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**Timothy S. Cragin** Assistant General Counsel Legal Services - Regulatory

August 23, 2021

## 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") 2021 Reliability Plan, which is being submitted for filing in the above-referenced docket. 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,

Timothy S. Cragin

TSC\bkd

Enclosures

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

## 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 23<sup>rd</sup> day of August 2021.

Timothy S. Cragin

#### **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 2021 RELIABILITY PLAN

Entergy New Orleans, LLC ("ENO" or the "Company") respectfully submits its 2021 Reliability Plan ("2021 Plan"). This 2021 Plan includes a section that addresses ENO's plan to continue to improve distribution system reliability (the "Distribution Plan"). Additionally, a schedule of the Transmission Reliability Projects scheduled to be worked on in 2021 for ENO is shown in Attachment 3.

## I. ENO's 2021 Distribution Reliability Plan

#### A. Baseline Reliability Programs

ENO's 2021 Distribution Reliability Plan ("Distribution Plan") proposes a variety of programs and corresponding projects intended to improve the reliability of ENO's distribution system (i.e., distribution feeders and related distribution facilities). The baseline distribution reliability projects currently involve an investment of approximately \$15 million in 2021 and approximately \$45 million aggregate over the next three years with the goal of providing both immediate reliability benefits and continuously improving reliability performance. The Distribution Plan set forth herein is intended to move ENO toward being able to deliver next-generation reliability.

The baseline reliability programs for 2021 that make up the Distribution Plan are essentially the same as those previously described to the Council and worked by the Company in conjunction with the 2020 Reliability Plan.

A brief description of each of the baseline reliability programs to be worked in 2021 is provided below including a breakdown of the \$15 million 2021 baseline distribution reliability project budget:

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

In 2019, ENO began a new program under which the entire distribution grid, backbone and laterals, will be inspected 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 more evenly distribute the amount of lines to be worked each year. 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 2020 we reranked by customer impact (number of customers affected [weighted 90%] and performance [weighted 10%]) 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 Planning 13 feeders, 510 line fuses
- 2022 Planning 15 feeders, 593 line fuses
- 2023 Planning 17 feeders, 587 line fuses

2024 – Planning 24 feeders, 806 line fuses

2025 – Planning 25 feeders, 451 line fuses

2026 – Planning 29 feeders, 198 line fuses

See Attachment 1: Feeder Inspection Schedule for the schedule of feeders currently identified. ENO may need to alter the schedule 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 will 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 that 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 will be inspected annually through infrared inspection at the point the feeder comes to a walk-in or switchgear. As part of these inspections, we also apply termite or rat treatments as appropriate for the area.

For 2021, ENO has budgeted spending approximately \$9.4 million on these repairs and the FIN crew 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 responding to repair needs that cannot be worked into the network crews' 2-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 proactive inspection and preventative maintenance program of the estimated 90,000 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 of 32% of the Entergy owned poles in the ENO system since 2017. The Pole Program will continue with periodic inspections for 2021-2023. In 2020, we performed restorations of 6 Osmose-identified restorable poles to bring those poles up to full performance standards. Inspections in 2020 did not identify any Entergy owned non-restorable poles. In 2021, we will continue with restoring poles as they are identified as part of the inspections. We will also continue with replacing poles previously identified as non-restorable. Because pole failures constitute only approximately two to five percent of customer interruptions and ENO desires to improve reliability as quickly as reasonably possible, ENO plans to replace non-restorable poles over the 5-year plan and focus its earlier

emphasis on other reliability programs that provide more potential for customer interruption avoidance.

The Pole Program has a 2020 budget of \$1.625 million, with \$250,000 of that allocated for Osmose inspection and restoration.

#### iv. 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 plans to spend a portion of its dedicated reliability spending to accelerate deployment of those parts of DA that will provide immediate reliability improvement.

In 2019, ENO installed 50 reclosers that were 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 these devices, circuits will be split into smaller segments with fewer customers within 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.

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The 2021 Distribution Reliability Plan includes a budget of \$456,000 for the DA 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 2021, ENO has budgeted spending approximately \$103,000 to work as many FOCUSidentified devices as possible. This is a lower percentage of our total reliability spend from previous years because we have found that we are seeing larger improvements for more customers by prioritizing the 100% Lateral projects over the more limited Focus projects. To ensure appropriate cost-benefit justification, we use a stage gate process with cost-benefit review following inspection and design in alignment with the Quanta recommendation with a limit of \$100 per customer interruption.

