

Avoidance and Minimization

The proposed project will avoid and minimize impacts to waters of the United States including wetlands to the greatest extent practicable, as discussed below.

Site availability for this project is limited by surrounding residential and industrial infrastructure, the locations of existing transmission lines, necessary acreage needed to construct the proposed substation, and requirements of the project as approved by the Midcontinent Independent System Operator (MISO). This project is needed to comply with the North American Electric Reliability Council (NERC) reliability requirements. This project will resolve violation of NERC Transmission Planning Criteria TPL-001-4, Category P6 and Entergy's Transmission Local Planning Guidelines and Criteria for N-2 failures on the 230kV system between the Sabine and Port Acres Bulk substations. MISO, as part of its annual transmission expansion planning (MTEP) 2016 process, determined that additional switching substations (including Legend Substation) and a proposed 230 kV transmission line are necessary before the summer of 2020 to continue to provide adequate and reliable service to customers in the southeastern area of ETI's service territory and comply NERC's reliability standards.

To mitigate the NERC reliability non-compliance, the Legend Substation must be sited in a manner that allows connection to one of the two Port Acres Bulk-Keith Lake (L-829) lines. The only location in which the applicant can effectively connect to the existing transmission infrastructure is the proposed location for the Legend substation. Furthermore, the applicant submitted an application for a Certificate of Convenience and Necessity (CCN) for the project to the Public Utility Commission of Texas (PUCT) in April 2017. As a regulated public utility, the applicant's infrastructure placements are subject to review by the PUCT. Although the PUCT will review multiple potential transmission right-of-way alignments, the applicant must propose substation sites that demonstrate the project will effectively meet the purpose and need of the project. In this case, the applicant is required to place the substation at this site to mitigate non-compliance with NERC reliability standards that will support the industrial and domestic growth to the south and west of Nederland, Groves, and Port Arthur, Texas. In January 2018, the PUCT approved the CCN application for the project, including the recommended site location for the Legend substation.

As noted above, to provide functionality, substations must be placed along the existing transmission line corridors. Therefore, the applicant evaluated all properties near the intersection of the existing transmission corridors within two miles of the preferred location. Based on the National Wetlands Inventory (NWI), the only areas near the existing alignment that are not identified as wetlands are the properties immediately surrounding the preferred location, residential areas, and tracts to the southwest. Residential areas were not considered because property acquisition would be financially and practically untenable. Preliminary site visits and SWCA's wetland delineation indicate that the adjoining areas are contiguous coastal plain wetlands with similar vegetation composition and cover. The tracts to the southwest do not adjoin existing transmission infrastructure and appear to be wetlands that are not identified in the NWI. Furthermore, the potential alternate sites are not located in close proximity to the transmission lines that must connect to the Legend substation, making them financially and practically untenable because these sites would require construction of additional transmission lines to connect the existing transmission corridor.

Because all other undeveloped tracts in the vicinity of the transmission line are identified as bearing significant wetlands, construction in another location would require acquisition of additional property

and right-of-way and the design and construction of accompanying transmission lines, all of which would likely impact significantly more wetlands than the preferred location. Therefore, the applicant has proceeded with a design that minimizes the wetland impacts to the extent practicable within the parcel they own. The substation layout has been placed in a manner that reduces the impacts while complying with the safety requirements for a substation. Furthermore, the substation placement has been oriented to reduce loss of wetland functions to the extent possible. Specifically, the proposed location is oriented such that the transmission tie-ins will be as close to the edge of the property as possible, thereby minimizing the amount of vegetation that must be cleared and limits the fragmentation of the remaining wetlands. The substation site required review and approval by PUCT before permitting could commence. Any attempts to relocate the substation would require an extensive review by PUCT that would delay the load-sharing that the project is intended to provide.

