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Barbara L. Casey Director - Regulatory Affairs

June 17, 2022

Via Electronic Delivery Ms. Lora W. Johnson, CMC, LMMC 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 Entergy New Orleans, LLC's ("ENO") 2022 Reliability Plan and First Quarter 2022 Reliability Plan Project Status Report through March 31, 2022, which is being submitted for filing in the above-referenced docket pursuant to Council Resolution R-18-98. As a result of the remote operations of the Council's office related to COVID-19, ENO submits this filing electronically and will submit the requisite original and number of hard copies once the Council resumes normal operations, or as you direct. ENO requests that you file this submission in accordance with Council regulations as modified for the present circumstances.

Thank you for your assistance with this matter.

Sincerely.

Barbara L. Casey

BLC\bkd

Enclosures

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

#### **BEFORE THE**

#### COUNCIL OF THE CITY OF NEW ORLEANS

<b>RESOLUTION DIRECTING</b>
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

DOCKET NO. UD-17-04

## ENTERGY NEW ORLEANS, LLC'S 2022 RELIABILITY PLAN

Entergy New Orleans, LLC ("ENO" or the "Company") respectfully submits its 2022 Reliability Plan ("2022 Plan"), which addresses ENO's strategy to continue to improve distribution system reliability and resilience throughout its service territory (the "Distribution Plan"). Additionally, the ENO Transmission Reliability Project spending for 2022 is provided in Attachment 3.

### I. ENO's 2022 Distribution Reliability Plan

#### A. **Baseline Reliability Programs**

ENO's 2022 Distribution Reliability Plan ("Distribution Plan") proposes a variety of programs and corresponding projects intended to improve the reliability and resilience of ENO's distribution system (i.e., distribution feeders and related distribution facilities). This year, ENO is increasing its distribution reliability-focused spend to more than \$40 million to build upon ENO's reliability progress in reducing customer interruptions. The increased investment includes projects targeting the French Quarter, Central Business District, and Superdome area. A more resilient system is expected to reduce damage during major storms resulting in faster recovery times for our customers. ENO's Distribution Plan set forth herein is projected to deliver next-generation reliability to customers.

The baseline reliability programs for 2022 are essentially the same as those previously described to the Council and a continuation of the 2021 Reliability Plan. A brief description of each of the baseline reliability programs is provided below with a breakdown of the 2022 baseline distribution reliability budget:

#### i. 100% Backbone and Lateral ("100% Lateral") Inspection Program

In 2019, ENO established the backbone and lateral inspection program which is designed to inspect the entire distribution grid, backbone and laterals on a five to eight-year cycle. We have inventoried the system and developed a plan to perform the initial inspection and repair over an eight-year cycle. Based on our findings thus far, we have adjusted the schedule to distribute the number of lines to be worked each year more evenly. ENO projects that after the initial eight-year cycle, we will be able to transition to a five-year cycle for ongoing maintenance.

To determine the order in which the feeders will be inspected and repaired, in 2021 we reranked by customer impact (number of customers affected [weighted 90%] and performance [weighted 10%]) of the 153 overhead feeders in the ENO system. We will continue to make minor adjustments to account for recent performance and to ensure coverage across the service area.

Set forth below is the currently planned overhead inspection schedule through 2026:

2019 - Completed 18 Feeders, 937 line fuses

- 2020 Completed 12 feeders, 392 line fuses
- 2021 Completed 7 feeders, 201 line fuses
- 2022 Planning 19 feeders, 760 line fuses
- 2023 Planning 21 feeders, 629 line fuses
- 2024 Planning 20 feeders, 666 line fuses
- 2025 Planning 23 feeders, 527 line fuses

2026 – Planning 28 feeders, 298 line fuses

See Attachment 1: Feeder Inspection Schedule for the schedule of feeders currently identified. Modifications to the schedule may be necessary from time to time to account for changes in line performance, city growth dynamics, or other circumstances, while ensuring that all feeders are inspected within the cycle.

The 100% Lateral inspections identify imminent failure (projected failure within six months) and P-1 (projected failure between six months and five years) vulnerabilities on the trunk (i.e., backbone) and laterals of each feeder. For each pole requiring work, the crew will adhere to the ENO's R1 reliability philosophy of bringing all facilities on the pole up to current standards. See Attachment 2: 100% Backbone and Lateral Inspection for a detailed description of the 100% Lateral inspection.

The 84 underground feeders are inspected annually through infrared inspection at the site where feeders are located either at a walk-in or switchgear location. As part of the inspections, we also apply termite or rat treatments as appropriate for the area.

ENO has budgeted to spend approximately \$16.3 million on these repairs and the Fix-it-Now ("FIN") crew this year as discussed below.

#### ii. Fix-it-Now (FIN) Crew

In 2018, ENO formed a Fix-It-Now (FIN) crew in addition to the Reliability Serviceman (RSM) for each network. It was identified that network crews were frequently being pulled off schedule by urgent requests and could not respond to reports of equipment at risk of imminent failure while still meeting customer commitments. The FIN program allows for a dedicated crew that can quickly change course and respond to imminent issues and requests without putting customer commitments at risk. In addition to the inspections identified elsewhere, the FIN crew

is charged with providing network support and responding to repair needs that cannot be worked into the network crews' two-week schedule. Some of these identified projects may be too large for the FIN crew to handle, so funding is allocated for contractor support to address the additional reliability projects identified by the RSMs, networks, and customer requests throughout the year.

