



January 30, 2019

*Via Electronic Mail*

**Council President Jason Rogers Williams**  
**Councilmember-At-Large**  
**1300 Perdido Street, Room 2W50**  
**New Orleans, LA 70112**  
[jasonwilliams@nola.gov](mailto:jasonwilliams@nola.gov)

**Council Vice-President Helena Moreno**  
**Councilmember-At-Large**  
**1300 Perdido Street, Room 2W40**  
**New Orleans, LA 70112**  
[morenocouncil@nola.gov](mailto:morenocouncil@nola.gov)

**Councilmember Joseph I. Giarrusso**  
**District "A"**  
**1300 Perdido Street, Room 2W80**  
**New Orleans, LA 70112**  
[Joseph.Giarrusso@nola.gov](mailto:Joseph.Giarrusso@nola.gov)

**Councilmember Jay H. Banks**  
**District "B"**  
**1300 Perdido Street, Room 2W10**  
**New Orleans, LA 70112**  
[Jay.Banks@nola.gov](mailto:Jay.Banks@nola.gov)

**Councilmember Kristin Gisleson Palmer**  
**District "C"**  
**1300 Perdido Street, Room 2W70**  
**New Orleans, LA 70112**  
[Kristin.Palmer@nola.gov](mailto:Kristin.Palmer@nola.gov)

**Councilmember Jared C. Brossett**  
**District "D"**  
**1300 Perdido Street, Room 2W20**  
**New Orleans, LA 70112**  
[councildistrictd@nola.gov](mailto:councildistrictd@nola.gov)

**Councilmember Cyndi Nguyen**  
**District "E"**  
**1300 Perdido Street, Room 2W60**  
**New Orleans, LA 70112**  
[Cyndi.Nguyen@nola.gov](mailto:Cyndi.Nguyen@nola.gov)

**Re: Entergy New Orleans, LLC's Revised Offer of Settlement**

Dear Councilmembers:

As the new President and CEO of Entergy New Orleans, LLC ("ENO" or the "Company"), I've spent my first two months assessing the historic challenges that have strained the relationship between ENO and its regulator, the New Orleans City Council. At the outset, I'd like to assure the Council that I take these matters very seriously and believe that reestablishing a constructive relationship between ENO, the Council, and the Community is paramount to delivering on our collective promises to the citizens of New Orleans.

While I cannot alter the past, I am now responsible for ensuring prospective results and I plan to use the lessons learned to shape ENO's future engagement with the Council and the Community. To that end, I've selected a new leadership team that will be responsive to the Council's and the Community's concerns. Fortunately, my previous executive leadership experiences within the energy sector are well aligned with the many initiatives that the Council

has stated it is interested in pursuing, including the implementation of renewables, increased reliability, and energy efficiency measures. I sincerely and respectfully ask that the Council provide us with the opportunity and time required to chart a new course as we strive to benefit all members of this community and renew a more productive and collaborative working relationship.

To that end, I write in earnest to resolve the most pressing issue before us, the pending Show Cause Resolution (Resolution R-18-474) and the potential repeal of the Council's approval of the New Orleans Power Station ("NOPS") (Resolution R-18-65). The Company offers this comprehensive settlement package with the goals of restoring the Council's and the Community's full faith in ENO and resolving these issues completely. Below please find a summary of the Company's offer, followed by a more comprehensive discussion of the proposal. I respectfully ask that you consider accepting this proposal so that the Company and the Council can renew their relationship and begin to focus ahead on advancing shared goals for the benefit of New Orleans.

### **I. Summary of ENO's Offer**

If the Council approves a proposal that resolves the show cause proceeding and leaves its NOPS approval undisturbed, the Company offers a comprehensive settlement that will do the following:

- (1) Provides a \$5 million settlement payment to City of New Orleans within 30 days of approval of this proposal (*i.e.*, the amount contemplated in the Show Cause);
- (2) Commits ENO's leadership to undertaking third-party ethics training for management-level employees and a Code of Ethics designed to prevent astroturfing (in addition to the internal measures already taken such as vendor education and revisions of ENO's procurement policies to specifically prohibit astroturfing). The Company will submit a plan<sup>1</sup> for compliance and a draft of the Code of Ethics within 30 days for Council review;
- (3) Commits to provide a mutually agreeable long-term, reliable power source to the Sewage & Water Board for its antiquated and costly pumps – enhancing overall customer service;<sup>2</sup>
- (4) Implements additional specific efforts (details below) to reduce outages on the distribution system as recommended by one of the country's foremost experts on electric system reliability;

---

<sup>1</sup> The plan will detail ENO's timeline for selecting a third-party vendor (to provide ethics training) and conducting the training.

