



Entergy Services, Inc.
639 Loyola Avenue (70113)
P.O. Box 61000
New Orleans, LA 70161-1000
Tel 504 576 6571
Fax 504 576 5579

Timothy S. Cragin
Assistant General Counsel
Legal Services - Regulatory

November 10, 2017

By Hand Delivery

Ms. Lora W. Johnson, CMC
Clerk of Council
City Hall - Room 1E09
1300 Perdido Street
New Orleans, LA 70112

Re: Resolution Directing Entergy New Orleans, Inc. to Investigate and Remediate Electric Service Disruptions and Complaints and to Establish Minimum Electric Reliability Performance Standards and Financial Penalty Mechanisms – CNO Docket No. UD-17-04

Dear Ms. Johnson:

Please find enclosed for your further handling an original and three copies of Entergy New Orleans, Inc.'s ("ENO") Reliability Plan, which is submitted pursuant to Council Resolution R-17-427 and is being filed in the above-referenced docket. Please file an original and two copies into the record in the above referenced matter, and return a date-stamped copy to our courier.

Thank you for your assistance with this matter.

Sincerely,

A handwritten signature in blue ink that reads "Timothy S. Cragin" with a checkmark at the end.

Timothy S. Cragin

TSC\kl

Enclosures

cc: Official Service List (UD-17-04 *via electronic mail*)

**BEFORE THE
COUNCIL OF THE CITY OF NEW ORLEANS**

| | | |
|--|---|----------------------------|
| IN RE: AN INQUIRY AND FACT |) | |
| FINDING INTO ENTERGY NEW |) | |
| ORLEANS, INC. AND ENTERGY |) | |
| LOUISIANA, LLC'S POST-HURRICANE |) | DOCKET NO. UD-17-04 |
| ISAAC RESPONSE AND STORM |) | |
| RECOVERY MATTERS |) | |

**ENTERGY NEW ORLEANS, INC.'S RELIABILITY PLAN
SUBMITTED PURSUANT TO COUNCIL RESOLUTION R-17-427**

Entergy New Orleans, Inc. (“ENO” or the “Company”) respectfully submits this Reliability Plan pursuant to Council Resolution R-17-427 (the “Resolution”). Pursuant to that Resolution, on September 11, 2017, the Council Advisors filed an initial report setting forth the Technical Advisors’ Review of Entergy New Orleans, Inc.’s Outages and Reliability Performance. Ordering Paragraph 4 of that Resolution requires ENO to provide the Council, within 60 days of the Advisors’ initial analysis, ENO’s “formal plans, budgets, schedules for improving the reliability performance of its distribution system, and recommended SAIFI and SAIDI standards to measure the reliability performance of its distribution system for monitoring and evaluation by the Council and its Technical Advisors.” This Reliability Plan is being submitted to fulfill the requirements of Ordering Paragraph 4. As part of this filing, ENO requests the opportunity to convene a technical conference for the purpose of discussing the SAIFI and SAIDI targets at issue herein.

I. Overview

ENO’s Reliability Plan consists of six major reliability-focused programs: the FOCUS Program, the Backbone Program, the Internal Program, the Pole Program, the Equipment

Inspection Program, and the URD/Cable Renewal Program. Each of these programs is described in more detail below, including details relating to the budgeted amounts for each program for 2017 and 2018, and the specific feeders targeted for reliability work.

It should be noted that the budgeted dollars for these programs do not include the \$30 million dollars that have been budgeted for Storm Hardening initiatives and which initiatives are also expected to provide reliability benefits as well as hardening facilities to improve performance during storms. Additionally, it should be noted that ENO spent approximately \$10 million in the latter half of 2016 (in addition to originally budgeted amounts for that year) to perform a “reliability blitz” to improve distribution reliability. The reliability work performed during that timeframe has begun to show improved reliability on the circuits where the work was performed.

II. FOCUS Program

The FOCUS Program uses outage data over the prior 2 year period and a jurisdictional algorithm to identify devices (*e.g.*, breakers, reclosers, line fuses, sectionalizers) and then prioritizes them on a quarterly basis based on the number of customer interruptions per circuit associated with those devices. The intent of the Program is to improve the reliability performance of FOCUS-identified devices, as well as to improve the overall distribution system by addressing specific outage causes through a focused inspection and mitigation program.

ENO’s FOCUS Program will consist of addressing and repairing equipment that has the potential of impacting a line segment’s performance and may include the following:

- Installation of animal guards and/or protective covers to mitigate animal outages;
- Replacement of cross-arms, insulators, conductors, arrestors, switches and other equipment;
- Vegetation mitigation impacting the segment performance;

- Shielding, installation, or relocation of lightning arrestors, removing grounds from metal brackets in the primary zone, and/or the installation of ground rods to improve Basic Insulation Level (“BIL”);
- Protective device coordination review is performed.