#### iii. Pole Program

The Pole Program is a cyclical 10-year proactive inspection and preventative maintenance program of the estimated 95,000 poles in New Orleans. The program consists of a visual inspection of the complete infrastructure, including the pole, cross-arms, insulators, etc., and a 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.

Under contract with Osmose, ENO has performed inspections on 45.9% of the poles in the ENO system since 2017. In 2021, Osmose performed restorations on 47 of the Osmose-identified restorable poles, thus, returning the poles to their originally designed strength.

In 2022, the ENO plan is to have Osmose inspect approximately 15,167 poles and restore all identified restoration candidates by utilizing \$1.54 million of the total \$5.6 million pole budget.

#### iv. Sectionalization

#### 1. Distribution Automation ("DA") Program Acceleration

The DA Program Acceleration involves fast track installation of DA communications system to reap the benefits of increased sectionalization (when outages occur, they will affect fewer customers) in advance of implementation of full grid modernization in an area. More specifically, DA refers to a combination of devices and an integrated communication network that can take automatic action to reduce the impact of a fault on the distribution system. ENO is deploying DA devices as part of the Advanced Metering Infrastructure ("AMI") and Grid Modernization programs. ENO, also, plans to spend a portion of its dedicated reliability funding to accelerate deployment of those components of DA that will provide immediate reliability improvement.

Currently, there are over 200 DA recloser locations across ENO's service territory that are fully compatible with the new communication network being installed as part of grid modification. As the communication network is coming online, we are connecting those reclosers to the network. This allows the devices to be controlled remotely from the Distribution Operations Center ("DOC") in Baton Rouge and will be able to report the feeder status to the DOC to help quickly identify and reroute power to minimize the impact of an outage.

By adding sectionalizers and smart equipment to the network, ENO will be able to better isolate faults and reduce the impact of storms on our customers by splitting circuits into smaller segments, with fewer customers in each zone. ENO is estimating that customer interruptions avoided will be approximately one quarter of the number of customers on the feeder because it is statistically unknown which side of the new device the outage would occur on.

#### 2. Trip Saver

The 2022 Trip Saver Program targets the replacement of 34 identified lateral fuse switches that have experienced controllable customer interruptions meeting certain requirements with Trip Saver devices. These devices are designed to convert outages that have historically required field visits for manual restoration into momentary outages where customers experience nearly instantaneous restoration.

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The 2022 Distribution Reliability Plan includes a budget of \$1.3 million for the Sectionalization Program.

#### v. FOCUS Program

The FOCUS program represents a systematic approach to identifying devices resulting in repeat outages and addressing all issues on that section of the feeder. It uses outage data over the prior two-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.

Once a device is identified, an inspection is performed to identify failing components, deficiencies and issues that are potentially contributing factors to the device's poor performance. These devices are inspected on a point-by-point basis with the findings used to create a remediation plan. The type of work typically performed by this program includes:

- Installation of animal guards and/or protective covers to mitigate animal outages;
- Replacement of defective or damaged equipment such as cross-arms, insulators, conductors, and switches;
- Vegetation mitigation;
- Improvement of Basic Insulation Level ("BIL") by removing bare ground wire located in the primary zone and installing Hendrix insulated grounds wire where existing shielded construction requires an electrical ground connection; and
- Review and correction as needed of protective device coordination.

For 2022, ENO plans to allocate a low percentage of the total reliability budget on FOCUS projects because larger improvements are seen for more customers by prioritizing the 100% Lateral projects. ENO will ensure appropriate cost-benefit justification using a stage gate process, with cost-benefit review following inspection, and a design in alignment with the Quanta recommendation of a \$100 limit per customer interruption. The Focus Program has a 2022 budget of \$790,000.

#### vi. Underground Network Inspection, Maintenance and Cable Renewal Program

The ENO service territory has several areas with extensive underground facilities that are aging and in need of renewal, including New Orleans East, the Lakefront, and the Central Business District. ENO engineering has identified sections of cable that have multiple splice repairs which challenge the reliability of the cable. The projects are being prioritized based on the number of splices and number of customers that would be affected if the cable were to fail again. The combined Underground Programs have a 2022 budget of \$3.4 million.

#### vii. Equipment Inspection Program

The Equipment Inspection Program involves the annual inspection of all capacitor banks and reclosers to ensure timely repair of equipment needed to support the grid and has a 2022 budget of \$595,000.

#### viii. Internal Program

The Internal Program involves addressing National Electric Safety Code ("NESC") compliance-related projects and Entergy Service Standards compliance-related projects. Additionally, projects removing idle or redundant facilities, addressing secondary voltage issues, and other upgrades not associated with another program are covered within the Internal Program. The 2022 budget for the Internal Program is \$2.4 million.

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#### ix. Vegetation Management

Consists of two elements: (1) a cycle-based proactive approach that uses a combination of both conventional side trimming and herbicides; and (2) a reactive, customer-driven component that involves investigating potential problem areas that are identified by Company personnel and/or the public and determining a course of action to alleviate the problem. ENO is currently working a 1½ year trimming cycle. Vegetation funding is in addition to the proposed reliability spending.

#### B. Emergent Reliability Programs

The majority of ENO's reliability programs prioritize spending by dollar per customer interruption avoided. This method, however, is not optimal for service areas where the customer count, based on electric meter accounts, is low but the number of people that would be affected in the area is high or high profile. The largest of these areas are the Central Business District and French Quarter.

