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November 1, 2021

BY ELECTRONIC DELIVERY

Ms. Lora W. Johnson
Clerk of Council
Council of the City of New Orleans
City Hall, Room IE09
1300 Perdido Street
New Orleans, LA 70112

In Re: Docket No. UD-21-01 – In Re: Entergy New Orleans, LLC Load Shed Protocols and All Events and Decisions Related to the February 2021 Winter Storm Uri Event

Dear Ms. Johnson:

Enclosed please find the *Council Utility Advisors' Report* in the above referenced matter, which is being submitted for filing into the record along with this letter. As a result of the remote operations of the Council's office related to COVID-19, the Advisors submit this filing electronically and will submit the requisite original and number of hard copies once the Council resumes normal operations, or as you direct. Please file this submission in accordance with Council's current regulations.

Sincerely,

Jay Beatmann
Counsel

JAB/dpm
Attachment

cc: Council Utility Regulatory Office

IN RE: ENTERGY NEW ORLEANS, LLC LOAD SHED PROTOCOLS AND ALL EVENTS AND DECISIONS RELATED TO THE FEBRUARY 2021 WINTER STORM URI EVENT

UD-21-01

COUNCIL UTILITY ADVISORS' REPORT

A. Background

During the period February 12-17, 2021, Winter Storm Uri swept across North America resulting in and over 170 million Americans being placed under various winter weather alerts. For several days leading up to February 16, 2021, Entergy New Orleans, LLC ("ENO" or "Company") received multiple notices, alerts, and other communications from the Mid-Continent Independent System Operator ("MISO") notifying ENO of a potential emergency event resulting from the extreme cold weather within the MISO territory. On Friday, February 12, 2021, MISO called for conservative operations due to extremely cold temperatures and generator fuel supply risks.

Beginning Monday, February 15, at approximately 6:00 a.m. (CST) [1], MISO escalated the declaration to a Maximum Generation Emergency Alert ("Max Gen Alert") for its southern region, which includes New Orleans, and increased the level of its emergency operations notifications throughout that day.[2] Again, on Tuesday, February 16, 2021, at approximately 5:00 a.m. MISO declared a Maximum Emergency Event Level Step 2 ("Max Gen Event Step 2") effective from 7:00 a.m., which was extended to 9:00 p.m. that evening. Member utilities were directed to reduce load and curtail load management resources ("LMRs"), and to implore customers to conserve

[1] All time references are Central Standard Time unless otherwise stated.
[2] ENO's response to Advisors' First Set of Data Requests 1-19. All discovery response references are HSPM unless otherwise noted.

energy and to prepare for extreme cold weather conditions.[3] That same day, at approximately 6:43 p.m., MISO directed a *pro rata* load shed ("Event") to prevent more extensive, prolonged power outages that could severely affect the reliability of the bulk power grid. A "load shed" is the intentional disconnection of customers to temporarily reduce electricity demand to avoid a possible system collapse, sometimes referred to as rolling blackouts. ENO was advised that its share of the load shed was 26 megawatts ("MW").[4] However, during the execution of the Event, ENO actually shed 105 MW, which resulted in nearly three times as many customers losing power than would have been otherwise impacted, with the loss of service up to one hour and forty minutes.[5] ENO customers were not alerted in advance that rolling blackouts were about to begin, nor were they provided any information during the blackout periods explaining what was happening, or when it might end.

In addition, the load shed included a feeder connected to the Sewerage & Water Board of New Orleans ("SWB"),[6] a critical customer, interrupting power to portions of SWB's potable water facilities. This feeder should not have been interrupted because SWB is a critical customer.

As a result of the Event having occurred and customers not having received sufficient, understandable warning and explanation from ENO, thousands of customers and businesses lost power and were predictably distressed. The Council called a special emergency meeting to address the Event.

At a special joint meeting of the Public Works, Sanitation and Environment Committee ("PWSEC") and the Utility, Cable, Telecommunications and Technology Committee ("UCTTC")

[3] ENO's response to Advisors' First Set of Data Requests 1-19, See also MISO Operating Procedures attached to the Advisors' Initial Report as Attachment 1.
[4] ENO's response to Advisors' First Set of Data Requests 1-5 and 1-19.
[5] Letter dated March 10, 2021 from David D. Ellis to all Councilmembers ("Ellis Letter").
[6] *Id.*

held on February 23, 2021 ("Joint Meeting"),[7] councilmembers expressed their reactions to ENO's excessive load shed that had a significantly increased effect on residents and businesses throughout the city. The Council also expressed wide frustration over ENO's lack of effective communication with customers and the Council, which ultimately led to customers having an inability to properly prepare for or understand the Event.

As a result of the Joint Meeting, the Council directed that the Council's Utility Advisors "immediately initiate an Investigation of Entergy New Orleans relative to its response to the Winter Storm URI weather event and the MISO declared Maximum Generation Emergencies of Friday, February 12 through Saturday, February 20, including the load shed event of February 16, 2021."[8] The Council further directed the Advisors "to develop a public report on their findings as a result of this Investigation including a recommendation to the Council as to whether or not more actions are needed."[9]

Pursuant to the Council's mandate, the Advisors initiated an initial investigation into all matters surrounding the Max Gen Alert and the Event with an understanding that the Advisors' Report would be completed within forty-five (45) days of the adoption of the Resolution.

The Advisors identified and divided the investigation into two main component parts:

1. Technical issues that related to the over-shedding of megawatts and customers; the interruption of service to the Sewerage & Water Board; the weatherization status of ENO generation resources[10]; and the process for determining priorities and sequencing of feeders (customers); and

[7] A second meeting of just the UCTTC further discussing the Event was held on March 16, 2012 ("UCTTC Meeting")
[8] City Council of New Orleans Resolution No. R-21-87 ("Resolution") at 5.
[9] *Id.* at 8.
[10] It was ultimately determined that the weatherization issue would be examined in a separate docket and not included in the current investigation.

2. Communications related to ENO's messaging to customers and the City Council before, during, and after the Event.

Pursuant to multiple discovery requests, the Advisors received hundreds of documents over the course of the initial investigation period totaling thousands of pages. However, it should be noted that most of the discovery responses were designated as Highly Sensitive Protected Material ("HSPM"), which severely restricted the use of the data contained therein. As a result, much of the Advisors' Initial Report, filed on April 12, 2021, ("Initial Report") relied upon the Advisors' summaries and adaptation of information that supported the Report's conclusions and recommendations, but without the ability to attach specific documents and other data production. However, Resolution R-21-151 provides a process whereby an appropriately protected HSPM record will be made a part of the official record in these proceedings. Accordingly, specific details and references in this report might only appear in the HSPM record.

The Advisors' initial conclusions were, and remain after further investigation, that ENO was responsible for technical and communications failures that resulted in adverse consequences for its customers, which were avoidable.[11]

B. Summary of Issues

ENO's automatic load shed computer program was incorrectly programmed, and it relied on outdated or incorrect data, perhaps for decades. These programming and data errors, coupled with errors in reading actual load at the time of the Event, resulted in ENO shedding 105 MW of power rather than the 26 MW assigned to it in the original directive. This resulted in approximately 18,000 additional customers losing power than was required. These programming and data errors were not discovered and corrected during ENO's required annual system reviews, again, perhaps

[11] The Advisors' Initial Report is adopted herein and made a part of this report.

for decades. In addition, an error in the development, maintenance, and updating of ENO's priority classifications of distribution feeders and critical customer lists resulted in an interruption of power to some SWB facilities during the event, without warning.

There were also technical flaws in ENO's sequencing of feeders included during the Event, which seemingly allowed higher classification category feeders to be disrupted.

With respect to communications, although there are numerous deficiencies in the communication procedures employed by ENO, the main problem discovered by the Advisors is that ENO had abdicated its communications responsibility to Entergy Services, LLC ("ESL") and/or other Entergy companies ("Entergy") to the detriment of ENO customers. Further, ENO failed to follow internal processes and procedures purportedly developed to manage communications under the exact circumstances of the Event. In addition, ESL and other Entergy companies clearly acted as though ENO specific communications were an afterthought, quite literally, and ENO failed to prevent that result either structurally, organizationally, or during the event.