<sup>2</sup> ENO will construct any mutually agreeable solution identified by ENO and S&WB as necessary for the reliable provision of power to S&WB and shall recover the costs of such solution through an appropriate rider or other cost recovery mechanism to be determined by the Council. ENO will file a detailed report with the Council every 30 days regarding the status of its meetings with S&WB.

- (5) Reduces risks to customers related to NOPS' construction and ongoing maintenance costs by requiring advanced periodic reporting and the Company to bear the legal burden to prove any costs overruns are prudent (details below);
- (6) Ensures NOPS' continued usefulness by requiring reporting every three years on any available technologies that would improve its efficiency or lower its emissions (details below);
- (7) Contemporaneously provides the Council with the raw emissions data submitted to the Louisiana Department of Environmental Quality ("LDEQ") to demonstrate compliance with all EPA requirements and health protections; and
- (8) Commits to pursuing alternative deal structures to hasten the potential settlement and ultimate approval of three large-scale solar farms currently being proposed by ENO.

## **II. Discussion of Comprehensive Proposal Benefits**

### **a. The Show Cause Proceeding**

In the Show Cause Resolution, the Council requested that ENO show cause as to why the following sanctions/penalties should not be imposed: (1) a cash payment of \$5 million to be paid in accordance with and for purposes determined by the Council; (2) a certification that each ENO management level employee has or will complete a third-party ethics training course; and (3) an ENO Code of Conduct designed to avoid a repeat of any "astroturfing" by the Company or its vendors.

While the Company and the Council have different legal positions regarding whether sanctions/penalties can legally be imposed under these circumstances, the Company proposes<sup>3</sup> the exact amount contemplated in the Show Cause Resolution, \$5 million (to be paid within 30 days of the Council's approval of this proposal), along with a commitment to comply with the other two ethics requirements in items (2) and (3) above.<sup>4</sup> The settlement payment offered is significant, as it represents approximately 10% of ENO's annual earnings. However, we are committed to demonstrating our commitment to public discourse based on trust and facilitating a more expedient return to a constructive relationship for the sake of the City of New Orleans and its residents.

---

<sup>3</sup> Under this proposed settlement, neither party would be deemed to have approved, accepted, agreed to, or consented to any legal or regulatory argument, position, principle, or policy asserted by the other party, and, except as otherwise expressly provided for in the settlement, nothing in the settlement would be considered precedent in future legal or regulatory proceedings.

<sup>4</sup> The Company also agrees to bear any costs associated with the Show Cause proceeding/Investigation, including the settlement payment, and any costs paid to the Council's Independent Investigators and/or the Council's Advisors associated with the investigation/show cause proceeding through the approval of the settlement, and also any costs related to the Company's submissions by the Company within 30 days following approval of this Proposal to comply with items (2) and (3) above, which are directly linked to the Show Cause Resolution. The Company will not seek to recover any of these costs from customers.

In order to avoid expensive and protracted litigation, this offer is conditioned upon the complete resolution of this matter, which includes the Council's maintaining and leaving undisturbed the prior approval of NOPS. This Council issued a well-reasoned, 188-page decision to approve NOPS, finding that the plant will prevent cascading outages in the City and aid in hurricane restoration efforts.

On October 31, 2018, the current Council recognized in Resolution R-18-474 that the conduct at issue in the Show Cause Resolution in no way affected or altered the evidentiary record that supported the plant's approval and was the basis of the Council's decision. The referenced evidentiary record, created over a two-year period where all parties had an opportunity to file testimony and cross-examine witnesses, overwhelmingly proved that NOPS is the quickest and least risky solution to a current and persisting reliability need. It provides a source of local power exactly where a much larger, older, and less environmentally friendly plant was located for the past 60 years.