#### i. CBD Mesh Network Action Plan

The underground electrical system in the CBD dates to the 1930's and has served us well for nearly 90 years. The system is set up as a network where a single equipment failure does not cause an outage; instead, the fault is isolated and load is rerouted, so no customers lose electricity. When a part of the CBD does experience an outage, it is typically the result of emergency switching to de-energize the mesh network to extinguish an equipment fire. The grid must then be carefully restarted, which currently involves personnel manually operating equipment at multiple locations.

Following the April 24, 2021 fire in the Notre Dame grid, ENO reevaluated the plan and timeline for refurbishing the CBD network. For 2022, we expect to spend \$6.6 million on this initiative.

#### 1. Upgraded Inspection Program

During future inspections, infrared thermography will be used to identify hot-spot issues within the primary terminal chambers of the transformers. The inspection program has been updated to include identifying the age of unit, grounding chamber connections, and mesh network locations. This process modification will mitigate fire potential in areas where the secondary mesh conductors are routed above the network transformer. Additionally, we will install fire protection around exposed sets of secondary mesh network cables that pose a risk of fire damage. Installation of fire protection is scheduled to be completed by 2041 to coincide with the completion of the transformer replacement program.

#### 2. Oil Sampling to Detect Water Intrusion

On April 24, 2021, ENO experienced a fire in one of its transformers located in the CBD, resulting from water intrusion into the primary terminal chamber. In response to this incident, ENO developed a 5 to 7-year plan, which it implemented in 2021, to perform oil samplings and identify transformers with similar primary termination chambers in need of repair or replacement. After additional research, however, the oil sampling process was determined to be a safety risk and will no longer be implemented. ENO, instead, will include inspection updates under the upgraded inspection program highlighted above.

#### 3. Transformer Repair and Replacement

Based on the results of the upgraded inspection program, ENO will prioritize the repair or replacement of transformers with similar style of primary termination chambers at risk of fire. With an estimated 210 transformers to replace, it is expected this will take 15 - 20 years. The program started August 1, 2021 and will continue through 2041. The schedule is to replace 10 -

20 transformers per year dependent on resources. This will require five people dedicated four days per week to accomplish. In 2021, we replaced 12 transformers.

#### ii. French Quarter Joint Utility Reconstruction Projects

ENO is continuing to invest in upgrading our underground facilities in the French Quarter in coordination with the Sewage & Water Board and Public Works. As each of the water line and drainage replacement projects result in street excavation, we are taking advantage of the opportunity to upgrade our duct banks to continue providing reliable service to the French Quarter. The 2022 baseline budget includes \$1.7 million for this work and additional funding will be provided from other non-reliability spend categories as needed.

## II. <u>Conclusion</u>

ENO has made significant strides in reliability in the last few years and will continue to work to improve its reliability to customers through the programs described above and the projects identified in the attached.

	2022 100% Lateral Overhead Inspection List													
								mers						
				Rank										
REGION	LOCAL OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	# of	# of	% of OH	% of UG	2021	2021
									CUSTs	LFUS			CI's	SAIFI
Metro (LA)	Orleans	MIDTOWN	911	1	0	0	1	0	2166	39	98%	2%	388	0.18
ELI-Southeast (LA)	East Orleans	ALMONASTER	622	0	0	0	1	1	1960	48	99%	1%	660	0.34
Metro (LA)	Algiers	HOLIDAY - LA	W0725	0	1	0	5	21	1788	57	62%	38%	398	0.22
Metro (LA)	East Orleans	CURRAN	2213						1611	1	1%	99%	1782	1.11
Metro (LA)	Orleans	DERBIGNY	1553	1	0	0	1	0	1332	44	78%	22%	2732	2.05
ELI-Southeast (LA)	East Orleans	PONTCHARTRAIN PARK	512	0	0	0	0	0	1145	31	97%	3%	298	0.26
ELI-Southeast (LA)	Orleans	AVENUE C	410	0	0	0	1	0	1108	25	99%	1%	225	0.2
Metro (LA)	Algiers	LOWER COAST	W1715	0	1	1	5	6	928	125	53%	47%	119	0.13
Metro (LA)	East Orleans	PATERSON	1002	1	0	0	4	3	500	30	85%	15%	1030	2.06
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	508	0	0	2	3	1	526	35	81%	19%	287	0.55
Metro (LA)	Orleans	PAUGER	1713	0	0	0	0	0	75	2	61%	39%		
Metro (LA)	Orleans	DERBIGNY	1504	1	2	0	0	0	32	5	20%	80%	1	0.03
Metro (LA)	Orleans	MIDTOWN	912	0	1	0	0	0	2087	44	97.78%	2.22%	973	0.47
Metro (LA)	Orleans	MIDTOWN	903	2	2	0	1	0	1948	45	98.25%	1.75%	3093	1.59
Metro (LA)	Orleans	MIDTOWN	907	1	1	0	1	0	2436	48	98.28%	1.72%	885	0.36
Metro (LA)	Orleans	DERBIGNY	1512	0	1	3	0	0	2938	52	87.50%	12.50%	9514	3.24
Metro (LA)	Orleans	NAPOLEON	1925	0	0	0	0	0	2291	34	96.12%	3.88%	307	0.13
Metro (LA)	Orleans	JOLIET	2016	0	0	0	1	0	1976	32	96.30%	3.70%	378	0.19
Metro (LA)	Orleans	JOLIET	2027	0	0	0	0	0	2032	63	98.11%	1.89%	194	0.1

