

August 23, 2024

ENTERGY TEXAS, INC.

Legend Power Station Project Jefferson County, Texas

Alternatives Analysis

PROJECT NUMBER:
0246516.15.02.01

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ACRONYMS AND ABBREVIATIONS

CCCT	Combined Cycle Combustion Turbine
CCN	Certificate of Convenience and Necessity
CCS	Carbon Capture and Sequestration
C.F.R.	Code of Federal Regulations
Commission	Public Utility Commission of Texas
ETI	Entergy Texas, Inc.
H ₂	hydrogen
kV	kilovolt
MISO	Midcontinent Independent System Operator, Inc.
MW	megawatt
NERC	North American Electric Reliability Corporation
NWI	National Wetland Inventory
Project	Legend Power Station
PURA	Public Utility Regulatory Act
STG	Steam Turbine Generator
USACE	United States Army Corps of Engineers

1.0 PROJECT DESCRIPTION

Entergy Texas, Inc. (ETI) is proposing to construct and operate a 754-megawatt (MW) natural gas-fired combined cycle combustion turbine (CCCT) facility known as the Legend Power Station (the Project). The Project will be constructed in Jefferson County, approximately 8.5 miles west of the City of Port Arthur. The Project is a self-build, natural gas-fired CCCT facility with one combustion turbine generator, one heat recovery steam generator, and one steam turbine generator (STG) in a one by one (1x1) multi shaft configuration. Legend is anticipated to produce net 754 megawatts at the International Organization for Standardization 3977 ambient conditions of 59°F and 60% relative humidity. Legend will be designed and constructed in a way that supports customers' sustainability goals and Entergy's own decarbonization commitment by utilizing the Power Island Equipment with hydrogen (H₂) co-blending capability of up to 30% by volume and by enabling the unit to support future carbon capture and sequestration (CCS) requirements within proposed environmental regulations.

Legend will support ETI's ability to provide affordable and reliable capacity and energy to customers by adding a highly efficient, low-emitting, flexible, and reliable generation resource in ETI's Eastern Region within Midcontinent Independent System Operator, Inc. (MISO) South. The addition of a new CCCT, anticipated operational date of mid-2028, in ETI's Eastern Region will satisfy several important long-term planning objectives, as follows:

- » Serve existing and potential new ETI customers at the lowest reasonable cost.
- » Maintain reliability and operational flexibility in the Region as loads grow.
- » Increase load serving capability within the Region to meet the expected industrial load growth, especially in the Port Arthur area.
- » Maintain power restoration capabilities after major storms or transmission service disruptions.
- » Satisfy long-term resource adequacy requirements in the MISO market.
- » Avoid significant incremental transmission upgrade costs.

1.1 Project Facilities

The Project will consist of the development of a greenfield generation CCCT facility with associated ancillary infrastructure including horizontally drilled sanitary sewer, water and natural gas pipelines, an access road, distribution construction power, and a 230-kilovolt (kV) overhead transmission line interconnection to the existing Legend Substation. The Legend facility requires approximately 124.4 acres of undeveloped land for the proposed development.

2.0 PURPOSE AND NEED FOR ACTION

2.1 Project Purpose

ETI provides retail electric service to more than 512,000 customers in 27 counties in the state of Texas. The purpose of the Project is to increase ETI's generation capacity to more reliably serve its customers in the context of the combined effect of unprecedented load growth in Southeast Texas and the need for incremental, clean, in-region dispatchable generation required to serve that load growth. The Legend Project is a fundamental component of ETI's holistic, integrated resource plan to facilitate this once-in-a-generation load growth and provide affordable, reliable, and sustainable service to customers.