The specific devices that have been targeted in the FOCUS Program in 2017, the customers affected, and the status of those projects for the specified Feeders are reflected in the Table below. Budgeted spending on the 2017 FOCUS Program is \$1.2 million.

| Network | Substation | Feeder | Cust | Device Type | Project Status |
|--------------|-----------------|--------|------|-------------|----------------|
| Orleans | MARKET | 2142 | 1531 | SBKR | COMPLETE |
| East Orleans | ALMONASTER | 613 | 1105 | RCLR | COMPLETE |
| East Orleans | SHERWOOD FOREST | 1612 | 236 | RCLR | COMPLETE |
| East Orleans | ALMONASTER | 622 | 1115 | RCLR | COMPLETE |
| Orleans | SOUTHPORT | B0527 | 909 | RCLR | COMPLETE |

Device Types: (1) SBKR = Substation Breaker; and (2) RCLR = Recloser.

The specific devices that have been targeted in the FOCUS Program for 2018 (along with corresponding customer counts) are reflected in the Table below. The currently projected budget for the 2018 FOCUS Program is \$1.33 million.

| Network | Substation | Feeder | AVG CUSTS | Device Type |
|--------------|--------------------|--------|-----------|-------------|
| East Orleans | CURRAN | 2215 | 359 | LFUS |
| Orleans | ALMONASTER | 614 | 476 | LFUS |
| Orleans | NAPOLEON | 1915 | 1569 | SBKR |
| Orleans | NAPOLEON | 1914 | 1039 | RCLR |
| Orleans | JOLIET | 2026 | 198 | LFUS |
| Orleans | DERBIGNY | 1553 | 266 | LFUS |
| Orleans | PAUGER | 1705 | 218 | LFUS |
| East Orleans | SHERWOOD FOREST | 1612 | 714 | SBKR |
| Orleans | NAPOLEON | 1914 | 1517 | SBKR |
| Orleans | JOLIET | 2015 | 161 | LFUS |
| Orleans | JOLIET | 2016 | 192 | LFUS |
| Orleans | PAUGER | 1705 | 190 | LFUS |
| Orleans | JOLIET | 2013 | 182 | LFUS |
| East Orleans | ALMONASTER | 623 | 118 | LFUS |
| East Orleans | CURRAN | 2211 | 166 | LFUS |
| Orleans | NAPOLEON | 1916 | 1391 | SBKR |
| Orleans | ALMONASTER | 627 | 196 | LFUS |
| Orleans | NAPOLEON | 1921 | 142 | LFUS |
| East Orleans | CURRAN | 2212 | 125 | LFUS |
| Orleans | MARKET | 2147 | 125 | LFUS |
| Orleans | PONTCHARTRAIN PARK | 512 | 119 | LFUS |
| Orleans | NAPOLEON | 1915 | 364 | RCLR |
| Orleans | ALMONASTER | 615 | 112 | LFUS |
| Orleans | JOLIET | 2026 | 61 | LFUS |
| Orleans | NAPOLEON | 1916 | 141 | LFUS |
| Orleans | NAPOLEON | 1914 | 105 | LFUS |

Device Types: (1) SBKR = Service Breaker; (2) RCLR = Recloser; (3) LFUS = Line Fuse.

III. Backbone Program

The Backbone Program is a proactive infrastructure program designed to inspect and address only the portion of the circuit that has the largest potential for customer impact. This generally limits the inspection to a walk-down from the substation breaker up to and including the first protective device that has the responsibility of isolating the remainder of the circuit. The intent of the Backbone Program is to inspect a predetermined number of multi-customer feeders within a defined territory each year.

The Program will consist of repairing or replacing equipment identified through an inspection process on a cyclical basis with the intent to eliminate and prevent breaker outages. The Backbone Program will typically consist of inspections including infrared cameras, removals, and/or replacement-in-kind, including the following examples:

- Installation of animal guards and/or protective covers to mitigate animal outages;

- Replacement of cross-arms, insulators, conductors, arrestors, switches and other equipment;
- Vegetation mitigation impacting the segment performance;
- Shielding, installation or relocation of lightning arrestors, removing grounds from metal brackets in the primary zone, and/or the installation of ground rods to improve the BIL.