NOPS remains the cornerstone of ENO's plan to address an urgent and current need to ensure grid reliability and stability, preventing widespread outages, and avoid an additional hurricane season without local generation for restoration support. Without it, the City and its citizens are at risk. With it, a baseline level of grid reliability will be established, clearing the way to pursue increases in innovative technologies without the need to be concerned about high-impact, widespread outages or the lack of a generating unit for hurricane responses. The Company has already spent \$96 million as a reasonable and prudent action in reliance on the Council's prior approval rendered over 10 months ago in order to bring the project into service as quickly as possible to mitigate these serious risks. This amount has been verified;<sup>5</sup> and any settlement of the show cause must maintain the Council's NOPS approval. Delays would not only result in additional costs, but they would leave customers unnecessarily and unreasonably exposed to reliability risks for a longer period than is necessary.

**b. Additional Benefits of Proposal**

If the Show Cause Resolution can be fully resolved and the Council maintains its approval of NOPS, ENO will also firmly commit to the following additional actions and conditions, with the clear intention of demonstrating our determination to press the reset button and bring significant benefits to our customers/your constituents in the process.

First, the Sewerage & Water Board of New Orleans ("S&WB") has stated that it plans to transition from relying on its own power generation to relying on ENO for reliable and economic power to its facilities. Accordingly, I have met with the S&WB's Executive Director, Ghassan Korban, on several occasions since joining ENO to discuss these issues. In addition, ENO and the S&WB have formed a Joint Reliability Team, which has met on numerous occasions in recent months and has produced short-term risk mitigation measures, mid-term reliability improvements, and long-term solutions to improve reliability to their facilities. The Team continues to refine the details of those plans. The Company has already implemented the majority of the short-term measures and has spent more than \$200,000 in determining the feasibility of additional options for improving the reliability of its electrical supply to the

---

<sup>5</sup> See attachment A, Summary of Project Costs and Construction Status

S&WB, including the construction of a new transmission-level substation and improvements to its distribution connections.<sup>6</sup>

ENO will agree to construct a mutually agreeable long-term solution for the S&WB, but NOPS remains central to the Company's plan to maintain overall grid stability in New Orleans and is therefore a crucial element of this collaboration. Without the grid stability provided by NOPS, the measures contemplated may prove ineffective in ensuring a reliable supply of power to the S&WB's facilities. Put differently, if cascading outages occur, such outages could interrupt service to a broad range of customers, including to any new substation or distribution-level improvements that are ultimately constructed to meet S&WB needs. Moreover, if a catastrophic event occurs, NOPS will be the local option to black-start (*i.e.*, the ability to self-start even when the grid is completely deenergized following, for example, a major weather event) or independently provide power to the S&WB as compared to the current nearest black-start unit, which is remote and vulnerable to transmission line damage.

The Company also notes that the approximately 50 MW of new load represented by the S&WB's transition from its own generation to Entergy's power will increase capacity needs and loading on the transmission grid in the New Orleans area. NOPS is designed to mitigate this risk. We will continue to work closely with the S&WB and will agree to provide the Council with status reports every 30 days regarding the progress of this collaboration. ENO will agree to proceed with the implementation of the mutually determined optimal solution, and it will work with the Council and its Advisors regarding appropriate cost recovery mechanisms, which will be determined by the Council.

Second, ENO recognizes that the distribution reliability issues initially raised by Councilmember Jared Brossett is an ongoing concern for the Council. During my brief tenure with ENO, I've made it a priority to meet with the men and women who operate ENO's distribution grid. They are responsible for implementing ENO's reliability programs and they have assured me that they take it personally when the lights go out. I wholeheartedly share in that sentiment. ENO has made significant investments over the last few years to improve distribution reliability and harden the distribution system. Those efforts are beginning to show results, as distribution-line-related customer interruptions decreased by 20% in 2018 as compared to 2017.

