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July 17, 2020

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") 2020 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,

Fimothy S. Cragin

TSC\rdm

**Enclosures** 

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

# CERTIFICATE OF SERVICE <u>Docket No. UD-17-04</u>

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 July 2020.

Timothy S. Cragin

#### **BEFORE THE**

#### COUNCIL OF THE CITY OF NEW ORLEANS

RESOLUTION DIRECTING	)
ENTERGY NEW ORLEANS, INC. TO	)
INVESTIGATE AND REMEDIATE	)
ELECTRIC SERVICE DISRUPTIONS AND	DOCKET NO. UD-17-04
COMPLAINTS AND TO ESTABLISH	) DOCKET NO. UD-17-04
MINIMUM ELECTRIC RELIABILITY	)
PERFORMANCE STANDARDS AND	)
FINANCIAL PENALTY MECHANISMS	)

#### ENTERGY NEW ORLEANS, LLC'S 2020 RELIABILITY PLAN

Entergy New Orleans, LLC ("ENO" or the "Company") respectfully submits its 2020 Reliability Plan ("2020 Plan"). This 2020 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 2020 for ENO is shown in Attachment 3.

### I. ENO's 2020 Distribution Reliability Plan

#### A. Baseline Reliability Programs

ENO's 2020 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 2020 and approximately \$60 million aggregate over the next four 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 2020 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 2019 Reliability Plan.

A brief description of each of the baseline reliability programs to be worked in 2020 is provided below including a breakdown of the \$15 million 2020 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 in 2019, 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 2018 we ranked by customer impact (number of customers affected [weighted 90%] and performance [weighted 10%]) the 153 overhead feeders in the ENO system. In the following years, we have made 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 – Inspected 19 Feeders, 985 line fuses, worked 17 feeders

2020 – Inspect 15 feeders, 537 line fuses, plus 2 feeders remaining from 2019

2021 – Inspect 14 feeders, 578 line fuses

2022 – Inspect 19 feeders, 584 line fuses

2023 – Inspect 14 feeders, 528 line fuses

2024 – Inspect 19 feeders, 569 line fuses

2025 – Inspect 25 feeders, 514 line fuses

2026 – Inspect 28 feeders, 177 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 **Error! Reference source not found.** 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 2020, ENO has budgeted spending approximately \$3.85 million on these repairs.

#### 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. Contractor support will also be utilized for some of the identified projects due to size, so funding will be allocated for this support to address these additional reliability projects identified by the RSMs, networks, and customer requests throughout the year.

The 2020 Budget includes \$1.91 million for the FIN crew and supplemental contract crew support.

#### 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 2020-2023. In 2019, we performed restorations of 2,150 Osmose-identified restorable poles to bring those poles up to full performance standards. In 2020, 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 \$2.7 million, with \$200,000 of that allocated for inspection. The balance will used to restore poles where possible or to replace non-restorable poles.

#### 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.

Additionally, we are installing Trip Saver devices on selected lines to reduce the number of sustained outages requiring a serviceman to come out and manually reset a line fuse. These devices are most impactful in areas prone to momentary interruptions caused by vegetation or animals contacting a line and quickly clearing it. In these cases, customers on these lines would see a momentary outage when, for example, the tree limb falls and contacts two phases of the conductor. The limb then falls off or burns away and the Trip Saver attempts to automatically close back in and will hold now that the fault has cleared.

The 2020 Distribution Reliability Plan includes a budget of \$504,000 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 2020, ENO has budgeted spending approximately \$313,000 to work as many FOCUS-identified 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 2020 budget of \$4.15 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 2020 budget of \$119,000.

#### viii. Internal Program

The Internal Program involves addressing National Electric Safety Code ("NESC") compliance-related projects and Entergy Service Standards compliance-related projects. The 2020 budget for the Internal Program is \$1.01 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.