The specific Backbone Circuits that were worked on in 2017, with corresponding customer counts, device types, and project status, are detailed below. The 2017 budget for Backbone Program spending is \$1.23 million.

| Network | Substation | Feeder | Cust | Device Type | Project Status |
|--------------|------------|--------|------|-------------|----------------|
| East Orleans | ALMONASTER | 627 | 1831 | SBKR | COMPLETE |
| East Orleans | ALMONASTER | 613 | 1717 | SBKR | COMPLETE |
| East Orleans | CURRAN | 2216 | 1652 | SBKR | COMPLETE |
| East Orleans | ALMONASTER | 622 | 1557 | SBKR | COMPLETE |

Device Type: SBKR = Substation Breaker.

The specific Backbone Circuits that have been targeted for work in 2018 are detailed below. The projected 2018 budget for Backbone Program spending is \$1.38 million.

| Network | Substation | Feeder | Cust | Device Type |
|--------------|-----------------|--------|------|-------------|
| Orleans | MARKET | 2132 | 2212 | SBKR |
| Orleans | JOLIET | 2016 | 2121 | SBKR |
| East Orleans | SHERWOOD FOREST | 1610 | 1056 | SBKR |
| Orleans | NAPOLEON | 1912 | 2049 | SBKR |
| Orleans | AVENUE C | 408 | 491 | SBKR |
| Orleans | MARKET | 2146 | 1759 | SBKR |
| Orleans | JOLIET | 2013 | 1682 | SBKR |
| Orleans | NAPOLEON | 1913 | 1639 | SBKR |
| East Orleans | SHERWOOD FOREST | 1604 | 1436 | SBKR |

Device Type: SBKR = Substation Breaker.

IV. Internal Program

The intent of the Internal Program is to address National Electric Safety Code (“NESC”) compliance-related projects, Entergy Service Standards compliance-related projects, and other projects that have not met reliability program criteria (excluding projects that arise due to load growth or that are associated with new or expanding customers). Internal Program projects are typically initiated by internal parties (*i.e.*, Region Manager, Operations Manager, Line Supervisors, and Design Managers).

ENO identified the following Internal Program projects in 2017:

- Hollygrove Infrastructure Improvement – This project was proactive work to address aging facilities (*e.g.*, primary crossarms) in the Hollygrove neighborhood of the Metro area;
- Underground Switchgear Replacement – This project involved proactive work to address aging and/or damaged switchgears that were showing signs of deterioration, often from animal intrusion. More specifically, aging or damaged live front switchgears were replaced with dead front switchgears in areas (such as along canal banks in eastern New Orleans) where we had known issues with rodents causing outages.
- Targeted P1 Infrastructure replacement – This project involves proactive work to address other any known reliability concerns identified throughout the year to prevent high customer count outages that could result from equipment failure.

The 2017 budget for Internal Program spending is \$1.42 million. The projected budget for 2018 is \$0.5 million.

V. Pole Program

The Pole Program is a cyclical proactive inspection and preventative maintenance program. The Program consists of a visual inspection of the complete structure, including the pole, cross-arms, insulators, etc., and full excavation where possible or sounding and selective boring when full excavation is not possible. The recommended actions depend on the findings of the inspection. Poles judged to be sound receive no further action. Those that have been identified as needing additional attention are either treated in the field or reinforced, depending on the condition of the pole. Those that are deemed beyond treatment or reinforcement are prioritized for replacement. ENO's designers are utilizing NESC 250C for replacement of new poles and the use of PoleForeman software to evaluate the pole class needed for extreme wind speed conditions. Based on poles analyzed so far, Pole Foreman has indicated the need to install more Class 1 poles (as opposed to Class 3 poles) based on the horizontal loading and NESC 250C enhanced wind speeds. ENO will attempt to install Class 1 poles where Pole Foreman recommends such a poles, however, there are instances in which existing foreign utilities in the ground hinder the space needed to install a Class 1 pole. ENO will work to identify all foreign utilities in the ground where a Class 1 pole is to be installed, but notes that a Class 3 pole may be installed due to construction constraints.

For 2017 and 2018, ENO's Pole Program has been and will be focused on addressing poles identified in OSMOSE pole inspections as needing repair or replacement, and on addressing joint use transfers. Joint use transfers are projects to provide additional clearances between the Company's facilities and joint use facilities, increase structure height or strength of poles containing joint use facilities, or transfer, purchase, or sell joint use facilities.

The Pole Program budget is \$1.30 million for 2017 and is projected to be \$1.46 million for 2018.

VI. Equipment Inspection Program

Through the Equipment Inspection Program, ENO performs an annual inspection of all reclosers greater than 100 amps, line capacitors, and regulators on the distribution line system. This Program also addresses and corrects any identified failures during inspection.

The 2017 budget for this Program is \$0.103 million and the projected 2018 budget is \$0.133 million.

