BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

ENTERGY LOUISIANA, LLC'S NOTICE OF EXEMPTION REGARDING THE AUDUBON SUBSTATION AND RELATED TRANSMISSION FACILITIES CONSISTENT WITH LOUISIANA PUBLIC SERVICE COMMISSION GENERAL ORDER DATED OCTOBER 10, 2013	)	**DOCKET NO. _____**

AFFIDAVIT

OF

BRADLEY D. SKOK

ON BEHALF OF

ENTERGY LOUISIANA, LLC

PUBLIC REDACTED VERSION

January 2024

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EXHIBIT LIST

AFFIDAVIT OF BRADLEY D. SKOK

SUPPORTING NOTICE OF EXEMPTION OF ENTERGY LOUISIANA, LLC

STATE OF MISSISSIPPI §

COUNTY OF MADISON §

Before me, the undersigned authority, on this day appeared BRADLEY D. SKOK, who having been placed under oath by me, did depose as follows:

"My name is Bradley D. Skok. I am over the age of 18 years of age and a resident of the State of Mississippi. I am competent to make this Affidavit. Based upon my 17 years of experience described below, I have personal knowledge of the matters addressed in this Affidavit, and my statements concerning these matters are true and correct.

I present this Affidavit before the Louisiana Public Service Commission ("LPSC" or the "Commission") on behalf of Entergy Louisiana, LLC ("ELL" or the "Company") in support of the Company's Notice of Exemption in the above-styled docket.

I. BACKGROUND

I am employed by Entergy Services, LLC ("ESL")[1] as Manager, Transmission Planning, within the Power Delivery Planning ("PDP") group of the Entergy Power Delivery Organization ("EPDO"). Since receiving a Bachelor of Science degree in Electrical Engineering in December 2006 from Mississippi State University, I have worked for ESL as

[1] ESL is the service company affiliate of the Entergy Operating Companies ("EOCs") that provides engineering, planning, accounting, technical, regulatory, and other administrative support services to each of the EOCs. The EOCs include ELL; Entergy Mississippi, LLC ("EML"); Entergy Arkansas, LLC ("EAL"); Entergy New Orleans, LLC ("ENO"); and Entergy Texas, Inc. ("ETI").

an engineer in varying roles of increased responsibilities with respect to the Entergy Transmission System and the transmission systems of the various EOCs. Since 2015, I have worked as a planning engineer or senior project manager in the project development area, and, in 2020, I was promoted to my current position, where I lead a team of engineers responsible for long-term transmission planning activities for ELL, ETI, and ENO. Those responsibilities include studying the bulk electric system and identifying transmission projects necessary to meet the customer load-serving needs of the EOCs, to ensure the reliability of service to customers, to interconnect new generation, and to maintain compliance with a number of North American Electric Reliability Corporation ("NERC") reliability standards governing transmission planning. The team I lead also maintains local planning criteria specific to Entergy's transmission assets and conducts studies to ensure compliance with those criteria.

I have previously provided Direct Testimony on behalf of ETI before the Public Utility Commission of Texas ("PUCT") in Docket No. 46248.[2]

II. PURPOSE OF AFFIDAVIT

In the above-styled docket, the Company is providing notice that, consistent with the terms of the Commission's Transmission Siting Order,[3] the Company is undertaking a portfolio of transmission projects required to add a new 500/230 kilovolt ("kV") Substation in Ascension Parish, Louisiana (the Audubon Substation) and approximately 7.8 miles of new transmission

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[2] *See* PUCT Docket No. 46248 (January 17, 2017), *Application of Entergy Texas, Inc. to Amend its Certificate of Convenience and Necessity for a 230kV Transmission Line in Jefferson, Chambers and Liberty Counties.*

[3] *See* General Order No. R-26018 (October 10, 2013), *In Re: Determination As To Whether the Commission Should Issue A General Order Asserting Jurisdiction Over The Certification of Utility Transmission Projects and the Determination of Whether Those Projects Are in the Public Interest*, Docket No. R-26018 ("Siting Order").

line to connect the new substation to existing 230kV and 500kV transmission lines (the "Project") for the primary purpose of accommodating a new clean energy complex ("Customer's Complex" or "Complex") being developed by a new customer (the "Customer"). As such, per my understanding of the Siting Order, the Project qualifies for an exemption from the requirement that the Company obtain a Certificate of Convenience and Necessity prior to the construction of the Project.[4] This Affidavit provides certain factual information to support the application of the exemption established in Section VIII(6) of the Siting Order.