#### 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**

			2020 100% I	Lateral O	ver	hea	d In	spe	ctio	n List					
		LOCAL			#		riorit <sub>:</sub> istom	y Rar iers	ık	# of	# of	% of	% of	2018 YTD	2018 YTD
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	ОН	UG	CIs	SAIFI
20	Metro	Orleans	MIDTOWN	912	0	1	0	0	0	2412	41	95%	5%	#N/A	#N/A
21	Metro	Orleans	ALMONASTER	614	0	0	0	0	0	2274	28	97%	3%	3520	1.51
22	Metro	N.O. East	GULF OUTLET	1205	1	0	0	1	0	2549	23	60%	40%	429	0.16
23	Metro	Orleans	PAUGER	1704	0	1	0	0	0	1600	46	91%	9%	8778	4.62
24	Metro	Orleans	JOLIET	2013	0	0	0	0	0	2277	41	95%	5%	2581	1.12
25	Metro	Orleans	NAPOLEON	1924	0	1	0	0	0	2426	38	95%	5%	837	0.33
26	Metro	N.O. East	ALMONASTER	611	0	0	3	1	1	2049	44	97%	3%	470	0.22
27	Metro	Orleans	NAPOLEON	1916	0	0	0	0	0	1863	32	91%	9%	4890	2.56
28	Metro	N.O. East	CURRAN	2216	0	0	0	0	0	1535	4	10%	90%	7672	4.63
29	Metro	Orleans	JOLIET	2014	0	0	0	0	0	2183	32	96%	4%	1604	0.71
30	Metro	Orleans	SOUTHPORT	B0527	0	0	0	1	0	2211	39	98%	2%	1267	0.54
31	Metro	Orleans	PAUGER	1709	0	1	0	0	0	2033	22	97%	3%	2672	1.25
32	ELI-Southeast (LA)	Algiers	LOWER COAST	W1713	0	0	0	2	7	2405	61	74%	26%	3533	1.36
33	ELI-Southeast (LA)	Algiers	LOWER COAST	W1725	0	0	3	0	13	2489	58	82%	18%	2205	0.84
34	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0115	0	0	0	0	4	1845	28	95%	5%	2223	0.80

			2021 100% La	ateral Ov	erh	ead	Ins	pect	tion	List					
		LOCAL			#	of Pr	riorit <sub>:</sub> istom	_	nk	# of	# of	% of	% of	2018 YTD	2018 YTD
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	ОН	UG	CIs	SAIFI
35	Metro	Orleans	JOLIET	2016	0	0	0	1	0	2065	31	82%	18%	2331	1.09
36	Metro	Orleans	NAPOLEON	1925	0	0	0	0	0	2241	36	96%	4%	245	0.11
37	Metro	N.O. East	TRICOU	2346	0	0	1	2	0	2064	53	99%	1%	1660	0.77
38	Metro	Orleans	JOLIET	2027	0	0	0	0	0	2204	75	97%	3%	263	0.11
39	Metro	Orleans	MIDTOWN	911	1	0	0	1	0	1991	10	98%	2%	2158	1.07
40	Metro	Orleans	MIDTOWN	904	0	0	0	1	0	1970	56	98%	2%	N/A	N/A
41	Metro	Orleans	MIDTOWN	903	2	2	0	1	0	1893	47	98%	2%	N/A	N/A
42	Metro	N.O. East	ALMONASTER	613	0	0	0	0	0	1677	45	98%	2%	4426	2.53
43	Metro	N.O. East	SHERWOOD FOREST	1607	0	0	1	3	1	1858	50	95%	5%	2535	1.32
44	ELI-Southeast (LA)	Algiers	Gretna	W0725	0	1	0	5	21	2290	57	63%	37%	3986	1.66
45	Metro	Orleans	MARKET	2146	0	0	0	0	0	1820	25	98%	2%	2175	1.15
46	Metro	Orleans	PAUGER	1712	0	1	0	1	0	1708	30	87%	13%	2933	1.61
47	Metro	N.O. East	PAUGER	1710	0	0	0	0	0	1965	33	98%	2%	411	0.20
53	ELI-Southeast (LA)	Algiers	Gretna	W0118	0	0	0	0	4	1272	30	95%	5%	4688	2.60