# Attachment 1: Feeder Inspection Schedule

	2023 100% Lateral Overhead Inspection List													
				# Priority Customers Rank										
REGION	LOCAL OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	# of CUSTs	# of LFUS	% of OH	% of UG	2021 Cl's	2021 SAIFI
Metro (LA)	East Orleans	ALMONASTER	627	0	0	0	1	0	1933	28	99%	1%	925	0.48
Metro (LA)	Orleans	PAUGER	1712	0	1	0	1	0	1797	20	95%	5%	1431	0.8
ELI-Southeast (LA)	East Orleans	CURRAN	2223	0	1	0	0	0	1698	47	53%	47%	801	0.47
ELI-Southeast (LA)	Orleans	NAPOLEON	1927	0	1	0	0	1	1337	32	82%	18%	1734	1.3
Metro (LA)	Orleans	JOLIET	2025	0	0	5	0	0	943	33	92%	8%	1193	1.27
Metro (LA)	East Orleans	SHERWOOD FOREST	1609						805	2	1%	99%	1909	2.37
ELI-Southeast (LA)	Orleans	AVENUE C	400	1	0	0	0	0	321	8	88%	12%	274	0.85
Metro (LA)	East Orleans	CURRAN	2211						1885	2	0%	100%	4821	2.56
Metro (LA)	East Orleans	ALMONASTER	613	0	0	0	0	0	1763	44	98%	2%	2950	1.67
Metro (LA)	Orleans	NAPOLEON	1923	0	1	0	1	0	1865	31	96%	4%	4095	2.2
Metro (LA)	Orleans	DERBIGNY	1554	0	0	2	0	0	1501	36	98%	2%	4607	3.07
Metro (LA)	Orleans	PAUGER	1710	0	0	0	0	0	2098	34	98%	2%	685	0.33
Metro (LA)	East Orleans	SHERWOOD FOREST	1607	0	0	1	3	1	1974	46	71%	29%	491	0.25
Metro (LA)	Orleans	MIDTOWN	904	0	0	0	1	0	2047	56	94%	6%	395	0.19
Metro (LA)	Orleans	JOLIET	2015	0	1	0	0	0	1517	22	98%	2%	5136	3.39
Metro (LA)	Orleans	NAPOLEON	1921	0	0	0	0	0	1704	30	95%	5%	911	0.53
Metro (LA)	Orleans	MARKET	2137	0	0	1	0	0	1851	42	83%	17%	586	0.32
Metro (LA)	Orleans	PAUGER	1702	0	0	0	0	0	1506	41	98%	2%	3602	2.39
Metro (LA)	Orleans	NAPOLEON	1913	0	0	0	0	0	1618	27	92%	8%	2657	1.64
Metro (LA)	Orleans	MARKET	2146	0	0	0	0	0	1903	26	98%	2%	71	0.04
Metro (LA)	Orleans	NAPOLEON	1914	0	0	0	0	0	1653	22	95%	5%	2318	1.4

	2024 100% Lateral Overhead Inspection List													
					Priori	ty Cus Rank	tome							
REGION	LOCAL OFFICE	SUBSTATION	FEEDER	0	1	2	ß	4	# of CUSTs	# of LFUS	% of OH	% of UG	2021 Cl's	2021 SAIFI
Metro (LA)	Orleans	NAPOLEON	1917	0	1	0	1	0	1811	45	97%	3%	788	0.44
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	503	0	0	0	0	0	1543	32	77%	23%	1610	1.04
Metro (LA)	East Orleans	CURRAN	2217	0	0	0	2	0	1772	44	28%	72%	654	0.37
Metro (LA)	Orleans	NAPOLEON	1922	0	1	1	0	0	1752	33	97%	3%	447	0.26
Metro (LA)	East Orleans	SHERWOOD FOREST	1601	0	0	1	2	0	1286	38	57%	43%	3397	2.64
Metro (LA)	East Orleans	PATERSON	1001	0	0	0	1	0	1672	47	78%	22%	223	0.13
Metro (LA)	Orleans	PAUGER	1711	0	0	0	0	0	1487	51	88%	12%	1791	1.2
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	506	0	0	0	0	0	1206	31	98%	2%	3534	2.93
Metro (LA)	Orleans	AVENUE C	409	0	0	0	1	0	1559	31	85%	15%	199	0.13
ELI-Southeast (LA)	East Orleans	SHERWOOD FOREST	1604	0	0	0	0	0	1433	37	89%	11%	280	0.2
Metro (LA)	Orleans	JOLIET	2021	0	0	0	0	0	1236	37	86%	14%	1447	1.17
ELI-Southeast (LA)	Orleans	MARKET	2142	0	0	0	0	0	1273	23	70%	30%	2	0
ELI-Southeast (LA)	Orleans	AVENUE C	406	0	0	0	0	0	761	12	60%	40%	31	0.04
Metro (LA)	East Orleans	PATERSON	1010	0	0	1	4	2	1058	29	58%	42%	1546	1.46
Metro (LA)	Orleans	AVENUE C	411	0	0	0	0	0	967	17	96%	4%	1957	2.02
Metro (LA)	East Orleans	SHERWOOD FOREST	1611	0	0	0	0	0	1049	33	87%	13%	1313	1.25
Metro (LA)	Orleans	AVENUE C	407	2	0	0	0	0	1138	31	85%	15%	203	0.18
Metro (LA)	Orleans	PAUGER	1708	0	0	1	0	0	928	21	90%	10%	1066	1.15
Metro (LA)	Orleans	JOLIET	2017	0	0	0	0	0	1027	40	95%	5%	499	0.49
Metro (LA)	Algiers	HOLIDAY - LA	W0712	0	0	0	0	9	1029	34	67%	33%	265	0.26

