

1 Q59. HOW DID THE COMPANY DETERMINE THE APPROPRIATE NUMBER OF  
2 TRANSMISSION RESOURCES NECESSARY TO RESTORE SERVICE  
3 FOLLOWING THE STORMS?

4 A. Prior to the storms' landfall, the Entergy System used two different damage prediction  
5 models to estimate the total number of restoration workers needed. Those models were  
6 developed in-house based on experience with prior storms and used the forecasted track  
7 and intensity of the storm to estimate damage, and then, based upon that estimate, the  
8 number of transmission and distribution workers required for the restoration. One model  
9 used the National Hurricane Center's 5-day forecasted track and wind fields to calculate  
10 the intensity and wind duration over substations within the forecasted path. The second  
11 model used a more general view of the hurricane track by selecting one of three possible  
12 solutions (east, central, or west track across the Entergy System) and the hurricane's  
13 forecasted landfall intensity (tropical storm to Category 5 hurricane). That model also  
14 provides an estimated number of workforce resources that would be needed.

15 The model outputs were compared to determine a specific resource worker  
16 acquisition target. Information provided by our weather service contractors, which  
17 included wind field intensity and duration forecasts, was overlaid upon our transmission  
18 land-based maps, and system damage was estimated based upon an "in harm's way"  
19 assessment of line miles, types of structures, and construction standards. That estimate  
20 was compared against past operational experience, which included comparisons to past  
21 storms of similar categories, and the estimated number and type of line, vegetation, and  
22 substation crews was determined and presented at System Resource conference meetings  
23 prior to landfall.

1           Following landfall, actual damage assessment began as soon as wind speeds  
2           allowed aircraft inspections and roadway access permitted ground patrolling. Those  
3           assessments were compiled and specific information was summarized concerning damage  
4           to vegetation, poles, structures, conductor, insulators, shield insulators, and other  
5           components. The System Planning Section, with input on extent of damage from the State  
6           Command Centers, quickly determined the most expeditious reconstruction plan needed to  
7           establish a stable generation, transmission, and distribution network and made any  
8           necessary adjustment to requested restoration resources.

9  
10                                   **1.       Entergy Affiliate Resources**

11   Q60. TO WHAT EXTENT DID ELL RELY ON THE RESOURCES OF ESL AND OTHER  
12       ENTERGY OPERATING COMPANIES TO ADDRESS THE STORMS' IMPACTS?

13   A.   The support from many ESL employees was critical to our restoration efforts in Louisiana  
14       following Hurricanes Laura, Delta, and Zeta. Our System Command Center was primarily  
15       staffed with ESL employees. Our System Command Center in Jackson, Mississippi,  
16       provided oversight of the storm event, such as coordinating the EOCs, Transmission,  
17       Generation, and many other departments engaged in restoration efforts. The day-to-day  
18       management of personnel and resources committed to Louisiana restoration efforts,  
19       however, was conducted and coordinated by ELL management.

20           Other EOCs also supported the transmission restoration efforts by supplying  
21       "loaned resources," including workers, logistics personnel, safety specialists, scouts, and  
22       material Supply Chain personnel. The knowledge that these personnel had of Entergy's

1 standards, operating procedures, and safety rules was important in safely and efficiently  
2 restoring power. The EOCs also supplied other resources such as materials and equipment.

3 **2. Mutual-Aid Resources**

4 Q61. TO WHAT EXTENT DID ENTERGY RELY ON OTHER ELECTRIC UTILITIES TO  
5 PROVIDE ASSISTANCE IN RECONSTRUCTING THE TRANSMISSION SYSTEM  
6 AFTER HURRICANES LAURA, DELTA, AND ZETA STRUCK ENTERGY'S  
7 SERVICE AREA?

8 A. Entergy sometimes relies on other utilities for assistance in major events. ELL relied upon  
9 mutual-assistance utilities such as Oncor Electric Delivery Company and Alabama Power  
10 Company to support transmission restoration efforts, which utilities were able to supply  
11 transmission line crews. The amounts charged by these contractors can be found on Exhibit  
12 MPB-9. Collectively, 314 mutual-assistance transmission linemen were provided to  
13 support restoration following Hurricane Laura, and 17 mutual-assistance transmission  
14 linemen were provided to support restoration following Hurricane Delta. There were no  
15 mutual-assistance transmission linemen utilized during the Hurricane Zeta restoration.

16  
17 Q62. WHAT SPECIFIC MUTUAL-AID AGREEMENTS DID THE TRANSMISSION  
18 GROUP RELY UPON?

19 A. The Transmission group relied upon two mutual-aid agreements at the times of Hurricane  
20 Laura, Hurricane Delta, and Hurricane Zeta: Southeastern Electric Exchange ("SEE")  
21 Procedures and Guidelines and Edison Electric Institute ("EEI") Governing Principles  
22 Covering Emergency Assistance. EEI is an industry trade association that represents all

1 U.S. investor-owned utilities. EEI members are grouped into seven Regional Mutual  
2 Assistance Groups. The Company is a member of three of those Regional Mutual  
3 Assistance Groups, the SEE, the Midwest Regional Mutual Assistance Group, and the  
4 Texas Regional Mutual Assistance Group. The Company uses the SEE agreement for  
5 mutual assistance with SEE member companies and the EEI agreement with all other EEI  
6 investor owned utility companies. Both agreements are designed so that the supporting  
7 companies are reimbursed for their expenses with no mark-up added.

8  
9 Q63. WHAT ARE THE BENEFITS OF UTILIZING MUTUAL-AID UTILITIES IN  
10 HURRICANE RESTORATION ACTIVITIES?

