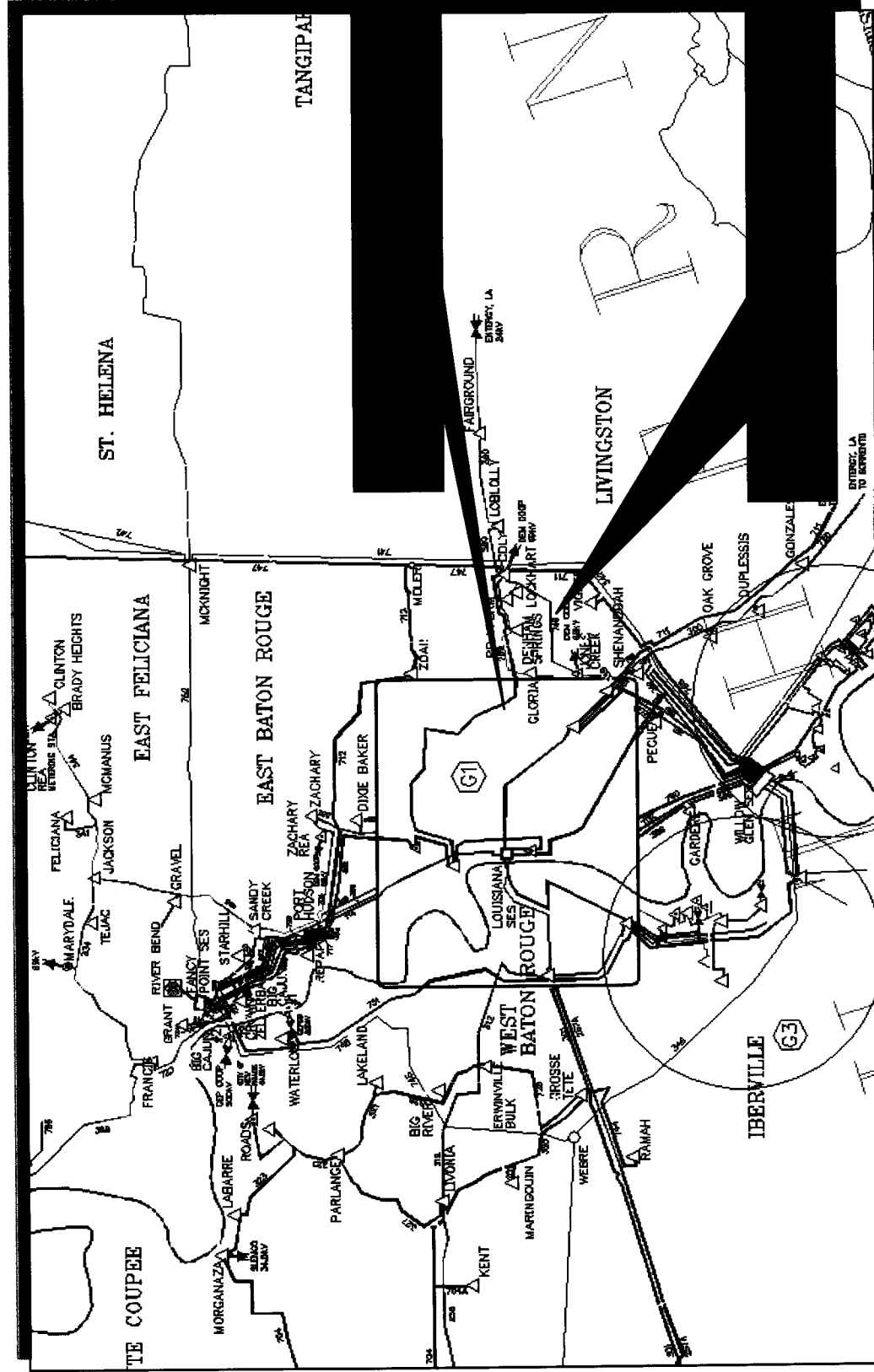


# Target Areas Around Baton Rouge Beyond 2011



# Entergy Gulf States, Inc. (Louisiana)

## Proposed Transmission Reliability Projects

Entergy