

9.0 INTRODUCTION TO ASSOCIATED LINEAR FACILITIES

Florida Power & Light Company (FPL) is seeking certification for several linear facilities for the Turkey Point Units 6 & 7 Project (Project). These linear facilities are discussed within this chapter and include transmission lines [230- and 500-kilovolt (kV)] and associated transmission access, reclaimed water pipelines, roadway improvements, and a potable water pipelines.

New 500- and 230-kV electric transmission lines are needed to connect the proposed Clear Sky substation to various other existing FPL substations in Miami-Dade County. Approximately 88.7 miles of transmission corridors are being proposed [52 miles West Preferred Corridor (or 51 miles West Secondary Corridor) and 36.7 miles East Preferred Corridor]. Within the West transmission portion of this chapter, Section W9.0, FPL is also proposing to certify an expansion of its Levee substation in northern Miami-Dade County and two access-only corridor laterals (total of 5.25 miles) that will be used solely for access to the new transmission lines.

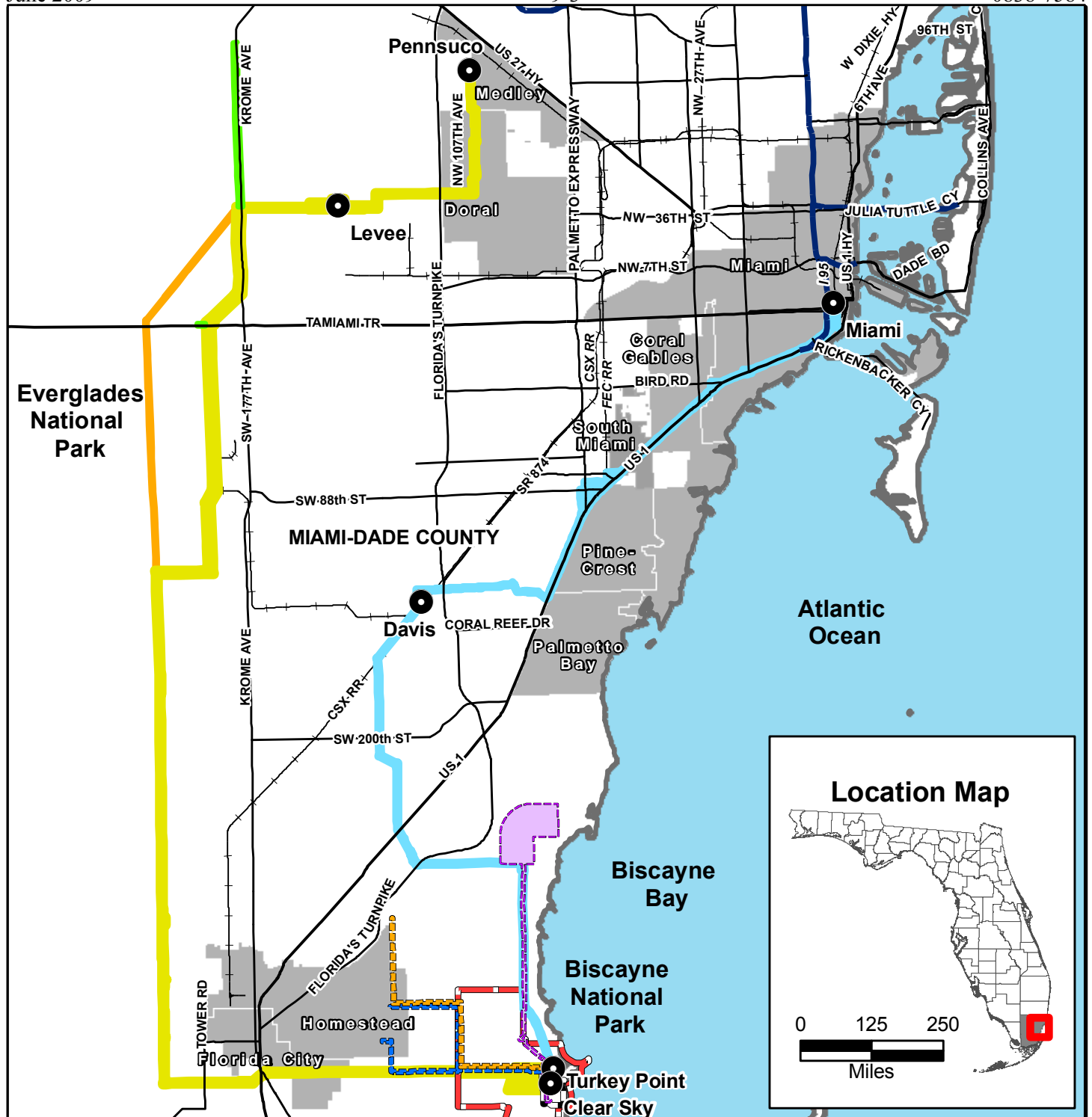
FPL is also seeking certification for a reclaimed water pipeline corridor as an associated linear facility to the Project. The reclaimed water pipeline corridor will be approximately nine miles in length, starting at the Miami-Dade South District Wastewater Treatment Plant and ending at the FPL reclaimed water treatment facility which is on the Turkey Point plant property. The reclaimed water pipeline corridor is collocated with the transmission line East Preferred Corridor for approximately 6.5 miles. The reclaimed water pipeline corridor is addressed in Section P9.0 of this chapter.