11 A. By using mutual-aid support during times of emergency restoration, utilities can muster  
12 work forces many times larger than they could if they relied on contract labor alone.  
13 Workers from other utilities come with all the training, tools, and equipment needed to  
14 immediately begin restoration work. Entergy is an industry leader in supplying restoration  
15 support and has thereby established relationships through which it can readily obtain  
16 support in times of need. Furthermore, mutual-aid support is provided at the mutual-aid  
17 company's costs (including labor, equipment, and other resources), so there is no mark-up,  
18 and the price is comparable to what the EOCs pay their own resources.



1 system, which aided in the tracking of contractor costs and logistical needs. At the  
2 appropriate time, the contractors were mobilized to report to a staging location. From there,  
3 the contractors were given safety and logistical orientation and their first reporting  
4 assignments.

5 Q66. WHO WERE THE CONTRACTORS UTILIZED BY THE COMPANY FOR  
6 TRANSMISSION-RELATED RESTORATION ACTIVITIES, AND WHAT COSTS  
7 WERE CHARGED BY EACH?

8 A. The contractors utilized for transmission-related restoration activities for Hurricanes Laura,  
9 Delta, and Zeta and the costs charged by each are detailed in the attached Exhibit MPB-9.  
10 Additionally, attached as Exhibit MPB-10 is a summary description of the services  
11 provided by each of the more significant contractors (*i.e.*, those contractors from whom we  
12 received invoices in excess of \$1,000,000).

13  
14 Q67. PLEASE DESCRIBE THE PROCESS BY WHICH ENTERGY AND ELL RECEIVED,  
15 REVIEWED AND APPROVED THE INVOICES SUBMITTED BY THIRD-PARTY  
16 CONTRACTORS ASSISTING IN THE TRANSMISSION-RELATED RESTORATION  
17 PROCESS.

18 A. Entergy has a structured process in place to review the work performed by third-party  
19 contractors and ensure the legitimacy and accuracy of submitted invoices. Entergy utilized  
20 a post-storm, cross-functional “Contractor Invoice Processing Team” to review, reconcile,  
21 and approve payment of invoices submitted by third-party contractors. Company witness  
22 Sarah Harcus addresses contractor invoice processing in more detail in her testimony.

1 **4. Materials Resources**

2 Q68. HOW DOES ENTERGY NEGOTIATE AND ACQUIRE MATERIALS RESOURCES  
3 FOR A MAJOR STORM RECONSTRUCTION?

4 A. Entergy retains several key vendors to supply materials on an ongoing basis. These  
5 vendors are selected based upon price bidding and extensive performance evaluations.  
6 Based on the results, Entergy contractually binds selected suppliers typically for a  
7 minimum of three years. Material supply partners are expected to maintain predetermined  
8 emergency stock for contingent situations such as storm reconstruction. Demand for goods  
9 and services associated with major events such as Hurricanes Laura, Delta, or Zeta can  
10 exhaust available inventories. For these events, Entergy agrees to pay reasonable and  
11 expected costs associated with production acceleration.

12 Additional vendors are also sought to manage supply/demand gaps. Entergy's  
13 material and contracts representatives negotiate pricing, terms, and conditions for these  
14 additional vendors to assure comparability to that of our partnered suppliers. While some  
15 price deviation from large contract pricing is expected from these additional vendors, these  
16 additional costs are necessary and justified to obtain necessary materials for expedited  
17 reconstruction. Vendors seeking to charge unreasonable or opportunistic prices for their  
18 products are not utilized. Further, Entergy endeavors to utilize contractors with pre-  
19 existing rates before turning to additional vendors.

1 Q69. DOES ENTERGY MAINTAIN INVENTORIES THAT ARE SUFFICIENT TO  
2 ADDRESS THE DEGREE OF DAMAGE RESULTING FROM STORMS OF THE  
3 MAGNITUDE OF HURRICANES LAURA, DELTA, AND ZETA?

4 A. Generally, no. While Entergy’s material inventories are typically sufficient to address  
5 normal construction needs or damage resulting from smaller storm events, it would not be  
6 feasible or cost-effective for Entergy to maintain inventories sufficient to immediately  
7 address the wide-spread damage caused by major hurricanes, especially when multiple  
8 hurricanes occur back-to-back within the same season and area.

9 Entergy leverages its long-term partnered contracts to shift inventory requirements  
10 to its key vendors. These arrangements reduce the amount of inventory required in Entergy  
11 stores, thereby reducing the inventory cost burden to customers. This strategy also reduces  
12 the amount of stores space required in Entergy facilities. Strategic storm reserves are part  
13 of negotiated contracts with these key vendors. The impacts of Hurricanes Laura, Delta,  
14 and Zeta on the EOCs depleted the strategic reserves and required significant additional  
15 materials, which were supplied by established suppliers and, in some cases, neighboring  
16 utilities. In addition, there were instances requiring expedited manufacturing and delivery  
17 services.

18  
19 **5. Logistics**

20 Q70. WHAT IS MEANT BY THE TERMS “LOGISTICS” AND “LOGISTICAL SUPPORT”?

21 A. The terms “logistics” and “logistical support” refer to the resources required to support the  
22 restoration personnel who are necessary to restore the system. Logistical support includes  
23 lodging, food, beverages, laundry, portable toilets, showers, dumpsters, transportation,



1 staging area lighting, generators, HVAC systems, fuel, materials, vehicles, parking,  
2 security, and other related functions. Logistical support also includes the planning,  
3 preparing, managing, and delivery of such services in a manner that maintains safety and  
4 provides for an efficient restoration.

5  
6 Q71. HOW IS LOGISTICAL SUPPORT COORDINATED AMONG THE ENTERGY  
7 OPERATING COMPANIES?

8 A. At the Entergy System level, logistical support must be coordinated and supplied for all  
9 functions of each of the affected EOCs in their respective service territories. When storms  
10 the size of Hurricanes Laura, Delta, and Zeta, or past storms such as Hurricanes Gustav  
11 and Ike, impact multiple EOCs within short time spans, the logistical support required to  
12 restore service as quickly and safely as possible is a massive and complicated undertaking.  
13 Entergy endeavors to use commercial lodging when available, but that option is often  
14 limited either due to damage to commercial lodging, power and water availability, or room  
15 availability (based on occupancy by residents or other restoration workers).