Additionally, ENO engaged Quanta Technology, LLC ("Quanta"), one of the country's foremost experts on electric system reliability, to review, benchmark, and recommend improvements to ENO's reliability programs. ENO is in the process of determining how and when it can best implement Quanta's recommendations. As further commitment to addressing the reliability issue, ENO will commit to take the following specific actions in response to certain Quanta recommendations: (1) install an additional 50 reclosers by July 1, 2019; (2) implement improved dispatch metrics before the third quarter of 2019 with the goal of improving average crew dispatch times for non-storm events to 10 minutes or less; (3) design and construct, in conjunction with grid modernization, projects to limit exposure to distribution-line-related outages to 500 customers or less per outage; and (4) provide the Council and the Council Advisors a detailed description of the consulting services that Internal Audit Services is

---

<sup>6</sup> See attachment B, January S&WB Update

performing with regard to Grid Modernization, Advanced Metering Infrastructure, Enterprise Asset Management, Outage Management System/Distribution Management System, Customer Digital and Distribution Automation, and Standard Operating Procedures and Physical and Cyber Security. Following the implementation of these systems, ENO will provide the Council Advisors with a copy of ENO-related post-implementation audit reports on the internal controls in these areas, with the exception of Physical and Cyber Security, which will be handled separately in order to protect sensitive information.

Next, in an effort to address concerns regarding the final cost of the NOPS project, the Company will agree to use commercially reasonable efforts to limit its costs to the \$210 million estimate provided and provide advance notification to the Council of any reasonably anticipated cost overruns. For any cost overruns that are not pre-approved, the Company will agree to bear the burden to prove that such costs are prudent before recovery from customers (see footnote for specific proposal).<sup>7</sup>

Similar to an airplane or an automobile, the longevity and safety of the NOPS facility depends on proper maintenance, and there is always the possibility that equipment will unexpectedly fail. Accordingly, ENO will agree to provide annual reporting regarding NOPS' expected operation and maintenance costs ("O&M") and will notify the Council of any reasonably expected increases, recognizing that O&M costs tend to fluctuate in the various years of a plant's operation, again similar to maintenance on an automobile. The Company will bear the burden to prove that any prior unapproved spending over the annually reported amount is prudent (See footnote for specific proposal).<sup>8</sup> These two conditions will provide the Council and the public cost protections by notification of any cost increases and making the Company bear the burden of proving that the costs are prudent before recovery occurs.<sup>9</sup>

ENO also notes that is undisputed that over 80% of expected new generation constructed over the next 10 years will consist of gas-powered generation. There is simply no evidence or

---

<sup>7</sup> ENO will provide bi-monthly reports to the Council during the plant's construction detailing the expenditures made to date and the currently anticipated schedule for future expenditures. When ENO becomes aware of the need for expenditures that will exceed the cost estimates contained in Docket No. UD-16-02, ENO shall file a description of such expenditures to the Council for review and approval prior to making such expenditures. Where it is not possible to file a description of the expenditures prior to the expense being incurred (as in, for example, an emergency situation), ENO shall as soon as reasonably practicable, file a description of the expenditure, the necessity for it and the reason that advance approval could not be sought with the Council for review and approval, and will not be permitted to recover such costs from customers until the Council has reviewed the costs and approved them as prudent.

<sup>8</sup> With respect to ongoing O&M expenses for NOPS once it comes online, ENO will file quarterly reports with the Council detailing the expenditures during each quarter. ENO will also file with the Council for review and approval an annual report regarding anticipated O&M expenditures for the next twelve months. If the expenses during any given twelve-month period exceed those detailed in the annual report by greater than 10%, and prior approval has not been obtained, ENO will not be permitted to recover such expenses from customers until such time as the expenses have been reviewed by the Council and approved as prudent. After five years, ENO shall be allowed to propose any modifications to these requirements that may better inform the Council or be more suitable to meet its objectives.