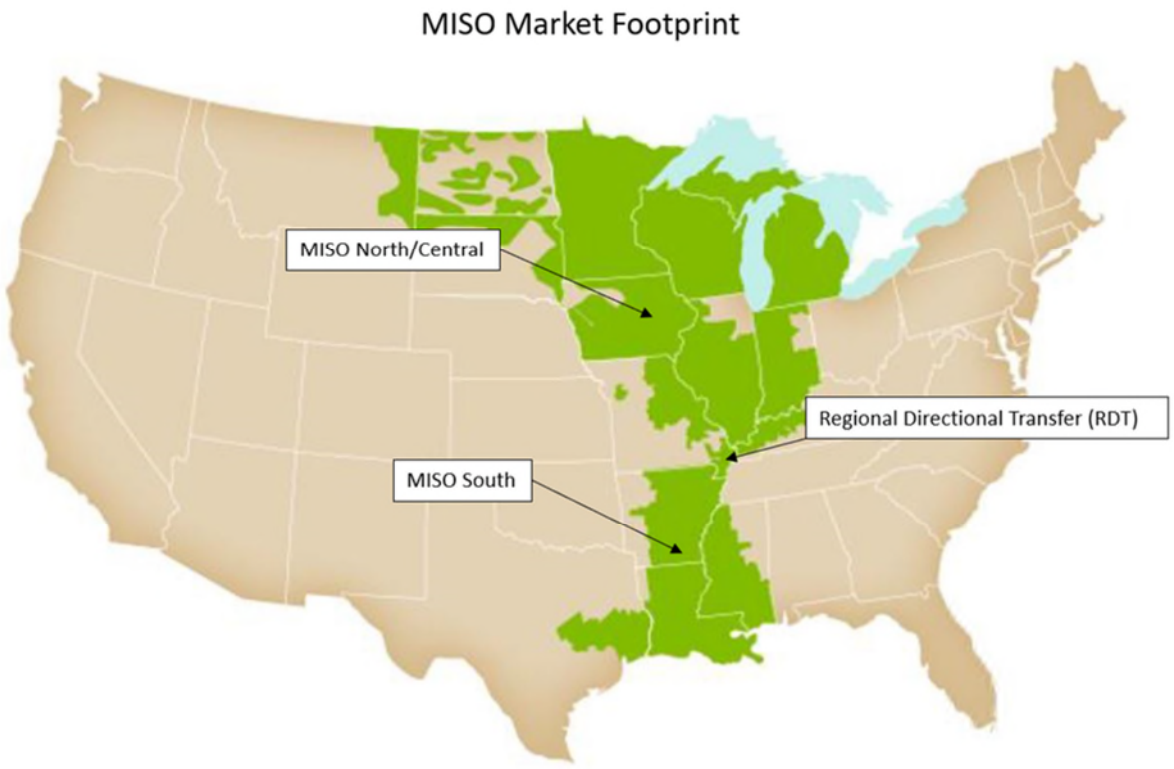
C. Technical Issues

The Entergy Operating Companies ("EOCs")[12] joined MISO in December, 2013. In general, MISO operates capacity and energy markets, plans transmission in coordination with MISO Transmission Owners, and is responsible for reliably managing the commitment and dispatch of generating units for a region that extends from parts of Canada to the Gulf of Mexico. While the EOCs, including ENO, are responsible for maintaining and operating their generating resources, the ultimate dispatch of those resources is directed by MISO.

[12] The Entergy Operating Companies are, Entergy Arkansas, LLC, ("EAL"), Entergy Louisiana, LLC ("ELL"), Entergy Mississippi, LLC ("EML"), Entergy New Orleans, LLC ("ENO"), and Entergy Texas, Inc. ("ETI")

Figure 1 shows a map of the MISO market footprint noting regions and the location of the Regional Directional Transfer ("RDT").

Figure 1



Abnormally cold temperatures were experienced across the central United States from February 12, 2021, through February 19, 2021. By February 16, more than thirty-five (35) percent of the generation in MISO South was in outage or derated. The increase in demand from the cold weather coupled with unit outages and derates across the central U.S. resulted in atypical flows of energy within MISO, the Southwest Power Pool ("SPP"), and the Pennsylvania New Jersey Maryland Interconnection ("PJM") regional transmission organizations ("RTO"). While there were multiple load curtailment events in MISO on February 16, the load curtailment that affected

New Orleans was triggered by an energy flow limit having been exceeded on the Regional Directional Transfer between MISO North/Central and MISO South regions.

On February 16, 2021, at 6:43 PM, MISO declared a Max Gen Event Step 5 (Firm Load Shed) and directed a 700 MW load shed in the MISO South Region. ENO's allocated amount of load shed was 26 MW. Unfortunately, for reasons discussed more fully below, the actual amount of load shed by ENO was 105 MW – four times the amount directed. The load shed began at approximately 7:15 p.m. on the evening of February 16, and lasted for approximately one hour and forty minutes, affecting nearly 25,000 ENO Customers.

1. Procedures and Protocols in Preparation for Capacity Emergencies

In preparation for dealing with capacity emergencies the North American Electric Reliability Corporation ("NERC")[13], MISO, and Entergy have developed procedures, manuals, and processes that guide interactions and communications between NERC, MISO, Local Balancing Authorities ("LBAs"),[14] and Market Participants, including Load Serving Entities ("LSEs") such as ENO. In addition, these procedures and manuals are used to implement the load shed process. Each of these documents is subject to periodic review and updating. In connection with the review of discovery responses, the technical Advisors have reviewed the following procedures, manuals, and processes.

NERC Emergency Operating Procedures EOP-011-1. Effective April 1, 2017. Ensures that each Balancing Authority has developed Operating Plans to mitigate emergencies, in conjunction with the MISO Reliability Coordinator and with standards for compliance.

[13] North American Electric Reliability Corporation is a non-profit corporation that ensures the reliability of the bulk power system by developing quality reliability standards in a timely manner that are effective.

[14] The Local Balancing Authority ("LBA") is an entity that is responsible for compliance to NERC for the subset of NERC Balancing Authority Reliability Standards. LBA activities include: maintaining interconnection telemetry, metering, and associated accounting; establishing equipment ratings and monitoring their local system in real-time; implementing emergency procedures including load shedding.

MISO Market Capacity Emergency, SO-P-EOP-00-002 Rev: 9. Effective April 24, 2020. Reviewed annually, this is included under the MISO Reliability Operating Procedures for MISO Market Capacity Emergencies and Abnormal Conditions. These protocols provide a set of emergency operating plans to address capacity and energy emergencies within MISO, including Stakeholder Market Participants, such as ENO. These protocols also address Stakeholder actions during a MISO Max Gen Emergency and include immediate actions to mitigate any undue risk to the Interconnection, including load shedding; includes Load Modifying Resource ("LMR") instructions via a MISO communications system (MCS).

Entergy Operations Management Manual, OMM-Pl-014. Effective date of July 2, 2020. This is the Event Reporting Operating Plan mandated by NERC Standard EOP-004. This Manual governs Procedures for Business Units, such as ENO, which include the specific responses to system-wide weather events as part of Entergy's Utility Operations Emergency Operations Plan, which is included in Entergy's System Planning and Operations ("SPO") Policies and Procedures.

Entergy Load Risk Management Load Shed Process, Rev. 04. OPS-702, Dated August 4, 2021. This ensures that Entergy's load shed program is consistent with the Regional Reliability Organization program and provides guidelines for determining the loads subject to curtailment, including the process for feeder selection for a load shed plan.

Entergy SPO Policies and Procedures - Capacity Emergency Load Shed Process, and Event Reporting, Rev. 12. Dated December 1, 2020, the operating plan that addresses Requirement R2 of NERC EOP-011-1, which mandates an Emergency Operating Plan.

LBA Operating Guide Firm Load Shed Process, Rev. 7. Dated September 3, 2019. This guide provides the orderly and equitable process steps the Entergy LBAs (including the Entergy Electric System ("EES") LBA and ENO) execute when MISO instructs an emergency firm load shed.

EMS Load Shed Update Process, Rev 00. Dated April 13, 2021, the Information Technology Management Manual new work instruction to provide guidance on updating the distribution loadshed programs on EMS Production.

ENO Load Shed Plan. Dated April 27, 2020. Reviewed annually, this plan lists details of the specific feeders that were curtailed in the February 16, 2021, Firm Load Shed. From a review of Entergy communications, it appears that there were no changes from the 2019 ENO Load Shed Plan.

The Advisors note that Entergy's manuals and procedures are detailed in their instructions but are cumbersome to implement as they involve a myriad of groups and organizations within Entergy. While some level of complexity is necessary given the size of the Entergy organization, the process with respect to some aspects appears to provide for multiple communication paths from different Entergy groups to certain stakeholders. This Report provides the Advisors' recommendations to address this concern.

2. Events Leading up to the Firm Load Shed Event

Anticipating extreme cold temperatures, Entergy began pre-storm preparations approximately a week before the Event.

MISO uses defined emergency operations messaging whereby MISO communicates to its members the status of its emergency operating procedures to provide for situational awareness and guide MISO and member actions.[15]

MISO's Emergency Operating Procedures proceed from Advisories, to Alerts, to Warnings, and to Events. The critical steps are as follows:

- Max Gen Alert – Alert for Situational Awareness: potential capacity shortage
- Max Gen Warning – Prepare for Possible Event
- Max Gen Event (Step 1) – Actions Taken to Preserve Operating Reserves
- Max Gen Event (Step 2,3,4) – Actions Taken to Preserve Firm Load

[15] See Advisors' Initial Report, Attachment 1 which summarizes MISO's Operating Procedures and terminology.