As a result of the above statements, ETI is providing the following “no-build” and “build” alternatives. Additionally, the provided “build” alternative for the project will avoid and minimize impacts to waters of the United States including wetlands to the greatest extent practicable, as discussed below. As such, this documents the avoidance and minimization.

Alternative 1 -No Build Alternative

Under this alternative, ETI would not construct and operate the proposed substation. This alternative would not provide the needed relief for existing infrastructure and would not add additional load serving capabilities to the Port Arthur network. This alternative would not result in potential impacts to wetlands or waters of the U.S. and would not affect threatened and endangered species habitat or cultural resources. No Individual Permit (IP) application would be submitted, and no coordination with U.S. Fish and Wildlife Service (USFWS) or State Historic Preservation Office (SHPO) would be required.

Alternative 2 - On Site Alternative (The Preferred Alternative)

Under this scenario, ETI would construct the proposed Legend Substation road to meet the project's purpose and need. Placement of the substation is limited by the location of existing transmission lines, land ownership, easement restrictions, and the larger requirements of the Port Arthur Reliability Project. The dearth of properties sufficiently sized to accommodate the substation, located adjacent to transmission lines, and in areas that are uplands make avoidance of wetland fill in the project area impracticable. Therefore, much of the infrastructure would be placed inside of the 500-year floodplain. Permanent fill to construct the substation and the associated infrastructure has been positioned to reduce permanent fill of wetlands as much as possible. However, proposed plans include fill of PEM wetlands.

This alternative's direct effects include permanent fill of approximately 3.521 acres of PEM wetlands. Approximately 6.952 acres of PEM may be temporarily impacted by construction activities, but will be allowed to re-vegetate after construction is complete. No lasting pollution will occur.

This alternative does not have the potential to impact cultural resources or threatened and endangered species.

This alternative provides the least environmentally damaging practical alternative (LEDPA) due to the following:

- The parcel proposed for the substation and access roads are already owned by ETI and the project will not adversely impact any conservation areas;
- The parcel will not require the construction of extensive transmission lines to reach more remote substation locations; and
- This alternative would meet the criteria for the project's purpose outlined above, including, but not necessarily limited to, siting close to the existing ETI owned transmission line, ability to construct necessary infrastructure, and will be developed on property already owned by ETI.

This combination of factors is required to render the project economically feasible. Please refer to Attachment C for the project maps and Attachment D for the project drawings.

Compensation

After the maximum practicable avoidance and minimization efforts were implemented, it was determined that unavoidable permanent impacts to 3.521 acres of PEM wetlands. Therefore, ETI proposes to provide compensatory mitigation for losses associated with permanent fill and conversion of wetlands based on the USACE Galveston District Riverine Herbaceous/Shrub interim hydrogeomorphic model (iHGM).

The objective of the iHGM approach is to provide a means of assessing the functional capacity of a given wetland system. Emphasis is placed on the physical (TSSW), biological (MPAC), and chemical (RSEC) functional characteristics. The USACE Galveston District Riverine Herbaceous/Shrub interim HGM model was used to calculate a functional capacity index (FCI) for each characteristic of the wetland assessment area. FCI values were then multiplied by the respective wetland acreage to calculate functional capacity units (FCU) for each characteristic. FCUs translate to wetland mitigation credits. The FCU values the Legend Substation are 1.887 TSSW, 1.761 MPAC, and 1.831 RSEC FCUs.

Based on the functional impact calculations, ETI assumes the project will require mitigation for the 1.147, 1.071, and 1.114 physical, biological, and chemical functions, respectively, for impacts to PEM wetlands. ETI proposes to offset the impacts through the purchase of wetland mitigation credits Pineywoods Mitigation Bank using a 2:1 mitigation ratio. Based on this ratio, ETI will need a total of 3.8 TSSW, 3.6 MPAC, and 3.7 RSEC credits to offset the impacts associated with the project. Refer to Attachment E of the Individual Permit application for the Preliminary Mitigation Plan with the Wetland Functional Assessment Report.