#### 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, 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 2021 budget of \$1.97 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 2021 budget of \$50,000.

#### 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,

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and other upgrades not associated with another program are covered within the Internal Program. The 2021 budget for the Internal Program is \$1.14 million

#### 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, but instead the fault is isolated and load is rerouted so no customers are out of lights. 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, currently involving personnel manually operating equipment at multiple locations. Following the April 24, 2021 fire in the Notre Dame grid, ENO reevaluated our plan and timeline for refurbishing the CBD network. For 2021, we expect to spend \$1.9 million on this plan.

#### 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. This will prevent fire potential in areas where the secondary mesh conductors are routed above the network transformer. Additionally, we will install fire blankets, fire wrap or fire coating around exposed sets of secondary mesh network cable that pose a risk of fire damage. This fire protection installation is scheduled to be completed by end of 2022.

### 2. Oil Sampling to Detect Water Intrusion

The apparent cause of the April 24 fire was water intrusion into the transformer primary terminal chamber. Over the next 5 - 7 years we will identify locations with a similar style of primary termination chambers and perform oil sampling. This will allow us to identify transformers in need of repair or replacement.

## 3. Transformer Repair and Replacement

Based on the results of the oil sampling program, we will work towards 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. We will start August 1, 2021 and continue through 2041. The schedule is to replace 10-20 transformers per year dependent on resources. We expect to replace 10 transformers in year one. This will require five people dedicated four days per week to accomplish.

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

ENO is continuing to invest in upgrading our underground facilities in the French Quarter in coordination with 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 2021 baseline budget includes \$650,000 for this work and additional funding will be provided from other non-reliability spend categories as needed.

# II. Conclusion

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

# **Attachment 1: Feeder Inspection Schedule**

	2021 100% Lateral Overhead Inspection List														
					#	ŧ of P	riorit	y Rai	ık						
		LOCAL			Customers					# of	# of	% of	% of	2019	2019
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	OH	UG	CIs	SAIFI
25	Metro	Orleans	NAPOLEON	1924	0	1	0	0	0	2426	38	95%	5%	938	0.39
29	Metro	Orleans	JOLIET	2014	0	0	0	0	0	2183	32	96%	4%	3668	1.68
30	Metro	Orleans	SOUTHPORT	B0527	0	0	0	1	0	2211	39	98%	2%	3727	1.69
31	Metro	Orleans	PAUGER	1709	0	1	0	0	0	2033	22	97%	3%	1988	0.98
35	Metro	N.O. East	TRICOU	2346	0	0	1	2	0	2261	53	99%	1%	2142	0.95
36	Metro	Orleans	NAPOLEON	1925	0	0	0	0	0	2308	34	96%	4%	1026	0.44
37	Metro	Orleans	JOLIET	2016	0	0	0	1	0	1956	31	82%	18%	1785	0.91
38	Metro	Orleans	JOLIET	2027	0	0	0	0	0	2006	63	97%	3%	605	0.30
39	Metro	Orleans	DERBIGNY	1512	0	1	3	0	0	2962	52	95%	5%	5737	1.94
40	Metro	Orleans	MIDTOWN	907	1	1	0	1	0	2407	48	97%	3%	5518	2.29
41	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0713	0	0	0	2	3	2646	22	92%	8%	800	0.30
42	Metro	Orleans	MIDTOWN	903	2	2	0	1	0	1935	49	98%	2%	4422	2.29
43	Metro	N.O. East	ALMONASTER	627	0	0	0	1	0	1874	27	98%	2%	5078	2.71

