

*East Texas Electric Cooperative, Inc.*  
*Warren Relocation Project*

**Warren Relocation - Jacinto Site  
Alternative Evaluation Analysis  
And  
Site Selection Study**

*August 31, 2007*

*Prepared and Submitted by:*



**GDS Associates, Inc.**  
**Engineers and Consultants**

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## **1. Introduction**

East Texas Electric Cooperative, Inc. (“ETEC”) is a generation and transmission (“G&T”) cooperative that serves a portion of load associated with its three member G&Ts: Northeast Texas Electric Cooperative, Inc. (“NTEC”), Sam Rayburn G&T Electric Cooperative, Inc. (“SRG&T”), and Tex-La Electric Cooperative of Texas, Inc. (“Tex-La”). As discussed more fully in this report, ETEC must replace existing power supply contracts due to expire on December 31, 2009. The purpose of this report is to explain ETEC's need for power, summarize the process used to determine that the Warren Relocation project is the most feasible option to serve the load, and provide the methodology used during the site selection process.

## **2. Project Overview**

ETEC currently owns a 25% undivided interest in the existing project (the “Warren Project”) located in Vicksburg, Mississippi. The generating units at the Warren Project consist of four GE7EA combustion turbines. The remaining 75% of the Warren Project is owned by Warren Power, LLC, an affiliate of Entergy Services, Inc.

ETEC intends to purchase Warren Power, LLC’s 75% interest in the Warren Project and to relocate all four combustion turbines to two separate locations (two turbines at each site) in southeast Texas (the “Cypress” and “Jacinto” sites). The output of the relocated combustion turbines will be used to meet ETEC load requirements currently served by partial requirements power supply contracts that will expire at the end of 2009. The relocation of the Warren combustion turbines is expected to also relieve transmission constraints in West of the Atchafalaya Basin (“WOTAB”) area of Entergy’s transmission system.

## **3. Project Need & Justification**

In 2010, ETEC will be responsible for securing 250 MW of capacity and associated energy to meet its power requirements on the Entergy system due to the expiration of two contracts: (1) the EPI/ETEC Unit Power Supply Agreement (30 MW) and (2) a partial requirements Wholesale Power Supply Agreement with Entergy Gulf States (“EGS”) (220 MW). To meet a portion of the power supply deficiency, ETEC recently acquired a 50 MW ownership share in the Plum Point Energy Station (“PPES”) that is currently under construction in Osceola, Arkansas. PPES’s expected commercial operation date is the second quarter of 2010. In 2006, ETEC filed an RUS loan application to obtain financing for that project.

### **Existing Power Supply Resources (Entergy)**

A list of the existing power supply resources used to meet ETEC’s requirements in the Entergy control area is shown in Table 1 below:

Resource Name	Winter Capacity (2007)	Type	Expiration
ISES 2	29 MW	Ownership	N/A
EPI Ritchie2	30 MW	UPSA	December 31, 2009
EGSI	179 MW	PSA	December 31, 2009
Nelson 6	50 MW	Ownership	N/A
Harrison County	50 MW	Ownership	N/A
<u>Warren</u>	<u>90 MW</u>	Ownership	N/A
Total	428 MW		

**Table 1: ETEC Existing Resources in Entergy**

**Capacity & Energy Requirements**

Based upon the most recent RUS-approved load forecast and ETEC’s existing power supply portfolio, capacity and energy tables were developed to determine the total capacity and energy needs for the period 2007 through 2029. ETEC’s projected power supply needs on Entergy’s system are presented below in Table 2 and graphically in Figure 1.

Resource (MW)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Annual Peak w/Losses	497.4	507.4	517.6	527.9	538.5	549.3	560.2	571.4	582.8	594.4
Reserve Requirements	74.6	76.1	77.6	79.2	80.8	82.4	84.0	85.7	87.4	89.2
Total Requirements	572.0	583.5	595.2	607.1	619.3	631.7	644.3	657.1	670.2	683.5
Long-Term Assets	324.0	324.0	324.0	324.0	324.0	324.0	324.0	324.0	324.0	324.0
Purchase Power Contracts	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8
Capacity Deficiencies	212.2	223.7	235.4	247.3	259.5	271.9	284.5	297.3	310.4	323.7
Total	572.0	583.5	595.2	607.1	619.3	631.7	644.3	657.1	670.2	683.5