Transmission Planning Summit

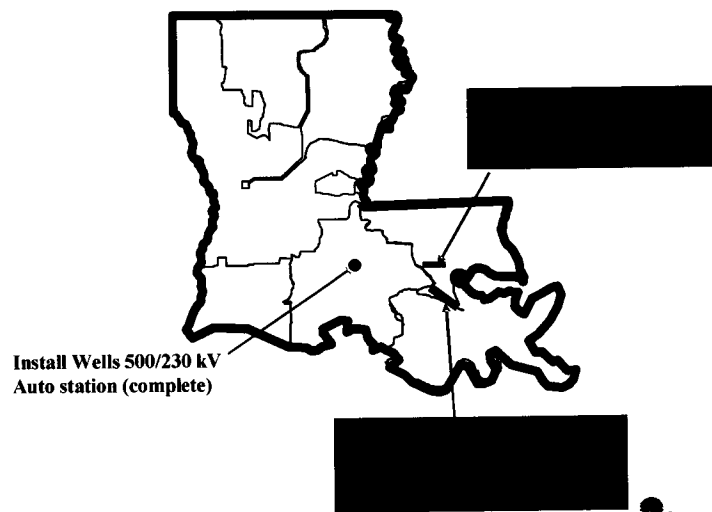
New Orleans, LA

July 14, 2005

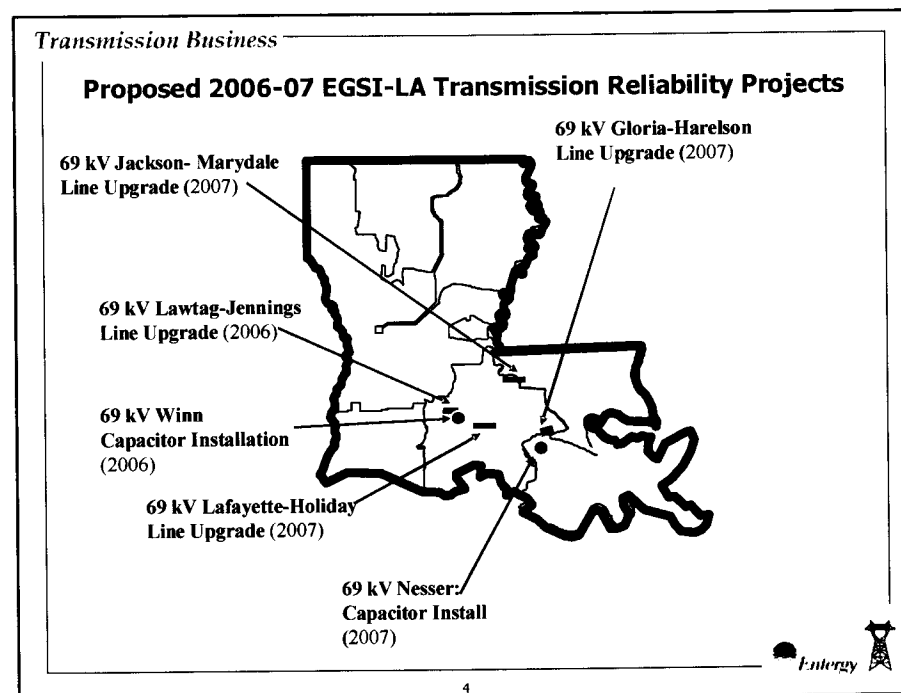
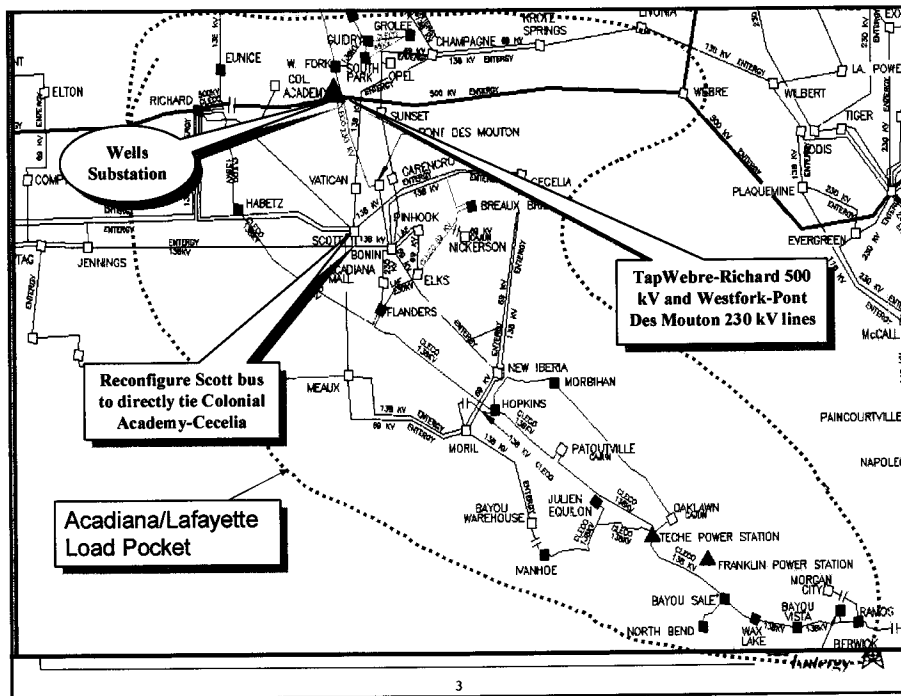