<sup>9</sup> For both mechanisms, force majeure events, such as major weather events or acts of terrorism, are specifically excluded. In those instances, the Company will need to focus on making necessary repairs in order to restore service to customers as quickly as possible.

analysis to support the idea that gas generation will become obsolete prior to the expiration of the project's useful life. It is much more likely that customers will realize benefits from the unit well beyond its projected useful life, as is the case with many currently operating gas-powered units. It is also noteworthy that the Council does not stand alone in its approval of RICE technology, as its peer regulators around the country (*e.g.*, Arizona, Michigan, Hawaii, Texas) have recently approved the same technology to ensure grid stability, facilitate more renewables, provide black-start capability, and reduce emissions compared to older retired/retiring units. Moreover, there are many other jurisdictions that currently employ RICE technology to realize the referenced benefits.<sup>10</sup> Nevertheless, the Company will commit to including in its triennial IRP any commercially available technologies that could enhance plant efficiency, reduce emissions, or otherwise improve the NOPS' cost effectiveness. ENO will incorporate this reporting into its triennial IRP process, such that each IRP process fully considers the availability of any technology that may reduce emissions and/or improve the efficiency of the plant, or its cost-effectiveness and weigh the costs and benefits of those improvements as part of ENO's long-term planning process.

As the Company has stated, NOPS is a modern, efficient, clean natural gas plant, that is safe for surrounding communities. The Company will commit to providing its annual emissions data submitted to the LDEQ to the Council and posting it on its website to demonstrate that it complies with all prescribed emission limits imposed on the new facility to protect health.

Finally, the Company fully expects and eagerly anticipates that the Council will soon have the opportunity to approve 90MW of renewable solar generation. The Company filed an Application for Approval of its Renewables Portfolio, and if approved, would make New Orleans the 6<sup>th</sup> ranked regulatory jurisdiction for solar penetration in the nation based on currently installed solar. Although the Company recognizes the benefits associated with owning an asset, it is also investigating alternative transaction structures that could facilitate the settlement of two renewable projects, totaling 70MW. With respect to the New Orleans located resource (*i.e.*, the remaining 20MW), ENO pursued the self-build option and salvaged the project when the counter-party refused to adhere to its bid proposal recognizing that it is the only option available within Orleans Parish for a large-scale farm and that it provides substantial local economic benefits in the tens of millions. The Company will present the alternative structures to the Council and all parties and has agreed, along with the other parties in the docket, to waive its right to a fully litigated evidentiary hearing to facilitate a quicker decision for the proposed resources.

### **III. Conclusion**

The Company understands that the paid actor controversy has been a serious issue for the Council and a significant diversion of its resources. The Company's interactions with the public must be rooted in trust, honesty, and transparency. The Company offers this comprehensive settlement in lieu of extensive and protracted litigation related not only to the matters raised in the Council's Show Cause Resolution, but also regarding the legality of any repeal of the

---

<sup>10</sup> See attachment C, map of RICE units constructed by ENO's EPC contractor, Burns and McDonnell, which does not depict RICE units constructed by other EPC contractors, or RICE units currently approved by not yet in service.


Jan. 30, 2019

Page 8

Council's prior approval of NOPS. The proposal reflects significant concessions for the matters raised in the Show Cause resolution and implements important provisions that will protect customers from unanticipated increases in the plant costs while ensuring operational and environmental transparency. This proposal further establishes a partnership with the S&WB allowing them to limit the boil-water issues that have plagued New Orleans and enabling important work on ENO's distribution system to improve overall customer reliability.

I remain excited about the potential to advance the shared goals of the Council, the Community, and the Company; and I thank you for your consideration of ENO's proposal.

Sincerely,



David D. Ellis

cc: Clinton A. Vince, Esq.  
Brian L. Guillot, Esq.



## **STATUS OF NOPS CONSTRUCTION SCHEDULE**

---

### **I. PROJECT BUDGET STATUS:**

NOPS Project Costs through December 2018 total \$96 million, which is primarily driven by equipment purchases and design engineering, allowance for funds used during construction, taxes, regulatory costs, etc. With respect to construction, only pre-construction activities have been completed. Total expected cancellation exposure through the same time period totals approximately \$128 million.

### **II. OVERALL PROJECT SCHEDULE STATUS:**

The project status has been broken down into three different sections for tracking progress on the Project: **Engineering, Procurement and Construction**. The Company has completed 91% of project engineering, 79% of project procurement, and 13% of construction via pre-construction activities.