16  
17 Q72. CAN YOU DISCUSS THE IMPORTANCE OF LOGISTICS RELATIVE TO THE  
18 RESOURCES PROCURED FOR RESTORATION?

19 A. Yes. While the men and women who traveled, some hundreds of miles, to Louisiana to  
20 assist in the restoration are mission critical, it is equally critical that they have appropriate  
21 logistical support. Without a place to sleep, food to eat, hydration, fuel, materials, supplies,  
22 etc., a large restoration work force is rendered ineffective, and customers would face a  
23 significantly longer restoration. Also, without reasonable logistical support, out of state

1 resources will be less eager to respond next time that Louisiana needs assistance. Needless  
2 to say, ramping up logistics to support a Hurricane Laura restoration force of 22,290 men  
3 and women in Louisiana, while complying with COVID-19 prevention protocols, was a  
4 significant and costly undertaking.

5  
6 Q73. PLEASE PROVIDE A SUMMARY OF THE VOLUME OF LOGISTICAL  
7 RESOURCES UTILIZED IN THE ELL SYSTEM RESTORATION PROCESS  
8 FOLLOWING HURRICANES LAURA, DELTA, AND ZETA.

9 A. The ELL logistical effort necessary to restore service following Hurricane Laura was a  
10 significant undertaking. ELL set up 12 major logistical sites following Hurricane Laura,  
11 and all of those were full-service logistical sites with lodging, food, and fuel. The Company  
12 utilized approximately 3,600 transmission restoration workers, all of whom needed basic  
13 necessities to work as safely and quickly as possible. Following Hurricane Delta, ELL set  
14 up 4 logistical sites to serve over 780 transmission restoration workers. And following  
15 Hurricane Zeta, ELL set up 4 logistical sites for its approximately 460 transmission  
16 restoration workers.

17  
18 Q74. WHAT STEPS DID ENTERGY TAKE DURING AND AFTER THE STORMS TO  
19 ENSURE THAT THE APPROPRIATE LEVEL OF RESOURCES WOULD BE  
20 AVAILABLE FOR STORM RESTORATION?

21 A. After landfall, damage assessments and feedback from the field resources provided  
22 additional information that resulted in adjustments to the level of logistics resources sought  
23 and the placement of those resources. Continuous communication between the System

1 Resource Section, transmission personnel, and the Louisiana Logistics Section ensured that  
2 adequate logistics resources were available to complete restoration based on a planned  
3 timeline.

4

5 Q75. PLEASE SUMMARIZE THE PERFORMANCE OF THE COMPANY, ITS  
6 EMPLOYEES, AND ITS CONTRACTORS IN RESTORING SERVICE AFTER  
7 HURRICANES LAURA, DELTA, AND ZETA.

8 A. The Company's employees, contractors, and workers from mutual-assistance companies  
9 all performed at an outstanding level in restoring power after Hurricanes Laura, Delta, and  
10 Zeta. The Entergy System is an industry leader in storm response and support, and we  
11 continue to look for ways to improve. Everyone worked long hours, many in very  
12 uncomfortable conditions, to get power restored as quickly and safely as possible after each  
13 storm. We will not always break our own speed records, but we will always strive to restore  
14 power as quickly as we can while protecting the safety of our workers and the public. As  
15 mentioned above, Entergy's Hurricane Laura response has been selected for special  
16 recognition by the industry due to the unique nature of the rebuild required after this storm,  
17 coupled with other significant obstacles and challenges that were overcome to restore  
18 power to customers after Hurricane Laura.

1 **VI. WINTER STORM URI**

2 Q76. PLEASE DESCRIBE WINTER STORM URI AND THE DAMAGE CAUSED TO THE  
3 COMPANY'S TRANSMISSION SYSTEM.

4 A. In February 2021, back-to-back winter storms brought freezing rain and ice to Louisiana.  
5 The first storm hit on February 15, 2021, and heavily impacted the Livingston Parish,  
6 Tangipahoa Parish, and Greater Baton Rouge areas. On February 17, the second storm  
7 heavily impacted central and north Louisiana.

8 Ice accumulation sagged or downed trees, limbs and power lines, causing damage  
9 to the Company's transmission and distribution systems. The additional weight of ice  
10 caused trees and limbs to fall into power lines and other electric equipment. In total,  
11 twenty-five transmission lines in ELL's service area experienced outages during Winter  
12 Storm Uri. Thirty-six percent of these outages (nine total) were due to compromised trees  
13 from outside of the ROW falling into transmission facilities, with one of these resulting in  
14 transmission structure damage. Other transmission line damage, including broken shield  
15 wire and insulator damage, accounted for an additional six outages (twenty-four percent of  
16 total). Twelve percent of the outages (3 total) were due to galloping transmission line  
17 conductors. The remaining transmission line outages (seven total) were due to other  
18 causes, including substation equipment operations and loss of source.