Additionally, FPL is seeking certification of approximately ten miles of corridors for the construction of several roadway improvements for access to the plant area. The roadway improvements will involve upgrades to existing paved roads and improvements of existing unpaved roads to paved roadways. In addition, intersection improvements at six locations will be made to accommodate peak construction traffic. One of the road segments to be improved, SW 359th Street will be collocated with a portion of the transmission West Preferred Corridor. These roadway improvements are addressed in Section R9.0 of this chapter.

FPL is also seeking certification for a potable water pipeline corridor as an associated linear facility to the Project. The potable water pipeline corridor will be approximately nine miles in length, starting at SW 137th Avenue/Tallahassee Road and SW 288th Street and ending at the proposed water storage tank for Turkey Point Units 6 & 7. The potable water pipeline corridor is collocated with other

existing or proposed linear features, other linear facility corridors proposed for this project, and the Site. The potable water pipeline corridor is addressed in Section D9.0 of this chapter.

The linear facilities proposed for certification in this application are generally depicted in Figure 9.0.0-1. For ease in referencing the linear facilities in this chapter, the transmission line corridors are included in sections preceded by a “W” (West Corridors) and “E” (East Corridor). The reclaimed water pipeline corridor section is enumerated with a “P” (Pipelines – Reclaimed Water). The roadway corridors’ section is enumerated with an “R” (Roadway Improvements). The potable water pipeline corridor section is enumerated with a “D” (Pipelines – Potable Water).



LEGEND

- | | |
|-------------------------|-----------------------------------|
| ● FPL Substation | ▨ Potable Water Pipeline Corridor |
| ■ East Preferred | ▨ Roadway Improvement Corridors |
| ■ Transmission Corridor | ▨ Turkey Point Plant Property |
| ■ West Preferred | ▨ Turkey Point Units 6 & 7 Site |
| ■ Transmission Corridor | ▨ Interstate Highway |
| ■ West Secondary | ▨ US Highway |
| ■ Transmission Corridor | ▨ Major Road |
| ■ Access Corridors | ▨ Railroad |
| ■ Reclaimed Water | ▨ Municipalities |
| ■ Pipeline Corridor | |

REFERENCES

US Census, 2000; FDOT, 2005; Miami-Dade County, 2008.



PROJECT	TURKEY POINT UNITS 6 & 7 PROJECT		
TITLE	LINEAR FACILITIES PROPOSED FOR CERTIFICATION		
	FILE No.	080489-0100	FIGURE 9.0.0-1
	REV.	0	
	PLOT DATE	06/08/2009	

ELECTRICAL TRANSMISSION LINES INTRODUCTION

Several new transmission facilities are required to serve the Project. The new transmission facilities will deliver approximately 2,200 megawatts (MW) of new generation from Turkey Point Units 6 & 7 to the state's electric grid. The new lines will connect the Clear Sky substation within the Turkey Point Units 6 & 7 Site (Site) (located on FPL's Turkey Point plant property) in southeast Miami-Dade County to several of FPL's existing transmission substations in Miami-Dade County (see Figure 9.0.0-1). The proposed corridors generally follow FPL rights-of-way or other existing linear facilities from the Site to the various substations identified in the following paragraphs. For connection to the western substations, FPL is proposing for consideration the West Preferred Corridor and the West Secondary Corridor. For connection to the eastern substations, FPL is proposing for consideration the East Preferred Corridor.