**Table 2: ETEC Power Supply Resources**

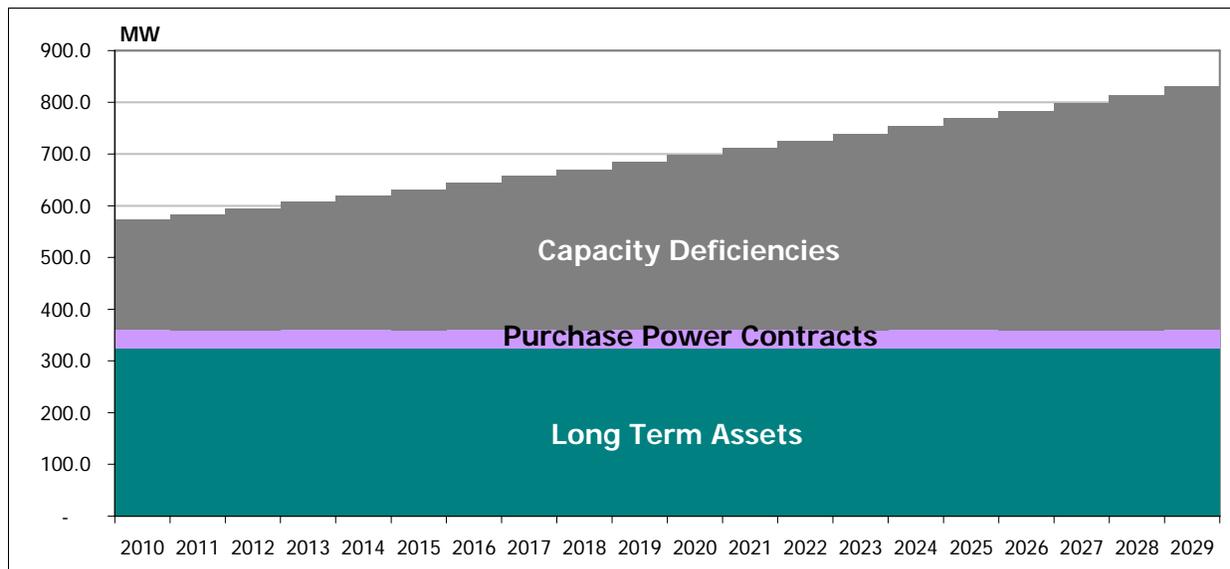


Figure 1: ETEC Capacity Requirements without Capacity Additions

#### 4. *Alternative Evaluation Analysis*

##### Summary of August 2006 RFP Process

ETEC issued a Request for Proposals (“RFP”) in August 2006 for capacity and energy totaling 460 MW to serve load in the AEP-West and EGS control areas. The RFP was issued to solicit power required due to the expiration of (1) the partial requirements power purchased under the Second Power Supply Agreement with AEP in the AEP-West control area, (2) the partial requirements power purchased under the Wholesale Power Requirements Agreement with EGS in the Entergy control area, and (3) a unit-contingent power purchased under a 40 MW Unit Power Agreement with Entergy Power, Inc. (“EPI”) for unit capacity and energy from the Ritchie2 gas-fired, peaking facility located in the Entergy control area. All three of these agreements expire on December 31, 2009 and ETEC will be responsible for replacing approximately 460 MW of capacity and associated energy beginning in 2010. The type of power supply requested by ETEC included: ownership options for capacity and energy, short and long-term purchased power arrangements, and supplemental power arrangements whereby the respondent would provide the required incremental capacity and energy to meet ETEC’s instantaneous power requirements including the provision of ancillary and control area services. In addition, ETEC requested proposals from alternative resources, such as demand-side management programs and renewable resources. ETEC received a total of thirteen (13) separate proposals from eleven (11) different respondents by October 2, 2006, that ranged from energy management services to partial requirements proposals.

The RFP press release was sent to 98 power marketers and five major press publications. Table 3 below provides a summary of the responses received.

Type	# of Proposals	Capacity Range
Energy Management	6	n/a
Unit Ownership	0	n/a
System/Block Power	5	50 - 225 MW
Partial Requirements	2	Supplemental Needs

**Table 3: Summary of RFP Responses**

### Summary of RFP Analysis

All proposals received on time and deemed complete were reviewed and placed on economic equivalencies. An evaluation model for each proposal was constructed for purposes of analyzing each proposal based on information provided in the specific proposal. The model also utilized certain key assumptions (outlined below) for comparison purposes of the proposals.

#### *Key Assumptions for Analysis*

- Consumer Price Index (“CPI”) Escalation
  - Based on 2005 EIA Annual Energy Outlook
  - FOM and VOM escalation unless different escalation explicitly stated in proposals
- Fuel Price Projections
  - Coal pricing based on 2005 EIA fuel projections while natural gas pricing based on a combination of NYMEX natural gas futures and the 2005 EIA natural gas fuel price projections.
  - All natural gas indexed proposals are projected using Henry Hub index forecasts.
- Discount factor for net present value calculations was 4.90%, equivalent to the FFB long-term interest rate as of December 2006.

All proposals were evaluated based on their ability to meet ETEC’s need for economical, flexible, and reliable power supply resources. Key price variables included, but were not limited to, fuel price escalation, inflation, and demand/energy pricing structure. Key non-price variables included but were not limited to, transmission viability, projected resource availability factors, and the creditworthiness of the RFP respondent.