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## Approved 2005-07 EGSI-LA Transmission Reliability Projects



2



## Breaker Upgrades

### **Scenario:**

- Based on asymmetrical fault current analysis the following circuit breakers have been identified as underrated:

### **Recommended Solution:**

- Replace the following circuit breakers with appropriately rated breakers:

#### **69 kV**

- Carlyss breaker 8775 Carlyss-Choupique
- Carlyss breaker 7840 Carlyss-Catalyst
- Moss breaker 17955 bus-tie breaker

#### **138 kV**

- Scott breaker 8820 Colonial Academy-Scott
- Scott breaker 8825 Cecelia-Scott
- Mossville breaker 17970 Mossville-Bayou D'Inde
- Nelson breaker 7990 Nelson-LC Bulk

#### **230 kV**

- Nelson breaker 27105 Capacitor breaker



## Gloria-Harelson: Upgrade 69 kV Line

### **Scenario:**

- Livingston Parish is on the far eastern edge of EGSI-LA. Two strong sources at Coly and Harelson supply power to the area. Coly-Denham Springs and Harelson-Gloria form one half of a looped configuration serving approximately 129 MW of the loop load.
- For the loss of Coly-Denham Springs, Harelson-Gloria overloads by 8% in 2007.

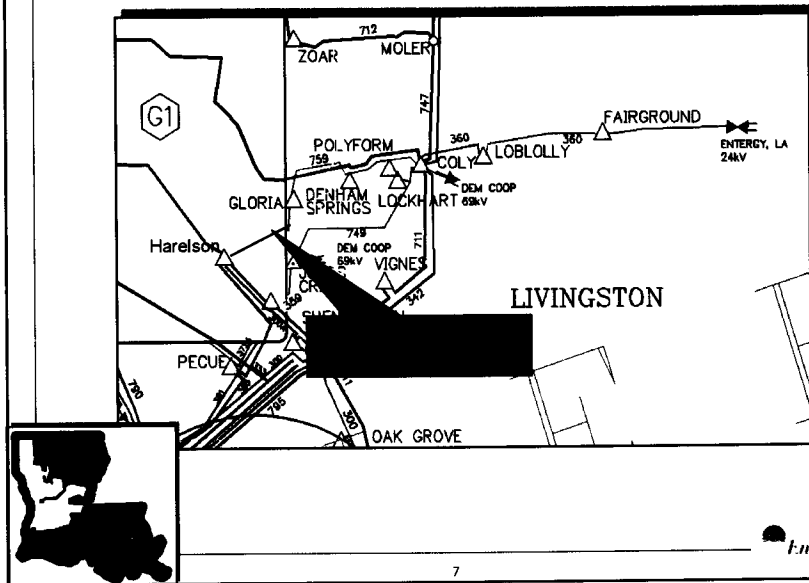
### **Recommended Solution:**

- Replace 3.27 miles of line with a conductor having a capacity of at least of 151 MVA.