			2022 100% La	nteral Ov	erh	ead	Ins	pect	tion	List					
		LOCAL			#		riorit istom	•	nk	# of	# of	% of	% of	2018 YTD	2018 YTD
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	ОН	UG	CIs	SAIFI
48	Metro	Orleans	NAPOLEON	1917	0	1	0	1	0	1646	45	96%	4%	2849	1.69
49	Metro	Orleans	NAPOLEON	1922	0	1	1	0	0	1732	27	98%	2%	1529	0.85
50	Metro	Orleans	NAPOLEON	1923	0	1	0	1	0	1795	30	96%	4%	506	0.28
51	Metro	Orleans	NAPOLEON	1921	0	0	0	0	0	1747	29	96%	4%	720	0.41
52	Metro	Orleans	NAPOLEON	1914	0	0	0	0	0	1591	23	95%	5%	2001	1.21
54	Metro	N.O. East	ALMONASTER	627	0	0	0	1	0	1747	28	98%	2%	300	0.16
55	Metro	N.O. East	SHERWOOD FOREST	1610	0	0	0	0	0	1019	15	25%	75%	6713	6.23
56	Metro	Orleans	NAPOLEON	1913	0	0	0	0	0	1607	25	91%	9%	1321	0.81
57	Metro	N.O. East	CURRAN	2217	0	0	0	2	0	1682	34	25%	75%	561	0.34
58	Metro	N.O. East	ALMONASTER	622	0	0	0	1	1	1630	44	99%	1%	888	0.51
59	Metro	Orleans	DERBIGNY	1554	0	0	2	0	0	1381	36	96%	4%	2920	2.02
60	Metro	Orleans	MARKET	2137	0	0	1	0	0	1672	42	95%	5%	220	0.13
61	Metro	Orleans	JOLIET	2015	0	1	0	0	0	1548	20	97%	3%	908	0.56
62	Metro	N.O. East	PAUGER	1702	0	0	0	0	0	1500	42	98%	2%	1216	0.81
63	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0713	0	0	0	2	3	2059	10	92%	8%	2973	1.41
64	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0722	0	0	0	1	1	1725	14	91%	9%	201	0.12
65	Metro	N.O. East	SHERWOOD FOREST	1604	0	0	0	0	0	1385	38	89%	11%	2119	1.50
66	Metro	Orleans	PONTCHARTRAIN PARK	503	0	0	0	0	0	1385	32	78%	22%	1455	0.99
67	Metro	PAUGER	1711	0	0	0	0	0	1384	50	88%	12%	1350	0.93	

			2023 100% La	ateral Ov	erh	ead	Ins	pect	tion	List					
		LOCAL			#	of P	riorit istom	_	ık	# of	# of	% of	% of	2018 YTD	2018 YTD
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	ОН	UG	CIs	SAIFI
68	ELI-Southeast (LA)	Algiers	LOWER COAST	W1715	0	1	1	5	6	1488	125	53%	47%	325	0.22
69	Metro	Orleans	AVENUE C	409	0	0	0	1	0	1509	31	83%	17%	45	0.03
70	Metro	Orleans	MIDTOWN	907	1	1	0	1	0	859	39	97%	3%	5480	6.36
71	Metro	Orleans	NAPOLEON	1927	0	1	0	0	1	1313	32	82%	18%	1384	1.03
72	Metro	Orleans	MARKET	2142	0	0	0	0	0	1244	24	85%	15%	1800	1.42
73	Metro	N.O. East	SHERWOOD FOREST	1601	0	0	1	2	0	1220	36	80%	20%	1747	1.35
74	Metro	Orleans	JOLIET	2022	2	0	0	1	0	1381	32	95%	5%	109	0.07
75	Metro	N.O. East	CURRAN	2223	0	1	0	0	0	1188	37	46%	54%	1542	1.29
76	Metro	N.O. East	PATERSON	1010	0	0	1	4	2	1167	36	61%	39%	1398	1.13
77	Metro	Orleans	DERBIGNY	1553	1	0	0	1	0	1214	44	96%	4%	498	0.39
78	ELI-Southeast (LA)	Westbank	Gretna	W0113	0	0	0	0	10	477	17	55%	45%	6815	2.43
79	Metro	Orleans	AVENUE C	407	2	0	0	0	0	1087	31	85%	15%	1104	0.98
80	ELI-Southeast (LA)	Algiers	Gretna	W0112	0	0	0	1	1	918	14	95%	5%	2536	2.15
81	Metro	Orleans	PONTCHARTRAIN PARK	512	0	0	0	0	0	1051	30	97%	3%	648	0.60