### Results of the August 2006 RFP Solicitation

Upon evaluation and completion of all power supply resource proposals received in the August 2006 RFP process, ETEC concluded that none of the power supply resources were adequate to meet ETEC’s post-2009 requirements on the Entergy system. All proposals suffered from one or more of the following issues: (1) lack of available firm transmission from either an economic feasibility aspect or not capable of physically obtaining firm transmission by January 2010, (2) reliability issues due to resource unavailability or being geographically undesirable (e.g.,

multiple control areas away from ETEC's load on the Entergy system), (3) limited resource flexibility or inability to dispatch a resource effectively to serve ETEC's load (e.g. a 165 MW minimum dispatch on a combined-cycle facility), or (4) not economically feasible. ETEC also identified additional external constraints to procuring new power supply resources, such as: (1) prevailing and expected future transmission constraints in the Western and WOTAB regions, (2) short-term planning horizon requiring new capacity resources by January 2010, and (3) lack of generation alternatives in the Western/WOTAB region. Due to the disappointing results of the RFP and the external constraints identified above, ETEC determined that the only option for firm, reliable power supply resources to meet its load requirements beginning in January 2010 would be to obtain and site peaking generation in the Western/WOTAB region.

### **Transmission Issues in WOTAB**

As a part of process to obtain firm transmission service for ETEC's ownership interest in PPES, Entergy indicated that its transmission system was severely constrained for all long-term firm service requests from resources outside of the WOTAB region. In fact, ETEC's transmission service request for PPES was granted as "conditionally firm" based on ETEC having a "viable redispatch option". The viable redispatch option involves reducing the output of ETEC's share of its Warren facility to 20 MW (ETEC owns 75 MW (summer rating) of Warren) during peak hours. Otherwise, ETEC will have to pay \$46 million for transmission facilities upgrades to guarantee firm transmission service. The results of the August 2006 RFP (see discussion above) indicated that there were no viable resources in the Entergy control area that could reliably serve ETEC's load. ETEC began immediately assessing generation alternatives that were already located, or could be located, in the Western/WOTAB region.

### **Summary of January 2007 RFIB Process**

ETEC issued a Request for Indicative Bids ("RFIB") for peaking generation alternatives on January 10, 2007 to replace ETEC purchased power resources that will terminate in December 2009. The peaking generation resources will help meet ETEC's load requirements on the Entergy system starting in January 2010, including associated planning reserves. The RFIB solicited proposals from project developers, original equipment manufacturers ("OEM") and engineer-procure-construct ("EPC") firms for approximately 300 MW of peaking generation to be split as evenly as possible between two sites in southeast Texas to be named by ETEC. The COD for both sites is to be on or before December 1, 2009. The RFIB requested indicative bids with cost estimates for several generation types: (1) new peaking generation, (2) used ("gray market") peaking generation, and (3) relocation of the Warren power plant to East Texas. Indicative bids were due on January 26, 2007.

### **Summary of RFIB Analysis**

ETEC received a total of nine separate proposals from six different respondents by January 27, 2007, that ranged from relocating the Warren plant to ownership in new FT8 generation projects. Based on the responses, all four proposals for the Warren relocation project had the lowest installed cost, on a \$/kW basis, as compared to other peaking generation alternatives.

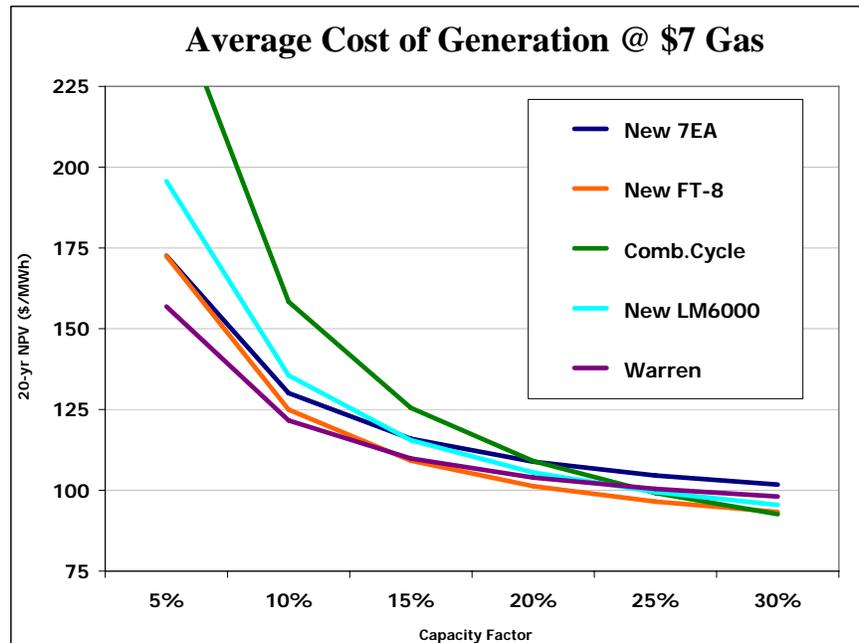
All proposals received on time and deemed complete were reviewed and placed on economic equivalencies. An evaluation model was constructed for purposes of analyzing each proposal based on information provided in the specific proposal. The model also utilized certain key assumptions (outlined below) for comparison purposes of the proposals.