- Max Gen Event (Step 5) – Shed (curtail) Load

Messaging leading up to the Event began on February 13 when MISO declared a Maximum Generation Capacity Advisory to begin on February 15, at 8:00 a.m. Throughout the day on February 15, 2021, emergency operations messaging for MISO South progressed from Alerts to Warnings, getting as high as Max Gen Event Step 2.

On February 15, 2021, there was a Local Transmission Emergency in the Western Pocket of MISO South in Texas during the morning peak where MISO curtailed 800 MW of load. On the morning of February 16, 2021, there was another Local Transmission Emergency in the Western Pocket in Texas where MISO curtailed 300 MW of load and a Transmission System Emergency in the Acadiana Area in southwest Louisiana where MISO curtailed 1000 MW of load. Also, during the morning of February 16, MISO extended Conservative Operations and declared a Max Gen Event Step 2a.

Under Max Gen Event Step 2a, MISO informs the affected LBAs to implement Load Modifying Measures and Load Modifying Resources, such as interruptible load resources. It appears that the Entergy EES Local Balancing Authority and the EOCs, including ENO,[16] did implement Load Modifying Resources at various times over the three-day period, February 15, through February 17. However, in reviewing the HSPM logs of operations, some notifications are missing, and inconsistencies were observed with respect to the timing of the operation of the Load Modifying Resources, the dispatch level of generating units, and the timing of the Event. A chronology of events up to the MISO notification of Max Gen Event Step 5 (Firm Load Shed) was included in the Advisors' Initial Report as Attachment 2.

[16] The load curtailments of LMR customers, including ENO's interruptible customer, was directly managed by the EES LBA. Although ENO was listed to receive notifications of the two curtailments of its LMR customer, there were no communications provided which confirm ENO acknowledging the curtailments.

3. Firm Load Shed Event

On February 16, 2021, at 6:43 p.m., MISO declared a Max Gen Event Step 5 and directed a 700 MW load shed in the MISO South Region. The load shed was to be allocated to all MISO South LBAs on a *pro rata* basis with each LBA allocating the load shed to the Load Serving Entities (LSE) within its LBA. Of the 700 MW, the Entergy LBA was allocated 538 MW, of which the EOCs were allocated 448 MW of load shed; ENO's allocated amount was 26 MW. A chronology of the February 16, 2021 Event was summarized in the Advisors' Initial Report as Attachment 3, which began with the MISO directive to the Entergy LBA to shed load. This chronology was derived from responses to the Advisors' discovery requests and cross-referenced to copies of notifications and logs.

The Entergy LBA Operations, following Emergency Operating Procedures, targeted a firm load shed of 26 MW from ENO's customers; however, as noted above, the actual firm load service interruption was 105 MW.

The load shed execution is accomplished through an automatic load shed program in which the targeted amount of load for subregions defined within each of the EOCs is entered into the automated program. The automated program steps through the list of pre-programmed feeders, opening the breakers to those feeders and using real time load measurements on each feeder to determine when the targeted amount of load shed has been achieved and no additional breakers need to be opened.

The technical Advisors have confirmed that there were two immediate causes for the excessive shedding of 79 MW for ENO's service area:

1) 60 MW of ENO load was erroneously included in an ELL Load Shed Program, resulting in 13,400 ENO customers (rather than ELL customers) losing service; and

2) an improperly functioning measurement of load in one of ENO's substations provided an inaccurate reading of actual load shed, resulting in an additional 19 MW of excess load shed and an additional 4,200 ENO customers losing service.

The specific errors discovered with the ENO load shed, and the faulty measurement equipment summarized above, resulted in 17,600 customers' service being interrupted erroneously of the total of approximately 25,000 customers affected.

The technical Advisors were also able to determine through further investigation that ENO had identified an additional cell reference error in the Entergy LBA spreadsheet used to calculate the allocated amount of load shed targeted for ENO.[17] This error resulted in an additional ENO load shed of 3 MW, which could have been avoided if the allocation calculations were reviewed prior to an actual load shed.[18]

It has also been established that one of ENO's feeders serving the SWB water intake facility was interrupted by the Load Shed Program.[19] The feeder at issue serves the Hamilton electrical vault at the rear of the SWB Carrollton Water Treatment Facility.[20] That feeder is not dedicated solely to serve the SWB; rather, it also serves approximately 2,400 residential customers in the area.[21] However, this feeder should have been prioritized as including a critical customer and should not have been interrupted during the Event. Importantly, this feeder was removed from the ENO Load Shed Plan and the Load Shed Program shortly after the Event.[22] This corrective action is expected to prevent this particular error from recurring in the future. However, the Advisors

[17] Affidavit of Victor M. Prep dated November 1, 2021, at 4, para. 14 (HSPM record as Exhibit A).
[18] *Id*.
[19] *Id*. at 4-5, para. 15.
[20] *Id*.
[21] *Id*.
[22] ENO response to Advisors' discovery CNO 3-5 (a), which states that Southport Feeder ID B0527 has been removed from the Load Shed Program.

found further deficiencies in the development of ENO's critical customer lists generally, which deficiencies must necessarily be discussed as HSPM.

The automatic and quick nature of the load shed underscores the importance of ensuring, in advance of a load shed event, that the program operates correctly. An annual review is required as part of the "Entergy SPO Policies and Procedures - Capacity Emergency Load Shed Process, and Event Reporting."[23] Further, as part of the Entergy Load Risk Management Process, ENO and the other EOCs are annually responsible for "…reviewing and updating the interruptible/curtailable retail service customer list and loads" as well as reviewing and concurring with the updating of "[t]he assigned circuit priority classification for all circuits selected for load shed and critical customer assignment."[24]

ENO has confirmed that the latest annual review of the load shed plan prior to the Event occurred in April 2020, and described the annual review as a cross-functional process that includes individuals from distribution, transmission, Entergy's Information Technology Operations Technology ("IT-OT") group, and customer service. Based on the Advisors' preliminary and current investigations, although the individual Operating Companies are ultimately responsibility for their Load Shed Plans, prior to the Event ENO did not have a central role.[25]

There are procedures and policies, all of which are designated HSPM, which govern these annual reviews. However, no documented process for updating the ENO Load Shed Program existed prior to the creation of a new IT work instruction after the Event.[26] In previous years and including the Event, departmental subject-matter experts relied upon historical knowledge and

[23] Prep Affidavit at 6, para. 19.
[24] Entergy Load Risk Management Load Shed, OPS-702, effective 08/24/2021, paragraph 4.8. (HSPM record).
[25] Prep Affidavit at 6, para. 21.
[26] *Id*. at 7, para. 25.

general modeling practices for the EMS Supervisory Control and Data Acquisition ("SCADA") software to implement updates to the load shed programs.[27]

Although ENO addressed training, simulation, and testing with regards to the load shed program it was apparent that the simulations that were performed were not an actual test of the load shed program in an external computer environment but more of a simulation of the actions needed to be taken by operators to implement a load shed and communications with MISO. In the course of the Advisors' review, ENO also confirmed that no automated testing was conducted on the Manual Load Shed Programs, including for the years 2016 through 2020.[28] ENO asserted that testing would have been unlikely to identify and correct the issues that caused incremental loadshedding during the February winter event.[29] The Advisors maintain the opinion that simulation testing could be an effective method to ensure that the Load Shed Programs are operating as intended.

Based upon their review of discovery responses, most of which are HSPM, the technical Advisors conclude that if the annual review process had been more robust and actual testing simulations of the program had been performed in an external computer test environment, the errors that resulted in the 60 MW of excess load shed due to the ENO feeders being improperly identified as ELL feeders could have been avoided. ENO has failed to explain how Entergy's cross-functional review process, with a significant participation from multiple entities, failed to disclose the errors.

[27] *Id*.
[28] *Id*. at 7, para. 27.
[29] *Id*.

The Advisors recommend that the Council require ENO to implement effective control and testing procedures related to the ENO and ELL Load Shed Programs to ensure that the Programs shed and restore load on the designated ENO distribution circuit feeders exactly as intended.

The Advisors also recommend that the Council direct ENO to systematize an arranged set of rules and guidelines for the Load Shed Plan and Load Program annual review process with documentation prepared by ENO, using complete references to Entergy emergency procedures, and including specifically assigned ENO staff positions, a comprehensive cross functional/cross company review process that includes a more active ENO staff involvement with sign-offs, and reviews of Load Shed Program simulation testing or confirmation of correct Load Shed Program operation.