			2024 1000/ T a	towal Or	o za la		T a	<b></b>	+ <u>+</u>	T int					
			2024 100% La	aterai Ov				_		List					
					#	of P		=	nk					2018	2018
		LOCAL				Ct	istom	ers		# of	# of	% of	% of	YTD	YTD
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	OH	UG	CIs	SAIFI
0.5	3.5		PONTCHARTRAIN	<b>7</b> 0.4						1110		0.0-1			0.00
82	Metro	N.O. East	PARK	506	0	0	0	0	0	1118	31	98%	2%	27	0.02
83	Metro	Orleans	AVENUE C	413	0	2	0	1	0	903	25	97%	3%	1908	2.09
84	Metro	N.O. East	SHERWOOD FOREST	1611	0	0	0	0	0	984	33	87%	13%	1092	1.07
			PONTCHARTRAIN												
85	Metro	Orleans	PARK	510	1	0	0	0	0	1012	23	75%	25%	559	0.53
86	Metro	Orleans	JOLIET	2017	0	0	0	0	0	1007	41	87%	13%	477	0.46
87	Metro	Orleans	SOUTHPORT	B0526	0	1	0	1	0	755	66	67%	33%	2707	3.52
88	Metro	Orleans	AVENUE C	410	0	0	0	1	0	1030	25	99%	1%	215	0.20
89	Metro	N.O. East	SHERWOOD FOREST	1612	0	1	0	2	0	732	45	97%	3%	2665	3.50
90	Metro	Orleans	PAUGER	1708	0	0	1	0	0	945	19	92%	8%	601	0.63
91	Metro	N.O. East	ALMONASTER	621	0	0	0	0	1	994	35	95%	5%	144	0.14
92	ELI-Southeast (LA)	Westbank	Behrman	W0512	0	0	0	1	0	4	4	95%	5%	8931	3.59
93	Metro	N.O. East	PATERSON	1001	0	0	0	1	0	815	25	82%	18%	918	1.13
94	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0712	0	0	0	0	9	1240	39	66%	34%	616	0.51
95	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0723	0	0	0	0	3	1031	15	86%	14%	954	0.92
96	Metro	Orleans	NAPOLEON	1912	0	0	0	0	0	790	19	96%	4%	1022	1.27
97	Metro	Orleans	AVENUE C	411	0	0	0	0	0	891	16	97%	3%	77	0.08
98	Metro	N.O. East	PATERSON	1009	0	0	0	0	0	829	26	75%	25%	570	0.67
99	Metro	N.O. East	GULF OUTLET	1204	0	1	0	1	1	713	63	85%	15%	1308	1.82
100	Metro	Orleans	AVENUE C				832	19	96%	4%	148	0.17			