Since approval of the transmission lines described in this chapter is being sought as part of the certification of a nuclear power plant with a construction/pre-service period exceeding that required for transmission lines by several years, design details for these transmission lines may not be finalized for several years. The corridors proposed in this application provide the flexibility to accommodate all reasonably foreseeable design options at this time. Final design will comply with conditions of certification and will be determined based on local conditions and prudent technological options available at the time design is finalized. The proposed new transmission lines are anticipated to use an overhead design, except for the crossing of the Miami River, which will be subaqueous. The typical designs currently available that could be used where appropriate are depicted in this application.

Associated transmission facilities for which FPL is seeking certification include the west transmission facilities (which consist of the West Preferred or Secondary Corridor, two Access Corridors, and the expansion of the Levee substation) and the east transmission facilities (consisting of the East Preferred Corridor). In addition, the proposed Clear Sky substation will be certified and is addressed in this application with the other facilities located within the Turkey Point Units 6 & 7 Site.

WEST TRANSMISSION FACILITIES (SEE SECTION W9)

Clear Sky-Levee #1 and #2 500-kV Transmission Lines—From the proposed on-Site Clear Sky substation, FPL is proposing two 500-kV lines extending west and then north to its existing Levee substation located in unincorporated Miami-Dade County east of State Road (SR) 997/Krome Avenue and north of U.S. Highway 41 (U.S. 41)/Tamiami Trail (see Figure 9.0.0-1). FPL currently has available right-of-way (either in fee or easement) for a significant portion of this distance. The total

length of this transmission corridor to Levee substation is approximately 43.6 miles. FPL acquired this right-of-way in the 1960s and early 1970s in anticipation of the future need for electrical facilities to serve electrical load growth in Miami-Dade County and southeast Florida. Approximately 7.4 miles of this right-of-way was encompassed by the addition of the Everglades National Park (ENP) Expansion Area to the ENP in 1989. As a consequence, a total of approximately 12 miles of FPL's existing right-of-way is proposed for relocation, including a short portion that was encompassed by the 8.5 Square Mile Area (SMA) project (immediately south of the ENP). The remaining portion of the right-of-way to be relocated extends across the southeast corner of Water Conservation Area 3B (WCA-3B) (immediately north of the ENP). This 12-mile portion of the existing FPL right-of-way is the West Secondary Corridor. The proposed relocation of this existing right-of-way is included in the West Preferred Corridor.

Clear Sky-Pennsuco 230-kV Transmission Line—From the proposed Clear Sky substation, FPL will extend a 230-kV transmission line to the west and then north to the existing Pennsuco substation located along NW 106th Street, south of U.S. Highway 27 (U.S. 27) near Medley in unincorporated Miami-Dade County (see Figure 9.0.0-1). This line is proposed to be largely constructed in the same right-of-way as the previously described 500-kV lines. However, the Clear Sky-Pennsuco 230-kV line will not connect to but rather bypass the Levee substation. From the Levee substation to the Pennsuco substation, FPL has an existing multi-circuit transmission line right-of-way that will be used in part for the proposed Clear Sky-Pennsuco 230-kV transmission line. This 230-kV-only portion of the West Preferred Corridor is approximately 8.4 miles long.

The two 500-kV lines to the Levee substation and the 230-kV line to the Pennsuco substation will be located within a corridor referred to as the “West Preferred Corridor” for purposes of this application. FPL is also proposing an alternate corridor for a portion of the route, and it will be referred to as the “West Secondary Corridor.” Both the West Preferred and West Secondary Corridors are described in detail in Section W9.3.2.

Substations—Section 403.503(14), Florida Statutes (F.S.), allows the applicant to include terminal or intermediate substations or substation expansions connected to an associated transmission line within the certification application. In this case, FPL is electing to include the Clear Sky substation, addressed in this application with other facilities within the Turkey Point Units 6 & 7 Site, and the expansion of the Levee substation addressed in this chapter of the application. The work at the other substations required for this Project will be permitted separately as needed.