4. <u>Load Measurement Problems</u>

In addition to the 60 MW of excessive load shed due to errors contained in one of ELL's load shed programs, 19 MW of load were erroneously shed resulting from faulty readings on certain ENO circuit feeders. These feeders falsely indicated an insufficient amount of targeted load was shed than was actually the case, causing the Load Shed Program to shed an additional 19 MW of ENO load, impacting approximately 4,200 customers.[30] According to the technical Advisors' review of information provided through discovery, ENO's initial response to this issue was inadequate, especially with respect to feeder evaluation.

As a result of the inadequacy of ENO's evaluation of feeders as part of preventative routine maintenance procedures, the Advisors recommend a comprehensive review of the load measurement related to all ENO feeders similar to the post-Event review that was conducted on only the feeders listed on the current Load Shed Plan.[31] Further, the Advisors recommend that the

[30] *Id*. at 11, para. 42.
[31] *Id*. at 12, para. 48.

Council direct ENO to conduct an increased level of testing to confirm, as much as possible, the correct operational interface between the Load Shed Programs and the SCADA system.[32] The Advisors also recommend strengthening the preventive/routine maintenance procedures ("PMs") going forward.[33]

5. Critical Customer List and Feeder Priority Classifications

In the Initial Report, the Advisors recommended additional review of feeder selection, prioritization, and sequencing to ensure that all ENO customers are treated equitably. Specifically, the Advisors recommended a comprehensive review of all ENO distribution feeders, identifying all feeders with critical customers, prioritizing all remaining feeders, and from that, establishing a new Load Shed Plan that includes as many feeders as reasonably possible with a randomly assigned load shed sequence.[34]

After further review, the Advisors have determined that the Company did not maintain a database or other documents identifying each of the feeders in ENO's Load Shed Plan that include critical customers and the names of each critical customer on each feeder.[35] The correct feeder priority classifications were not assigned to all ENO feeders in previous annual updates, including the limited number of feeders in the Load Shed Plans.

ENO's involvement in the annual review of the Load Shed Plans, feeder priority classifications and critical customers was inadequate to ensure that the Load Shed Plans were correct.

Further review by the Advisors of ENO's Load Shed Plans from 2016 through 2020 shows additional problems with the annual review process. Only one ENO staff person was listed to

[32] *Id*.
[33] *Id*. at 12, para. 49.
[34] See Advisors' Initial Report at 20.
[35] See ENO response to Advisors' discovery CNO 5-14.

review the 2020 ENO Load Shed Plans, and that staff person was not included among the several ENO staff listed to review the Load Shed Plans in each of the previous years.[36] Also, several of the circuit feeder priority classifications in each of the recent five years Load Shed Plans were identified with critical customers, with the five years of annual ENO Load Shed Plan updates consistently remaining unchanged.[37] As a result, the errors and deficiencies in developing ENO's Load Shed Plans were perpetuated for several years.

ENO confirmed its shortcomings regarding critical customer lists, feeder priority classifications, and a more rigorous annual review process, and reports that it is implementing remedial measures.[38] These measures include ENO taking a more prominent role in identifying and prioritizing critical customers located on feeders serving ENO load and a more detailed and interactive review of the load shed list and of the annual review process itself.[39] ENO has agreed to implement the Advisors' recommendation to conduct a comprehensive review of all ENO distribution feeders, identifying all feeders with critical customers, prioritizing all remaining feeders, and from that, establishing a new ENO Load Shed Plan that includes as many feeders as reasonably possible with lower priority classifications.[40]

The Advisors also recommend that the Council order ENO to codify the Load Shed Plan critical customer and feeder priority classification review process in documentation prepared by ENO, using complete references to Entergy emergency procedures as outlined in Mr. Prep's Affidavit.[41] The ENO documentation should include specifically assigned ENO staff positions, procedural schedules, and a comprehensive cross functional/cross company review process that

[36] Prep Affidavit at 14, para. 58.
[37] *Id*.
[38] See ENO response to Advisors' discovery CNO 3-10.
[39] *Id*.
[40] Prep Affidavit at 15-16, para. 65.
[41] *Id*. at 16, para. 67.

includes a more active ENO staff involvement.[42] The Advisors also note that ENO did not communicate effectively with its large commercial and industrial customers before and during the Event. ENO should have made direct requests to its large customers to reduce load as a proactive measure, knowing that a load shed of distribution circuit feeders was likely and imminent.

6. Observation of Excessive Load Shed in Real Time

The technical Advisors have discovered that ENO's total load could not be monitored during the duration of the Event, or directly during normal operations. In fact, ENO conceded that at the time of the Event, the Company's Distribution Dispatch staff did not have a specific means to identify total ENO load or monitor the change in ENO total load and specific ENO load shed over the course of the Event.[43] In response to multiple requests made by the Advisors, ENO indicated that it was unable to manually validate the feeders shed by six different load shed programs (ENO's Load Shed Program and the 5 ELL Load Shed Programs) and compare against the targeted jurisdictional load in real time.[44] Thus, Distribution Operations personnel could not manually validate the feeders shed "in the heat of an emergency event" to compare against targeted load shed.[45]

The Advisors recommend that the ENO should implement, as soon as can reasonably be expected, the most effective means to provide Entergy distribution supervisory personnel in the Distribution Operations Center, during load shed events, with timely information related to ENO's total load, including the ability to confirm that targeted ENO load sheds are implemented as intended.[46] The Advisors also recommend that if there are equipment or other constraints that

[42] *Id*.
[43] Prep Affidavit at 19, para 85.
[44] See ENO Response to Advisors' discovery CNO 4-10(b).
[45] See ENO June 16, 2021 Response to Prudence Investigation at 16 and 17.
[46] Prep Affidavit at 20, para. 90.

prevent the implementation of timely information related to monitoring ENO's total load, ENO should provide such information to the Council, including any alternative approaches that the Council may consider to address this concern.[47]

D. Communications Issues

A major source of the critical communications failures that occurred during the Event was ENO's reliance on ESL and other Entergy companies for communication and public relation services. These services are among a list of shared services covered by an agreement between ENO and ESL that has existed for decades. Shared services are not a bad thing and can be beneficial to ratepayers. However, ENO has little independent control over its communications, even those specifically directed to ENO customers, including in an emergency. ENO asserts that the Event was ENO's first time communicating with customers regarding a system-wide load shed event in 20 years and argues that those communications were reasonable under the circumstances.[48] The Advisors disagree. ENO's communications to customers did not provide a level of specificity, focus, and detail that would have allowed New Orleans customers to be better informed and prepared for the Event.

Operationally, ESL and other Entergy companies are governed by communications protocols, procedures, and manuals that create a complex, bureaucratic, and bloated process that virtually assured that the emergency communications up to and during the Event would fail with respect to ENO customers, who represent the smallest part of the Entergy system and are easily ignored by that system. This is clearly reflected in the communications that were issued before, during, and after the event.

[47] *Id* at 20, para. 91.
[48] Entergy New Orleans, LLC Response to Prudence Investigation at 18.

1. ENO's Load Shed Communications and the Media's Coverage of Them Were Inconsistent and Conflict With ENO's Own Policies and Procedures

Entergy communications procedures are governed by hundreds of pages of manuals including at least two manuals that are specifically tailored for emergency communications related to power shortfalls as occurred during the Event.[49] Nonetheless, no ENO customer-specific message presented during this investigation was disseminated to ENO customers or the Council prior to or during the event that provided any sufficient, accurate, and understandable information related to the Event.

The Entergy Power Shortfall Communications Plan clearly describes the primary objectives of the plan to be carried out by the utility.[50] One of these objectives, which can hardly be considered HSPM, includes providing timely, accurate and consistent information to key stakeholders, including customers and employees.[51] The targeted audiences for these critical communications include customers, community leaders, elected officials, regulatory commissions, and employees.[52] While the logic of these goals is unassailable, they are meaningless if they are not accomplished.

Among the shortcomings of ENO's reliance on ESL-controlled communications is that they are issued by a variety of means that do not always follow a consistent pattern and provide consistent, timely, and effective messaging to the target audiences. For example, some information is released by a news release directly to the media. Other information is released by ENO "alerts" or "newsroom updates," which are posted on the ENO website. Some information is sent by direct message to customers via text, email, or voicemail; some on social media. Although the details of

[49] Although they are designated HSPM by ENO they are referred to as 1) Entergy Power Shortfall Communications Plan, and 2) ETR Emergency Outage Response Communications Plan, included in HSPM record as Exhibits B and C respectively.
[50] Entergy Power Shortfall Communications Plan, Updated August 31, 2020 at 3. (HSPM record as Exhibit B).
[51] *Id.*
[52] *Id.*

the various communications manuals are currently designated as HSPM, the conclusion that they were ill-suited to the task of communicating to New Orleans customers during the Event is no secret.[53]

ENO's Manager of Communications, Ms. Lee Sabatini, cites various New Orleans news media messages as support for ENO's performance in communicating with customers.[54] Media announcements can disseminate information to New Orleans residents broadly, however, such announcements are only useful to supplement timely, understandable, and consistent direct communications with customers. ENO, not the media, is responsible for clearly, timely and consistently communicating with its customers regarding any major anticipated event that can impact customers to the extent of the sudden total loss of electricity for an unspecified amount of time.