VII. URD/Cable Renewal Program

The URD/Cable Renewal Program focuses on ensuring that cables meet a certain performance criteria as targeted for replacement done in both segment and half-loop projects.

The 2017 budget for this Program is \$.632 million and the projected 2018 budget is \$1.44 million.

VII. SAIFI and SAIDI Performance Measures

In considering the establishment of minimum SAIFI and SAIDI performance measures, it is important for the Council to consider the nature of ENO's urban service territory. For example, with regard to SAIDI, which is a measure of average outage duration, it is important to consider that the time it takes to resolve an outage includes all of the following actions: (1) mobilization to the area where the outage is occurring; (2) feeder inspection to identify any damage and root cause; (3) working with the Distribution Operations Center ("DOC") to perform any available field switching to isolate the feeder damage and to restore as many customer outages as possible; (4) safely navigating any traffic congestion and/or job site challenges; (5) following safety protocol to develop the plan to make repairs (Job Hazard Analysis and Scope of Work); (6) retrieval of any equipment and/or material if not already on site (*e.g.*, a new pole); (7) the act of safely making the necessary repairs; (8) following safety protocol to work with DOC to release any Clearances/Grounds; and finally, (9) working with DOC to carry out switching

orders to restore feeder to normal configuration, which may involve multiple crews navigating to and setting up at different switches from where the repairs were made. Operating in congested city conditions can adversely impact the time that it takes to carry out these restorative activities.

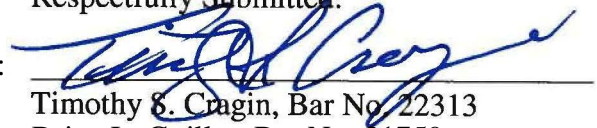
Also, it should be noted that the Advisors' Technical Report notes the number of ENO feeders that did not meet the Louisiana Public Service Commission-established SAIFI and SAIDI standards, however, the LPSC does not apply that standard on a feeder by feeder basis, but to the system as a whole. Although ENO works to improve the reliability of circuits that have experienced significantly higher than average customer interruptions, ENO believes that any SAIFI and SAIDI standards that are established by the Council should be based on a systemwide application rather than on a feeder by feeder basis.

At this time, ENO suggests that a distribution line SAIFI goal for 2018 of 1.587 and a distribution line SAIDI goal of 175.7 would be reasonable, based on historical SAIFI and SAIDI performance and the estimated impact of the reliability improvement programs described elsewhere in this document. The SAIDI goal incorporates the impact of traffic congestion and job site access challenges in ENO's urban service territory as discussed. ENO emphasizes that these are goals and that any minimum standards should be higher than these proposed goals. ENO suggests, however, that a technical conference be held prior to the Council imposing any minimum standard to have a candid discussion with stakeholders about the challenges and tradeoffs related to maintaining a reliable distribution system and to ensure that all parties understand the inherent limitations of SAIFI and SAIDI measures and the various issues that can cause a utility to experience periodic aberrations or abnormal temporary fluctuations in these measures. ENO further suggests that any Council imposition of SAIFI and SAIDI standards

provide a process that allows for explanations of extraordinary circumstances that may adversely affect ENO's ability to achieve any standard imposed.

Respectfully Submitted:

By:



Timothy S. Cragin, Bar No. 22313

Brian L. Guillot, Bar No. 31759

Harry M. Barton, Bar No. 29751

639 Loyola Avenue, Mail Unit L-ENT-26E

New Orleans, Louisiana 70113

Telephone: (504) 576-6571

Facsimile: (504) 576-5579

**ATTORNEYS FOR ENTERGY NEW
ORLEANS, INC.**

CERTIFICATE OF SERVICE

Docket No. UD-17-04

I hereby certify that I have served the required number of copies of the foregoing report upon all other known parties of this proceeding, by the following: electronic mail, facsimile, overnight mail, hand delivery, and/or United States Postal Service, postage prepaid.

Lora W. Johnson
Clerk of Council
Council of the City of New Orleans
City Hall, Room 1E09
1300 Perdido Street
New Orleans, LA 70112

Pearlina Thomas, Chief of Staff
W. Thomas Stratton, Jr., Director
Connolly Reed
Council Utilities Regulatory Office
City of New Orleans
City Hall, Room 6E07
1300 Perdido Street
New Orleans, LA 70112

David Gavlinski
Interim Council Chief of Staff
New Orleans City Council
City Hall, Room 1E06
1300 Perdido Street
New Orleans, LA 70112

Rebecca Dietz
Bobbie Mason
City Attorney Office
City Hall, Room 5th Floor
1300 Perdido Street
New Orleans, LA 70112