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	2022 100% Lateral Overhead Inspection List														
					#	t of P	riorit	y Rar	ık						
		LOCAL				Customers			# of	# of	% of	% of	2019	2019	
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	OH	UG	CIs	SAIFI
44	Metro	N.O. East	ALMONASTER	622	0	0	0	1	1	1871	45	99%	1%	3828	2.05
45	Metro	Orleans	JOLIET	2015	0	1	0	0	0	1494	22	97%	3%	2291	1.53
46	Metro	Orleans	NAPOLEON	1923	0	1	0	1	0	1844	31	96%	4%	522	0.28
47	Metro	N.O. East	CURRAN	2217	0	0	0	2	0	1927	44	25%	75%	568	0.29
48	Metro	Orleans	NAPOLEON	1922	0	1	1	0	0	1802	33	98%	2%	2590	1.44
49	Metro	Orleans	MARKET	2137	0	0	1	0	0	1726	41	95%	5%	3168	1.84
50	Metro	Orleans	MIDTOWN	911	1	0	0	1	0	2095	39	98%	2%	752	0.36
51	Metro	N.O. East	PAUGER	1710	0	0	0	0	0	2052	34	98%	2%	608	0.30
52	Metro	N.O. East	CURRAN	2223	0	1	0	0	0	1699	47	46%	54%	2746	1.62
53	Metro	Orleans	MIDTOWN	904	0	0	0	1	0	2019	56	98%	2%	83	0.04
54	Metro	N.O. East	ALMONASTER	613	0	0	0	0	0	1799	46	98%	2%	1920	1.07
55	Metro	N.O. East	SHERWOOD FOREST	1607	0	0	1	3	1	1974	51	95%	5%	275	0.14
56	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0725	0	1	0	5	21	1999	57	63%	37%	44	0.02
57	Metro	Orleans	PAUGER	1712	0	1	0	1	0	1781	21	87%	13%	743	0.42
58	Metro	Orleans	MARKET	2146	0	0	0	0	0	1902	26	98%	2%	283	0.15

## Attachment 1 ENO 2021 Reliability Plan CNO Docket No. UD-17-04 Page 3 of 6

	2023 100% Lateral Overhead Inspection List														
					#	‡ of P	riorit	y Rar	ık						
		LOCAL				Customers			# of	# of	% of	% of	2019	2019	
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	OH	UG	CIs	SAIFI
59	Metro	Orleans	NAPOLEON	1914	0	0	0	0	0	1616	23	95%	5%	431	0.27
60	Metro	N.O. East	PATERSON	1001	0	0	0	1	0	1664	47	82%	18%	1557	0.94
61	Metro	N.O. East	PAUGER	1702	0	0	0	0	0	1481	41	98%	2%	893	0.60
62	Metro	Orleans	NAPOLEON	1917	0	1	0	1	0	1723	44	96%	4%	845	0.49
63	Metro	Orleans	NAPOLEON	1921	0	0	0	0	0	1710	30	96%	4%	916	0.54
64	Metro	Orleans	DERBIGNY	1554	0	0	2	0	0	1462	37	96%	4%	208	0.14
65	Metro	Orleans	PAUGER	1711	0	0	0	0	0	1443	51	88%	12%	432	0.30
66	Metro	Orleans	PONTCHARTRAIN PARK	503	0	0	0	0	0	1498	32	78%	22%	1385	0.92
67	Metro	Orleans	AVENUE C	409	0	0	0	1	0	1560	32	83%	17%	515	0.33
68	Metro	Orleans	NAPOLEON	1913	0	0	0	0	0	1599	27	91%	9%	258	0.16
69	Metro	N.O. East	SHERWOOD FOREST	1610	0	0	0	0	0	1086	15	25%	75%	1408	1.30
70	Metro	N.O. East	SHERWOOD FOREST	1604	0	0	0	0	0	1412	37	89%	11%	303	0.21
71	Metro	Orleans	DERBIGNY	1553	1	0	0	1	0	1299	44	96%	4%	107	0.08
72	Metro	N.O. East	SHERWOOD FOREST	1601	0	0	1	2	0	1329	36	80%	20%	473	0.36
73	Metro	Orleans	MARKET	2142	0	0	0	0	0	1260	23	85%	15%	1345	1.07
80	ELI-Southeast (LA)	Algiers	Gretna	W0118	0	0	0	0	4	1272	30	95%	5%	132	0.10
82	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0712	0	0	0	0	9	1147	38	66%	34%	78	0.07