Another adverse result of over-reliance on media outlets comes from ENO's articulated goal of having the media "echo" Entergy's messages. This creates the risk of exactly what occurred in connection with the Event that the media's communications will be inconsistent with, and possibly contradictory to, those released by ENO directly. This is especially true when other operating companies are sending media releases that refer to other parts of the state, excluding New Orleans.

For example, in a 5:00 p.m. update on February 16, a long multi-paragraphed document says:

> **Entergy's reliability coordinator, MISO, cancelled its order for power outages in Texas and Louisiana.** Shortly afterward, operators began restoring customers back to service who were affected by these outages. However, winter weather and the forecast could cause additional outages over the next few days.... Crews are

[53] The sampling of communications referred to in this report were all provided in discovery by ENO or found on the ENO website. Although initially designated as HSPM, ENO counsel lifted that designation as to public communications referred to herein.
[54] Affidavit of Lee Sabatini at 2-3.

> currently working to restore customers effected by the load shed. This part of our restoration process could take many hours to complete. Additionally, some equipment may have been damaged due to the cold weather and the amount of load being consumed.

Oddly, in the same release, several paragraphs later, contradictory statements are made:

> **We have begun targeted customer outages** to prevent the possibility of more extensive and wider spread outages. These outages may last several hours and it is not necessary to report your outage during this time…. Because of the extreme cold temperatures, resuming to full operation is a slower than usual process. We are working to minimize outage times as much as possible. We apologize for the inconvenience this outage has caused and appreciate your understanding.[55]
>
> Which is it? Is the load shed over or just starting?

No New Orleans specific messaging referring to or explaining imminent outages before or during the Event has been presented by ENO during this investigation.

The first New Orleans specific communication with actual information about load shedding did not occur until the event was already underway when Ms. Becky Knox, then-ENO Vice-President for Regulatory Affairs, sent an email to councilmembers at 7:35 p.m. stating that "[a]t 6:52 p.m. MISO issued a Maximum Generation Emergency Event Step 5 effective from 02/16/2021 19:40 EST until 2/17/2021 01:00 EST.[56] MISO has called for a mandatory load shedding event for Louisiana including 26 megawatts from New Orleans.[57] Our DOC will begin effecting load shedding immediately in order to satisfy the MISO request. The event is currently expected to last until midnight…."[58]

It was only the fact that Councilmember Moreno posted this information on her social media that anyone in New Orleans had any idea about the event until it was well underway. Notably, the information included in Ms. Knox's email was very limited and inhibited any efforts

[55] Storm Center…Entergy System Winter Storm Update – 2/166/21 @ 5 p.m. from Entergy website (emphasis added).
[56] Email from Becky Knox to Councilmembers, Council Staff and Advisors dated February 16, 2021.
[57] *Id*.
[58] *Id.*

by councilmembers to provide useful information to the public in that it does not explain what a load shed is or who it would affect. If the purpose of Ms. Knox's email was to provide useful information to the Council, it fell short. The average ENO customer has no idea what it means to "load shed 26 megawatts." Is that the whole city or one neighborhood? Nor do they know what a MISO Maximum Generation Emergency Event Step 5 is or what DOC means. Consequently, the information, as delayed as it was, was of little assistance.

Utilizing clear, understandable, consistent language is crucial. The tardy, muddled, often conflicting messaging used by Entergy and ENO created the specific problem that emergency communications are intended to prevent, and frustrated the stated goals of Entergy/ENO's internal procedures and protocols.

2. ENO's Messaging in the Days Leading Up To the Event Lacked Focus, Urgency and Failed to Provide Localized Information

In the days leading up to the Event, all public communications referred to by ENO in connection with this investigation were consistently very general and mostly related to non-emergency issues like potential weather-related bill increases and encouraging customers to "prepare for cold weather," and to conserve energy. They all lacked any clear sense of focus and urgency. Often, any information that might have related to the impending crisis was buried late into a message.

On February 11, for example, voice and text messages were sent to customers who had signed up for such alerts with no mention of potential power disruptions, instead referring to "tips on how to save money and prepare for winter weather," and "we also offer a number of payment options to fit your needs."[59] In text and voice messages on February 14, there was again no mention

[59] See ENO Excel spreadsheet provided as part of ENO's Response to Advisors' First Set of Data Requests 1-15 and attached to the Advisors' Initial Report as Attachment 4. Although this attachment was originally designated HSPM, that designation was removed by ENO counsel because it is public information.

of potential outages instead encouraging customers to "do your part to help by managing your usage to reduce bills and taking a few easy steps to conserve energy."[60]

On February 15, the first mention is made in text and voice messages that "if reductions [in electric usage] are not sufficient, it may be necessary to begin temporary interruptions of electric service in your area," which statement appears near the end of long voice and text message scripts.[61]

ENO's communications prior to the load shed event were also, in many instances, untimely and failed to provide the necessary level of localized information to adequately inform New Orleans customers of critical information about the Event. The communications policies and procedures that govern ENO's messaging clearly require certain communications to be modified to include anticipated risks to local areas of the electric system such as potential load shed conditions.[62]

The non-local nature of the communications system is reflected in a February 14, Entergy Louisiana winter storm alert posted on the Entergy website at 3:00 p.m. and referred to by ENO as a communication relevant to this investigation.[63]

However, that alert reads in part as follows:

> Entergy crews are on standby across the state as the utility prepares for snow, ice and freezing temperatures statewide beginning tonight and into the week.
>
> The National Weather Service is predicting several inches of snow possible in north Louisiana and ice accumulation up to one-fourth an inch possible in north and central Louisiana, and up to half an inch possible in portions of south Louisiana, including Baton Rouge.
>
> If this type of winter precipitation occurs, it could pose significant challenges for our electric system, especially in cities, such as Baton Rouge that have a large tree

[60] *Id.*
[61] See ENO Excel spreadsheet provided as part of ENO's Response to Advisors' First Set of Data Requests 1-15 and attached to the Advisors' Initial Report as Attachment 4.
[62] Entergy Power Shortfall Communications Plan, Updated August 31, 2020 at 16. (HSPM record Exhibit B).
[63] ENO's response to Advisors' First Set of Data Requests 1-15.

> canopy. Snow and ice can add weight to tree limbs and cause them to fall into electric equipment, downing power lines and utility poles. It can also add weight to power lines, causing them to sag and break cross arms or damage other electric equipment.[64]

There is no mention of New Orleans in this alert or of rolling outages. Another alert on February 14 refers to MISO with the following explanation:

> The current load forecasts are approaching an all-time winter peak, even greater than those experienced during the polar vortex of January 2019.
>
> These conditions are spread across the country, including the area served by the Mid-Continent Independent System coordinator that manages transmission and generation needs for the Entergy operating companies and other utilities. MISO projects whether it will have sufficient power generation to address increased demand and resource uncertainties the cold weather can bring.
>
> MISO will direct its members to take additional actions if generation or transmission sufficiency changes.
>
> Extreme cold can cause operational issues for our power generation facilities by adversely affecting systems and instrumentation that could result in a generator suddenly going offline and not producing power.[65]

Again, there is no information specific to New Orleans, nor is there any warning about impending outages. More important, none of this information would be useful to the average customer who would not be technically informed enough to know what "MISO will direct its members to take additional actions if generation or transmission sufficiency changes," actually means.

This pattern continued into February 15. The only direct customer messages that day that mentioned potential interruptions of electric service in the event of insufficient reductions in usage was either a voicemail or text message with the following script:

> This is a call from Entergy…. we are strongly requesting our customers to limit electricity uses immediately, since the present extreme cold weather is increasing demand for electricity. Conservation can be done by turning off or not using non-essential lights and electric appliances, especially electric water heaters, clothes driers, and dishwashers and to turn heating thermostats to lower settings. If

[64] *Id.*
[65] ENO's response to Advisors' First Set of Data Requests 1-15.

> reductions are not sufficient, it may be necessary to begin temporary interruptions of electric service in your area. We apologize sincerely for this inconvenience and are working to restore our system to normal grid operations as soon as possible. For additional information, visit www.comentergynewsroom.com.[66]

News releases that day reflect the same general call for conservation. However, at noon on February 15, more specific information benefitting other Entergy service areas did find its way into a winter storm alert that read:

> Winter weather continues to significantly impact portions of Entergy service area in Louisiana, with approximately 60,000 customers without power as of noon. The greater Baton Rouge and Tangipahoa parish areas have been hardest hit.
>
> A storm team of 1900 including line workers, tree trimmers and support personnel is assessing damage and restoring power where it is safe to do so. Preliminary damage assessments indicate ice accumulations have knocked down power lines, tree limbs and entire trees into electric equipment. Road closures due to icy conditions and other accessibility challenges will hamper our ability to reach some areas and slow restoration in those communities.[67]

Again, no New Orleans-specific information.