	2025 100% Lateral Overhead Inspection List  # of Priority Rank 2018 2018														
					#			-	nk					2018	2018
		LOCAL				Cι	istom	ers	1	# of	# of	% of	% of	YTD	YTD
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	OH	UG	CIs	SAIFI
101	Metro	N.O. East	ALMONASTER	617	0	0	0	0	1	703	25	95%	5%	936	1.28
102	Metro	Orleans	AVENUE C	403	0	0	0	0	0	689	14	59%	41%	1041	1.49
103	Metro	N.O. East	PONTCHARTRAIN PARK	505	0	0	0	0	0	769	14	54%	46%	98	0.12
104	Metro	N.O. East	SHERWOOD FOREST	1605	0	0	0	2	0	425	14	35%	65%	3170	7.14
105	Metro	Orleans CBD	NOTRE DAME	1826	0	1	0	0	0	624	4	35%	65%	1253	1.99
106	Metro	Orleans	JOLIET	2011	0	0	0	0	0	340	48	98%	2%	3813	1.83
107	Metro	Orleans	AVENUE C	406	0	0	0	0	0	745	14	68%	32%	51	0.07
108	Metro	N.O. East	ALMONASTER	626	0	0	0	1	1	712	47	63%	37%	77	0.10
109	Metro	N.O. East	PONTCHARTRAIN PARK	501	0	0	0	1	1	684	26	88%	12%	145	0.22
110	Metro	N.O. East	PONTCHARTRAIN PARK	502	0	0	0	0	0	622	20	98%	2%	660	1.02
111	Metro	Orleans	JOLIET	2021	0	0	0	0	0	579	11	98%	2%	678	0.58
112	Metro	N.O. East	PONTCHARTRAIN PARK	509	0	0	0	0	0	558	18	64%	36%	558	0.98
113	Metro	Orleans	NAPOLEON	1911	0	0	0	0	1	552	10	98%	2%	598	1.06
114	Metro	N.O. East	TRICOU	2345	0	0	1	4	1	582	35	88%	12%	310	0.51
115	Metro	Orleans	AVENUE C	401	0	0	0	0	0	560	4	26%	74%	388	0.68
116	Metro	Orleans	JOLIET	2025	0	0	5	0	0	495	35	99%	1%	966	1.98
117	Metro	N.O. East	TRICOU	2325	0	0	1	0	0	572	33	98%	2%	82	0.13
118	Metro	Orleans	AVENUE C	405	1	0	0	0	0	499	18	94%	6%	489	0.95
119	Metro	Orleans	JOLIET	2024	1	0	0	0	0	526	14	91%	9%	143	0.26
120	Metro	N.O. East	ALMONASTER	612	0	1	0	1	1	112	12	95%	5%	3481	29.50
121	Metro	Orleans	AVENUE C	402	0	1	0	0	0	476	3	38%	62%	52	0.11
122	Metro	N.O. East	PONTCHARTRAIN PARK	508	0	0	2	3	1	462	35	85%	15%	125	0.26
123	Metro	N.O. East	PATERSON	1002	1	0	0	4	3	328	21	88%	12%	430	1.28
124	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0726	0	0	0	0	9	863	14	85%	15%	642	0.74
125	ELI-Southeast (LA)	Algiers	HOLIDAY (LA)	W0714	0	1	0	1	2	701	25	42%	58%	171	0.31

			2026 100% La	ateral Ov	erh	ead	Ins	pect	tion	List					
						of P	riorit	y Raı						2018	2018
		LOCAL				Cι	istom	ers		# of	# of	% of	% of	YTD	YTD
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	ОН	UG	CIs	SAIFI
126	Metro	Orleans	ALMONASTER	625	0	0	0	0	0	325	9	89%	11%	398	1.23
127	Metro	Orleans	AVENUE C	400	1	0	0	0	0	309	8	88%	12%	116	0.37
128	Metro	Orleans	DERBIGNY	1512	0	1	3	0	0	277	9	95%	5%	186	0.62
129	Metro	Orleans	SOUTHPORT	B0525	0	0	0	0	0	204	6	95%	5%	230	1.06
130	ELI-Southeast (LA)	Westbank	Behrman	W0524	0	0	0	1	2	158	11	95%	5%	551	1.02
131	Metro	N.O. East	ALMONASTER	616	0	0	0	1	2	168	23	84%	16%	169	1.01
132	ELI-Southeast (LA)	Westbank	Behrman	W0515	0	0	0	0	10	51	4	55%	45%	1004	0.42
133	Metro	Orleans	AVENUE C	412	1	0	0	0	0	134	3	69%	31%	19	0.14
134	Metro	Orleans	PONTCHARTRAIN PARK	513	0	0	0	0	0	98	10	85%	15%	99	0.99
135	Metro	N.O. East	GULF OUTLET	1202	0	1	0	0	0	95	13	99%	1%	89	0.93
136	Metro	Orleans	PAUGER	1701	0	0	0	0	0	76	4	87%	13%	87	1.10
137	Metro	Orleans	MIDTOWN	902	0	0	0	0	0	39	1	90%	10%	312	8.00
138	Metro	Orleans	PAUGER	1713	0	0	0	0	0	68	2	63%	38%	4	0.06
139	Metro	N.O. East	SHERWOOD FOREST	1608	0	0	0	1	0	41	9	96%	4%	187	4.56
140	Metro	N.O. East	GULF OUTLET	1203	0	0	2	3	0	57	27	93%	7%	8	0.14
141	Metro	Orleans CBD	DERBIGNY	1551	0	1	0	0	0	34	3	2%	98%	3	0.18
142	Metro	Orleans CBD	DERBIGNY	1543	0	2	0	0	0	31	4	7%	93%	1	0.03
143	Metro	Orleans CBD	DERBIGNY	1504	1	2	0	0	0	31	5	5%	95%	0	0.00
144	Metro	N.O. East	TRICOU	2326	0	0	0	0	1	30	11	98%	2%	0	0.00
145	Metro	Orleans	DERBIGNY	1510	0	0	0	0	0	22	12	7%	93%	26	1.13
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	3	98%	2%	0	0.00
148	Metro	N.O. East	PONTCHARTRAIN PARK	507	0	0	0	0	1	7	3	75%	25%	0	0.00
149	Metro	Orleans	DERBIGNY	1541	0	1	1	0	0	4	0	97%	3%	0	0.00
150	Metro	Orleans	MIDTOWN	910	0	0	0	0	0	1	0	1%	99%	6	0.00