## Attachment 1 ENO 2021 Reliability Plan CNO Docket No. UD-17-04 Page 4 of 6

2024 100% Lateral Overhead Inspection List															
					# of Priority Rank										
		LOCAL				Cı	istom	ners	1	# of	# of	% of	% of	2019	2019
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	OH	UG	CIs	SAIFI
74	Metro	Orleans	AVENUE C	410	0	0	0	1	0	1073	25	99%	1%	2232	2.08
75	Metro	Orleans	NAPOLEON	1927	0	1	0	0	1	1329	32	82%	18%	146	0.11
76	Metro	Orleans	PONTCHARTRAIN PARK	510	1	0	0	0	0	1052	23	75%	25%	891	0.85
77	Metro	N.O. East	ALMONASTER	621	0	0	0	0	1	1061	35	95%	5%	408	0.38
78	Metro	Orleans	JOLIET	2021	0	0	0	0	0	1226	37	98%	2%	623	0.51
79	Metro	Orleans	PONTCHARTRAIN PARK	512	0	0	0	0	0	1120	30	97%	3%	1645	1.47
81	Metro	N.O. East	PATERSON	1010	0	0	1	4	2	1069	29	61%	39%	239	0.22
83	Metro	N.O. East	PONTCHARTRAIN PARK	506	0	0	0	0	0	1161	31	98%	2%	203	0.17
84	Metro	Orleans	AVENUE C	407	2	0	0	0	0	1107	31	85%	15%	692	0.63
85	ELI-Southeast (LA)	Algiers	LOWER COAST	W1715	0	1	1	5	6	992	126	53%	47%	1175	1.18
86	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0722	0	0	0	1	1	1084	17	91%	9%	401	0.37
87	Metro	N.O. East	SHERWOOD FOREST	1611	0	0	0	0	0	1036	33	87%	13%	464	0.45
88	Metro	Orleans	JOLIET	2017	0	0	0	0	0	1047	40	87%	13%	283	0.27
89	Metro	Orleans	PAUGER	1708	0	0	1	0	0	957	20	92%	8%	62	0.06
90	Metro	N.O. East	ALMONASTER	617	0	0	0	0	1	732	25	95%	5%	1169	1.60
91	Metro	N.O. East	ALMONASTER	626	0	0	0	1	1	761	52	63%	37%	981	1.29
92	Metro	N.O. East	GULF OUTLET	1204	0	1	0	1	1	723	64	85%	15%	547	0.76
93	Metro	N.O. East	PONTCHARTRAIN PARK	509	0	0	0	0	0	636	17	64%	36%	3001	4.72
94	Metro	Orleans	JOLIET	2025	0	0	5	0	0	915	37	99%	1%	446	0.49
95	Metro	Orleans	AVENUE C	411	0	0	0	0	0	937	16	97%	3%	131	0.14
96	Metro	Orleans	NAPOLEON	1912	0	0	0	0	0	796	20	96%	4%	821	1.03
97	ELI-Southeast (LA)	Algiers	Gretna	W0112	0	0	0	1	1	918	14	95%	5%	7	0.01
98	Metro	Orleans	AVENUE C	408	0	0	0	0	0	863	19	96%	4%	47	0.05
99	Metro	Orleans	SOUTHPORT	B0526	0	1	0	1	0	760	33	67%	33%	1052	1.38

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2025 100% Lateral Overhead Inspection List															
				# of Priority Rank											
		LOCAL				Cı	istom	ers		# of	# of	% of	% of	2019	2019
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	OH	UG	CIs	SAIFI
109	Metro	N.O. East	TRICOU	2325	0	0	1	0	0	612	33	98%	2%	149	0.24
110	Metro	Orleans	AVENUE C	403	0	0	0	0	0	624	12	59%	41%	69	0.11
111	Metro	Orleans	AVENUE C	401	0	0	0	0	0	574	4	26%	74%	131	0.23
112	Metro	Orleans	JOLIET	2022	2	0	0	1	0	571	9	95%	5%	14	0.02
113	Metro	N.O. East	SHERWOOD FOREST	1605	0	0	0	2	0	456	14	35%	65%	304	0.67
114	Metro	Orleans	JOLIET	2024	1	0	0	0	0	395	13	91%	9%	390	0.99
115	Metro	Orleans	NAPOLEON	1911	0	0	0	0	1	563	10	98%	2%	91	0.16
116	Metro	Orleans	AVENUE C	405	1	0	0	0	0	515	18	94%	6%	10	0.02
117	Metro	Orleans	AVENUE C	402	0	1	0	0	0	520	3	38%	62%	417	0.80
118	Metro	N.O. East	PATERSON	1002	1	0	0	4	3	518	30	88%	12%	422	0.81
119	Metro	Orleans	AVENUE C	404	0	0	0	0	0	445	11	50%	50%	431	0.97
120	Metro	N.O. East	PONTCHARTRAIN PARK	508	0	0	2	3	1	497	35	85%	15%	128	0.26
121	ELI-Southeast (LA)	Westbank	Gretna	W0113	0	0	0	0	10	477	17	55%	45%	100	0.21
122	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0726	0	0	0	0	9	465	13	85%	15%	92	0.20
123	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0714	0	1	0	1	2	427	25	42%	58%	206	0.48
124	Metro	Orleans	ALMONASTER	625	0	0	0	0	0	320	9	89%	11%	213	0.67
109	Metro	N.O. East	TRICOU	2325	0	0	1	0	0	612	33	98%	2%	149	0.24
110	Metro	Orleans	AVENUE C	403	0	0	0	0	0	624	12	59%	41%	69	0.11
111	Metro	Orleans	AVENUE C	401	0	0	0	0	0	574	4	26%	74%	131	0.23
112	Metro	Orleans	JOLIET	2022	2	0	0	1	0	571	9	95%	5%	14	0.02
113	Metro	N.O. East	SHERWOOD FOREST	1605	0	0	0	2	0	456	14	35%	65%	304	0.67
114	Metro	Orleans	JOLIET	2024	1	0	0	0	0	395	13	91%	9%	390	0.99
115	Metro	Orleans	NAPOLEON	1911	0	0	0	0	1	563	10	98%	2%	91	0.16
116	Metro	Orleans	AVENUE C	405	1	0	0	0	0	515	18	94%	6%	10	0.02
117	Metro	Orleans	AVENUE C	402	0	1	0	0	0	520	3	38%	62%	417	0.80