Access Corridors—FPL is also seeking in this application approval of two access-only corridor laterals as part of the West Corridors. These corridors will be used only for access to the certified transmission line corridor and eventual right-of-way. No transmission line structures will be built in these Access Corridors, although access roads or road improvements may be required. The two Access Corridors are referred to as the Tamiami Trail Access Corridor and the Krome Avenue Access Corridor.

These two Access Corridors are depicted in Figure 9.0.0-1 and discussed in more detail in the West Preferred Corridor description (Section W9.3.2).

EAST TRANSMISSION FACILITIES (SEE SECTION E9)

Clear Sky-Davis 230-kV and Davis-Miami 230-kV Transmission Lines—From the proposed Clear Sky substation, FPL will require a single-circuit 230-kV transmission line connecting to the existing Davis substation and another 230-kV transmission line connecting the Davis substation to the existing Miami substation. The Davis substation is located in unincorporated Miami-Dade County at the intersection of SW 136th Street and SW 127th Avenue. The Miami substation is located in the City of Miami at the northeast intersection of SW 2nd Avenue and the Miami River (see Figure 9.0.0-1). These new 230-kV lines will be located within a corridor identified as the “East Preferred Corridor.”

The Clear Sky to Davis portion of the East Preferred Corridor allows for the collocation of the new transmission line within an existing multi-circuit FPL transmission line right-of-way. This existing right-of-way (approximately 19 miles long) has the space to accommodate the proposed single-circuit 230-kV line without the need for additional right-of-way. From Davis to Miami, new right-of-way will be required for this Project; however, most of the corridor includes existing transmission or transportation rights-of-way [U.S. Highway 1 (U.S. 1), Busway, Metrorail]. The Davis-Miami portion of the East Preferred Corridor is approximately 17.7 miles long.

Clear Sky-Turkey Point 230-kV Transmission Line—FPL is also seeking certification of a short 230-kV transmission line from its proposed Clear Sky substation to its existing Turkey Point substation. Both substations are located on FPL’s Turkey Point plant property, approximately 0.4 mile apart. This short section of 230-kV line will be constructed within the boundaries of the East Preferred Corridor.

ALTERNATE CORRIDORS (FILED BY OTHER PARTIES)

Based on recent changes to the Florida Electrical Power Plant Siting Act (PPSA), an applicant under the PPSA has the option to allow other parties to submit alternate corridors to its own proposed transmission line corridors. FPL is affirmatively exercising this option so that other parties are allowed to file alternate transmission line corridors for consideration in the certification proceeding along with the FPL West and East Corridors proposed in this application [see Rule 403.5064(1)(b), F.S.].

If any party wishes to file an alternate transmission line corridor, they should contact Florida Department of Environmental Protection's (FDEP's) Siting Coordination Office for specific instructions or consult the PPSA, Sections 403.501 through .518, F.S., and rules adopted thereunder, Chapter 62-17, Part I, Florida Administrative Code (F.A.C.). Public notice of the alternate corridor will be required pursuant to Sections 403.5271 and 403.5363, F.S.

CHAPTER ORGANIZATION

Since this application will essentially include two separate transmission line corridors for certification (a West Corridor and an East Corridor), the FDEP proposed guidelines for Chapter 9.0 of the Site Certification Application (SCA) have been adapted for ease in reviewing the two separate corridors. Therefore, following this introductory section, the Chapter 9.0 transmission subsections will be preceded by a "W" for the West Corridors and an "E" for the East Corridor. This chapter will start with a complete discussion of the West Corridors, including the information regarding the Levee substation and the two Access Corridors; this will be followed by the "E" sections, discussing the East Corridor. Reviewers with interest in one corridor or another can find all the required information for that corridor in a consolidated area of the application. Likewise, reviewers of both corridors, but only with an interest in a certain section of Chapter 9.0, can find those sections numbered identically except with a "W" or "E" preceding. The FDEP Siting Coordination Office has concurred in the use of this adaptation and nomenclature as described.

Corresponding to this nomenclature, Chapter 9.0 also contains a discussion of the associated reclaimed water pipelines, associated roadway improvements, and associated potable water pipelines. These sections are preceded by "P," "R," and "D," respectively, as previously described.