			2026 100% La	ateral Ov	erh	ead	Ins	pect	tion	List					
					#		riorit	€'	ık					2018	2018
LOCAL						Cı	istom	ers		# of	# of	% of	% of	YTD	YTD
No.	REGION	OFFICE	SUBSTATION	FEEDER	0	1	2	3	4	CUSTs	LFUS	OH	UG	CIs	SAIFI
151	Metro	Orleans	MIDTOWN	906	0	0	0	0	0	1	0	1%	99%	0	0.00
152	Metro	Orleans	MIDTOWN	908	0	0	0	0	0	1	0	1%	99%	0	0.00
153         Metro         Orleans         AVENUE C         404         0         0         0         0         0         0								0.00							

#### **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:
  - o Broken, bowing, split cross-arms
  - o Pin insulator is bent over (indicating rotten arm)
  - o Broken or rotten brace
  - Broken Wilson rack replace with standoff bracket or spools (does not trigger full R1)
- Condition of Insulator:
  - o Flashed, broken, cracked, glazing missing
- Bayonet condition:
  - o Bowing
  - o Type of bracket holding shield wire
  - o 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

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WO #s	Substation	Project Status	Work Description	Construction Start Date	EST ISD	Actual ISD	Estimated 2020 Project Cost
C6PPGR0139	ALMONASTER	Completed	Replace SEL-287 V with SEL-451 230kV Cap Bank Relay	3/30/2020	4/30/2020	4/14/2020	\$ 191,400.00
C6PPGR0074	CURRAN	Completed	Replace OCB #22BT-12	2/24/2020	3/5/2020	3/6/2020	\$ 148,500.00
C6PPKO1067	DERBIGNY	Completed	Add Standard Animal Mitigation	7/16/2020	12/31/2020	5/21/2020	\$ 35,200.00
C6PPBU1557	NAPOLEON	Completed	Replace Feeder Breaker 1912-2 and disconnect	3/13/2020	3/20/2020	3/25/2020	\$ 178,200.00
C6PPBU1559	NAPOLEON	Completed	Replace Feeder Breaker 1911-2 and disconnect	3/2/2020	3/13/2020	3/20/2020	\$ 178,200.00
C6PPGR0060	NOTRE DAME	Completed	Replace XFMR Diff Panel on T4 Type: EM - WH HU CO11	1/15/2020	2/12/2020	2/12/2020	\$ 320,000.00
C6PPGR0144	SHERWOOD FOREST	Completed	Replace HV & LV Arresters on T2	3/1/2020	3/11/2020	3/11/2020	\$ 35,999.04
C6PPGR0145	SHERWOOD FOREST	Completed	Replace LV Arresters on T4	5/25/2020	6/12/2020	6/22/2020	\$ 35,999.04
C6PPGR0093	SHERWOOD FOREST	In Construction	Replace OCB Main Breaker 16T2-6 and Disconnects	5/4/2020	9/25/2020		\$ 396,000.00
C6PPKO1062	ALMONASTER	In Progress	Add standard animal mitigation	6/22/2020	12/31/2020		\$ 55,440.00
C6PPGR0158	CURRAN	In Progress	Install Green Jacket Animal Mitigation	10/1/2020	12/31/2020		\$ 396,000.00
C6PPGR0152	CURRAN	In Progress	Replace/upgrade SCADA RTU Type: D-400S	9/7/2020	9/11/2020		\$ 125,400.00
C6PPGR0141	DELTA	In Progress	Replace Switch N9810 (Motor Operator Only Replacement)	5/25/2020	7/31/2020		\$ 51,480.00