	2025 100% Lateral Overhead Inspection List # Priority Customers													
				1										
						Rank								
REGION	LOCAL OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	# of CUSTs	# of LFUS	% of OH	% of UG	2021 CI's	2021 SAIFI
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	510	1	0	0	0	0	1091	23	75%	25%	44	0.04
Metro (LA)	Algiers	HOLIDAY - LA	W0722	0	0	0	1	1	1065	17	84%	16%	129	0.12
Metro (LA)	East Orleans	ALMONASTER	621	0	0	0	0	1	1070	35	95%	5%	69	0.06
Metro (LA)	East Orleans	SHERWOOD FOREST	1610	0	0	0	0	0	1009	15	24%	76%	578	0.57
Metro (LA)	Orleans	AVENUE C	408	0	0	0	0	0	893	19	96%	4%	944	1.06
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	505	0	0	0	0	0	828	14	54%	46%	846	1.02
Metro (LA)	Orleans CBD	NOTRE DAME	1826	0	1	0	0	0	638	4	32%	68%	2531	3.97
Metro (LA)	East Orleans	ALMONASTER	617	0	0	0	0	1	749	25	96%	4%	738	0.99
ELI-Southeast (LA)	Orleans	AVENUE C	402	0	1	0	0	0	480	3	38%	62%	3840	8
Metro (LA)	East Orleans	GULF OUTLET	1204	0	1	0	1	1	720	64	81%	19%	1339	1.86
Metro (LA)	East Orleans	SHERWOOD FOREST	1612	0	1	0	2	0	771	50	96%	4%	861	1.12
Metro (LA)	East Orleans	ALMONASTER	626	0	0	0	1	1	776	51	58%	42%	407	0.52
Metro (LA)	Orleans	NAPOLEON	1912	0	0	0	0	0	824	20	95%	5%	33	0.04
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	501	0	0	0	1	1	715	26	88%	12%	955	1.34
	Orleans	SOUTHPORT	B0526	0	1	0	1	0	771	33			13	0.02
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	502	0	0	0	0	0	668	20	98%	2%	701	1.05
Metro (LA)	Orleans	AVENUE C	401	0	0	0	0	0	568	4	25%	75%	1559	2.74
Metro (LA)	Orleans	AVENUE C	413	0	2	0	1	0	601	19	97%	3%	1235	2.05
Metro (LA)	Orleans	NAPOLEON	1911	0	0	0	0	1	624	11	89%	11%	579	0.93
	East Orleans	TRICOU	2325	0	0	1	0	0	634	33	98%	2%	813	1.28
Metro (LA)	Algiers	HOLIDAY - LA	W0726	0	0	0	0	9	452	13	94%	6%	2125	4.7
Metro (LA)	Algiers	HOLIDAY - LA	W0723	0	0	0	0	3	654	15	87%	13%	294	0.45
ELI-Southeast (LA)	East Orleans	SHERWOOD FOREST	1605	0	0	0	2	0	482	13	10%	90%	1360	2.82

2026 100% Lateral Overhead Inspection List														
				# P	Priorit	:y Cus Rank	stome	ers						
REGION	LOCAL OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	# of CUSTs	# of LFUS	% of OH	% of UG	2021 Cl's	2021 SAIFI
ELI-Southeast (LA)	Orleans	AVENUE C	403	0	0	0	0	0	634	11	97%	3%	105	0.17
Metro (LA)	Orleans	AVENUE C	404	0	0	0	0	0	449	10	51%	49%	1575	3.51
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	509	0	0	0	0	0	578	17	64%	36%	292	0.51
Metro (LA)	East Orleans	TRICOU	2345	0	0	1	4	1	600	36	89%	11%	37	0.06
Metro (LA)	Orleans	JOLIET	2022	2	0	0	1	0	560	9	91%	9%	78	0.14
ELI-Southeast (LA)	Orleans	AVENUE C	405	1	0	0	0	0	526	18	94%	6%	32	0.06
Metro (LA)	East Orleans	ALMONASTER	625	0	0	0	0	0	325	9	89%	11%	1470	4.52
Metro (LA)	Orleans	JOLIET	2024	1	0	0	0	0	416	13	79%	21%	14	0.03
Metro (LA)	Orleans	JOLIET	2011	0	0	0	0	0	361	16	92%	8%	792	2.19
Metro (LA)	Algiers	HOLIDAY - LA	W0714	0	1	0	1	2	421	24	41%	59%	23	0.05
Metro (LA)	Orleans	SOUTHPORT	B0525	0	0	0	0	0	231	3			284	1.23
Metro (LA)	East Orleans	ALMONASTER	612	0	1	0	1	1	130	13	82%	18%	407	3.13
Metro (LA)	East Orleans	ALMONASTER	616	0	0	0	1	2	171	24	83%	17%	11	0.06
Metro (LA)	Orleans	AVENUE C	412	1	0	0	0	0	142	3	71%	29%	183	1.29
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	513	0	0	0	0	0	100	10	67%	33%	198	1.98
Metro (LA)	East Orleans	GULF OUTLET	1202	0	1	0	0	0	91	14	99%	1%	254	2.79
Metro (LA)	East Orleans	SHERWOOD FOREST	1608	0	0	0	1	0	61	13	91%	9%	59	0.97
Metro (LA)	Orleans	PAUGER	1701	0	0	0	0	0	75	4	87%	13%	11	0.15
Metro (LA)	East Orleans	GULF OUTLET	1203	0	0	2	3	0	48	22	95%	5%	4	0.08
Metro (LA)	Orleans	MIDTOWN	902	0	0	0	0	0	41	1	100%	0%		
Metro (LA)	Orleans	DERBIGNY	1543	0	2	0	0	0	33	4	13%	87%	53	1.61
Metro (LA)	Orleans	DERBIGNY	1510	0	0	0	0	0	24	7	20%	80%	56	2.33
Metro (LA)	Orleans	DERBIGNY	1506	0	0	1	0	0	23	6	60%	40%	21	0.91
Metro (LA)	East Orleans	PATERSON	1009	0	0	0	0	0	24	5	86%	14%	7	0.29
Metro (LA)	Orleans	DERBIGNY	1551	0	1	0	0	0	16	3	4%	96%		
Metro (LA)	Orleans	DERBIGNY	1511	0	1	0	0	0	14	1	70%	30%		