#### Key Assumptions for Analysis

- Consumer Price Index (“CPI”) Escalation
  - Based on 2005 EIA Annual Energy Outlook
  - FOM and VOM escalation unless different escalation explicitly stated in proposals
- Fuel Price Projections
  - Natural gas pricing based on a combination of NYMEX natural gas futures and the 2005 EIA natural gas fuel price projections.
- Discount factor for net present value calculations was 4.70%, equivalent to the FFB long-term interest rate as of February 2007.
- Financing term for new peaking generation was 30 years while refurbished and used generation had lives depending on the existing age of the units (e.g., Warren relocation was financed over 22 years based on the original date of commercial operation)

All proposals were evaluated based on their ability to meet ETEC’s need for economical, flexible, and reliable peaking generation resources. ETEC also reviewed the financial creditworthiness and operational viability of each of the RFIB respondents to determine their wherewithal and competency to complete the proposed project.

The next phase of the screening analysis was to review the impact of various capacity factors on each of the proposed generation technologies to determine the breakeven capacity factor between these alternatives. Figure 4, shown below, contains a graph that shows the 20 year levelized rate for each generation technology at various capacity factors. Since the proposed generation resources are all categorized as peaking resources (without the conceptual combined-cycle project), the annual capacity factors range from 5% to 30%.



**Figure 4: Screening Curve for Peaking Generation Alternatives**

The screening curve analysis assumes that resources are utilized at 100% capacity output and operating at the highest efficiency, but does not include various “start-up” charges or costs associated with transmission, variable LTSA expenses, or emissions. As shown in the screening curve above, the break-even capacity factor for the Warren relocation project and a new FT-8 facility is approximately 15%, while the combined-cycle project has a breakeven capacity factor of approximately 25% and 30% with the Warren project and new FT-8, respectively.

The combined-cycle facility that is included in the screening curve analysis above represents a conceptual combined-cycle resource comprised of two 7EAs, two HRSGs, and one steam turbine. The combined capacity rating of this facility would be 254 MW in the summer and 274 MW in the winter with an estimated installed capital cost of \$209 million (\$821/kW and does not include IDC). The incremental cost of this proposed combined-cycle project over the Warren relocation project is approximately \$100 million, which represents the addition of a 100 MW steam turbine for \$1,000/kW. The operational parameters could allow this facility to dispatch as a single 7EA (from 50 to 75 MW) up to the fully loaded capacity rating while the variable cost parameters would mimic a traditional combined-cycle when fully loaded. Obviously, when the 7EAs are dispatched without the benefits of the steam turbine operation, the efficiency of the combined-cycle unit is no better than a stand-alone 7EA (with an approximate heat rate of 12.0), thus if the unit is operating at less than 60% utilization, the heat rate is equivalent to a 7EA. Because of the configuration, cost, and size of this conceptual combined-cycle project, ETEC would not be able to effectively utilize this resource to serve its load, thus this resource is deemed unacceptable at the current time. However, ETEC is evaluating the potential to configure one of the peaking generation sites to accommodate the addition of a steam-turbine in the future if it is deemed economically feasible.

The LM6000 has a breakeven capacity factor of approximately 25% with the Warren relocation project and the new 7EAs do not produce a break-even within this capacity range. Based on the results of the screening curve analysis combined with the expectation that any peaking generation resources located in East Texas would have an annual capacity factor less than 25%, ETEC decided to focus on peaking generation alternatives consisting of the Warren relocation project, new 7EAs, and FT-8s in conducting economic feasibility scenarios.

### **Results of RFIB Analysis**

Based on the results of the screening analysis, ETEC conducted a feasibility study to evaluate a number of peaking generation alternatives and to account for the externalities that were absent in the screening analyses (e.g., dispatch parameters necessary to serve ETEC's hourly loads, transmission service implications, and ability to supplement peaking generation with market purchases).

ETEC reviewed a number of potential peaking generation combinations and eventually decided to evaluate the following five scenarios:

1. Leave Warren in Vicksburg and site 3 new 7EAs in East Texas;
2. Leave Warren in Vicksburg and site 1 new 7EA and 3 new FT8s in East Texas;
3. Relocate 2 Warren units (buy one, move two) and 2 new 7EAs in East Texas;
4. Relocate 2 Warren units (buy one, move two) and 3 new FT8s in East Texas;
5. Relocate 4 Warren units (buy three, move four) to East Texas.

As discussed in the previous section "Transmission Issues in WOTAB", there are significant transmission constraints into the WOTAB region on the Entergy system and ETEC's 50 MW ownership share of the PPES has not been granted firm transmission service because of these constraints. By leaving Warren in Vicksburg, Mississippi, ETEC would have to pay \$46 million in transmission facility upgrades but would not be entitled to receive transmission credits in addition to having to fund these upgrades on an unsecured basis. Thus for scenarios 1 and 2, where ETEC's existing share of the Warren plant would remain in Vicksburg, ETEC has added \$46 million, on a net-present-value basis, to the overall cost of these scenarios.

