case, the Treasure Coast Regional Planning Council (TCRPC) has submitted a report which does not expressly recommend approval or denial of the project, but which makes several recommendations related to FPL West County Energy Center Unit 3. The TCRPC recommendations address issues related to the need for future power plants, upgrades of existing power plants, use of solar power and other renewable energy resources and conservation measures.

Section 403.519(3) specifically provides that the PSC is the sole forum for determination of need, "which accordingly shall not be raised in any other forum or in the review of proceedings in such forum." In making its need determination, the PSC must consider, among other things, the need for electric system reliability and integrity, the need for adequate electricity at a reasonable cost, the needs for fuel diversity and supply reliability, and the extent to which renewable energy resources and conservation measures are reasonably available. Stated more simply {from 403.519(3)}, the "the commission's determination of need for an electrical power

plant shall create a presumption of public need”. The PSC determination takes into account the location of the plant within the grid (in this case Palm Beach County), the fuel type (in this case natural gas), the type and size of the plant (in this case a 1250 megawatt combined cycle unit), the extent to whether renewable energy sources and conservation measures can be utilized and more than can be addressed herein.

The Department construes this exclusive jurisdiction to be the opposite of concurrent jurisdiction, meaning that no other agency may make a determination which is in conflict with the Commission’s determination that a 1250 megawatt natural gas combined cycle power plant is necessary to be installed in Palm Beach County to best meet FPL’s future system load needs. The TCRPC report appears to question the need for the proposed WCEC Unit 3 or to suggest that the use of solar power, other renewable energy sources or conservation measures are available to mitigate that need. In this case, the TCRPC has made some recommendations which arguably conflict with the PSC’s determination, and are therefore not accepted by the Department.

The specific recommendations contained in the Council’s report are that the Siting Board:

- 1. Condition the construction of WCEC Unit 3 on the establishment of a business plan by the State and FPL that will eliminate the need for FPL to construct future greenfield, fossil-fueled power plants in Florida. The establishment of such a business plan is contingent on the State legislature and the FPSC adopting laws, rules, and procedures that will enable the necessary legal and rate-making environment. Pursuant to Section 403.507(3)(c) Treasure Coast Regional Planning Council cites the following: Sections 186.501-186.513, inclusive, Florida Statutes, Section 29K-5.002 Florida Administrative Code, Sections 403.507(2) & 403.509(3) Florida Statutes;*
- 2. Require that FPL, upon FPSC approval of determination of need, take all actions necessary to upgrade the Riviera Plant so it is back "online" in early 2014. It is also recommended that FPL examine the feasibility of using land within its transmission corridor west of the Riviera Plant for solar power generation purposes;*
- 3. Require that FPL adopt Council's proposed alternative to add 50 MW a year of rooftop PV systems to increase capacity to meet peak loads;*
- 4. Coordinate with the State legislature and the FPSC to enact the necessary legislation, rules and procedures to allow the electric utilities in the State of Florida to install, own, and operate PV units on the rooftops of private and public buildings;*
- 5. Continue to coordinate with the State legislature and the FPSC to enact the necessary legislation, rules and procedures that would allow Florida's power companies to meet the State's renewable portfolio standards established as a result of the Governor's Executive Order 07-127;*
- 6. Continue to coordinate with the State legislature and the FPSC to enact the necessary legislation, rules and procedures to amend the regulatory framework to provide financial incentives for the power providers and customers to rely to a greater extent on solar energy and other renewable energy resources; and*
- 7. Continue to coordinate with the State legislature and the FPSC to amend the regulatory framework to increase conservation measures.*

In accordance with 403.507(5)(d), the Department’s project analysis shall include “The recommendation of the department as to the disposition of the application, of variances, exemptions, exceptions, or other relief identified by any party, and of any proposed conditions of certification which the department believes should be imposed.”

Noteworthy is that TCRPC recommendations 1, 4, 5, 6 and 7 are contingent upon or propose the enactment of legislation, the adoption of new rules, or the amendment of “regulatory framework”. In this regard, the Department notes that nothing within the Power Plant Siting Act confers a new authority or power upon an agency which is non-existent outside of the confines of the Act. Therefore, unless TCRPC has been vested with the authority to require business entities to enact legislation or amend regulatory frameworks, the above recommendations are without basis and should not be a part of the Department’s recommended conditions. Similarly, because TCRPC has no authority to require business entities to pursue specific projects, the Department declines to include TCRPC recommendations 2 and 3, which seek to “require” FPL to upgrade its Riviera Plant and to adopt the TCRPC’s proposed rooftop solar PV “alternative”. Nevertheless, the Department, in consultation with TCRPC, has proposed special conditions which are consistent with TCRPC’s recommendations, and recognize commitments which have been made by the licensee.

The Department has reviewed the recommendations of all parties and recommends approval of West County Energy Center Unit 3 if Florida Power & Light Company as the applicant agrees to abide by the conditions of certification, attached and incorporated herein as Appendix I.

DONE AND ISSUED this 15th day of September 2008, at Tallahassee



Michael P. Halpin, P.E.
Siting Program Manager