Metro (LA)	Orleans	DERBIGNY	1541	0	1	1	0	0	13		33%	67%	3	0.23
Metro (LA)	East Orleans	PONTCHARTRAIN PARK	507	0	0	0	0	1	6	2	73%	27%		

## **Attachment 2: 100% Backbone and Lateral Inspection**

100% Inspections are focused on preventing imminent or other near-term outages. Under this view, we are looking for two categories of issues:

- Imminent failure: Equipment projected to fail in less than six months
- Priority-1 (P-1): Equipment projected to fail from 6 months to 5 years

Issues identified as imminent failure will be directed to the ENO FIN crew to work as soon as possible. Those identified as P-1 will be sent to engineering to be designed and constructed by the contract crews within a designated timeframe.

- 100% Inspection Criteria triggering the need for Point repair:
- Condition of Cross-arms:
  - Broken, bowing, split cross-arms
  - Pin insulator is bent over (indicating rotten arm)
  - Broken or rotten brace
  - Broken Wilson rack replace with standoff bracket or spools (does not trigger full R1)
- Condition of Insulator:
  - Flashed, broken, cracked, glazing missing
- Bayonet condition:
  - Bowing
  - Type of bracket holding shield wire
  - Indication of rot
- Line arrestor (on feeder)
- Automatic sleeves (will be sent to FIN crew for imminent repair, will not trigger R1)
- Steel arms with bare jumpers (track, but will not trigger R1)
- Infrared inspection of all connection points (switches, jumpers, etc)

Not in scope (those items not in accordance with ENO standards but less likely to cause an

outage):

- Lack of Hendrix ground
- Lack of proper guy strain insulator
- Missing pole ground
- Corner box pole in acceptable condition

When an imminent failure or P-1 issue is identified, we will address all issues on the pole bringing it our R1 standard. This includes:

- Repairing all damaged cross-arms
- Installing Hendrix ground to improve lightning mitigation
- Replacing damaged insulators
- Replacing damaged bayonet if pole is in acceptable condition or replacing pole as needed
- Installing animal mitigation

## Attachment 3: 2022 Transmission Reliability Project Status Updates

WO #s	Substation	Project Status	Work Description	Construction Start Date	EST ISD	Estimated 2022 Project Cost
C6PPGR0290	DERBIGNY	In Progress	RTU Renewal SCADA WESTRONIC	4/18/2022	5/12/2022	\$ 125,400
C6PPGR0214	DELTA	In Progress	Upgrade SCADA RTU	5/1/2022	5/26/2022	\$ 125,400
C6PPBU1678	AVENUE C	In Progress	Replace T4	4/11/2022	5/31/2022	\$ 1,683,686
C6PPGR0300	SHERWOOD FOREST	In Progress	BREAKER REPLACEMENT - 1611-2	6/20/2022	6/30/2022	\$ 244,200
C6PPGR0301	SHERWOOD FOREST	In Progress	BREAKER REPELACEMENT - 1603-2	7/5/2022	7/8/2022	\$ 244,200
C6PPBU1679	AVENUE C	In Progress	RTU - SCADA - WESTRONIC	7/1/2022	7/31/2022	\$ 125,400
C6PPGR0142	DERBIGNY	In Progress	Replace OCB Main Breaker 15T2-6 and Disconnec	7/1/2022	7/31/2022	\$ 290,400
C6PPGR0158	DERBIGNY	In Progress	Replace 24kV OCB 1509-2	7/1/2022	7/31/2022	\$ 290,400
C6PPGR0291	GENTILLY	In Progress	RTU - SCADA - WESTRONIC	8/7/2022	8/26/2022	\$ 125,400
C6PPGR0283	CLAIBORNE	In Progress	Replacement & Relocation of Battery Set System	9/14/2022	10/15/2022	\$ 43,560
C6PPGR0302	TRICOU	In Progress	Transformer Life Extension T4	10/3/2022	10/28/2022	\$ 561,000
C6PPBU1549	AVENUE C	In Progress	Replace T2 (with a 115-13.8kV 40MVA LTC)	10/1/2022	10/31/2022	\$ 1,096,920
C6PPGR0143	LOWER COAST	In Progress	T2 (Life extension-add oil filtration, complete reb	10/3/2022	11/10/2022	\$ 792,000
F1PPU75782	Upgrade Ave C - Paris Tap line	In Construction	Upgrade TLine and switches and bus work at Ave	3/1/2022	6/1/2022	\$ 1,562,928
F1PPU51353	Lower Coast 230kV- Add Breaker	In Construction	Install high side breakers	9/1/2021	6/1/2022	\$ 2,200,793
F1PPU51248	Curran 230kV- Add Breaker	In Construction	Install high side breakers	11/1/2021	6/1/2024	\$ 5,393,774
F1PPU75943	Norfolk TLine ROW	In Progress	TLine ROW cost	N/A	12/31/2022	\$ 2,794,198
F1PPU75835	Sherwood Forrest	In Scoping	Install high side breakers	TBD	12/1/2024	\$ 629,305
F1PPU76016	ENO Eriver Crossing Resiliency Upgrades	In Scoping	Tower Analysis and Hardening	TBD	6/1/2024	\$ 198,861