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	2026 100% Lateral Overhead Inspection List														
					#	f of P	riorit	y Rar	ık						
		LOCAL				Customers			# of	# of	% of	% of	2019	2019	
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	OH	UG	CIs	SAIFI
137	Metro	N.O. East	GULF OUTLET	1203	0	0	2	3	0	51	22	93%	7%	71	1.39
138	ELI-Southeast (LA)	Westbank	Behrman	W0515	0	0	0	0	10	51	6	55%	45%	0	0.00
139	Metro	Orleans CBD	DERBIGNY	1504	1	2	0	0	0	35	5	5%	95%	77	2.20
140	Metro	Orleans	MIDTOWN	902	0	0	0	0	0	42	1	90%	10%	0	0.00
141	Metro	Orleans CBD	DERBIGNY	1543	0	2	0	0	0	34	4	7%	93%	7	0.21
142	Metro	Orleans CBD	DERBIGNY	1551	0	1	0	0	0	37	3	2%	98%	0	0.00
143	Metro	N.O. East	PATERSON	1009	0	0	0	0	0	22	5	75%	25%	128	5.82
144	Metro	N.O. East	TRICOU	2326	0	0	0	0	1	32	11	98%	2%	0	0.00
145	Metro	Orleans	DERBIGNY	1510	0	0	0	0	0	22	10	7%	93%	15	0.68
146	Metro	Orleans	DERBIGNY	1506	0	0	1	0	0	21	6	70%	30%	0	0.00
147	Metro	Orleans	DERBIGNY	1511	0	1	0	0	0	14	2	98%	2%	14	1.00
148	Metro	N.O. East	PONTCHARTRAIN PARK	507	0	0	0	0	1	5	2	75%	25%	1	0.20
149	ELI-Southeast (LA)	Westbank	Behrman	W0512	0	0	0	1	0	4	4	95%	5%	0	0.00
150	Metro	Orleans	DERBIGNY	1541	0	1	1	0	0	4	0	97%	3%	0	0.00
151	Metro	Orleans	MIDTOWN	910	0	0	0	0	0	1	0	1%	99%	0	0.00
152	Metro	Orleans	MIDTOWN	906	0	0	0	0	0	1	0	1%	99%	0	0.00
153	Metro	Orleans	MIDTOWN	908	0	0	0	0	0	1	0	1%	99%	0	0.00

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# **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:
  - $\circ$  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: 2021 Transmission Project Report