**Estimated cost:** \$1.1 MM



## Gloria-Harelson: Upgrade 69 kV Line



## Lawtag-Jennings: Upgrade 69 kV Line

### Scenario:

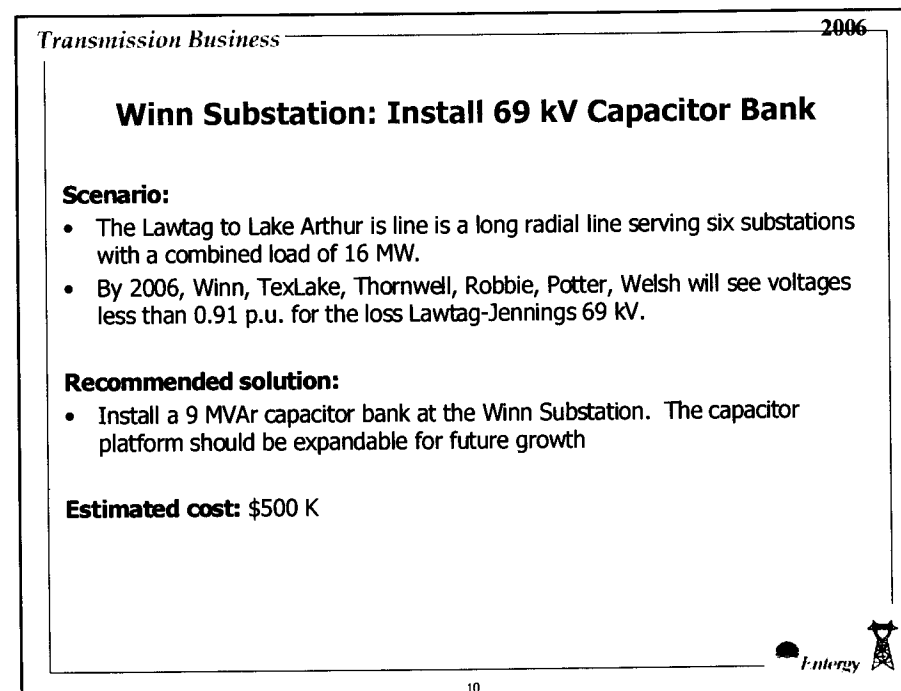
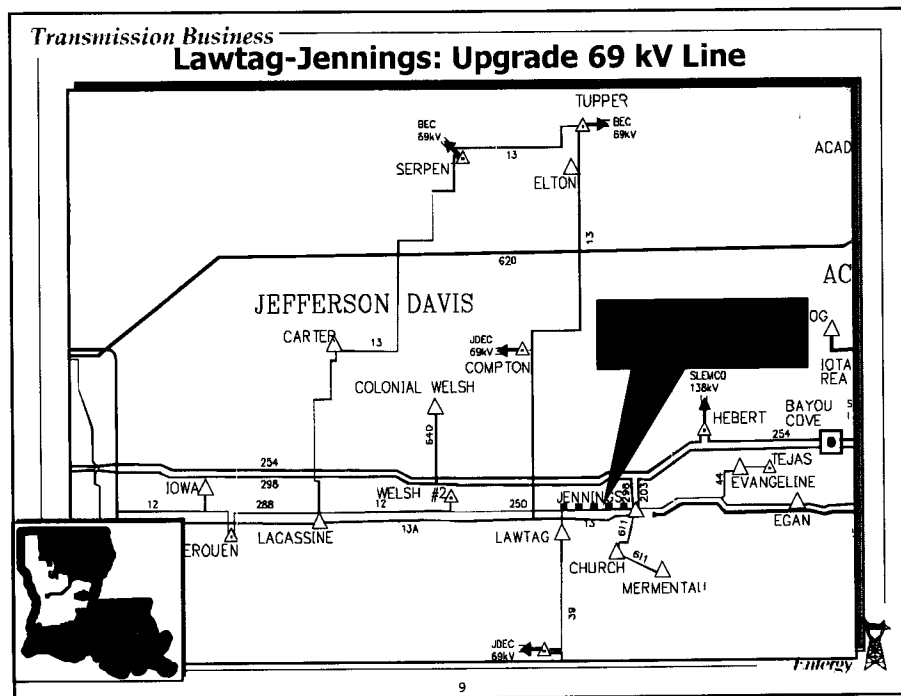
•Line 14 (Jennings-Lawtag) will have a projected loading of 46 MVA in 2007. It is currently constructed with 4/0 Cu conductor. At this level, the line will be overloaded by 10% in 2006 and 16% in 2007 during normal operations. Annual load growth is approximately 1.47%.

### Recommended solution:

•Upgrade Jennings to Lawtag (approximately 4.79 miles) to be capable of carrying 78 MVA or 652 amps. Replace or relocate structures as necessary.