### ENTERGY NEW ORLEANS, LLC'S RELIABILITY PROJECT STATUS REPORT AS OF MARCH 31, 2022

Entergy New Orleans, LLC ("ENO") respectfully submits this Reliability Project Status Report, based on the level of spending, to provide the Council with an update through March 31, 2022 on progress regarding ENO's 2022 Reliability Plan.

Although 2022 has brought multiple challenges to ENO's reliability work, we are continuing to make progress on our 100% backbone and lateral inspection and repair program. During the first quarter we have responded to mutual assistance requests in the northeast during January, local winter storms impacted Entergy Operating Companies in February, and unstable weather patterns resulted in increased severe rainstorms within the New Orleans metropolitan area during the month of March, including the EF3 tornado which significantly impacted Arabi and the Lower Ninth Ward. These challenges have directly impacted ENO's resources as the company had to redirect funding to support storm restoration efforts throughout the first quarter, including the disastrous effects from the EF3 tornado that impacted Arabi and the Lower Ninth Ward of New Orleans.

At this time of the 19 feeders planned for 2022, including the 6 carried over from 2021: one (1) has been completed, four (4) are in construction, twelve (12) are in design and two (2) remain incomplete.

Our Fix-It-Now ("FIN") reliability crew continues to work on performing infrared inspections of distribution facilities to identify and prevent outages that could result from imminent failure conditions. The crew continues to monitor and investigate repeated outages to assess and repair the fundamental causes of those outages. During the reporting period, work has been completed on more than 22 separate locations throughout the city.

The restoration and weather impacts discussed above have caused delays in our cyclical pole inspections for the year, however once started we will continue to restore and/or replace all poles identified as deficient in those inspections. We will continue our ten-year plan to replace all non-restorable poles.

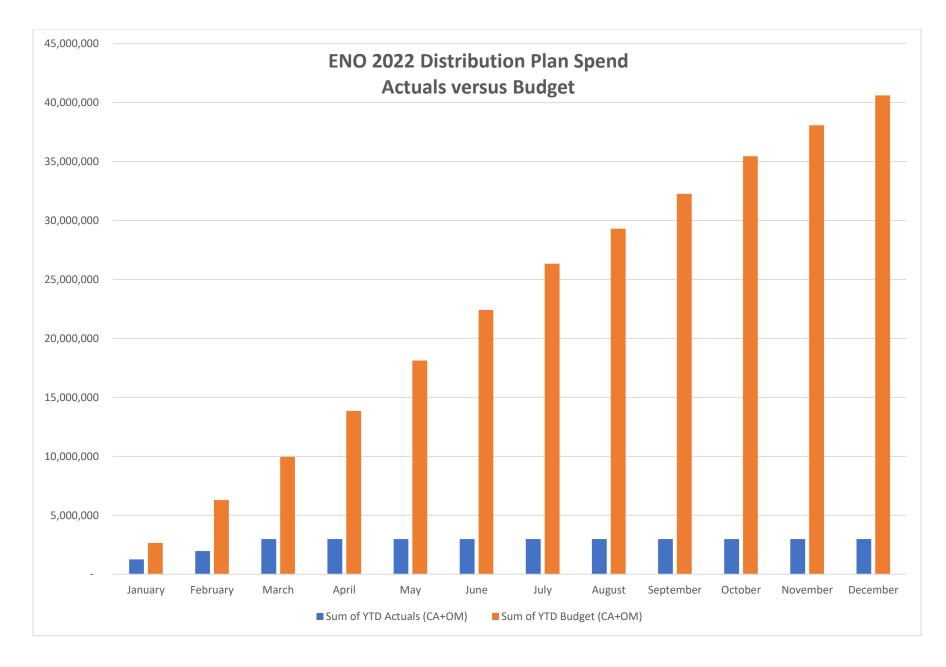
In the Distribution Automation Acceleration program, there are currently 68% of reclosers on the automated network. In efforts to continue connecting existing reclosers to the growing communications network, two new reclosers have been installed.

The Underground program, while working in conjunction with planned transmission/substation work, identified three sets of substation exit cables that required maintenance. Once repaired the cables could yield significant reliability benefits, reducing the potential for customer interruptions. These are the points where power leaves the substation, and a fault could affect many customers. One of these projects was completed in 2021 and the remaining two are scheduled to be completed this year.

The Central Business District (CBD) Mesh Network Action Plan was developed mid-2021 and is underway. Of the twenty (20) transformers planned to be replaced in 2022, eight (8) have been completed and twelve (12) are currently in design. A five to seven-year plan was initially implemented in 2021 to perform oil samplings and identify transformers with a similar style of primary termination chambers in need of repair or replacement. After additional research, the oil sampling process was determined to be a safety risk and will no longer be implemented. ENO, instead, will include inspection updates under the upgraded inspection program. Attached hereto is a schedule of Transmission Reliability project spending for 2022, with costs incurred through March 2022.