For the feasibility study, STRATEGIST was used to conduct an analysis of the annual dispatch of ETEC's existing and planned resources from 2010 through 2030 (concurrent with the remaining life of the Warren plant). For each scenario, dispatch parameters for ETEC's existing resources plus the scenario-specific new peaking generation resources, were entered into the STRATEGIST model. The dispatch parameters consisted of fixed/variable operations and maintenance rates, annual availability (including forced outage rates), and specific unit heat rates. Additional inputs into the model, including fuel prices and inflation, were consistent with all other analyses completed to date. Furthermore, STRATEGIST was used to determine the optimal expansion plan for required generation resources in the future. Generation technology alternatives for the future expansion plan consisted of a sub-critical coal plant, conventional combined-cycle, and peaking generation of 7EA and FT8 technology. The specific input variables for the new generation alternatives were obtained from the 2006 EIA Annual Energy

Outlook for heat rates and the variable/fixed O&M rates, while the installed capital cost were based on recent generation ownership proposals received by ETEC for coal, combined-cycle, and peaking generation. A market purchase option was also included in the STRATEGIST model such that when the market price curve was lower than the variable cost of ETEC's resources, STRATEGIST would purchase energy from the market. The market price curve was derived from an incremental variable cost projection of the overall demand and available generating resources on the Entergy system.

Each feasibility scenario incorporated the STRATEGIST output for generation for all of ETEC's resources in addition to the variable costs for each new ETEC resource (including the installed 2010 peaking generation resources, but excluding PPES, in each of the five scenarios). The fixed costs associated with each new ETEC resource (excluding PPES) was based on: (1) the installed capital cost per the results of the RFIB for the peaking resources and the EIA projections for the new future resources, (2) amortization schedule appropriate for each type of resource (e.g., 22 years for the Warren combustion turbines, 30 years for new 7EA/FT8s, 35 years for new coal plants), (3) fixed operations and maintenance rates, and (4) future capital additions.

The summary results of the feasibility study are shown below in Table 4. As shown in the table, the Warren Relocation Project (buy three units, relocate four to East Texas) has the lowest overall cost, in net present value terms, as compared to the other four peaking generation alternatives.

<b>East Texas Electric Cooperative, Inc.</b>				
<b>Feasibility Study of Peaking Generation Alternatives on Entergy System</b>				
<b>Rank</b>	<b>Scenario</b>	<b>Description</b>	<b>20-year Levelized Rate (\$/MWh)</b>	<b>20-Year Total NPV Cost (\$000)</b>
1	Scenario 5	Relocate all 4 used units of Warren	71.74	1,070,189
2	Scenario 4	Relocate 2 used Warren units; buy 3 new FT-8	72.16	1,076,363
3	Scenario 3	Relocate 2 used Warren units; buy 2 new 7EAs	72.58	1,082,618
4	Scenario 1	Don't relocate Warren; buy 3 new 7EAs	74.13	1,105,743
5	Scenario 2	Don't relocate Warren, buy 1 new 7EA and 3 new F-T8's	74.67	1,113,823

**Assumptions**

- 1/ Study period is from 2010 - 2030, based on the remaining life of Warren units.
- 2/ All cases assume financing for 100% of new/used peaking generation, including the Warren relocation project.
- 2/ Variable costs and generation obtained from STRATEGIST runs while fixed costs are based on amortization and fixed O&M for each resource.

**Table 4: Summary of Feasibility Study for Peaking Generation Scenarios**

## **5. Site Selection**

Based upon the need for capacity in the WOTAB area, as well as the opportunity to address transmission constraints on Entergy's system, ETEC began the process of identifying potential sites where the Warren combustion turbines could be relocated. ETEC initiated power flow studies to determine which potential generating unit locations would provide the most relief for transmission congestion in the WOTAB area. These studies revealed that siting units near Entergy's Cypress substation near Kountze, Texas would provide the most transmission relief. Accordingly, ETEC intends to locate two of the combustion turbines at the Cypress site (see Site Selection Study for Cypress site for more information). The results of the transmission study and siting investigation were presented to ETEC's Board of Directors, which approved funding for site acquisition in January 2007.

During the course of negotiations for energy management and control area services with Entergy, ETEC was informed that locating an additional site in Entergy's service area west of the Trinity River would be a condition for receiving such services from Entergy. Given the reliability and diversity benefits associated with having two sites, ETEC agreeably began pursuing a second site. Entergy provided a list of suitable locations near existing Entergy substations. These substations included the Jacinto substation located in northern Liberty County near Cleveland, the Grimes substation located in Grimes County near Shiro, and the Porter substation located in Montgomery County near Porter Heights, Texas. Based upon this list, ETEC initially rejected the Grimes County site due to its limited gas pipeline access (a single Atmos line approximately five miles west of the substation) and the Porter substation due to its location deep within Montgomery County, which is part of the Houston-Galveston non-attainment area for NO<sub>x</sub>. ETEC then chose to investigate the general location north of Entergy's Jacinto substation (see Attachment A, page 1), as this area offered two distinct advantages: 1) the plant site could be located in San Jacinto County, which is in attainment for NO<sub>x</sub> under the National Ambient Air Quality Standards (NAAQS) and 2) the presence of numerous natural gas pipelines in the area.