Beverly Gariepy
Department of Finance
City Hall, Room 3E06
1300 Perdido Street
New Orleans, LA 70112

Hon. Jeffery S. Gulin
3203 Bridle Ridge Lane
Lutherville, MD 21093

Clinton A. Vince, Esq.
Presley R. Reed, Jr., Esq.
Emma F. Hand, Esq.
Dentons US LLP
1900 K Street, NW
Washington, DC 20006

Basile J. Uddo, Esq.
J.A. "Jay" Beatmann, Jr.
c/o Dentons US LLP
The Poydras Center
650 Poydras Street, Suite 2850
New Orleans, LA 70130-6132

Walter J. Wilkerson, Esq.
Kelley Bazile
Wilkerson and Associates, PLC
The Poydras Center, Suite 1913
650 Poydras Street
New Orleans, LA 70130

Joseph A. Vumbaco, P.E.
Joseph W. Rogers
Philip J. Movish
Lauren Oliva
Legend Consulting Group
8055 East Tufts Avenue
Suite 1250
Denver, CO 80237-2835

Errol Smith, CPA
Bruno and Tervalon
4298 Elysian Fields Avenue
New Orleans, LA 70122

Timothy S. Cragin, Esq.
Harry M. Barton, Esq.
Entergy Services, Inc.
Mail Unit L-ENT-26E
639 Loyola Avenue
New Orleans, LA 70113

Joseph J. Romano, III
Suzanne Fontan
Therese Perrault
Danielle Burleigh
Entergy Services, Inc.
Mail Unit L-ENT-4C
639 Loyola Avenue
New Orleans, LA 70113

Jacob Rickoll
Tulane Canal Neighborhood Association
2301 Conti Street
New Orleans, LA 70119

Luke F. Piontek,
Judith Sulzer,
Roedel, Parsons, Koch, Blache, Balhoff &
McCollister
8440 Jefferson Highway, Suite 301
Baton Rouge, LA 70809

Monique Harden
Deep South Center for
Environmental Justice, Inc.
1631 Elysian Fields Avenue, #165
New Orleans, LA 70117

Gary E. Huntley
Entergy New Orleans, Inc.
Mail Unit L-MAG-505B
1600 Perdido Street
New Orleans, LA 70112

Seth Cureington
Polly S. Rosemond
Derek Mills
Entergy New Orleans, Inc.
Mail Unit L-MAG-505B
1600 Perdido Street
New Orleans, LA 70112

Keith Hardie
Maple Area Residents, Inc.
618 Audubon Street
New Orleans, LA 70118

David Dalia
609 Dumaine Street
New Orleans, LA 70116

Jamie Hill
Parkview Neighborhood Association
872 Taft Place
New Orleans, LA 70119

Julianna D. Padgett
Carrollton Riverbend Neighborhood
Association
935 Dante Street
New Orleans, LA 70118

Logan Atkinson Burke
Forest Wright
Sophie Zaken
Alliance for Affordable Energy
4035 Washington Avenue
New Orleans, LA 70125

Warrenetta C. Banks
Lower 9 Resilient
5130 Chartres Street
New Orleans, LA 70119

Arthur J. Johnson
Lower 9th Ward Center for Sustainable
Engagement and Development
6846 Lake Willow Drive
New Orleans, LA 70126

Dawn Hebert
6846 Lake Willow Dr.
New Orleans, LA. 70126

Emily K. Leitzinger
Mid-City Neighborhood Organization
4313 Palmyra Street
New Orleans, LA 70119

Abigail Sebton
Urban Conservancy Petition
1307 OC Haley Boulevard #307
New Orleans, LA 70113

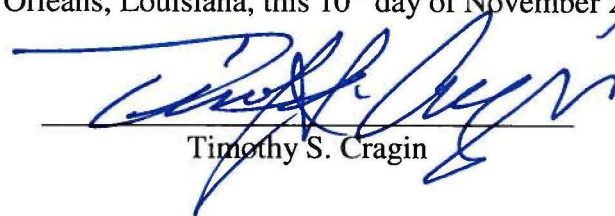
Eric J. Songy
Algiers Neighborhood Presidents Council
P.O. Box 740446
New Orleans, LA 70174

Denise T. Turbinton,
931 Mazant St.
New Orleans, LA 70117

Renate Heurich
350 Louisiana
1407 Napoleon Avenue #B
New Orleans, LA 70115

Jeffery Cantin
Gulf States Renewable Energy Industries
Association
400 Poydras, Suite 900
New Orleans, LA 70130

New Orleans, Louisiana, this 10th day of November 2017.



Timothy S. Cragin