ETI has a large and growing need for additional capacity to address an existing capacity shortfall, planned generator deactivations, and expectations for rapid load growth. Particularly in its Eastern Region where Legend will be located, ETI has historically encountered industrial projects or expansions ranging from 5 to 50 MW, but now must plan to serve multiple projects ranging from 100 to 500 MW or more. ETI believes that under current conditions in the Port Arthur area, ETI can only serve up to 400 MW of new load, and ETI states that it already has under contract enough future load to exceed this 400 MW threshold. ETI believes that without the proposed Legend facility, ETI cannot reliably serve the new loads it already has under contract and the other loads reflected in its load forecast. In addition, there are thousands of additional MW of projects in earlier stages of development that ETI has conservatively not included in its load forecast, some of which will materialize to a significant degree.

ETI's Business Plan 2024 load forecast conservatively reflects approximately 800 MW of load growth by 2028, resulting in a capacity shortfall of nearly 1,500 MW absent new generation. Particularly, ETI has begun to see an evolution in its forecasted load growth with a heavier concentration of industrial load growth in the Eastern Region, particularly in the Port Arthur area, and the types of loads that require dispatchable generation for reliable service. Siting the Project in the Eastern Region, near the industrial load growth, is also beneficial by putting a high-energy-producing resource near high-energy-usage customers while supporting all customers' needs across the service territory.

2.2 Need for Action

By 2028, ETI will be short of load serving capability to meet North American Electric Reliability Corporation (NERC) TPL-001 N-1, G-1 requirements. The Project meets the need for incremental in-region dispatchable generation, which is required for ETI to reliably serve only those upcoming loads with signed energy service agreements. Highly efficient in-region dispatchable generation is required because the vast majority of the new and expanding industrial loads in Southeast Texas have sustainability goals for which they are accountable. Many are also exporting their products to European and other global markets that require a sustainable product development pipeline. These industrial customers are increasingly considering access to clean energy as a key component in locating new loads. ETI will ensure these needs are met by utilizing turbines at the Project with off-the-shelf H₂ co-firing capability and, at no material upfront cost, the design and layout of the Legend facility will enable the use of CCS technology, which ETI expects its customers will require and will be utilized in the near future. Existing infrastructure and industrial use of CCS in the Southeast Texas uniquely positions ETI to take advantage of CCS.

2.3 Scope of Environmental Analysis

Approval of Entergy's Certificate of Convenience and Necessity (CCN) to construct the Project is subject to Chapter 37 of the Public Utility Regulatory Act (PURA), particularly PURA §37.056. This section provides that the Public Utility Commission of Texas (Commission) "may approve an application and grant a certificate only if the Commission finds that the certificate is necessary for the service, accommodation, convenience, or safety of the public," after considering several factors.

The factors the Commission considers in a CCN Proceeding include:

1. The adequacy of existing service.
2. The need for additional service.
3. The effect of granting the certificate on the recipient of the certificate and any electric utility serving the proximate area.
4. Other factors, such as:
 - a. Community values.
 - b. Recreational and park areas.
 - c. historical and aesthetic values.
 - d. Environmental integrity.
 - e. The probable improvement of service or lowering of costs to consumers in the area if the CCN is granted, including any potential economic or reliability benefits associated with dual fuel and fuel storage capabilities in areas outside the Electric Reliability Council of Texas' region (PURA § 37.056(c)).

The construction of the proposed Project satisfies these factors and would be well-suited to advance the dual fuel and fuel storage policy reflected in the recent amendments to the statutory CCN factors. Approval of the CCN amendment is merited under the relevant statutory provisions. This alternative analysis was prepared based on 33 Code of Federal Regulations (C.F.R.) § 320.4 - General policies for evaluating permit applications. This alternative analysis is designed to ensure careful consideration of environmental aspects of a proposed action and to make information available to decision-makers and the public before final decisions are made and actions are taken. The alternative analysis for the proposed Project presents a site-specific proposed action and alternatives in order to demonstrate the selection of the most practicable alternative with the least environmental impacts.

Additionally, this alternative analysis is to aid the United States Army Corps of Engineers (USACE) in its review of the alternatives considered for the proposed Project. In the USACE's evaluation of permit applications to discharge dredged or fill material into waters of the United States, including wetlands, the USACE is required to analyze alternatives to the proposed project that achieve its purpose. USACE conducts this analysis pursuant to two main requirements – the 404(b)(1) Guidelines (Guidelines)¹ and the National Environmental Policy Act.² The following paragraphs outline the alternatives considered for the proposed Project.