WO #s	Substation	Project Status	Work Description	Construction Start Date	EST ISD	Actual ISD	Estimated 2021 Project Cost
C6PPGR0152	CURRAN	Complete	Upgrade SCADA RTU	2/1/2021	2/5/2021	2/23/2021	\$ 195,500
C6PPBU1529	NAPOLEON	Complete	Replace SEL-287 V with SEL-451 230kV Cap Bank Relay	1/18/2021	1/29/2021	3/8/2021	\$ 330,000
			Upgrade the D20 Supervisory Control Data Acquisition (SCADA) Remote Terminal Unit (RTU), serial number 4, at the Napoleon				
C6PPBU1553	NAPOLEON	Complete	Substation	1/1/2021	1/31/2021	3/22/2021	\$ 207,500
C6PPBU1490	PAUGER	Complete	Replace the SCADA Remote Terminal Units (RTU) with an RTAC RTU	11/30/2020	12/11/2020	4/19/2021	\$ 166,500
C6PPGR0153	SHERWOOD FOREST	Complete	Replace/upgrade SCADA RTU Type: D-20 ME (Non-Outage)	3/1/2021	3/5/2021	4/22/2021	\$ 126,000
C6PPGR0164	NOTRE DAME	Complete	Replace / Upgrade SCADA RTU Type: D-20	3/1/2021	3/31/2021	5/17/2021	\$ 143,000
C6PPGR0140	DERBIGNY	Complete	Replace 1513-2 Feeder Breaker	1/11/2021	1/22/2021	5/28/2021	\$ 292,000
C6PPGR0089	MARKET 230	Complete	Install Only - Replace 230kv OCB N2117	4/12/2021	5/21/2021	6/2/2021	\$ 383,000
C6PPGR0184	MARKET 230	Complete	Replace 230kv OCB N2111	5/21/2021	5/21/2021	6/2/2021	\$ 330,000
C6PPGR0227	MARKET 230	Complete	AT1 Life Extension	4/12/2021	5/21/2021	6/2/2021	\$ 489,500
C6PPBU1552	JOLIET	Complete	Replace / Upgrade SCADA RTU Type: D-20	6/7/2021	6/18/2021	7/27/2021	\$ 104,500
C6PPBU1571	PAUGER	In-Progress	Add Two (2) DGA Monitors	3/1/2021	3/31/2021		\$ 138,000
C6PPGR0165	NOTRE DAME	In-Progress	Add 3 DGA Monitor	8/31/2021	9/4/2021		\$ 182,500
C6PPGR0142	DERBIGNY	In-Progress	Replace OCB Main Breaker 15T2-6 and Disconnects	10/18/2021	11/12/2021		\$ 242,000
C6PPGR0158	DERBIGNY	In-Progress	Replace 24kV OCB 1509-2	10/18/2021	11/12/2021		\$ 242,000
			T2 (Life extension-add oil filtration, complete rebuild of LTC, replace; LTC control, pumps, radiators, fans, valves, gauges, gaskets, bushings,				
C6PPGR0143	LOWER COAST	In-Progress	and arrestors and process/replace oil as applicable )	10/11/2021	11/19/2021		\$ 660,000
C6PPGR0217	SHERWOOD FOREST	In-Progress	Replace Transformer T2	10/11/2021	11/19/2021		\$ 852,000
C6PPGR0183	MARKET 230	In-Progress	Replace 230kv OCB N7209	11/8/2021	11/26/2021		\$ 330,000
C6PPBU1549	AVENUE C	In-Progress	Replace T2 (with a 115-13.8kV 40MVA LTC)	9/1/2021	11/26/2021		\$ 825,000
C6PPGR0216	PONTCHARTRAIN PARK	In-Progress	Replace SCADA RTU (Westronic)	11/12/2021	11/30/2021		\$ 104,500
C6PPGR0215	HOLIDAY	In-Progress	Upgrade SCADA RTU (GE Energy Svcs)	12/10/2021	12/30/2021		\$ 104,500
F1PPU51158	Gulf Outlet 115kV: Inst Cap Ba	In-Progress	Install new capbank	5/1/2020	12/1/2020	9/26/2020	\$ 45,874
F1PPUX4897	Tricou- Energize Xfmr T2	In-Progress	Install new Transformer	2/15/2020	12/31/2020	11/23/2020	\$ 316,359
F1PPU75782	Upgrade Ave C - Paris Tap line	In-Progress	Upgrade TLine and switches and bus work at Ave. C.	TBD	6/1/2022	TBD	\$ 553,782
F1PPU51353	Lower Coast 230kV- Add Breaker	In-Progress	Install high side breakers	TBD	6/1/2022	TBD	\$ 4,664,394
F1PPU51248	Curran 230kV- Add Breaker	In-Progress	Install high side breakers	TBD	6/1/2023	TBD	\$ 2,520,777