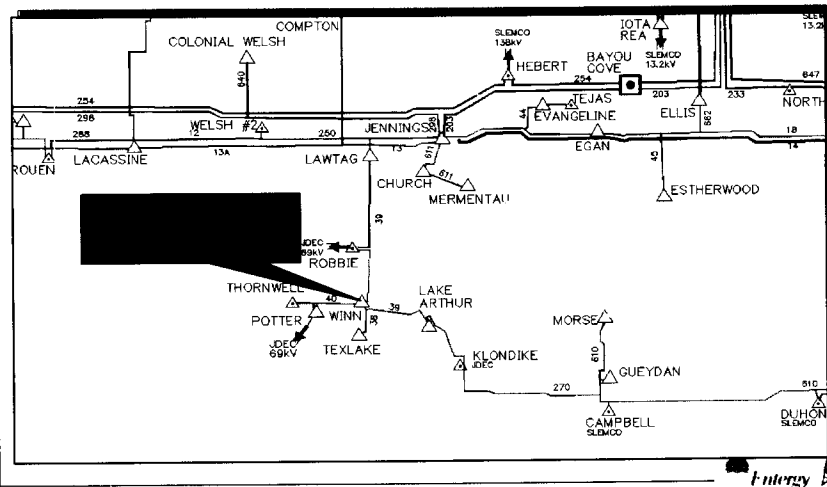
**Estimated cost:** \$2.5 MM







## Winn Substation: Install 69 kV Capacitor Bank



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## Lafayette-Holiday: Upgrade 69 kV Line

### Scenario:

- There is approximately 141 MW of load in the area between Scott and New Iberia. The Lafayette-Holiday-Billeaud line is currently rated at 39 MVA.
- Loss of Moril 138/69 kV auto causes a 16% overload and loss of Moril-New Iberia 69 kV line causes an overload of 9% on Lafayette-Holiday in Summer 2005.

### Recommended Solution:

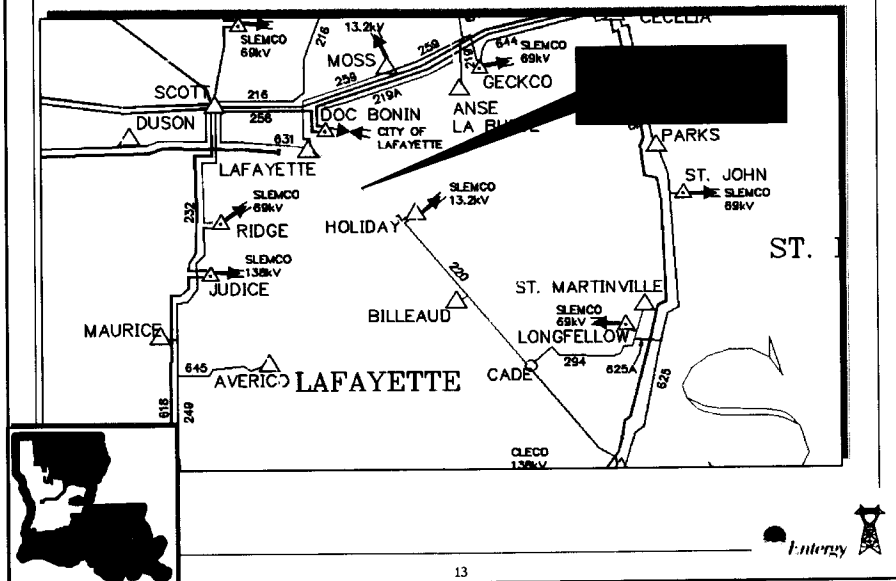
- Replace 4.89 miles of 1- 4/0 Cu with a conductor having a capacity of at least 68 MVA (or 569 amps).

**Estimated Cost:** \$2.23 MM



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### Lafayette-Holiday: Upgrade 69 kV Line



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2007

### Nesser Substation: Install 15 MVar 69 kV capacitor bank

#### Scenario:

- Nesser is on a long radial tap. Nesser substation is experiencing rapid growth of over 6%/year. Peak loading is over 45 MVA.
- By 2007, Jones Creek and Nesser 69 kV will see voltages less than 88% for an outage of Harelson-Jones Creek section of lines.

#### Recommended Solution:

- Install a 15 MVar capacitor bank at the Nesser Substation. The capacitor platform should be expandable for future growth.