¹ 40 C.F.R. 230. Guidelines for Specification of Disposal Sites for Dredge or Fill Material.

² 33 C.F.R. 325. Appendix B. Implementation Procedures for the Regulatory Program.

3.0 NO ACTION ALTERNATIVE

Under the No Action Alternative, no changes would occur to the Project site, and there would be no effect or consequences to the environment on and around the Project site. However, under the no action alternative, ETI would be short of load-serving capability to meet NERC TPL-001 N-1, G-1 requirements and would not be able to meet the regional public need for additional energy and capacity by 2028. Consequently, in the absence of the Legend Project, the Port Arthur area will likely experience operational challenges by 2028 (congestion, potential voltage issues, potentially requiring customers in the region to reduce demand during stressed operational conditions, etc.).

In the event the Legend Project is not constructed, a wires-only alternative would need to be pursued as soon as possible. However, there is a high degree of risk it would not be feasible to implement the wires-only solution in the timeframe needed to meet the 2028 energy capacity requirements. The Cypress to Legend Substation 500 kV transmission line, (currently pending approval by MISO) has an in-service date of mid-2029 and would only provide 400 MW of load serving capability to the Port Arthur area. Another 500 kV transmission source would need to be provided from another project.

A potential candidate for the additional 500 kV transmission source is the Running Bear to Legend Substation project, which has not undergone the necessary detailed engineering and scoping analysis and is not expected to be in service until the early part of the next decade. In addition, initial analysis suggests the Running Bear to Legend Substation project will be challenged by limited availability of right-of-way, significant land clearing, and wetland impacts due to the linear distance (north of Cleveland, Texas to Port Arthur, Texas) and demanding design requirements to account for high wind-loading standards, which are challenges to the project's approval and constructability. Ultimately, having two 500 kV lines into the Legend Substation would not help alleviate ETI's projected capacity shortfall for 2028; hence, the two 500 kV lines will have to be accompanied by generation interconnected elsewhere (i.e., remote from Legend Substation) to help ensure ETI is resource adequate and to improve the operational reliability of the transmission system.

Another consequence of the No Action Alternative may involve multiple independent energy producers introducing additional projects in the Port Arthur area. These projects would likely result in greater and more widespread environmental impacts than the proposed Legend Project.

4.0 LOCATION ALTERNATIVES

To meet the need of the Project, siting the power generation facility proximate to the load demand and within ETI's Eastern Region is a critical factor. As part of the ETI portfolio analysis conducted to address the need for additional capacity, ETI performed site evaluations to identify several potential sites within the Eastern Region (an area bordered by the Texas/Louisiana state line on the east, the Gulf of Mexico on the south, the ETI planning region known as the "Western Region" on the west, and the Southwest Power Pool on the north) and selected the most practicable site with the least environmental impacts based on established criteria. The analysis provided a screening process to identify potential sites for new build generation in the Eastern Region of ETI's service territory. A total of 11 sites were evaluated and criteria-specific scores were weighted to develop a relative ranking. The evaluation criteria included several variables:

- » Fuel Supply - number of pipelines in proximity, number and flexibility of suppliers, gas pressure.
- » Transmission Interconnection – connections and upgrades required.
- » Transmission Planning – potential to avoid future transmission projects.
- » Water Supply – connection to makeup water source.
- » Infrastructure – synergies of infrastructure and personnel.
- » Site Suitability – proximity to residential space, cost and availability of land, teardown and land remediation.
- » Environmental – attainment/nonattainment, wetlands mitigation, threatened and endangered species habitat, and cultural resources.
- » Construction costs.

Based on this criterion, a short list of five alternative sites (including the Preferred Alternative) were assessed and a comparison of the relative cost differences developed (Figure 1). Below is a summary of the practicability of the five alternative sites (Table 1). The names and specific locations of the alternative sites are confidential and not included below.