#### **Major Design Tasks Completed Through December 2018**

- Issued for Construction (IFC) engine hall building shell drawings
- Issued for Bid (IFB) ductwork design
- IFC site finish drawings
- Issued for owner review Piping and Instrument Diagram's (P&ID's) and began addressing comments.
- Site wick drain arrangement plan developed and issued.
- Power block building foundation and piling design completed and IFC.
- Pre-Engineered Metal Building (PEMB) drawings IFC and contract issued.
- Piling design IFC.
- Ductwork and support structural steel design completed.
- Heating, Ventilation and Air Conditioning (HVAC) and plumbing design completed and IFB.
- Plant overall electrical one-line drawing issued for owner review.
- Generator Step Up (GSU) Transformer specification issued for owner review.
- Medium and Low Voltage (MV/LV) electrical one lines drawings issued for owner review.
- Plant General Arrangement (GA) issued for owner review.
- Below grade design/pipe routing IFC.
- Above grade pipe routing/design IFC.
- Plant electrical grounding IFC

#### **Procurement Progress Through December 2018**

- Issued FNTP for Reciprocating Internal Combustion Engines (RICE), Generators and RICE auxiliary equipment in March 2018. All manufacturing of these components were completed in early December 2018.
  - Generators and auxiliary equipment shipped on December 19, 2018 and is expected to arrive at the Port of New Orleans on or about January 17, 2019.
  - RICE shipped on December 30, 2018 and are expected to arrive at the Port of New Orleans on or about January 30, 2019.
- Instrument air compressors IFB and contract awarded.
- GSU Transformers IFB and contract awarded.
- Fire water pumps IFB and contract awarded.
- Fuel Gas conditioning equipment IFB and contract awarded.
- Oil Water Separator IFB and contract awarded.
- Tanks and Pressure Vessels IFB and contract awarded.
- Ventilating units IFB and contract awarded.
- Emergency Diesel Generator (EDG) IFB and contract awarded.
- MV/LV Switchgear IFB and contract awarded.
- Circuit Breakers IFB and contract awarded.
- Ductwork IFB and contract awarded.
- Motor Control Center's (MCC's) IFB and contract awarded.
- Structural Steel contract awarded.
- Control enclosure IFB, bids received.

### **Major Construction Tasks Completed Through December 2018**

- Mobilized for pre-construction activities on April 9<sup>th</sup>.
- Power block area clearing and grubbing complete.
- Installed settlement monitoring plates and piezometers to monitor settlement following installation of fill material.
- Installed power block fill and wick drains to allow for soil consolidation.
- Completed test pile program to determine the required pile depths.
- Installed temporary power distribution racks for construction work trailers and construction power.
- Site settlement to support installation of pilings and foundations considered complete on July 20<sup>th</sup>.
- Completed preparation of equipment laydown area.
- Installed power block construction road.
- Installed drainage ditches around power block.
- All further construction related activities are currently on hold pending receipt of an air permit from the Louisiana Department of Environmental Quality (LDEQ).

# SWB and Entergy Reliability Initiative



January 2019

# Contents

- Overview
- Joint Reliability Team
- Area Map
- Short Term Risk Mitigation
- Mid-Term Improvement Options
- Long Term Solution
- Project Challenges/Opportunities

# Overview

- Entergy and S&WB have formed a Joint Reliability team to identify and implement measures to increase reliability to S&WB facilities and transition to Entergy as primary source of reliable and economic power
- The New Orleans Power Station (NOPS) is a cornerstone of Entergy's ability to provide reliable and economic power to S&WB
  - NOPS will ensure grid stability and prevent cascading outages that could interrupt service to any new substation
  - NOPS will also help serve any new pumping load as S&WB transitions away from generating its own power to Entergy as its primary source of power
  - NOPS will provide a local source of blackstart power close to the City that can support S&WB operations following extreme weather events
- Measures designed to increase reliability to S&WB facilities assume NOPS is constructed – absent NOPS those measures may prove ineffective
- Entergy will continue to collaborate with S&WB, and it is critical to recognize that NOPS and providing reliable service to S&WB go hand in hand



# Joint Reliability Team

Boil Water Advisories over recent years have increased due to Power Quality issues at Carrollton Plant