19 In total, Winter Storm Uri knocked out power to approximately 228,000 ELL  
20 customers.

1 Q77. PLEASE DESCRIBE THE WORKFORCE ASSEMBLED BY THE COMPANY TO  
2 RESTORE SERVICE FOLLOWING WINTER STORM URI.

3 A. A storm team of more than 4,000, including line workers, tree trimmers, and support  
4 personnel, worked quickly and safely to restore power to customers who sustained outages  
5 as a result of Winter Storm Uri.  
6

7 Q78. WHAT WERE THE COMPANY'S PRIORITIES IN RESTORING POWER AFTER  
8 WINTER STORM URI?

9 A. As Company witness Mr. Hawkins discusses in his testimony, the Company focused first  
10 on restoring power to critical infrastructure that was essential to the health and well-being  
11 of our communities as well as getting the greatest number of customers back online at a  
12 time. The Company also made every effort to prioritize restoring power to customers who  
13 had been without service the longest due to Winter Storm Uri.  
14

15 Q79. DOES RESTORATION TAKE PLACE DIFFERENTLY AFTER AN OUTAGE IN  
16 VERY COLD WEATHER?

17 A. Yes. As discussed by Company witness Mr. Hawkins, restoration of the distribution  
18 system follows a different process in extremely cold conditions. As he explains, during  
19 weather extremes, we must change our processes to restore power in a way that best ensures  
20 safety and reliability for customers as well as our employees. Rather than simply  
21 energizing an entire power line all at once, the Company must bring customers back online  
22 one section at a time to avoid damage to our system, which can slow efforts to restore  
23 power in some areas. Transmission restoration in extreme winter weather conditions also

1 requires revised protocols to ensure reliable operation. In areas with known significant ice  
2 accumulation, personnel suspend remote sectionalization after any line operations until  
3 local supervision can inspect and clear substation equipment required for switching for safe  
4 operation. This operating protocol ensures that any transmission line switch that may be  
5 inoperable due to ice accumulation isn't broken or damaged. In addition, automatic  
6 reclosing is disabled on lines that experience multiple operations due to the potential for  
7 galloping conductors.

8  
9 Q80. WHAT WERE THE TIME FRAMES FOR RESTORATION OF SERVICE  
10 FOLLOWING WINTER STORM URI?

11 A. Customers who were affected by the first storm, including those that lost power days after  
12 the storm had passed due to limbs falling after the fact and other scenarios, were restored  
13 by February 20. Most customers affected by the second storm were restored by February  
14 22, with isolated cases in the hardest-hit areas restored on February 23.

15  
16 **VII. STORM COSTS**

17 **A. Hurricanes Laura, Delta, and Zeta Storm Costs**

18 Q81. WHAT ARE THE TOTAL TRANSMISSION-RELATED COSTS OF THE  
19 COMPANY'S RESTORATION EFFORTS FOLLOWING HURRICANES LAURA,  
20 DELTA, AND ZETA?

21 A. The total ELL Transmission costs incurred in connection with Hurricanes Laura, Delta,  
22 and Zeta total \$524.7 million. These costs include the transmission-related storm costs  
23 incurred through February 28, 2021, plus certain estimated costs related to Hurricane

1 Laura. These numbers do not include adjustments for carrying costs. Please see Exhibit  
2 MPB-2; Exhibit SMH-1 attached to the Direct Testimony of Company witness Ms. Harcus,  
3 which is a report summarizing costs by class and major resource category for ELL for  
4 Hurricanes Laura, Delta, and Zeta; as well as Exhibit SMH-4 attached to Ms. Harcus's  
5 Direct Testimony, which includes the transactions underlying the total Transmission-level  
6 costs for Hurricanes Laura, Delta, and Zeta.

7  
8 Q82. WHAT ARE THE TRANSMISSION RESTORATION COST CATEGORIES?

9 A. As discussed by Company witness Ms. Harcus, there are five major ELL cost categories:  
10 (1) Contract Work, (2) Employee Expense, (3) Labor, (4) Materials, and (5) Other. In  
11 addition, affiliate costs are assigned one of two major cost categories – ESL Billings or  
12 Loaned Resources. The Loaned Resources category includes the total labor costs incurred  
13 on behalf of and charged to the Company by personnel from other Entergy affiliates. The  
14 two remaining cost categories are Mutual Assistance and Adjustments. Company witness  
15 Ms. Harcus discusses the Adjustments category in her Direct Testimony.

16  
17 **1. Contract Work**

18 Q83. WHAT TRANSMISSION DOLLARS ARE ASSOCIATED WITH THE COST  
19 CATEGORY "CONTRACT WORK"?

20 A. Contract Work costs incurred by ELL through February 28, 2021 were \$372,462,742 for  
21 Hurricane Laura, \$12,839,974 for Hurricane Delta, and \$12,655,481 for Hurricane Zeta.

1 Q84. PLEASE DESCRIBE THE COSTS INCLUDED IN THIS COST CATEGORY.

2 A. Contract Work captures the costs related to the third-party contractor personnel (including  
3 both line and vegetation workers) and mutual-aid crewmembers who took part in the  
4 restoration of ELL's transmission system following Hurricanes Laura, Delta, and Zeta.  
5 These workers were primarily transmission line workers, substation workers, and  
6 vegetation workers. This category also includes the costs of vendors that provided  
7 specialized equipment and vehicles and vendors that provided logistical services (which I  
8 described earlier in my testimony).

9

10 Q85. WHAT SERVICES WERE PERFORMED BY LINE MAINTENANCE AND  
11 CONSTRUCTION CONTRACTORS?

12 A. Line maintenance and construction contractors were engaged to rebuild or repair damage  
13 to transmission lines caused by Hurricanes Laura, Delta, and Zeta. Work included  
14 repairing broken wire; clearing highways, railroad ROWs, and waterways of downed  
15 conductor; removing damaged transmission line structures, conductor, steel towers, and  
16 foundations; installing new foundations; installing new pole structures; erecting new steel  
17 towers along and across roads, marshes, and rivers; pulling in miles of new conductor and  
18 shield wire; and cleaning up roads and ROWs of debris left from the storm and restoration  
19 efforts. This work was necessary to restore a viable transmission delivery network for bulk  
20 power delivery across the ELL service area. A total of 314 mutual-assistance and 2,471  
21 contracted line maintenance and construction workers were engaged in the transmission  
22 restoration effort following Hurricane Laura in the ELL service territory. A total of 17  
23 mutual-assistance and 386 contracted line maintenance and construction workers were



1 engaged in the transmission restoration effort following Hurricane Delta in the ELL service  
2 territory. And a total of 146 contracted line maintenance and construction workers were  
3 engaged in the transmission restoration effort following Hurricane Zeta in the ELL service  
4 territory.