C6PPGR0140	DERBIGNY	In Progress	Replace 1513-2 Feeder Breaker	9/28/2020	10/9/2020		\$ 178,200.00
C6PPGR0159	DERBIGNY	In Progress	Replace 1551-2 Feeder Breaker	7/13/2020	7/31/2020		\$ 178,200.00
C6PPGR0148	GENTILLY	In Progress	Replace 115kV OCB N1312 (T-Asset)	8/10/2020	8/28/2020		\$ 211,200.00
C6PPGR0160	GULF OUTLET	In Progress	Replace/ Upgrade SCADA RTU type: D-20	7/6/2020	7/12/2020		\$ 225,192.00
C6PPGR0162	MARKET 230	In Progress	Replace/Upgrade SCADA RTU Type: D-20	9/21/2020	10/9/2020		\$ 125,400.00
C6PPGR0082	MICHOUD SWITCHYARD	In Progress	Replace 115kV Bus CCVT A Phase (AT1)	9/21/2020	11/27/2020		\$ 21,700.00
C6PPGR0083	MICHOUD SWITCHYARD	In Progress	Replace 115kV Bus CCVTs (3 Phase) (North Bus)	9/21/2020	10/30/2020		\$ 66,000.00
C6PPGR0090	MICHOUD SWITCHYARD	In Progress	Replace 115kv OCB N1102 (230/115KV AUTO BKR)	11/2/2020	11/27/2020		\$ 184,800.00
C6PPGR0091	MICHOUD SWITCHYARD	In Progress	Replace 115kv OCB N1105 (230/115KV AUTO BKR)	9/21/2020	11/27/2020		\$ 184,800.00
C6PPBU1553	NAPOLEON	In Progress	Replace Procedure SCADA RTU Type: D-20 M++	9/1/2020	9/30/2020		\$ 125,400.00
C6PPBU1554	NAPOLEON	In Progress	Replace Feeder Breaker 1924-2 and disconnect	10/19/2020	11/6/2020		\$ 178,200.00
C6PPBU1555	NAPOLEON	In Progress	Replace Feeder Breaker 1925-2 and disconnect	7/12/2020	7/31/2020		\$ 178,200.00
C6PPBU1556	NAPOLEON	In Progress	Replace Feeder Breaker 1925-2 and disconnect	9/1/2020	9/30/2020		\$ 178,200.00
C6PPBU1558	NAPOLEON			9/1/2020	9/30/2020		\$ 178,200.00 \$ 178,200.00
C6PPBU1560	NAPOLEON	In Progress	Replace Feeder Breaker 1914-2 and disconnect				\$ 178,200.00 \$ 178,200.00
C6PPBU1561	NAPOLEON	In Progress	Replace Feeder Breaker 1916-2 and disconnect	7/12/2020 9/1/2020	7/31/2020		\$ 178,200.00 \$ 178,200.00
C6PPBU1562	NAPOLEON	In Progress	Replace Feeder Breaker 1915-2 and disconnect	9/1/2020	9/30/2020 9/30/2020		\$ 178,200.00 \$ 178,200.00
		In Progress	Replace Feeder Breaker 1917-2 and disconnect				*,=
C6PPBU1563	NAPOLEON NAPOLEON	In Progress	Replace Feeder Breaker 1921-2 and disconnect	9/1/2020	9/30/2020		
C6PPBU1564		In Progress	Replace Feeder Breaker 1922-2 and disconnect	9/1/2020	9/30/2020		
C6PPBU1565	NAPOLEON	In Progress	Replace Feeder Breaker 1923-2 and disconnect	10/5/2020	10/16/2020		\$ 178,200.00
C6PPBU1566	NAPOLEON	In Progress	Replace Feeder Breaker 1927-2 and disconnect	11/23/2020	12/4/2020		\$ 178,200.00
C6PPGR0164	NOTRE DAME	In Progress	Replace / Upgrade SCADA RTU Type: D-20	8/31/2020	9/4/2020		\$ 125,400.00