Nov 5, 2018 Entergy and SWB agree to reconvene their joint Reliability Team

Joint Reliability Team met on:

12/5/18  
12/18/18  
1/16/19

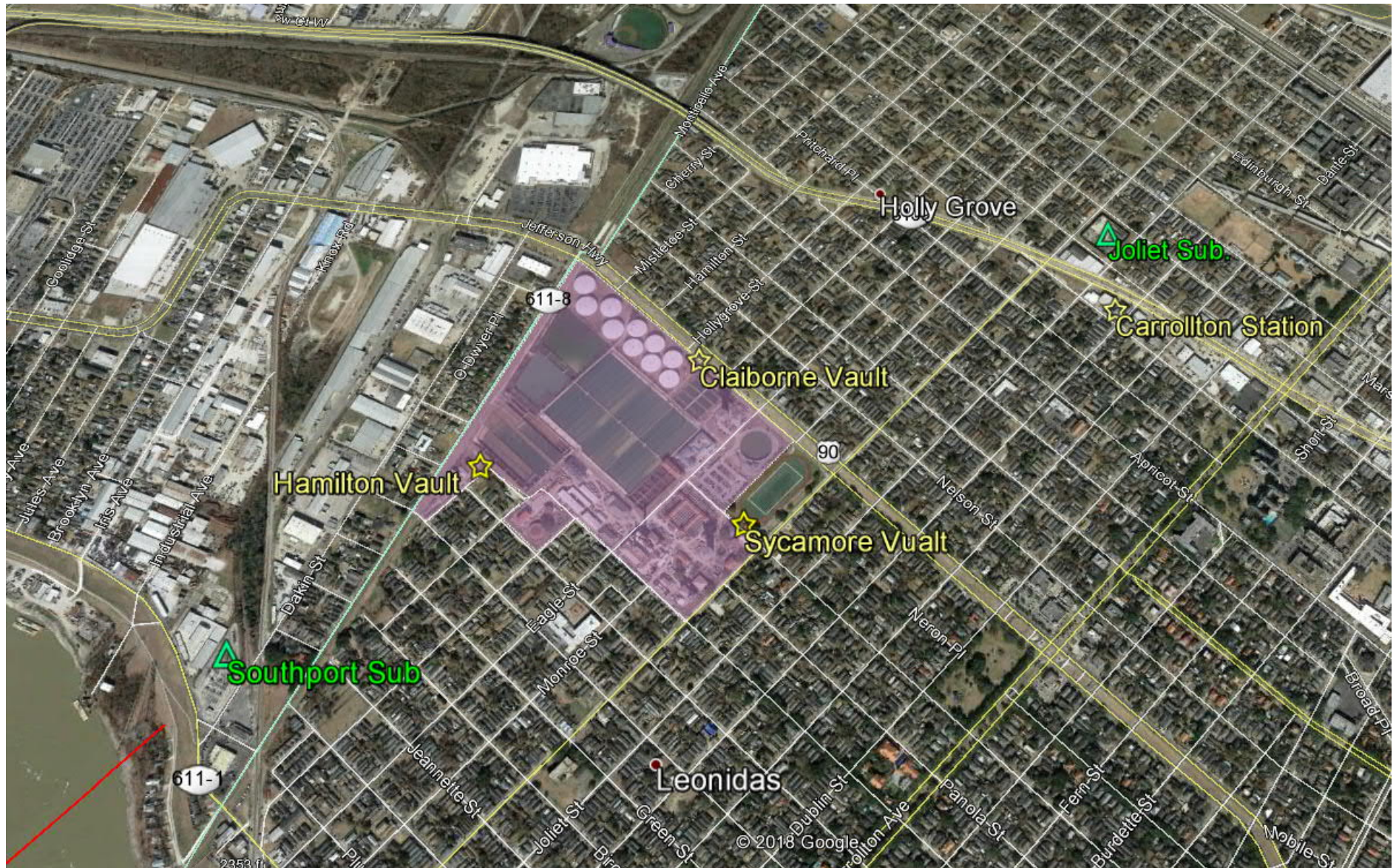
To develop solutions

Joint Reliability Team produced an initial solution set and continues to refine the details