5 Q86. WHAT SERVICES WERE PERFORMED BY SUBSTATION MAINTENANCE AND  
6 CONSTRUCTION CONTRACTORS?

7 A. Substation maintenance and construction contractors were engaged to reconstruct, replace,  
8 repair, or otherwise make operationally-ready substation assets such as steel supporting  
9 structures, fences, battery sets, protective relays, circuit breakers, regulators, transformers,  
10 lightning arrestors, switches, bus insulators, control wiring, conductors, supervisory  
11 control and data acquisition (“SCADA”) remote terminal units, radio/fiber optic  
12 communications, and site control houses.

13 This work was necessary to re-energize substations to restore load to ELL  
14 customers as transmission lines were restored to service. Contract resources were utilized  
15 in this area to augment Entergy manpower resources to avoid delays as line restoration  
16 work proceeded expeditiously. A total of 317 contracted substation maintenance and  
17 construction workers were engaged in the transmission restoration effort following  
18 Hurricane Laura in the ELL service territory. A total of 33 contracted substation  
19 maintenance and construction workers were engaged in the restoration effort following  
20 Hurricane Delta in the ELL service territory. And a total of 7 contracted substation  
21 maintenance and construction workers were engaged in the restoration effort following  
22 Hurricane Zeta in the ELL service territory.

1 Q87. WHAT SERVICES WERE PERFORMED BY VEGETATION CUTTING AND  
2 REMOVAL CONTRACTORS?

3 A. Vegetation cutting and removal contractors were engaged to clear trees, limbs, and  
4 vegetation debris from roadways, transmission facilities, and ROWs. Services included  
5 the provision of manpower and equipment for cutting, lifting, chipping, hauling, and  
6 disposal of vegetation material. I note that the crews used for vegetation removal from  
7 transmission lines are usually not the same as, nor are they interchangeable with, the crews  
8 used to remove vegetation from distribution circuits. Transmission lines, being usually on  
9 open ROWs, require track-mounted machinery with a taller reach than the equipment used  
10 to remove vegetation from distribution lines, which can be tire-mounted and have a shorter  
11 reach. Transmission and distribution vegetation crews often have been trained with  
12 different skill sets as well.

13 These services were necessary to restore access to ELL's transmission facilities and  
14 to clear fallen trees and limbs from transmission conductors and structures. A total of 155  
15 contracted vegetation workers were used in response to the transmission system damages  
16 caused by Hurricane Laura in the ELL service territory. A total of 136 contracted  
17 vegetation workers were used in response to the transmission system damages caused by  
18 Hurricane Delta in the ELL service territory. And a total of 96 contracted vegetation  
19 workers were used in response to the transmission system damages caused by Hurricane  
20 Zeta in the ELL service territory.

1 Q88. WERE THE CONTRACT WORK COSTS REASONABLE AND NECESSARY?

2 A. Yes. The costs incurred were reasonable based on a number of factors: (1) ELL estimated  
3 the number of necessary resource personnel based on its modeling and experience with  
4 other storms; (2) ELL continually monitored the number of resource personnel and began  
5 releasing personnel as soon as possible; (3) a large number of the personnel were from  
6 mutual-assistance utilities that provided at-cost personnel with no profit for storm-related  
7 work; (4) many of the other third-party contractors performed pursuant to contracts that  
8 were in existence prior to the storm, which means that they were entered into during non-  
9 emergency conditions and typically based on a competitive bidding process; (5) when ELL  
10 executed new contracts, it attempted to engage contractors with whom it had prior  
11 experience upon terms consistent with the prior services; and (6) ELL had a system in place  
12 to verify that invoices complied with contracted rates and that the work billed was actually  
13 performed.

14

15 **2. Employee Expense**

16 Q89. WHAT TRANSMISSION DOLLARS ARE ASSOCIATED WITH THE  
17 RESTORATION COST CATEGORY "EMPLOYEE EXPENSE"?

18 A. Employee Expense costs incurred by ELL through February 28, 2021 were \$387,368 for  
19 Hurricane Laura, \$10,104 for Hurricane Delta, and \$8,142 for Hurricane Zeta.

20

21 Q90. PLEASE DESCRIBE THE COSTS INCLUDED IN THIS COST CATEGORY.

22 A. This cost category primarily includes expenses for the logistical effort of providing lodging  
23 and meals to Entergy employees and some contractors that are not captured under the

1 logistical supply contractor costs in the Contract Work category. These costs also include  
2 travel expenses (mileage, airfare, small vehicle rentals, etc.) and other employee expenses  
3 (such as per diem rates when provided in lieu of lodging and meals, and other incidental  
4 personal supply needs).

5 Q91. WERE THE EMPLOYEE EXPENSE COSTS REASONABLE?

6 A. Yes. The magnitude of transmission system damage and the duration of restoration efforts  
7 required that work crews be located in proximity to the work they were performing.  
8 Extended work schedules were developed to provide a safe but expedient restoration effort.  
9 Sustaining an effort such as this required that crews be provided bedding, food, sanitation,  
10 and other essential facilities and services. Due to the ongoing restoration activities  
11 associated with earlier storms and hurricanes in the southern U.S., food and lodging  
12 facilities were in great demand. Based on my experience in storm restorations, these costs  
13 were reasonable in view of the size and nature of the event along with the scarcity of  
14 available, local resources.

15  
16 **3. Labor**

17 Q92. WHAT TRANSMISSION DOLLARS ARE ASSOCIATED WITH THE  
18 RESTORATION COST CATEGORY "LABOR"?

19 A. Labor costs incurred by ELL through February 28, 2021 were \$2,377,206 for Hurricane  
20 Laura, \$579,598 for Hurricane Delta, and \$360,101 for Hurricane Zeta.