C6PPGR0165	NOTRE DAME	In Progress	Add 3 DGA Monitor	8/31/2020	9/4/2020		\$ 219,120.00
C6PPGR0166	PATTERSON	In Progress	Replace / Upgrade SCADA RTU Type: D-20	10/5/2020	10/9/2020		\$ 263,208.00
C6PPBU1567	PAUGER	In Progress	Replace 1705-2 Feeder Breaker	11/23/2020	12/4/2020		\$ 178,200.00
C6PPBU1568	PAUGER	In Progress	Replace 1702-2 Feeder Breaker	10/26/2020	11/6/2020		\$ 178,200.00
C6PPBU1569	PAUGER	In Progress	Replace 1704-2 Feeder Breaker	11/9/2020	11/20/2020		\$ 178,200.00
C6PPBU1572	PAUGER	In Progress	Replace 17BT-24 Bus Tie Breaker	7/6/2020	7/24/2020		\$ 178,200.00
C6PPBU1573	PAUGER	In Progress	Replace 1701-2 Feeder Breaker	10/5/2020	10/23/2020		\$ 178,200.00
C6PPBU1473	PAUGER	In Progress	Replace XFMR Diff Panel on T2 Type: EM - WH HU/CO	10/12/2020	10/30/2020		\$ 330,000.00
C6PPBU1461	PAUGER	In Progress	Replace 17T2-6 Main T2 Breaker	10/12/2020	10/30/2020		\$ 148,500.00
C6PPBU1490	PAUGER	In Progress	Replace the SCADA Remote Terminal Units (RTU) with an RTAC RTU	11/30/2020	12/11/2020		\$ 148,500.00
C6PPBU1571	PAUGER	In Progress	Add Two (2) DGA Monitors	10/12/2020	12/30/2020		\$ 153,120.00
C6PPGR0095	PONTCHARTRAIN PARK	In Progress	Add Standard Animal Mitigation	11/2/2020	12/31/2020		\$ 79,200.00
C6PPGR0092	SHERWOOD FOREST	In Progress	Replace OCB Main Breaker 16T4-6 and Disconnects	5/25/2020	9/25/2020		\$ 396,000.00
C6PPGR0153	SHERWOOD FOREST	In Progress	Replace/upgrade SCADA RTU Type: D-20 ME (Non-Outage)	7/6/2020	7/17/2020		\$ 125,400.00
F1PPU75760	UpG Patrsn-Ponchtrn Pk 115kv	Completed	Upgraded TLine, and bus and switches at Patterson and Pontchartrain Park	7/15/2019	6/1/2020		\$ 288,226.52
F1PPU51158	Gulf Outlet 115kV: Inst Cap Ba	In Progress	Install new capbank	5/1/2020	12/1/2020		\$ 2,587,767.00
F1PPUX4897	Tricou- Energize Xfmr T2	In Progress	Install new Transformer	2/15/2020	12/31/2020		\$ 3,476,883.00
F1PPUX6066	NOLA Solar- Sherwood Forest Fdrs	Completed	Install high side CCVT, replace fder brk 1612, upgrade relaying in fdr brk 160		6/1/2020		\$ 928,532.00
F1PPU50894	SPOF ELL -NMP Relaying Imprv	In Progress	Install new relaying at Joliet, Labarre, Market & Southport	10/1/2020	6/30/2021		\$ 445,893.70
F1PPU51353	Lower Coast 230kV- Add Breaker	Scoping	Install high side breakers	TBD	6/1/2022	TBD	\$ 371,748.00
F1PPU75782	Upgrade Ave C - Paris Tap line	Scoping	Upgrade TLine and switches and bus work at Ave. C.	TBD	6/1/2021	TBD	\$ 162,694.00
F1PPU51248	Curran 230kV- Add Breaker	Scoping	Install high side breakers	TBD	9/22/2022	TBD	\$ 333,225.00
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