At 8:30 a.m. on February 15, in an "Entergy System Winter Storm Update" in an otherwise standard form winter weather alert, Texas specific information was included:

> ….
>
> Entergy Texas has started periodic power outages for its customers across southeast Texas. The company is taking this action as directed by our reliability coordinator, the Mid-Continent Independent System Operator (MISO), as a last resort and in order to prevent a more extensive prolonged power outage that could severely affect the reliability of the power grid.
>
> - This is an unusual situation driven by extreme weather conditions. A loss of generation combined with the peak load has caused a strain on the system. As a result, we are short of power needed to meet our customer's demands across southeast Texas.
> - Depending on conditions, individual customers may experience multiple outages during the day.
> - Crews have taken proactive steps to prepare and protect our assets from the extreme cold as well as placed additional power generation into service.

[66] See ENO Excel spreadsheet provided as part of ENO's Response to Advisors' First Set of Data Requests 1-15 and attached to the Advisors' Initial Report as Attachment 4.
[67] ENO's response to Advisors' First Set of Data Requests 1-15.

Due to bitterly cold temperatures and the winter storm, the demand for electricity has reached an all-time high.

- MISO is taking action or directing actions to be taken to restore the system to normal operations as quickly as possible and will direct Entergy Texas to stop the periodic outages as soon as the power shortfall no longer threatens the integrity of the rest of the electrical power system.[68]

However, on February 16, the local ENO direct messaging was essentially the same as February 15 and lacked the urgency that was justified by the MISO Max Gen Event Step 2 in effect, the second curtailment of ENO's largest interruptible customer, and the fact that a load shed was all but certain by mid-morning. Yet, again, the messaging contained no specific information related to impending outages in the New Orleans area except for a general statement that "If reductions are not sufficient, it may be necessary to begin temporary interruptions of electric service in your area," which only appears well into the voice and text message scripts. By midday on February 16, ENO was well aware of the **probability** of load shedding affecting ENO customers. Yet, the news releases and alerts on February 16, were far more helpful to customers of **other** localities.

In the fourth paragraph of one news release on February 16, the following was stated:

> As of 1:00 p.m., approximately 62,000 customers in Louisiana were without power, with portions of southwest Louisiana, greater Baton Rouge and Northshore areas being hardest hit. Approximately 200 customers were without power in Orleans Parish. In southwest Louisiana, Entergy Louisiana initiated power outages for some customers as directed by the company's reliability coordinator, Mid-Continent Independent System Operator. This was done as a last resort to prevent more extensive, prolonged power outages that could severely affect the reliability of the power grid. The directive from MISO has since been lifted and crews have begun the process of restoring power to customers in southwest Louisiana.[69]

[68] ENO's response to Advisors' First Set of Data Requests 1-15.
[69] ENO's response to Advisors' First Set of Data Requests 1-15.

The news release, which is not time stamped, provided no useful information for the customers of ENO. In a February 16, 10:30 a.m. "Winter Storm Update," the following information was provided:

> The winter weather continues to cause power outages for our customers across our service territory. Our restoration workforce continues restoring power where it is safe to do so. Temperatures overnight below zero in some locations have created extremely high demand for electricity in the service territory.
>
> Our grid operator, MISO, notified our operating companies in Texas and southwest Louisiana to start additional power outages for their customers.
>
> Extremely cold weather continues to effect operations across our territory. Low-temperature records below zero and in the teens dating back to 1903 have been met and exceeded in several locations, especially southeast Texas and southwest Louisiana.
>
> **Entergy Texas is conducting power outages for its customers across its Texas service territory. This includes an area north of Houston, and Jefferson, Orange, Hardin and Liberty Counties. Additionally, Entergy Louisiana has started power outages for customers in southwest Louisiana.** (Emphasis in original).[70]

The balance of the alert is standard cold weather boilerplate with no useful information for the customers of ENO.

In separate news releases on February 16, more specific information was provided, at least for customers in southwestern Louisiana and in Beaumont, Texas.[71] It is important to note that these were some of many specific load shed alerts for **other** parts of Louisiana, Texas, Mississippi and Arkansas, but, in discovery responses, ENO presented no specific release or message issued for New Orleans, until **after** the event.

It should also be mentioned that Ms. Sabatini did not refute or otherwise provide a direct response to the non-localized nature of ENO's communications as described in the Advisors'

[70] ENO's response to Advisors' First Set of Data Requests 1-15.
[71] ENO's response to Advisors' First Set of Data Requests 1-15.

Initial Report.[72] In fact, she makes no mention of any specific and localized communications to ENO customers prior to February 15.[73] She also ignores the Advisors' criticisms of the inadequate and generalized nature of system-wide messages that referenced areas such as Baton Rouge, Tangipahoa Parish, Beaumont TX, and southwest Louisiana but conspicuously made no mention of New Orleans in the days leading up to the event. Notably, Ms. Sabatini does not reference any direct messaging to ENO customers that includes New Orleans specific information prior to February 15. She simply re-illustrates the February 15, voice and text message that calls for conservation and for the first time generally warns that temporary interruptions of electric service may be necessary.[74]

In her affidavit, Ms. Sabatini claims that the Entergy's "public messages, combined with the media's coverage of those messages provided information to the public well before the load shed event occurred and gave customers more than 24 hours to understand the need to conserve usage and to make plans in the event of service interruption." In addition to the deficiencies in specificity, timeliness, and localized nature of the communications, ENO's claim that public messages are sufficient to inform customers is also unpersuasive because ENO's public posts and media coverage of those posts are not a substitute for ENO's responsibility to directly communicate, through voice, text, and email, with its customers and the Council. ENO has at its disposal several means of messaging customers in times of emergency and those means were not used in an effective and strategic manner, including detailed emergency voice and text messaging that could reach the overwhelming majority of customers prior to media releases, website postings,

[72] Affidavit of Lee Sabatini dated June 16, 2021.
[73] *Id.* at 2.
[74] *Id.*

and other public announcements. In fact, ENO has the emergency ability to send direct messages to all customers even if they have not signed-up for such messages.

3. ENO did not Communicate with the Council in a Timely and Effective Manner Prior To, and During the Event

The Entergy Power Shortfall Communications Plan unequivocally states that one of the key audiences for emergency communications is elected officials and regulatory bodies.[75] Despite this clear Entergy-wide policy, Council members were not sufficiently informed prior to or during the event. It is undisputed that ENO knew that the possibility of a load shed affecting New Orleans customers was a distinct possibility well in advance of the Event and a probability earlier the day of the Event. Yet, the first New Orleans specific communication does not occur until the event was already underway. As noted above, Ms. Knox, sent the first Event-related email to councilmembers at 7:35 p.m.

Councilmembers were left with this generally deficient email as the sole basis to try to provide some semblance of information to New Orleans residents and businesses and not until the Event was well underway. Had ENO provided timely, useful, and consistent information to its regulator, individual councilmembers could have utilized their platforms to better inform residents and businesses.

Additionally, there were significant time lags in ENO's messaging that were expressed in real time by the Council. In an email to Ms. Knox at 8:43 p.m., and referenced at the Joint Meeting, Councilmember Moreno urged ENO to provide more information to the public:

> Becky, communications with the public is key during situations like this. It's been almost two hours since the directive and there's been no media.
>
> News stations are quoting Cleco's news release and my social media as to what's happening with blackouts.

[75] Entergy Power Shortfall Communications Plan, Updated August 31, 2020 at 3. (HSPM record as Exhibit B).

Please provide the public with information. Thank you. Helena Moreno.[76]

The councilmember received no response until after 10 p.m. that evening, after the Event had long ended. Despite Councilmember Moreno's entreaty, ENO did not make any public information available until the Event had nearly ended.

At 8:41 p.m. on February 16, a news release issued saying, in part:

> Entergy has initiated additional power outages for its customers across its four-state service area. The company is taking this action as directed by our reliability coordinator, the Mid-Continent Independent System Operator, as a last resort in order to prevent more extensive, prolonged power outages that could severely affect the reliability of the power grid. **The directive includes all of MISO's south region, spanning from Arkansas to Texas to the Gulf South.**
>
> Due to extremely cold temperatures over the last several days, the demand for electricity has reached an all-time high. Additionally, these weather conditions have forced off generation resources across the system. The implementation of this load shed across the Entergy region will help ensure an adequate reserve margin, which helps ensure Entergy is better positioned to manage through additional extreme weather this week…. Entergy will work to limit the duration of each outage, but due to significant demand on the system and generation outages, options may be limited.
>
> MISO is directing actions to be taken to restore the system to normal operations as quickly as possible and will direct Entergy to stop these outages as soon as the power shortfall no longer threatens the integrity of the rest of the electrical power system.[77]

Even if this had come in advance of the Event, the release relies upon broad geographic descriptions rather than simply explaining whether New Orleans is affected and to what extent. An ENO customer would have to know what constitutes the "MISO south region" to know whether New Orleans customers were included.