ETEC's land acquisition expert first investigated the viability of properties on the market in southern San Jacinto County and located one property just east of the intersection of U.S. Highway 59 and FM 2914. However, when this site was investigated further, it was discovered that the site was more than one mile from the nearest transmission interconnection and that any line connecting the plant to the road would cross several properties. This situation was undesirable because a certificate of convenience and necessity (CCN) from the Public Utility Commission of Texas (PUCT) would be required to construct a transmission line over one mile in length with the possibility of intervention by a number of affected property owners. In addition to costs associated with the construction of transmission lines, the permitting requirements most likely would have led to untenable delays in obtaining permission for the construction of the line. ETEC then proceeded to focus its efforts on unadvertised properties adjacent to Entergy's 138 kV line (see Attachment A).

While investigating aerial photographs along Entergy's 138 kV line, ETEC's representatives became aware of what appeared to be an ideal site at the intersection of a number of pipelines and Entergy's 138 kV transmission line just north of the Liberty-San Jacinto County line. Having previously secured an option on one site (Hancock at Cypress) from a previous logging tract, ETEC's agent decided to contact Temple-Inland to make inquiries concerning the availability of the company's San Jacinto County property located south of the pipelines and west of Entergy's transmission lines. However, these efforts were not fruitful, and ETEC then began investigating property records to discover the names of the owners of the tracts that were eventually optioned. This site appeared to be ideal, as the required electric transmission interconnection can be made entirely within the property's boundaries, and at least one of the four pipelines crossing the property should be available to connect and provide natural gas to the project (see Attachment A for a map of the site and nearby gas pipelines). Power flow studies confirmed that locating the second pair of generating units at the Jacinto location was viable from a transmission perspective.

Additional investigations were initiated, and an unsolicited offer was submitted in April 2007 to the owners of the tract determined to be ideal for ETEC's purposes. This offer was accepted, and environmental investigations were initiated in May 2007. The property selected is a rectangle consisting of two tracts controlled by the same owner, who refused to sell the larger tract separately. ETEC has received initial assurances from Entergy that 168 MW or more of generating capacity can be connected to the 138 kV transmission line crossing the property. It has not yet been determined whether Entergy will desire a radial or through-bus interconnection, so both options have been illustrated on Attachment C. In both cases, the transmission lines necessary for interconnection will be located entirely within the property purchased by ETEC for the generating plant.

At ETEC's request, PBS&J conducted a Phase I Environmental Site Investigation in May 2007 and provided a draft report in June. The executive summary from the draft report is provided as Attachment B.

### **Site Description**

ETEC's Jacinto Peaking Power Facility will consist of 42 acres of woodland located approximately five miles south of Shepherd, Texas, and 1.8 miles east of U.S. Highway 59 in San Jacinto County, Texas. Two simple cycle combustion turbine-generator units will be relocated to the site and will burn natural gas, most likely from one of the four interstate transmission pipelines crossing the property (see Attachment C). The project site is located in a rural area crossed by both natural gas pipelines and a 138 kV transmission line. The nearest residential property (a single residence) is approximately 1,250 feet from the proposed plant location and is screened from the plant site by forested area. As noted in PBS&J's report, the proposed site does not appear to have any significant environmental liabilities. ETEC is currently engaged in negotiations with the property owners and expects to be able to close on the site in August 2007 when all necessary surveys and title searches have been completed.