TABLE 1 ALTERNATIVES COMPARISON

PRACTICABILITY CATEGORY	ALTERNATIVE SITE 1 (PREFERRED ALTERNATIVE)	ALTERNATIVE SITE 2	ALTERNATIVE SITE 3	ALTERNATIVE SITE 4	ALTERNATIVE SITE 5
Site Ownership	Greenfield – None of the property owned by ETI.	Greenfield – None of the property owned by ETI.	Greenfield – None of the property owned by ETI.	Greenfield – None of the property owned by ETI.	Greenfield - None of the property owned by ETI.
Construction Costs	\$30.45M	\$39M	\$37.1M	\$36.5M	\$37.8M
Transmission Interconnection	<1-mile distance to Legend Substation interconnection site. Approximately 12 acres of land disturbance and ~\$3.7M construction cost.	9-mile distance to Legend Substation interconnection site. Approximately 108 acres of land disturbance and ~\$33.3M construction cost. Requires ROW acquisition hurdle along with CCN filing.	5-mile distance to Legend Substation interconnection site. Approximately 62 acres of land disturbance and ~\$18.5M construction cost. Requires ROW acquisition hurdle along with CCN filing.	1-mile distance to interconnection site. Approximately 12 acres of land disturbance and ~\$3.7M construction cost.	5-mile distance to interconnection site. Approximately 62 acres of land disturbance and ~\$18.5M construction cost. Requires ROW acquisition hurdle along with CCN filing.
Fuel Supply	Infrastructure buildout (lateral + compression) needed to connect to closest interstate pipeline with capacity (~10 miles) or to connect via lateral with intrastate pipeline projects in development (~2.5 miles). Ability to leverage interconnections with existing pipeline infrastructure is optimized. Location optimal for partnering with local/neighborhood industrials on sharing/reducing costs of required infrastructure.	Infrastructure buildout (lateral + compression) needed to connect to closest interstate pipeline with capacity (~6 miles) or to connect via lateral with intrastate pipeline projects in development (~0.25 miles). Location has limited opportunities for partnering with neighboring industrials.	Infrastructure buildout (lateral + compression) needed to connect to closest interstate pipeline with capacity (~8 miles) or to connect via lateral with intrastate pipeline projects in development (~6 miles). Location has limited opportunities for partnering with neighboring industrials.	Infrastructure buildout (lateral + compression) needed to connect to closest interstate pipeline with capacity (~9 miles) or to connect via lateral with intrastate pipeline projects in development (~3.5 miles). Location has limited opportunities for partnering with neighboring industrials.	Infrastructure buildout (lateral + compression) needed to connect to closest interstate pipeline with capacity (~8.25 miles) or to connect via lateral with intrastate pipeline projects in development (~5.75 miles). Location has limited opportunities for partnering with neighboring industrials.