21

1 Q93. PLEASE DESCRIBE THE COSTS INCLUDED IN THIS COST CATEGORY.

2 A. This cost category includes expenses for all direct payroll associated with ELL employees  
3 involved in the restoration effort. The services provided by ELL employees in this category  
4 were incremental to their normal job functions. These employees' services were necessary  
5 because they had first-hand knowledge of ELL's systems and operating procedures and  
6 were uniquely suited to assist with the restoration.

7

8 Q94. DOES THE COST CATEGORY "LABOR" INCLUDE OVERTIME?

9 A. Yes. ELL employee overtime is included in the Labor cost category. Overtime was  
10 incurred due to the need to expedite restoration and the need for ELL employees familiar  
11 with the System to work as much as possible in order to restore power quickly.  
12 Additionally, there are overtime charges included in the charges for third-party vendors in  
13 the Contract Work category.

14

15 Q95. WERE THE LABOR COSTS REASONABLE AND NECESSARY?

16 A. Yes. The Labor costs were reasonable and necessary because they were provided at the  
17 employees' normal wage, so we were thereby assured that there was no premium added  
18 for storm work. Moreover, these employees were typically familiar with ELL operating  
19 procedures and its service area.

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2  
3  
4 **4. Materials**

5 Q96. WHAT TRANSMISSION DOLLARS ARE ASSOCIATED WITH THE COST  
6 CATEGORY "MATERIALS"?

7 A. Materials costs incurred by ELL through February 28, 2021 were \$50,533,800 for  
8 Hurricane Laura, \$1,315,283 for Hurricane Delta, and \$1,953,511 for Hurricane Zeta.

9 Q97. PLEASE DESCRIBE THE COSTS INCLUDED IN THIS COST CATEGORY.

10 A. As discussed previously in my testimony, this cost category includes expenses for the  
11 actual materials used in the transmission restoration effort, including towers, poles, wires,  
12 conductors, insulators, circuit breakers, hardware, and related materials. The majority of  
13 the transmission-related materials were acquired from Entergy's inventory while other  
14 materials were purchased from Entergy's key suppliers, who, I would note, provided  
15 outstanding support during the restoration. Those materials were essential in the  
16 restoration of the transmission system in order to restore a stable generation and  
17 transmission network in the ELL service area.

18 Q98. HOW DID ELL DETERMINE THE AMOUNT OF MATERIALS THAT WOULD BE  
19 NEEDED TO COMPLETE THE HURRICANES LAURA, DELTA, AND ZETA  
20 RESTORATIONS?

21 A. Damage assessment analyses from the System Command Center Operations Section were  
22 provided to Entergy Supply Chain representatives in the early stages of system restoration  
in order to prepare estimates for material ordering requirements. As detailed damage  
assessment information became available, and as restoration crews completed "wreck-out"

1 of destroyed facilities, material requirements were re-evaluated to avoid shortages and  
2 over-runs. As part of the daily planning and prioritization conference meetings, material  
3 issues were reported by the Transmission Line and Substation Managers in ELL, and  
4 adjustments were made to material requisitions and/or staging locations to meet demands.

5 Q99. WERE THE TRANSMISSION-CLASS MATERIALS COSTS REASONABLE AND  
6 NECESSARY?

7 A. Yes, these costs were necessary to restore a stable transmission network in the ELL service  
8 area. The costs were reasonable because a large portion of the material ELL used to rebuild  
9 the transmission system came from Entergy's own inventory, which means that these  
10 materials were purchased from key suppliers during non-emergency conditions and there  
11 was no premium for expedited manufacture or delivery. ELL also leveraged contracts with  
12 key partner vendors to acquire additional materials, and these purchases were made in  
13 accordance with pricing agreements that were not affected by the storm. In addition, ELL  
14 acquired materials from other utilities, including thirty-three (33) 500 kV structures and  
15 twenty-six (26) anchor cages from Florida Power & Light, which enabled the recovery of  
16 key transmission tie lines into southwest Louisiana after Hurricane Laura. In those  
17 instances where ELL had to acquire materials from any vendor with which it did not have  
18 a pre-existing contract, prices for materials were compared to prices of similar materials  
19 that ELL typically secures under contract and further weighed against ELL's experience  
20 and the exigent circumstances.





1 the costs for specialized equipment were reasonable because the equipment was obtained  
2 at rates that were negotiated based on pre-storm operating conditions.

3 **6. Affiliate Costs**

4 Q103. WHAT WERE THE TRANSMISSION DOLLARS ASSOCIATED WITH “ESL  
5 BILLINGS” AND WHAT DO THOSE COSTS INCLUDE?

6 A. ESL Billings incurred by ELL through February 28, 2021 were \$4,094,776 for Hurricane  
7 Laura, \$128,434 for Hurricane Delta, and \$81,810 for Hurricane Zeta. These costs include  
8 expenses for ESL employee salaries (including overtime) employee expenses, material,  
9 and transportation associated with ESL services provided and charged directly to, or in a  
10 few limited cases allocated to, the ELL system restoration codes. These services include  
11 engineering design and support, logistics support, operational planning, project  
12 management, right-of-way, technical support, systems operations support, damage  
13 assessment, contractor supervision, and others.

14  
15 Q104. WHAT WERE THE TRANSMISSION DOLLARS ASSOCIATED WITH “LOANED  
16 RESOURCES” AND WHAT DO THOSE COSTS INCLUDE?