ATTACHMENT A

Proposed Jacinto Site



2025

573

787

321

Cleveland

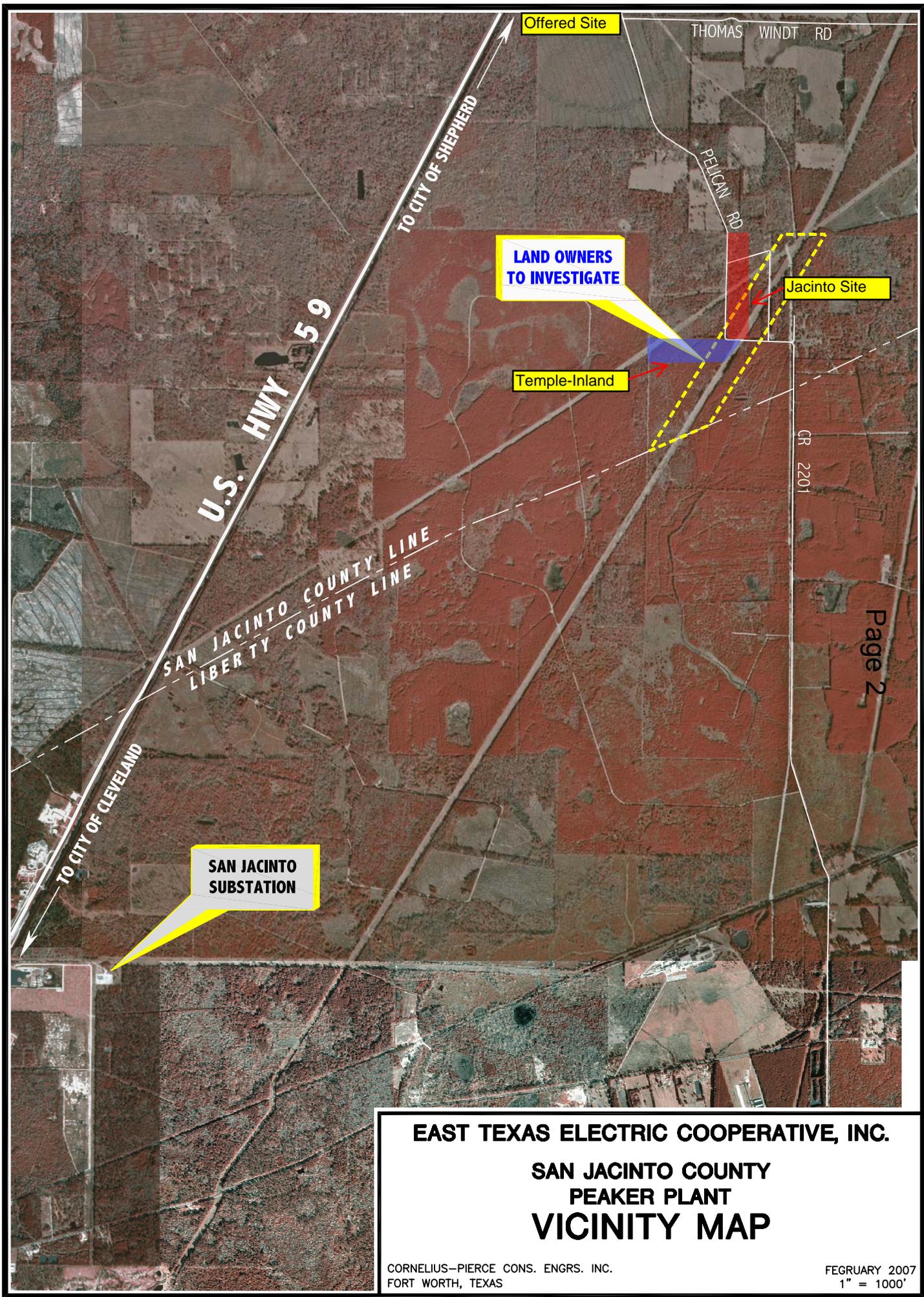
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105





**EAST TEXAS ELECTRIC COOPERATIVE, INC.**

**SAN JACINTO COUNTY  
PEAKER PLANT  
VICINITY MAP**

ATTACHMENT B

## Executive Summary

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This document presents the results of the Environmental Site Investigation conducted on the proposed East Texas Electric Cooperative, Inc. (ETEC) power plant located in San Jacinto County, Texas.

The subject site is located approximately two miles east of Westcott, Texas in San Jacinto County, Texas, and 0.5 mile north of the San Jacinto/Liberty County line. This investigation includes a Phase I Environmental Site Assessment (ESA), which was conducted in general accordance with the scope and limitations of the American Society for Testing and Materials (ASTM) under the designation E-1527-05. The purpose of the Phase I ESA was to identify, to the extent feasible, recognized environmental conditions as defined in the ASTM standard, and consisting of a site visit, aerial photographic review, and regulatory agency database review. The investigation also included ecological and cultural resources assessments.

The site consists of approximately 42.25 acres of undeveloped wooded land. The site is currently owned by Burl Thomas, Justice of the Peace No. 5 for Liberty County, Texas.

A regulatory agency database information search was conducted for the subject and surrounding properties. According to the regulatory agency database report, no records registered with either state or federal agencies were found within the applicable radius of the subject property.

Aerial photographs were reviewed to evaluate historical usage of the subject property and the surrounding areas. The photographs depict the site as it appeared in 1957, 1976, 1988, 1995, and 2005. The photographs depict the subject property as undeveloped property from 1957 to 2005. Surrounding land uses were similar except for agricultural (under cultivation) to the south from 1957 to 1976. Review of the five historical aerial photographs did not reveal evidence of environmental concerns associated with the subject property and surrounding adjacent properties.

The visual inspection, conducted on May 16, 2007, was intended to identify indicators of recognized environmental conditions. The visual inspection included a pedestrian survey of the subject property and evaluation of the land use of the surrounding properties. No apparent environmental concerns were observed in and around each of these areas. No evidence of hazardous materials was noted on the subject property or on the surrounding properties at the time of the site visit.

The results of the Phase I ESA indicate no evidence of current or prior hazardous material storage, usage, or spillage that may pose an environmental concern to the subject property. Therefore, it is the opinion of PBS&J that no further investigation is warranted.