PRACTICABILITY CATEGORY	ALTERNATIVE SITE 1 (PREFERRED ALTERNATIVE)	ALTERNATIVE SITE 2	ALTERNATIVE SITE 3	ALTERNATIVE SITE 4	ALTERNATIVE SITE 5
Water Supply	New water supply made available by industrial park developer to municipal water supply.	New water wells would need to be drilled or a new water pumping station and pipeline would need to be constructed to the site.	New water wells would need to be drilled or a new water pumping station and pipeline would need to be constructed to the site.	New water wells would need to be drilled or a new water pumping station and pipeline would need to be constructed to the site.	New water wells would need to be drilled or a new water pumping station and pipeline would need to be constructed to the site.
Infrastructure	Only site that has opportunity to have barge unloading. This is a key constructability item, allowing the project to save several million dollars due to larger equipment deliveries (turbine and heat recovery steam generator) being assembled prior to delivery.	Site deliveries of all equipment would consist of trucking and some opportunity for rail delivery. Road improvements and re-routing of utility lines required for deliveries.	Site deliveries of all equipment by truck. Site was < 1 mile from Jack Brooks Regional Airport with stack and structure height implications for aeronautical reviews.	Site deliveries of all equipment by trucking and opportunity for rail. Site currently has very limited access requiring road engineering and development.	Requires improvements to the bridge/waterway crossing and road to access. Site deliveries of all equipment by truck.
Proximity to Residences	Proximity to neighbors 1,900 feet north of property boundary.	Proximity to neighbors 2,000 feet southwest of property boundary.	Housing Authority of the City of Port Arthur neighborhood adjacent to property.	Proximity to neighbors 2,100 feet northwest of property boundary.	Proximity to neighbors 1,500 feet southeast of property boundary.
Wetland Impacts	Approximately 55.4 acres of wetlands will be impacted by the overall Project.	Potential wetland impacts on site due to 49 acres of freshwater forested/shrub wetland and 1,837 feet of intermittent streams. Additional wetland impacts would be possible for construction of associated infrastructure, fuel supply pipelines, and 9-mile transmission interconnection.	10+ acres of wetland impacts on site due to freshwater forested/shrub wetland identified on NWI maps. Additional wetland impacts would be likely for construction of associated infrastructure, fuel supply pipelines, and 5-mile transmission interconnection.	Significant wetland impacts due to entire site identified as freshwater emergent wetland on the NWI maps. Additional wetland impacts would be likely for construction of associated infrastructure, fuel supply pipelines, and 1-mile transmission interconnection.	Significant wetland impacts due to entire site identified as freshwater emergent wetland on the NWI maps. Additional wetland impacts would be likely for construction of associated infrastructure, fuel supply pipelines, and 5-mile transmission interconnection.
Flooding Risk	Site protected by levee. Flooding risk, mitigated through raising site elevation.	Minimal flood risk, and minor elevation changes.	Flooding risk, mitigated through raising elevation.	Flooding risk, mitigated through raising elevation.	Flooding risk, mitigated through raising elevation.

PRACTICABILITY CATEGORY	ALTERNATIVE SITE 1 (PREFERRED ALTERNATIVE)	ALTERNATIVE SITE 2	ALTERNATIVE SITE 3	ALTERNATIVE SITE 4	ALTERNATIVE SITE 5
Existing Environmental Contamination	No. None identified in Phase 1 Environmental Site Assessment completed for site.	Desktop review of regulatory databases indicated no documented sources of contamination are present.	Unknown	Yes. Historical site contamination with heavy metals.	Unknown
Cultural Resources	Intensive pedestrian survey identified no cultural resources within the Project boundary. It is expected the USACE and the Texas Historical Commission will concur with a finding of no historic properties affected.	Desktop review identified no previously recorded cultural resources were documented. However, impacts to waters of the US would require a Phase 1 Cultural Resource Survey to confirm the presence of eligible archaeological properties.	Unknown, but the impact to waters of the US would require a Phase 1 Cultural Resource Survey to confirm the presence of eligible archaeological properties.	Unknown, but the impact to waters of the US would require a Phase 1 Cultural Resource Survey to confirm the presence of eligible archaeological properties.	Unknown, but the impact to waters of the US would require a Phase 1 Cultural Resource Survey to confirm the presence of eligible archaeological properties.
Threatened and Endangered Species	The eastern black rail is federally listed threatened with Section 4(d) rule protections. Entergy consulted with the United States Fish and Wildlife Service (USFWS) Texas Coastal Ecological Field Office to review eastern black rail habitat on-site conditions for habitat. Presence/absence surveys have been conducted for the species and the survey results were negative. Presence/absence surveys were also conducted for the tricolored bat (proposed federally endangered) and were negative. No take on either species is expected.	The site is located in Jefferson County, TX and based on interpretation of aerial imagery of this alternative location, it is anticipated this site has the potential to impact the same species identified as threatened or endangered by the TPWD and USFWS as each of the other sites. Based on a desktop review federally listed species for the county were documented to have no more than low likelihood for occurring within the Project Area and would only likely be present as a migrant species.	The site is located in Jefferson County, TX and based on interpretation of aerial imagery of this alternative location, it is anticipated this site has the potential to impact the same species identified as threatened or endangered by the TPWD and USFWS as each of the other sites. A site-specific habitat assessment was not completed.	The site is located in Jefferson County, TX and based on interpretation of aerial imagery of this alternative location, it is anticipated this site has the potential to impact the same species identified as threatened or endangered by the TPWD and USFWS as each of the other sites. A site-specific habitat assessment was not completed.	The site is located in Jefferson County, TX and based on interpretation of aerial imagery of this alternative location, it is anticipated this site has the potential to impact the same species identified as threatened or endangered by the TPWD and USFWS as each of the other sites. A site-specific habitat assessment was not completed.