[76] Joint Meeting Transcript at 11-12, Lines 18-9.
[77] ENO's response to Advisors' First Set of Data Requests 1-15 (emphasis added).

Finally, in another press release issued after the event Entergy/ENO said "[m]andatory rolling outages that began at 7 p.m. have ended for now, and we have returned the system to normal operations. All customers affected by this directive were restored by 9 p.m."[78]

Consequently, the New Orleans public never received any prior or real-time information that would have prepared them for, or guided them through, the Event, including the fact that load sheds are designed to last no more than two hours in any one location.[79]

There is no indication that ENO had any influence on the communications process. Based upon the Advisors' preliminary and subsequent investigations, it is clear that the entire emergency communications process is driven by ESL and other Entergy companies with ENO as nothing more than an afterthought. Even though ENO has its own communications manager, the investigation disclosed that she cannot "localize" messaging without going through a cumbersome approval process controlled by ESL or some other Entergy affiliated entity. At best, ENO asserts that "… ENO personnel do have the authority to make minor changes to customize the message to their jurisdiction."[80] Unfortunately, based upon the Advisors' review, it does not appear that the ENO communications manager attempted to "customize" the messaging until after the Event.

ENO management, including its communications manager, knew for days that the actual implementation of a load shed event was a significant possibility, yet, despite having "canned" releases for everything from higher bills to generator safety there was no evidence presented that any kind of a prepared message was written in advance, which could have been dispatched immediately upon confirmation of the load shed directive, with information specific to ENO customers. The Advisors believe that it is unacceptable that ENO-specific messaging, including

[78] ENO's response to Advisors' First Set of Data Requests 1-15.
[79] Joint Meeting Transcript at 59-60, Lines 19-5.
[80] ENO June 16, 2021 Response to Prudence Investigation at 22.

direct customer messaging, was not "in the chamber" for immediate release upon the activation of the Event. A brief but informative message could have been prepared that gave a simple explanation of a load shed event, why it was being implemented, the expected time frame for the forced outages, and the fact that they are intended to roll from neighborhood to neighborhood as the event progresses until its conclusion.[81]

Even the general messaging about the Event that did get disseminated without any ENO customer specific information was garbled, unclear, confusing, and usually buried among numerous paragraphs of boilerplate. If there was any mention of load shedding, it was often not until deep into the message and often it was little more than a sentence. Usually, that sentence was nothing more than some version of "if reductions are not sufficient, it may be necessary to begin temporary interruptions of electric service in your area."[82]

The Advisors also believe that based upon this investigation that the communication system relied upon by ENO is inherently overly complicated. It appears that certain information is released as "alerts," which appear on the website and can be accessed by hyperlinks in other communications. Some communications are "media releases," which, although they may be posted on the website, appear to be intended for the news media to decipher and report. Finally, there are direct messages to customers that can be in the form of texts, voice messages, or emails.

The Advisors believe that this process places an unacceptable burden on ENO customers to seek out and decipher information rather than having basic, understandable, and important information disseminated directly to customers and the media.

[81] In fact, the HSPM record will show that these things should have been done under prevailing Entergy communications protocols and procedures.
[82] The insufficiency of this message under prevailing Entergy communications protocols and procedures will appear in the HSPM record.

Based upon the information gathered in this investigation, the Advisors believe that ENO's communications prior to and during the Event were inconsistent with its own policies and procedures and fell below the appropriate standards of conduct under the circumstances. ENO failed to have adequate and reliable communication systems in place to assure that timely and useful information was effectively disseminated to customers. The Advisors conclude that these shortcomings resulted from ENO's overreliance on ESL and other Entergy companies. While the Advisors acknowledge that there can be cost efficiencies realized from shared services among the EOCs, they cannot be achieved in derogation of the rights of ENO customers by participating in a process with no effective local input or control, especially during emergency circumstances where the scope, potential impact, timing, and precautions are not fungible among all operating companies.

ENO has defended its actions both in its technical and communications failures as resulting from an emergency. However, the Advisors do not accept that the technical and communications failures resulted from an emergency in the true sense of that word, which is defined as "a sudden, urgent, usually unexpected occurrence or occasion requiring immediate action."[83]

The technical failures acknowledged by ENO were the result of errors in computer data and programming that likely occurred years ago, not during an emergency, but routinely. It was repeated annually during routine system reviews for accuracy. These errors did not result from an emergency and could have been avoided.

The same is true of the communications failures. ENO is subject to communications manuals and protocols that run literally hundreds of pages, including many specific to load shed events. ENO management was aware in advance of the Event that load shedding was a **possibility**,

[83] Dictionary.com

yet no concise, informative, understandable message had been prepared for New Orleans customers in advance. This was not due to an emergency, but deficient planning, and reliance on ESL.

In ENO's prudence response, it is asserted that '[b]eing fast but wrong when communicating has significant consequences in terms of public confusion and undermining public trust in the messaging."[84] The Advisors believe the facts suggest that the **lack** of communication did exactly that: confuse the public and undermine public (and regulator) trust in the messages. There is no conflict between being proactive and being accurate, especially with proper planning.

It is axiomatic that communications of any sort are not useful if they are not timely, simple and direct, and consistent. The Entergy communications process employed before, during, and after the Event was inadequate as to ENO. It cannot be reasonably concluded that the communications relied upon by ENO in this investigation were adequate to the task as to ENO customers and the Council.

E. Intervenors' Comments

The Alliance for Affordable Energy filed comments in this docket arguing that ENO's failure to perform load shed testing and its poor communications with the public were imprudent.[85] The Alliance points out that ENO, in its Response to Prudence Investigation, admits that "load shed test simulations were not historically performed" and that ENO's proposal to improve its annual load shed review process "underscores implicitly the inadequacy and imprudence of ENO's decision-making procedures leading up to" the event. However, although the Advisors agree that ENO's conduct was substandard, in determining imprudence the regulator must necessarily review the decisions made by the utility at the time those decisions were made, not based on hindsight.

[84] ENO June 16, 2021 Response to Prudence Investigation at 20.
[85] Comments of the Alliance for Affordable Energy at 3.

The Alliance also states that ENO was imprudent because it "failed to initiate communication with ratepayers and media outlets prior to the load shed event to inform ratepayers that load shedding would commence." The Alliance also argues that ENO "waited for media outlets to inquire" about the outages after the event had already begun. Again, while the Advisors agree with the Alliance that ENO's communications were not sufficiently clear or timely, we believe that the cause for the communications shortfalls were driven more by cumbersome Entergy corporate processes than by imprudent conduct.

Sustainable Energy Economy Solutions (SEES") also submitted comments raising issues such as ENO's infrastructure planning, decarbonization, reliability, weatherization, and the role of MISO in preserving grid reliability in the future.[86] The Advisors agree that these are all important topics to be considered in New Orleans and significant work needs to be done in order to combat the challenges associated with climate change. The Advisors point out that many of the issues raised by SEES are either already being considered in existing Council dockets or will be considered going forward, including, but not limited to, the most recent docket established by the Council on October 27, 2021, for the purpose of developing a long-term resilience and storm hardening plan for New Orleans' electric infrastructure.

F. Conclusions and Recommendations

Based upon the information gathered in both the initial and subsequent investigations, the Advisors believe that ENO has not adhered to several applicable standards regarding reliability of service, notification to customers, and responsibility for avoidable consequences resulting from foreseeable difficulties within the company's control.[87] Although the Advisors do not find these

[86] Sustainable Energy Economy Solutions at 2-4.
[87] For a fuller discussion of the applicable standards see the Council Utility Advisors' Initial Report, filed into the record on April 14, 2021.

violations rise to the level of imprudence as defined in the Charter, the Code, and the Service Regulations, ENO's conduct in both the technical and communications aspects of the Event was below standard and inconsistent with ENO's own processes, protocols, and procedures.

The Advisors believe that the appropriate response to this substandard conduct, which would be in the best interest of ENO customers, is to ensure that these mistakes never occur again. New Orleans residents and businesses would benefit most from never again having to face unnecessary electric disruptions, and when they are necessary being fully informed in a timely, understandable, and consistent manner as to what is happening when, why, and for how long.

To that end the Advisors make the following specific recommendations, which the Advisors recommend the Council direct ENO to implement. The Advisors further recommend that the Council direct ENO to provide evidence of implementation to the Council in no more than 90 days from a Council resolution directing ENO to implement these recommendations. If implementation is not timely demonstrated, the Council should consider appropriate sanctions.

