9-A3.3.1.7 Proposed Central Florida South Substation

The proposed Central Florida South substation is planned to be located on approximately 60 acres near the boundary between Sumter County and the City of Leesburg in Lake County, Florida within the area designated “General Area of Proposed Central Florida South Substation” on Figure 9-A3.3-7. The proposed Central Florida South 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 general location is reasonably central to the population served and has adequate undeveloped land area for a substation. The proposed Central Florida South substation will not be permitted through the SCA process. PEF will seek the necessary approvals for the proposed Citrus substation separately.

9-A3.3.2 Corridor Description

Locating the 500-KV LCFS 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 LCFS Corridor have been developed to connect the LNP the proposed Central Florida South substation. Figure 9-A3.3-4 depicts the 500-kV LCFS Corridor and the network of the candidate corridor segments considered.

From the LNP to the existing PEF 500/230-kV transmission line the 500-kV LCFS Corridor is proposed to be co-located with the three other proposed 500-kV transmission lines (the two LPC transmission lines and the LCR transmission line). For most of the rest of its length, the 500-kV LCFS Corridor will be co-located with existing PEF transmission lines. The 500-kV LCFS Corridor is approximately 59 miles in length and ranges in width from approximately 1000 feet to a mile wide.

The right-of-way width is typically 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. The proposed co-location with other proposed and existing 500-kV transmission lines may allow a reduction in the typical right-of-way width.

9-A3.3.2.1 Potential Cumulative Impact

An additional consideration by the corridor selection team in discussions regarding the 500 kV LCFS transmission line was the potential cumulative impact of a corridor for this 500-kV LCFS transmission line together with corridors for the other three 500-kV transmission lines which also originate at the LNP, the two 500-kV LPC transmission lines 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 Central Florida South substation continue south and then head east; those heading to the proposed Citrus substation and the CREC switchyard head south and then west. Other high-ranking candidate corridors for each of these four 500-kV LPC transmission lines follow different alignments.

EAST — Some candidate corridors heading to the proposed Central Florida South substation exit the LNP in an easterly direction and pass through the City of Dunnellon before turning to the south to connect with the existing PEF 500/230-kV transmission line right-of-way.

WEST #1 — Some candidate corridors heading to both the proposed Citrus substation and the CREC switchyard follow the Levy/Citrus Common Corridor until they reach the Cross Florida Barge Canal, then turn west and follow the Cross Florida Barge Canal to US 19 where they turn south and generally follow US 19 south to the vicinity of the existing PEF 500/230-kV transmission line right-of-way then turn west.

WEST #2 — Other candidate corridors heading to both the proposed Citrus substation and the CREC switchyard exit the LNP in a westerly direction to US 19 then turn south and generally follow US 19 south to the existing PEF 500/230-kV transmission line right-of-way then turn west.

A generalization of these alternative alignments is depicted in Figure 9-A3.3-6. Each of these alignments has varying levels of potential to affect resources considered in corridor selection. Table 9-A3.3-4 presents a comparison of some of the key quantitative factors used to evaluate these candidate corridors using the specific raw measurements of high-ranking candidate corridors. A representative high-ranking candidate corridor was selected for each group of candidate corridors and its candidate corridor segment ID numbers are included in a footnote to Table 9-A3.3-4. For comparison purposes, the information presented in Table 9-A3.3-4 includes only that part of any of these candidate corridors located between the LNP and the existing PEF 500/230-kV