4.1 Alternative Site 1 (Preferred Alternative)

The Preferred Alternative site is adjacent to the existing Legend Substation and is a viable greenfield site within a new industrial park with existing industrial development. This site is adjacent to planned infrastructure and is in proximity to transmission, and surface and city water sources, which minimizes the overall environmental impacts and significantly reduces construction costs.

At less than one mile in distance, the Preferred Alternative site has the shortest transmission line interconnections of the alternatives evaluated. This significantly minimizes the overall environmental impacts as a typical transmission line corridor can have up to 100-foot-wide right-of-way and impact nearly 12 acres of land for every mile of transmission line. Other than Alternative Site 4 (discussed below), the other alternative sites considered would require between five and nine miles of transmission line, new easements and added environmental impacts. Additionally, the Legend Substation interconnection occurs on the same property, thereby avoiding impacts to other landowners.

Fuel supply options for the site include an opportunity to avoid developing a new compressor station, minimizing air quality and land impacts. Flooding risk is mitigated by raising elevation of the site, and the USACE's and Jefferson County Drainage District No. 7 Hurricane Protection Levee, which exists between the property and Taylor Bayou. To the east, south, and north of the property boundary are wetlands and canals associated with the Taylor and Tiger bayous, which will be impacted by the Project. Although the Project will have wetland and canal impacts, the overall environmental impacts will be minimized due to nearby transmission and municipal infrastructure. Additionally, neighboring residences are located only to the north of the Project site with an approximate 1,900-foot buffer while the rest of the surrounding area is considered undeveloped or non-residential. Entergy plans to minimize the vegetation removal on the property to maintain natural barriers between the Project and neighboring communities to the north.

The Preferred Alternative site location was selected due to its proximity to existing Legend 230 kV Substation, which avoids environmental impacts associated with lengthy transmission line corridors and minimizes reliability and schedule risk associated with securing, developing, authorizing and constructing transmission lines. The Preferred Alternative site was not found to be contaminated, which minimizes the risk of exposing the surrounding environment and humans to contaminated soils during construction. Furthermore, due to existing infrastructure, the site will not require a compressor station for fuel lines or a water pump station for water lines, further reducing impacts to air quality and natural land resources. While the Proposed Alternative site would result in impacts to wetlands and non-wetlands, it is anticipated that that other alternative sites considered in the regional area would result in similar impacts to wetlands and non-wetlands given the regional setting of the Port Arthur area.

4.2 Alternative Site 2

Alternative 2 is a greenfield site where ETI would need to purchase the 100-acre property necessary for development. To provide resources, new fuel compressor stations and fuel pipelines would need to be constructed, increasing impacts to air quality and natural land resources. Additionally, new water wells would need to be drilled or a new water pumping

station and pipeline would need to be constructed to the site for a water source. The site is in proximity to neighboring residences on the south and west boundaries. Although impacts to wetlands were initially expected to be minimized at the site location, further survey work indicated areas outside of the mapped National Wetland Inventory (NWI) locations met the criteria for wetland areas, which would increase overall wetland impacts and mitigation costs. Additional offsite impacts associated with the necessary fuel compressor station and fuel and water pipelines would result in offsite impacts to wetlands and other resources. Alternative 2 was not selected as it requires nine miles of transmission line and easement developed on an expedited timeline, resulting in higher environmental impacts and increased costs.