ENO is available to discuss this report, and reliability in general, in further detail, if necessary.





ENO 2022 Distribution P	ENO 2022 Distribution Plan Spend											
Actuals versus Buc	lget											
Funding Project		im of YTD		im of YTD	-	um of YTD						
		Actuals		Budget		Variance						
Internal (F1PPDA0198)	\$	198,314	\$	697,486	\$	(499,172)						
DA Acceleration / Sectionalization (F1PPDA1250)	\$	308,611	\$	333,652	\$	(25,042)						
Focus (F1PPDA1750)	\$	-	\$	197,622	\$	(197,622)						
100% Lateral (F1PPU28054)	\$	120,548	\$	2,970,890	\$	(2,850,341)						
FIN & Other Strategic Reliability (F1PPU25021)	\$	662,552	\$	1,295,521	\$	(632,968)						
Equipment Inspection & Maintenance (F1PPDA0598)	\$	474	\$	148,998	\$	(148,524)						
Backbone (F1PPDA0989)	\$	-	\$	119,043	\$	(119,043)						
Underground Safety, Network Improvement & Replacement (F1PPDA1550, F1PPU25008, F1PPUA5002)	\$	138,508	\$	848,111	\$	(709,603)						
Pole Program (F1PPUA5001)	\$	65,458	\$	1,250,583	\$	(1,185,125)						
Grid Mod Make Ready Work (F1PPUMKRED)	\$	11	\$	-	\$	11						
Conti Street Reconstruction (F1PPU27263)	\$	282,175	\$	436,497	\$	(154,322)						
CBD Transformer Program (F1PPU28061, F1PPU27940)	\$	1,203,381	\$	1,661,845	\$	(458,464)						
Total	\$	2,980,031	\$	9,960,248	\$	(6,980,215)						

# 2022 Transmission Reliability Project Status Updates

WO #s	Substation	Project Status	Work Description	Construction Start Date	EST ISD	Estimated 2022 Project Cost	March YTD Actuals
C6PPGR0290	DERBIGNY	In Progress	RTU Renewal SCADA WESTRONIC	4/18/2022	5/12/2022	\$ 125,400	47,126
C6PPGR0214	DELTA	In Progress	Upgrade SCADA RTU	5/1/2022	5/26/2022	\$ 125,400	7,512
C6PPBU1678	AVENUE C	In Progress	Replace T4	4/11/2022	5/31/2022	\$ 1,683,686	872
C6PPGR0300	SHERWOOD FOREST	In Progress	BREAKER REPLACEMENT - 1611-2	6/20/2022	6/30/2022	\$ 244,200	17,862
C6PPGR0301	SHERWOOD FOREST	In Progress	BREAKER REPELACEMENT - 1603-2	7/5/2022	7/8/2022	\$ 244,200	17,705
C6PPBU1679	AVENUE C	In Progress	RTU - SCADA - WESTRONIC	7/1/2022	7/31/2022	\$ 125,400	5,460
C6PPGR0142	DERBIGNY	In Progress	Replace OCB Main Breaker 15T2-6 and Disconnects	7/1/2022	7/31/2022	\$ 290,400	270
C6PPGR0158	DERBIGNY	In Progress	Replace 24kV OCB 1509-2	7/1/2022	7/31/2022	\$ 290,400	1,385
C6PPGR0291	GENTILLY	In Progress	RTU - SCADA - WESTRONIC	8/7/2022	8/26/2022	\$ 125,400	14,924
C6PPGR0283	CLAIBORNE	In Progress	Replacement & Relocation of Battery Set System	9/14/2022	10/15/2022	\$ 43,560	25,661
C6PPGR0302	TRICOU	In Progress	Transformer Life Extension T4	10/3/2022	10/28/2022	\$ 561,000	-
C6PPBU1549	AVENUE C	In Progress	Replace T2 (with a 115-13.8kV 40MVA LTC)	10/1/2022	10/31/2022	\$ 1,096,920	19,192
C6PPGR0143	LOWER COAST	In Progress	T2 (Life extension-add oil filtration, complete rebuild of	10/3/2022	11/10/2022	\$ 792,000	-
F1PPU75782	Upgrade Ave C - Paris	In Construction	Upgrade TLine and switches and bus work at Ave. C.	3/1/2022	6/1/2022	\$ 1,562,928	196,079
F1PPU51353	Lower Coast 230kV- A	In Construction	Install high side breakers	9/1/2021	6/1/2022	\$ 2,200,793	1,321,122
F1PPU51248	Curran 230kV- Add Bre	In Construction	Install high side breakers	11/1/2021	6/1/2024	\$ 5,393,774	3,082,734
F1PPU75943	Norfolk TLine ROW	In Progress	TLine ROW cost	N/A	12/31/2022	\$ 2,794,198	1,798
F1PPU75835	Sherwood Forrest	In Scoping	Install high side breakers	TBD	12/1/2024	\$ 629,305	22,058
F1PPU76016	ENO Eriver Crossing Re	In Scoping	Tower Analysis and Hardening	TBD	6/1/2024	\$ 198,861	3,534

### 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.

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New Orleans, Louisiana, this 17th day of June 2022.

Barbara L. Casey