## Results of Joint Reliability Team Efforts:

- Short Term Risk Mitigation Efforts
- Mid-Term Improvement Options
- Long Term Solution

# Area Map - Carrollton Plant



# Short Term Risk Mitigation

## Enhanced Feeder Maintenance

- Completed maintenance identified during infrared inspection of feeders serving SWB Carrollton Plant
- Enhanced inspection program to include bi-annual visual and infrared of all feeders and vaults – March and September
- Pending – cross arm replacement on Feeder 2016

## Southport Sub

- Monthly Infrared inspections
- Installed new primary and backup relaying on Ninemile and Labarre transmission circuits serving Southport Sub
- Installed new primary and backup relaying on Transformer #1
- Upgraded Load Tap Changer on Transformer #1
- Performed distribution breaker maintenance
- Installing animal mitigation equipment to address Monk Parakeet infestation

## Joliet Sub

- Monthly Infrared inspections
- Installed new primary and backup relaying on Midtown transmission circuit serving Southport Sub
- Installing animal mitigation equipment to address Monk Parakeet infestation
- Deploying permanent infrared cameras to immediately report HV and LV temperature changes
- Evaluating permanent flood mitigation measures

## Improved Communication

- SWB and Entergy have direct lines of communication between control centers
- Implemented new communications protocol to keep SWB and Entergy control room operators apprised of outages and abnormal switching events



# Mid-Term Improvement Options

## Option 1: Reduce Exposure

- Evaluating methods to reduce outage exposure on circuits serving Claiborne, Sycamore, Hamilton and Carrollton Vaults by:
  - Rerouting circuits
  - Installing reclosers
  - Relocating circuit tie/transfer points

## Option 2: Create Redundancy

- Add 2<sup>nd</sup> source into Hamilton and Sycamore Vaults
- Add Automatic Load Transfer Schemes to Hamilton and Sycamore Vaults

## Option 3: Provide Customer Flexibility

- Increase feeder capacity at the Hamilton vault to allow more flexibility inside SWB facility

# Long Term Solution

## Transmission Level Service

- Build 230/24kV Sub
- Four (4) breaker 230kV Ring Bus Configuration
- Two (2) 67MVA Power Transformers
- Eight (8) 24kV Feeder Breakers

## Optimize Electrical Operation

- Utilize 3<sup>rd</sup> party vendor to review customer electrical arrangement, evaluate customer operational plan and model switching transients to ensure reliable operation under various customer configurations
- Utilize 3<sup>rd</sup> Party vendor to document customer electrical arrangement to support future troubleshooting efforts

## Benefits

- Served by two independent transmission sources
- Proposed substation will be located adjacent to S&WB Claiborne Pumping Station, creating shorter circuit runs and reducing circuit exposure
- New facilities have capacity to serve up to 70MW
- Ensures strong Power Quality in various customer configurations



## N.O. SWB Reliability Initiative

**GOAL:**  
Implement a customer focused solution to reliably and cost effectively serve electrical power requirements for New Orleans SWB.

### TEAM

#### Entergy

Michael Gravolet  
Drew Thompson  
Seth Cureington  
Lamart Buggage  
Earl Vedros, Jr  
Randall Roberts  
Derrick Claiborne  
John Kingston  
Darren Dehesa  
Lajon Jordan  
Kevin Haas  
Tad Patella  
Frank Morse  
Chris Gremillion  
Paul Mazant  
Joe Payne  
Clay Adams  
Bill Sones  
Bryan Hebert

#### N.O. SWB

Ghassan Korban  
Eric Labat  
Bruce Adams  
Richard Rainey  
Ron Spooner  
Robert Turner

### Next Steps

Schedule meeting for Distribution sub-team

2/1/19 – Finalize scope for providing 7.5MVA of total capacity at Hamilton and/or Claiborne delivery point (short term mitigation)

02/13/19 – Conduct team meeting #3 with customer technical team. Present short term reliability improvement that Entergy Management has approved for implementation.

02/13/19 – Prepare billing estimates for service from new substation.

# Reciprocating Engine Power Plant Experience

## Utility Plants 25MW or Greater