4.3 Alternative Site 3

Alternative 3 is a greenfield site where ETI would need to purchase the 100-acre property necessary for development. To provide resources, new fuel compressor station and fuel pipeline would need to be constructed, increasing impacts to air quality and natural land resources. Additionally, new water wells would need to be drilled or a new water pumping station and pipeline would need to be constructed to the site for a water source. The site is adjacent to a residential neighborhood, which is a Housing and Urban Development property. The close proximity of this neighborhood to the project would require significant sound attenuation measures and could be seen as disproportionately impacting the residences. Wetlands were anticipated to be impacted onsite and additional offsite impacts associated with the necessary fuel compressor station and fuel and water pipelines would result in offsite impacts to wetlands and other resources. Alternative 3 was not selected due to its proximity to the residential neighborhood and as it requires five miles of transmission line and easement developed on an expedited timeline, resulting in higher environmental impacts and increased costs.

4.4 Alternative Site 4

Alternative 4 is a greenfield site with similar siting advantages/disadvantages of Alternative 1. Alternative 4 is also not located on property owned by ETI but is not surrounded by infrastructure needed to reduce construction timelines and costs. This alternative has the potential for significant wetland impacts. New water wells would need to be drilled or a new water pumping station and pipeline would need to be constructed to the site for a water source. Additionally, new fuel compressor stations and fuel pipelines would need to be constructed to the site, increasing impacts to air quality and natural land resources. The site was discovered to have known soil contamination with heavy metals, with an initial remediation cost estimated to be several million dollars. The full extent of the contamination was not known, but soil disposal, remediation, potential human exposure, and continued testing was anticipated for this site. Alternative 4 was not selected as it lacks surrounding infrastructure and needs substantial environmental remediation efforts resulting in higher environmental impacts, environmental risk to the natural and human environment, and increased costs.

4.5 Alternative Site 5

Alternative 5 is a greenfield site with similar siting advantages/disadvantages of Alternative 2. Alternative 5 is also not located on property owned by ETI and is not surrounded by infrastructure needed to reduce construction timelines and costs. This alternative would have significant wetland impacts, as the entire property was identified on the NWI as freshwater emergent wetlands. New water wells would need to be drilled or a new water pumping station

