

Levy Nuclear Plant to Proposed Citrus Substation (LPC) Site Certification Application

primary purpose of the field work was to confirm the accuracy of available data, update the data to existing conditions, if required, and to visit specific areas that contain ecological communities which may harbor threatened or endangered species. Habitat classifications and wildlife observations (including listed species observations) were conducted during the site visits.

9-A1.3.1.6 Major Alternative Corridors Considered

Multiple candidate corridors were evaluated for the two 500-kV LPC transmission lines. The candidate corridors from the quantitative analysis for the two 500-kV LPC transmission lines can be generally placed in one of four groups.

The first group of candidate corridors follows the 500-kV Levy/Citrus Common Corridor (see Sections 9-A1.3.2.2 and 9-A1.3.2.3), which runs south from the LNP to County Road (CR) 488 (West Dunnellon Road). At the southerly terminus of the Levy/Citrus Common Corridor, these candidate corridors continue south and then west following the PEF 500/230-kV transmission line right-of-way to the proposed Citrus substation.

The second group of candidate corridors exits west from the LNP and runs either to the existing PEF 69-kV transmission line right-of-way, the existing PEF 230-kV transmission line right-of-way or US 19. There, the second group turns south following either US 19 or the existing PEF 69/230-kV transmission line right-of-way and then the existing PEF 115-kV transmission line right-of-way to the existing PEF 500/230-kV transmission line right-of-way. At that point the second group turns west, following the existing PEF 500/230-kV transmission line right-of-way to the proposed Citrus substation.

The third group of candidate corridors combines elements of the first two groups. As with the first group, it follows the 500-kV Levy/Citrus Common Corridor south from the LNP but when it reaches the Barge Canal it turns to the west following the Barge Canal to US 19. There it turns south and as the second group, it follows either US 19 or the existing PEF 69/230-kV transmission line right-of-way and then the existing PEF 115-kV transmission line right-of-way to the existing PEF 500/230-kV transmission line right-of-way.

The fourth group of candidate corridors exits the LNP in an easterly direction and passes through the City of Dunnellon before turning to the south to intersect with the existing PEF 500/230-kV transmission line right-of-way where the candidate corridors turn west and follow that right-of-way to the proposed Citrus substation.

9-A1.3.1.7 Proposed Citrus Substation

The proposed Citrus substation is planned to be located on approximately 70 acres in Citrus County, Florida near the intersection of the PEF 500/230-kV transmission line right-of-way and US 19 within the area designated as "General Area of Proposed Citrus Substation" on Figure 9-A1.3-7. The proposed Citrus substation will be designed to accommodate 500-kV and 230-kV transmission lines. The specific location of this substation is unknown at this time. This

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general location has adequate undeveloped land area for the proposed substation.

9-A1.3.2 Corridor Description

Locating the 500-kV LPC Corridor required extensive data collection and analysis and the exercise of professional judgment by the corridor selection team, balancing land use, environmental, safety, engineering and cost considerations. Based on the quantitative and qualitative evaluation described herein, which included input from PEF and the public involvement process, the 500-kV LPC Corridor has been developed to connect the LNP with the proposed Citrus substation. Figure 9-A1.3-4 depicts the 500-kV LPC Corridor and the network of the candidate corridor segments considered.

From the LNP to approximately a mile north of the existing PEF 500/230-kV transmission line, the LPC transmission lines will likely be co-located with two other 500-kV transmission lines (the LCR transmission line and the LCFS transmission line). The 500-kV LPC Corridor is approximately 7 miles in length and is a mile wide.

The typical right-of-way width is 220 feet for a new 500-kV transmission line constructed with H-frames and 200 feet when constructed with monopoles, with the structures located in the center of the right-of-way. Two new 500-kV transmission lines are proposed for the 500-kV LPC Corridor. The proposed co-location with other proposed 500-kV transmission lines may allow a reduction in the typical right-of-way width.

9-A1.3.2.1 Potential Cumulative Impact

An additional consideration by the corridor selection team in discussions regarding the two 500-kV LPC transmission lines was the potential cumulative impact of a corridor for these two 500-kV LPC transmission lines together with corridors for the other two 500-kV transmission lines which also originate at the LNP, the 500-kV LCFS transmission line and the 500-kV LCR transmission line. Candidate corridors, including high-ranking candidate corridors for these four transmission lines, exit the LNP in three separate directions: east toward the existing Central Florida substation, south toward the proposed Citrus substation and west and/or south toward the CREC switchyard.

SOUTH The northerly segments of many high-ranking candidate corridors for all four 500-kV LPC transmission lines originating at the LNP (the two LPC, the LCR and the LCFS transmission lines) follow an alignment that runs directly south from the LNP, across the Cross Florida Barge Canal, across Inglis Island and the Withlacoochee River and through the Crystal Manor community to an area near CR 488 (West Dunnellon Road).

South of CR 488 (West Dunnellon Road), these high-ranking candidate corridors diverge. Those heading to the proposed