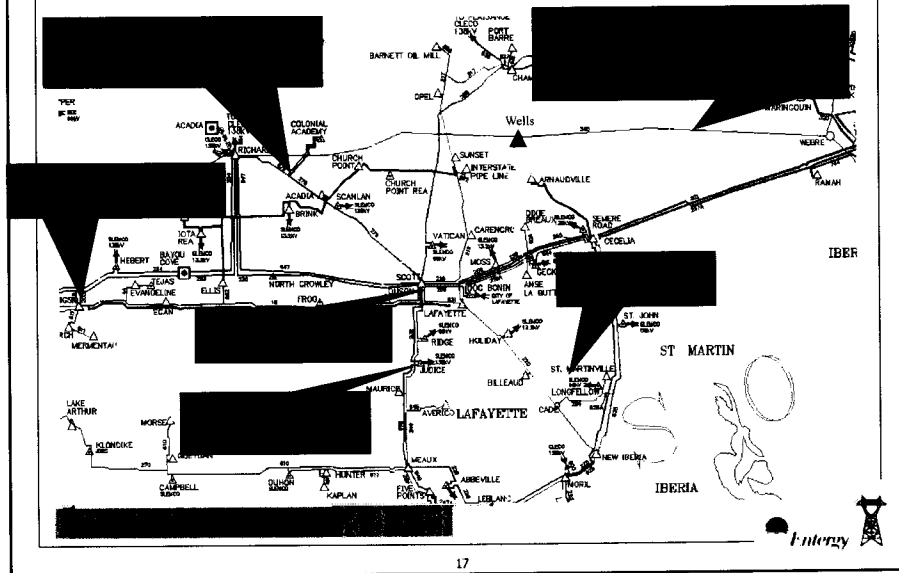
**Estimated cost:** \$510 K



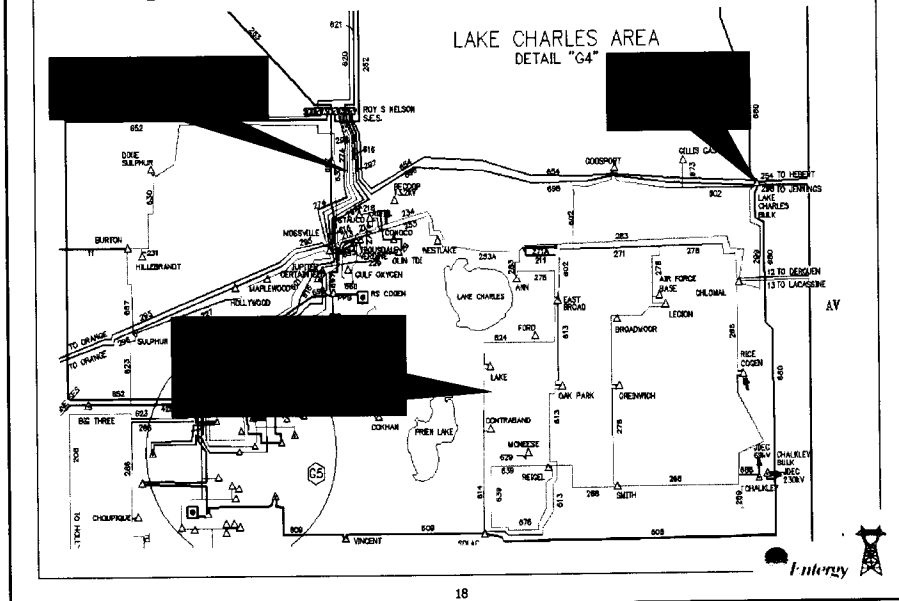
14



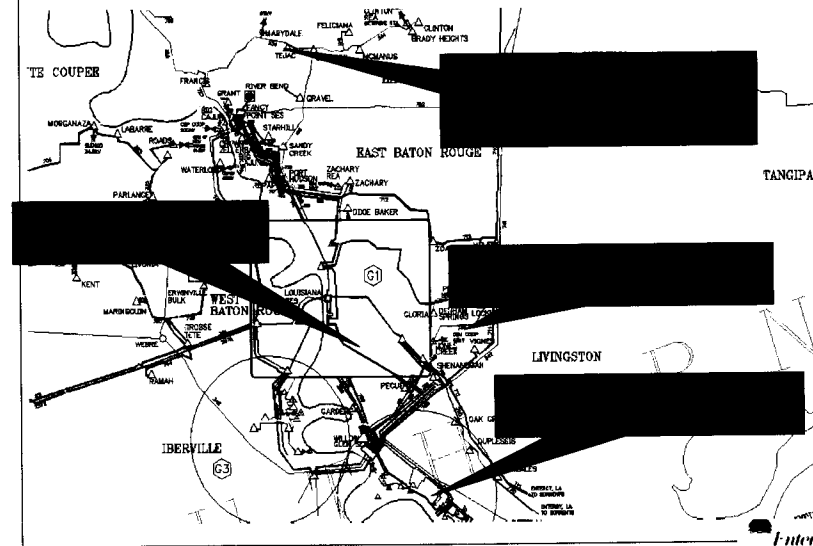
### Target Areas Around Lafayette Beyond 2010



### Target Areas Around Lake Charles Beyond 2010



### Target Areas Around Baton Rouge Beyond 2010



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