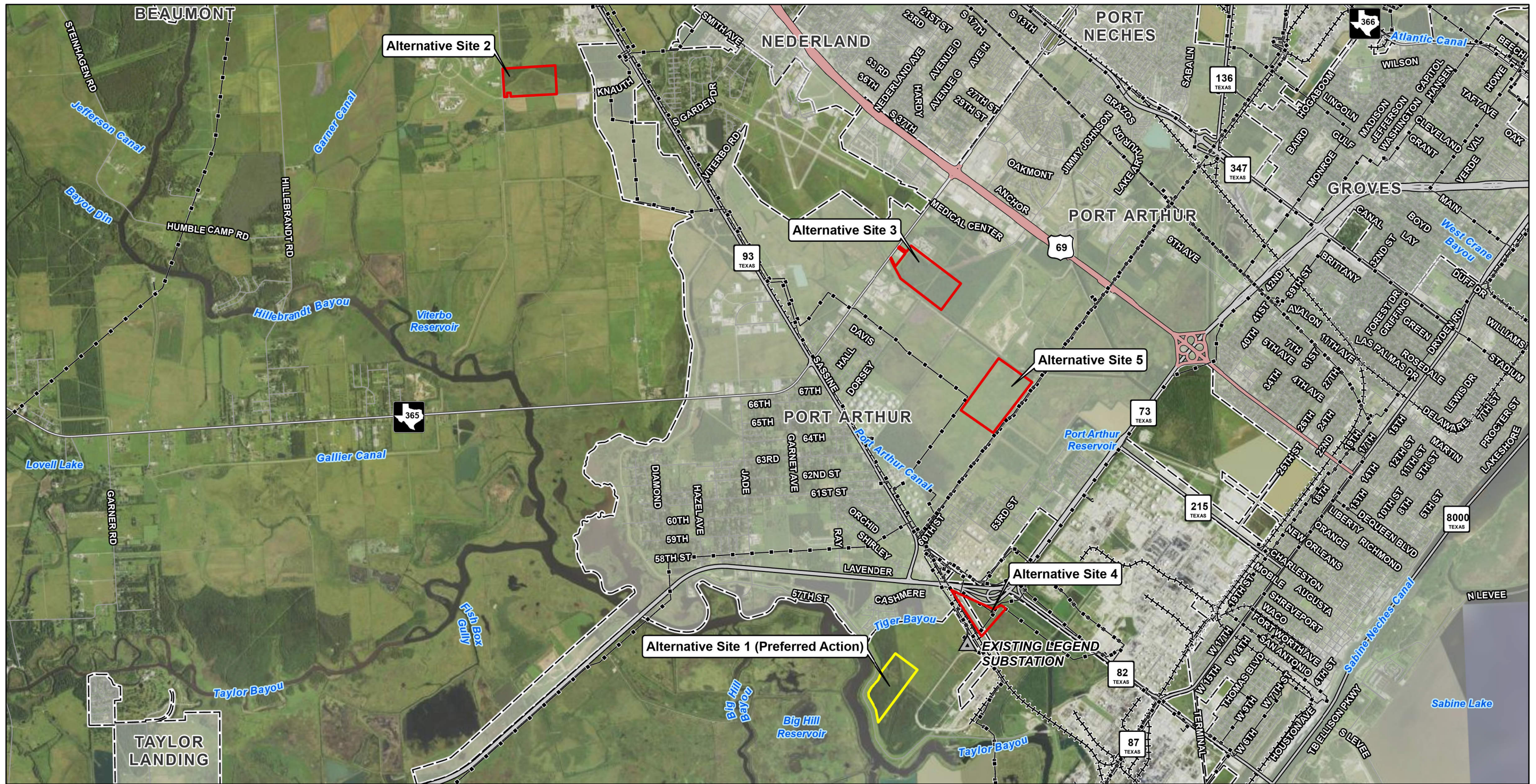
and pipeline would need to be constructed to the site for a water source. Additionally, new fuel compressor stations and fuel pipelines would need to be constructed to the site, increasing impacts to air quality and natural land resources. The site access required a new access road and bridge to cross a canal separating the property from other roadways. Alternative 5 was not selected as it lacks surrounding infrastructure and needs substantial civil infrastructure improvement and requires five miles of transmission line and easement developed on an expedited timeline, resulting in higher environmental impacts, schedule risk and increased costs.

5.0 CONCLUSION

If the Project is not constructed, ETI will not have the ability to meet their objectives, which include bolstering reliability in the Eastern Region, increasing load serving capacity, meeting resource adequacy needs in the MISO, and complying with NERC TPL-001 N-1, G-1 requirements. Therefore, the purpose and need of the Project would not be met.

ETI conducted an alternative analysis for the proposed Project for the purpose of identifying the most environmentally sound and technically feasible options. These alternatives were evaluated using information obtained from field surveys and desktop analysis of the surrounding environment, which employed aerial photography, NWI data, and other available desktop resources. For the reasons discussed in the preceding sections, ETI concludes that the Preferred Alternative site located adjacent to the existing Legend Substation is the least environmentally damaging alternative.

APPENDIX A ALTERNATIVES ANALYSIS LOCATION FIGURE



- Preferred Project Site
- Alternative Project Site

City Limits

Substation

Existing Transmission Line

US Highway

Railroad

State Highway

FM Road

County Road



LEGEND POWER STATION PROJECT

**FIGURE 1
ALTERNATIVE SITE
OVERVIEW MAP**

JEFFERSON COUNTY, TEXAS