17 A. Loaned Resources costs incurred by ELL through February 28, 2021 were \$662,479 for  
18 Hurricane Laura, \$26,060 for Hurricane Delta, and \$15,026 for Hurricane Zeta. These  
19 costs include expenses for the salaries of other EOC employees, including overtime, who  
20 worked on or supported the ELL restoration effort. Such costs were charged to the ELL  
21 storm project. For example, such expenses include salaries for loaned transmission line  
22 construction crew personnel from other EOCs.

1 Q105. WHAT PROCESSES WERE IN PLACE TO ENSURE THAT THESE COSTS WERE  
2 ACCURATE?

3 A. All supervisory-level Entergy personnel are periodically reminded of the importance of  
4 accurate payroll time entry with regard to storm restoration and support activity. All  
5 timesheet entries (including labor charged to capital suspense) in the storm project must be  
6 verified for accuracy and approved by a minimum of one level of supervision/management  
7 before being uploaded into the Entergy payroll system.

8  
9 Q106. WERE THESE “AFFILIATE” COSTS REASONABLE AND NECESSARY?

10 A. Yes. These costs were both necessary and reasonable to the restorations following  
11 Hurricanes Laura, Delta, and Zeta. These costs were predominantly associated with  
12 employees from our regulated affiliate companies who provided direct restoration support  
13 such as post-storm patrols and damage assessment, line construction, operation and staffing  
14 of staging sites, and support and staffing of logistics management.

15 These services were both necessary and reasonable for several reasons. With regard  
16 to managing the restoration efforts following Hurricanes Laura, Delta, and Zeta, the  
17 employees of the other EOCs are familiar with our administrative systems and company  
18 procedures, whereas outside contractors or utilities generally are not. The construction  
19 resources were necessary to affect a timely restoration just like the non-affiliated  
20 construction resources provided by ELL, contractors, other utilities, and other third parties.  
21 These costs were reasonable because ELL paid the direct labor costs and expenses of using  
22 these resources. The labor was provided at cost. Non-affiliated companies would either

1 operate less effectively in these roles or have increased costs built into their pricing to  
2 account for the training, preparation, and guaranteed availability already in existence for  
3 each affiliate's own operational needs.

4  
5 **7. Mutual Assistance Costs**

6 Q107. WHAT IS THE TOTAL AMOUNT OF MUTUAL ASSISTANCE COSTS INCURRED  
7 FOR THE HURRICANES LAURA, DELTA, AND ZETA RESTORATIONS?

8 A. The total amount of restoration costs incurred by ELL for mutual assistance at the  
9 transmission level through February 28, 2021, was \$23,683,265 for Hurricane Laura and  
10 \$458,575 for Hurricane Delta. No mutual assistance costs were incurred in connection  
11 with Hurricane Zeta.

12  
13 Q108. WERE THE MUTUAL ASSISTANCE COSTS REASONABLE AND NECESSARY?

14 A. Yes. As I explained above, when the Company requires aid from its mutual assistance  
15 partners, it pays the actual charges for the assisting utility's crews, at the same rates the  
16 assisting utility pays its crews. Labor rates, transportation charges, labor overhead, and  
17 corporate overhead are reimbursed at the same rates that the assisting utility accounts for  
18 these charges in its normal course of business. Moreover, mutual-aid utilities were  
19 essential for the restorations following Hurricanes Laura and Delta due to the damage to  
20 ELL's transmission system.

1 **8. Estimated Costs**

2 Q109. IS ELL ALSO REQUESTING THE RECOVERY OF THE ESTIMATED COSTS  
3 NECESSARY TO COMPLETE THE TRANSMISSION-LEVEL RESTORATION  
4 PROCESS FOLLOWING HURRICANES LAURA, DELTA, AND ZETA?

5 A. Yes. ELL is requesting \$4,460,000 in estimated costs primarily associated with Hurricane  
6 Laura restoration for certain projects that are on-going and have not yet been completed  
7 (or were not completed as of February 28, 2021) but are necessary to restore ELL's  
8 transmission system to its pre-Laura condition. These estimated costs are summarized in  
9 Exhibit MPB-11. The Company has completed its Transmission-level projects to repair  
10 damages caused by Hurricane Delta.

11 As I noted above, the estimated costs reflected in Exhibit MPB-11 do not include  
12 the potential cost to demolish and rebuild a 31 mile 115 kV transmission line that was  
13 damaged during Hurricane Zeta; ELL is still evaluating potential alternatives to a repair  
14 and rebuild of this line to identify the lowest reasonable cost alternative considering risk  
15 and reliability.

16  
17 Q110. PLEASE DESCRIBE THE TRANSMISSION-RELATED PROJECTS FOR WHICH  
18 THE COMPANY IS REQUESTING RECOVERY OF COSTS BASED ON  
19 ESTIMATES.

20 A. ELL is requesting cost recovery of estimated expenditures related to ongoing "punch list"  
21 work being performed on transmission lines and ROWs affected by Hurricane Laura.  
22 Immediately following passage of the storm, construction crews remained focused on the  
23 safe and efficient execution of those repairs required to enable re-energization of affected

1 transmission lines. Those activities not required to safely execute the repair and rebuild of  
2 affected transmission lines (but which are required to return the transmission line and  
3 ROWs to pre-storm conditions) are typically completed after the line is re-energized.  
4 These activities include restoration of ROWs and removal of other materials from the  
5 ROWs that were utilized in the recovery process. In addition, repairs made to transmission  
6 facilities that were temporary in nature to enable timely restoration are also being reviewed  
7 and modified, as needed. Engineering personnel also continue efforts to update existing  
8 transmission facility drawings to reflect the as-built condition of each transmission line  
9 post-storm.

10  
11 **B. Winter Storm Uri Storm Costs**

12 Q111. WHAT ARE THE TOTAL TRANSMISSION-RELATED COSTS OF THE  
13 COMPANY'S RESTORATION EFFORT FOLLOWING WINTER STORM URI?