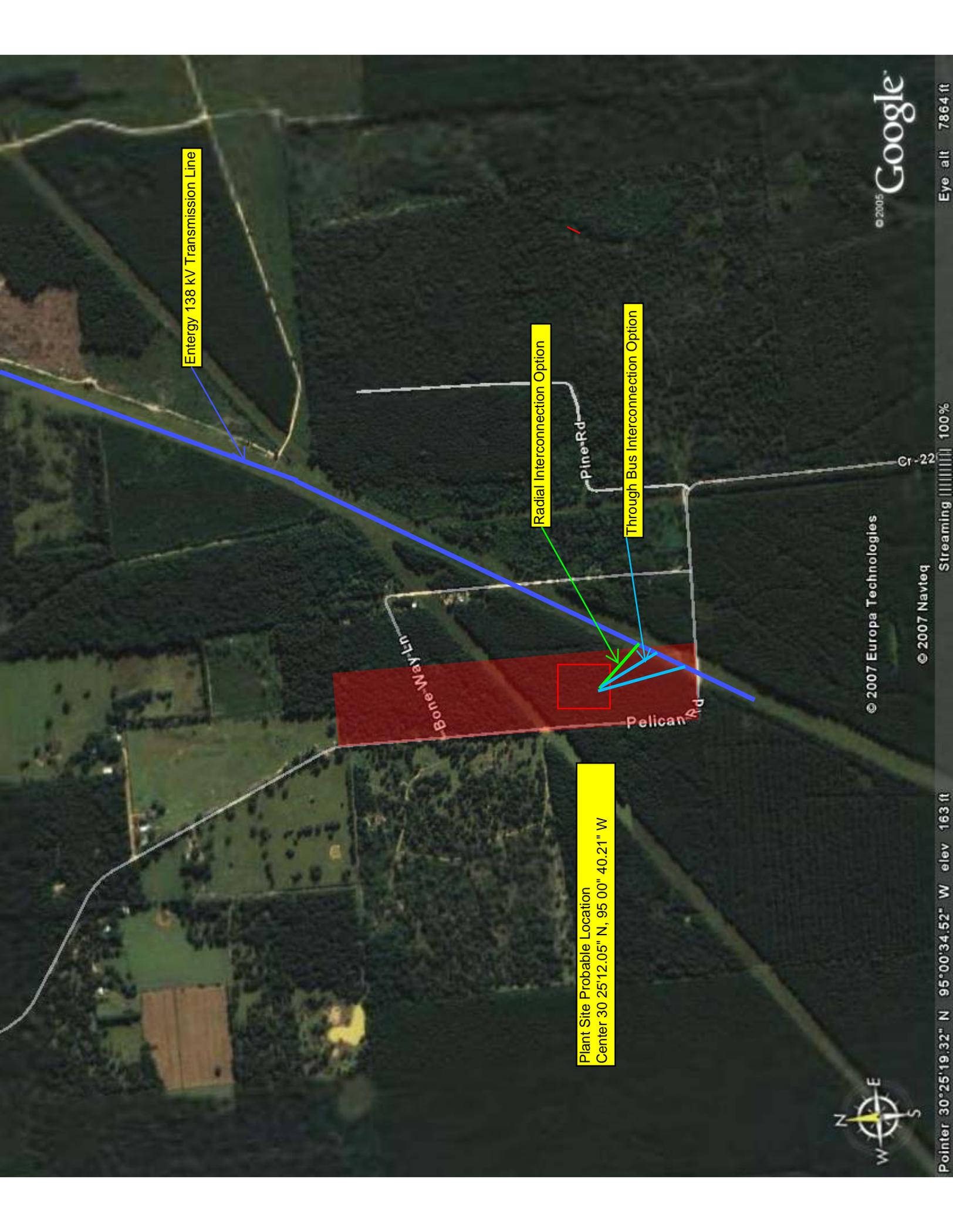
Based on the pedestrian survey of the site and an evaluation of the habitat, the subject property is not expected to support federally listed threatened or endangered species of potential occurrence in San Jacinto County.

No streams or channels were identified within the subject property, however, both emergent and forested wetlands were observed. Although the forested wetlands on the northern part of the property extend into adjacent lands, there were no clear surface connections to waters of the U.S. for any of the wetlands (forested or emergent). NWI maps indicate that this forested wetland is not connected to waters of the U.S. However, without access to the adjacent properties, it is not possible to determine whether there is a hydrologic connection. Consultations with the USACE would be necessary to determine whether the forested wetland was considered jurisdictional (i.e., not isolated). It is possible that the USACE would accept the conclusion that this wetland was isolated, based on NWI maps, aerial photo interpretation and limited groundtruthing.

No cultural resources were located during PBS&J's investigation of the project area. Based on the results of the pedestrian survey and shovel testing and the overall low potential of cultural sites in this location due to the reasons presented, it is unlikely that any significant undiscovered cultural resources are present in the project area. Cultural resource clearance is recommended for this project.

draft

ATTACHMENT C



Energy 138 kV Transmission Line

Radial Interconnection Option

Through Bus Interconnection Option

Plant Site Probable Location  
Center 30°25'12.05" N, 95°00'40.21" W