1. <u>Technical Recommendations</u>:

(a) Development of Comprehensive Load Shed Plan.

In the Advisor's Initial Report, the Advisors recommended a comprehensive review of all ENO distribution feeders, identifying all feeders with critical customers, prioritizing all remaining feeders, and from that, establishing a new load shed plan which includes as many feeders as reasonably possible with a randomly assigned load shed sequence.[88] In ENO's June 16, 2021 Response to Prudence Investigation, ENO provided a revised Manual Load Shed Plan that ENO indicated was "… very similar to the plan recommended by the Council's Advisors."[89] That revised Manual Load Shed Plan included 41 of ENO's

[88] Advisors Initial Report at 20.
[89] ENO June 16, 2021 Response to Prudence Investigation at 14.

distribution circuit feeders; however, this is only about 18 percent of the total distribution feeders in New Orleans. Subsequent to the Event, ENO stated that a 2021 customer list was completed for all ENO feeder priority classifications, including critical customers. The Advisors recommend that the Council direct ENO to provide a revised Manual Load Shed Plan that is consistent with the Advisors' recommendation, and which reflects the appropriate inclusion of all priority classification 3 feeders, with reference to the 2021 customer list recently completed for all ENO feeder priority classifications.

(b) Supplement the new procedure requiring a comprehensive cross functional / cross company review of ENO's annual Load Program Extract.

Entergy's Distribution Planning Group supports ENO in reviewing Load Shed Plans, provides the Load Shed Plans to the IT-OT Group to be implemented into Load Shed Programs, as well as signs-off after reviewing the as-modeled feeder list extract sent from IT-OT. Those as-modeled annual feeder list extracts from the ENO and ELL Load Shed Programs should also be sent to ENO and ELL for review and sign-off. The Advisors recommend that the Council direct ENO to supplement the new Entergy Work instruction IT-WI-120 "EMS Load Shed Update Process", in Section 4, Responsibilities: (i) that the review of changes and document sign-off from the DOC and Distribution Asset Planning include confirmation that the annual Load Program extracts are consistent with the feeder lists provided by the ENO and ELL Load Shed Plans, and (ii) that the EOCs, notably ENO and ELL, be added as responsible for review and document sign-off.

(c) Additional simulation testing of the Load Shed Program should be performed after the Load Shed Plans have been programed by IT-OT.

ENO believes that "...test simulations would have been unlikely to uncover the data entry issue that arose during the winter event because they are designed to compare the list of

feeders entered into a load shed program against the tripping of those same feeders."[90] However, ENO agrees that "test simulations could have value for other reasons beyond identifying the specific issues with the recent load shed event"[91] and indicated that "the Company is exploring test simulations for future applications."[92] The Advisors' maintain their position that additional simulation and testing of the Load Shed Programs has merit. The Advisors recommend that the Council direct ENO to request that the Entergy organizational entity responsible for implementing control and test procedures related to ENO's and ELL's Load Shed Programs implement improved control and testing procedures related to the Load Shed Programs to ensure that the Programs shed and restore load on the designated ENO distribution circuit feeders exactly as intended. The Advisors further recommend that the Council should direct ENO to inform the Council when such request has been made and provide a report to the Council on the improved control and testing procedures that have been implemented.

(d) ENO should prepare ENO documentation, systematizing an arranged set of rules and guidelines for the Load Shed Plan and Load Program review process.

The Advisors recommend that the Council direct ENO to develop documentation specifically pertaining to ENO, which provides an arranged set of rules and guidelines for the Load Shed Plan and Load Program review process. This ENO, Operating Company specific, documentation should use complete references to Entergy emergency procedures, include specifically assigned ENO staff positions, include a comprehensive cross functional / cross company review process with a more active ENO staff involvement of

[90] ENO June 16, 2021 Response to Prudence Investigation at 14.
[91] *Id*.
[92] *Id*.

review and sign-off of annual Load Shed Plans and Load Shed Program simulation testing, and include ENO staff review and confirmation of correct Load Shed Program operation.

(e) Distribution feeder load measurement review and preventive/routine maintenance procedures related to all ENO feeders.

The Advisors recommend that the Council should direct ENO to perform a comprehensive review of the load measurement related to all ENO feeders. This review should be similar to the review that was conducted on the 41 feeders listed in the current ENO Load Shed Plan. The Advisors recommend that the Council should direct ENO to conduct an increased level of measurement testing on all ENO feeders to confirm, as much as possible, the correct operational interface between the ENO Load Shed Program and the SCADA system. Further, the Advisors recommend that the Council should direct ENO to improve its preventive/routine maintenance procedures ("PMs") such that the types of problems identified in its comprehensive review of the 41 feeders in its current Manual Load Shed Plan will be identified for all feeders on a routine basis as part of ENO's preventive/routine maintenance procedures ("PMs") related to circuit feeders load measurement and control. The Advisors recommend that the Council should require ENO to provide documentation demonstrating that its preventive/routine maintenance procedures ("PMs") related to circuit feeders load measurement and control have been strengthened, and included as a periodic requirement to minimize load measurement errors related to any feeder which may be included in ENO's Load Shed Plans.

(f) A critical customer and feeder priority classification annual review process for all ENO feeders should be detailed in new documentation prepared by ENO, incorporating an organized set of rules and guidelines.

The Advisors recommend that the Council direct ENO to develop documentation specifically pertaining to ENO, which provides an arranged set of rules and guidelines for

the identification of feeders with critical customers. This ENO, Operating Company specific, documentation should detail the ENO customer service staff and distribution personnel responsible, the required procedural schedule, timetable and sign-offs, the identification of all low priority, classification 3, feeders to be included in the annual ENO Load Shed Plan, and complete references to Entergy emergency procedures, such as the Entergy Load Risk Management Load-Shed Process, Revision 4.

(g) ENO staff positions and specific responsibilities related to emergency events should be clearly defined in new documentation prepared by ENO.

The Advisors recommend that the Council direct ENO to develop documentation specifically pertaining to ENO, which provides the identification of ENO staff positions and specific responsibilities related to emergency events. This ENO, Operating Company specific, documentation should delineate specific ENO staff positions and responsibilities related to load shed and emergency events, such as preparedness and immediate responses, updating procedural documents (including Load Shed Plans), and all communications with Entergy organizational entities dealing with emergency response, Council members, City administration and ENO customers. The new documentation should include the ENO staff responsibilities and instructions to make direct appeals to large customers when a load shed is imminent.

(h) Entergy distribution supervisory personnel should have timely information related to monitoring ENO's total load, including the ability to confirm that targeted ENO load sheds are implemented as intended.

The Advisors recommend that the Council direct ENO to investigate and report to the Council on improved real-time monitoring of ENO load such that Entergy distribution supervisory personnel have timely information related to ENO's total load, including the ability to confirm that targeted ENO load sheds are implemented as intended. In ENO's

report to the Council: ENO should provide a timetable when the improved monitoring of ENO's total load could be implemented, identify the costs associated with any improved monitoring, identify any equipment or other constraints which may impede the timely implementation of the improved monitoring, and provide any alternative approaches which the Council may consider.

2. <u>Communications Recommendations</u>:

Although the Advisors agree that properly managed shared services among the Entergy operating companies can be beneficial to customers, the unique nature and needs of ENO cannot be neglected in the process. This is especially true regarding communications. New Orleans is not the rest of the state. Knowing what is happening or about to happen in Lake Charles or Lafayette is not useful to New Orleans customers, and messaging tailored to those cities, or southwest Louisiana generally, are mostly useless to New Orleans customers. Despite Entergy's assertions to the contrary, what this investigation has confirmed is that this type of messaging is not fungible among the operating companies.

ENO also asserts that ENO has taken remedial steps. Ms. Sabatini says in her affidavit that ENO has reviewed their communications during Winter Storm Uri "with a critical eye and has implemented a new procedure regarding news releases following a MISO directive to shed load."[93] More specifically, Ms. Sabatini says that if a similar situation were "to occur today, a streamlined news release would be communicated promptly to the media containing basic information such as: (1) confirming that MISO has issued a directive to curtail load, and (2) identifying the specific jurisdiction where the load shed has occurred."[94] Suffice it to say that these general modifications are not adequate.

[93] Sabatini Affidavit at 4.
[94] *Id*.

Therefore, the Advisors recommend that the Council direct ENO to develop an ENO, Operating Company specific, emergency communications plan ("ECP"). The ENO ECP should focus on the specific timing and forms of ENO customer communications, referencing and interfacing with Entergy's corporate emergency communications plan. The ECP should provide a simple, concise, and useable plan that assures that Entergy messaging will be **customized** and **simplified** to assure that New Orleans customers receive timely, understandable, and useful information. The plan must address assuring that the messages are focused and understandable for New Orleans customers and stakeholders. The plan must also assure that the customized messages will be distributed timely through all available channels of communication and not put the burden on customers to seek out information.