14 A. The total ELL Transmission costs incurred due to Winter Storm URI were \$2,960,000.  
15 These costs include the transmission-related storm costs incurred through February 28,  
16 2021, plus certain estimated costs. These numbers do not include adjustments for carrying  
17 costs. Please see Exhibit MPB-3; Exhibit SMH-2 attached to the Direct Testimony of  
18 Company witness Ms. Harcus, which is a report summarizing costs by class and major  
19 resource category for ELL for Winter Storm Uri; as well as Exhibit SMH-4 attached to Ms.  
20 Harcus's testimony, which includes the transactions underlying the total Transmission-  
21 level costs for Winter Storm Uri. I note that the costs related to Winter Storm Uri that ELL  
22 incurred fall into the same categories of costs and types of activities as those presented

1           above to outline the costs incurred during the restoration efforts following Hurricanes  
2           Laura, Delta, and Zeta.

3

4   Q112. WERE THESE STORM COSTS REASONABLE AND NECESSARY?

5   A.    Yes. ELL incurred these costs to prepare for Winter Storm Uri and return transmission  
6           lines to service as quickly, safely, and efficiently as possible. ELL made necessary  
7           expenditures for essential materials, labor, and other identified costs to carry out these  
8           activities. These costs were incurred in the requisite manner to ensure the reliability of the  
9           transmission system to provide power to customers.

10                 Moreover, these costs were reasonable, as confirmed by the internal control  
11            measures ELL relied on to procure and monitor the material and personnel resources that  
12            it utilized for the restoration of its system. As noted above, the Company is a highly-skilled  
13            purchaser of services and materials for its facilities and is intimately familiar with the  
14            products and services of the vendors with which it was working. ELL was thus able to  
15            ensure that the prices and terms under which it purchased services and materials following  
16            Winter Storm Uri were fair and reasonable under the circumstances.

17

18   Q113. IS ELL ALSO REQUESTING THE RECOVERY OF ANY ESTIMATED COSTS  
19           NECESSARY TO COMPLETE THE TRANSMISSION-LEVEL RESTORATION  
20           PROCESS FOLLOWING HURRICANES LAURA, DELTA, AND ZETA?

21   A.    Yes. ELL is requesting \$1,273,329 in estimated costs associated with Winter Storm Uri  
22           restoration for certain projects that are on-going and have not yet been completed but are

1 necessary to restore ELL's transmission system. These estimated costs are reflected in  
2 Exhibit MPB-3.

3  
4 **VIII. CONCLUSION**

5 Q114. WERE THE TRANSMISSION-RELATED COSTS INCURRED BY THE COMPANY  
6 TO ADDRESS HURRICANES LAURA, DELTA, AND ZETA, AS WELL AS WINTER  
7 STORM URI, REASONABLE AND NECESSARY?

8 A. Yes. The transmission-related storm costs related to Hurricanes Laura, Delta, and Zeta,  
9 together with Winter Storm Uri, were all reasonable and necessary. The Company's focus  
10 was to restore service to its customers as fast as safely possible. Expedient restoration of  
11 service was essential to begin the recovery for a region devastated by most active storm  
12 season in history for the State of Louisiana, which experienced a total of five named storms  
13 in 2020,<sup>15</sup> with Hurricanes Laura, Delta, and Zeta all impacting Louisiana in a 62-day  
14 period. The labor and materials utilized by the Company were necessary to restore service  
15 to customers and rebuild ELL's damaged transmission facilities following each hurricane.  
16 Without the significant labor and material resources utilized, the Company would not have  
17 been able to rebuild the transmission system and therefore would not have been able to  
18 restore service to customers in the timely manner that it did after each hurricane.

19 The Company followed its established, well-rehearsed restoration plan, and the  
20 labor and materials costs were largely incurred pursuant to previously-negotiated contracts  
21 and cost-based mutual-assistance agreements. We implemented a thorough process to

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<sup>15</sup> In addition to Hurricanes Laura, Delta, and Zeta, Tropical Storm Cristobal made landfall in Louisiana between the mouth of the Mississippi River and Grand Isle on June 7, and Hurricane Marco made landfall near the mouth of the Mississippi River (or came very close to it) on August 24.

1 engage vendors, assign and monitor the labor and materials they provided, and review their  
2 invoices to ensure that they were accurate. Despite the circumstances surrounding an  
3 extremely active hurricane season, together with the logistical challenges associated with  
4 COVID-19, I am not aware of any instance of price gouging, and I believe the vast majority  
5 of service providers cooperated with the Company and endeavored to be of assistance to  
6 the Company in addressing the emergency situation rather than taking advantage of it.

7  
8 Q115. IN THE LIGHT OF THE FACTS KNOWN TO THE COMPANY AT THE TIME, WAS  
9 IT NECESSARY AND REASONABLE FOR THE COMPANY TO ACQUIRE AND  
10 UTILIZE THE TRANSMISSION-RELATED RESOURCES THAT IT DID TO  
11 COMPLETE RESTORATION OF SERVICE AND RECONSTRUCTION OF ITS  
12 TRANSMISSION FACILITIES FOLLOWING HURRICANES LAURA, DELTA,  
13 ZETA, AND WINTER STORM URI?

14 A. Yes.

15  
16 Q116. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

17 A. Yes, at this time.



**AFFIDAVIT**

STATE OF LOUISIANA

PARISH OF ORLEANS

**NOW BEFORE ME**, the undersigned authority, personally came and appeared, **Michelle Bourg**, who after being duly sworn by me, did depose and say:

That the above and foregoing is his sworn testimony in this proceeding and that he knows the contents thereof, that the same are true as stated, except as to matters and things, if any, stated on information and belief, and that as to those matters and things, he verily believes them to be true.

  
Michelle Bourg

**SWORN TO AND SUBSCRIBED BEFORE ME**  
THIS 20th DAY OF April, 2021

  
NOTARY PUBLIC

My commission expires: is for life