In particular, my Affidavit:

- provides an overview of the Entergy Transmission System and ELL's Transmission System;
- provides an overview of the transmission planning process, including the role of the Midcontinent Independent System Operator, Inc. ("MISO");
- explains the development of the Project, including a discussion of the studies by both ESL and MISO that led to the determination that the Project is the most effective portfolio of projects necessary to reliably provide electric service to the Customer's Complex; and
- provides the documentation required to show that the primary purpose of the Project is to accommodate the needs of the Customer's Complex.

III. OVERVIEW OF ENTERGY AND ELL TRANSMISSION SYSTEMS

The EOCs' Transmission Facilities span portions of five states (Arkansas, Louisiana, Mississippi, Texas, and Missouri) and are comprised of approximately 16,100 circuit miles of

[4] *Id.* at Section VIII(6).

transmission lines. In addition to the lines, there are 1,522 substations across the system. Employees and assets based at various locations throughout the areas served by the EOCs are called upon to plan, operate, and maintain these facilities.

The Entergy Transmission Facilities are used to move high-voltage bulk electric power produced by market participants within MISO across an interconnected system of transmission lines and substations to distribution points for delivery to the approximately 3 million retail customers of the EOCs, as well as to other transmission system users such as municipalities and cooperatives, and to points of delivery into other transmission systems. The Entergy Transmission Facilities also deliver power directly to some large commercial and industrial retail customers of the EOCs. These transmission-level retail customers include refineries, chemical plants, oil and gas processing facilities, pumping stations, and other large manufacturing sites vital to the economies of the region and nation.

Each EOC owns or controls (subject to MISO's functional control) the transmission system assets that are located in the respective area in which it provides retail electric service. In addition, ESL owns or leases certain assets that support the transmission business.

The ELL transmission system is comprised of approximately 5,267 circuit miles of transmission lines. The ELL transmission system is composed of 69 kV, 115 kV, 138 kV, 230 kV, 345 kV, and 500 kV transmission lines and substations, and it extends across the footprint of the State of Louisiana. The ELL transmission system is interconnected with the transmission and/or distribution systems of ENO, EAL, EML, ETI, Lafayette Utilities System, Cleco Power LLC ("Cleco"), Cleco Cajun, Southwestern Electric Power Company ("SWEPCO"), and Louisiana Electric Power Authority.

IV. THE TRANSMISSION PLANNING PROCESS

A. Standards and Guidelines

Reliable transmission infrastructure is critical to ensure ELL can reliably support industries locating in the areas of Louisiana that the Company serves, to ensure that inadequate infrastructure does not become an impediment to that development and the economic benefits to Louisiana associated with that development, and to continue to reliably serve all customers. To meet these goals, in addition to its own internal standards, the Entergy Transmission System is planned, designed, and operated in accordance with national and regional reliability standards and guidelines.

In the Energy Policy Act of 2005, the United States Congress authorized the Federal Energy Regulatory Commission ("FERC") to approve mandatory, enforceable reliability standards for users, owners, and operators of the bulk power system. On July 20, 2006, and pursuant to Section 215 of the Federal Power Act, FERC certified NERC as the Electric Reliability Organization ("ERO") in the United States. To achieve its mission of improving reliability and security of the bulk power system, NERC continually develops and enforces reliability standards; monitors the bulk power system; assesses future adequacy of the bulk power system; audits owners, operators, and users of the bulk power system for preparedness; and educates and trains industry personnel.

Included in its ERO certification was a provision for NERC to delegate authority for the purpose of proposing and enforcing reliability standards in particular regions of the country by entering into delegation agreements with regional entities. NERC, in the exercise of its authority under this provision, delegated authority to SERC Reliability Corporation ("SERC"), a nonprofit corporation, to serve as one of several regional entities for the purpose of proposing

and enforcing reliability standards. Under that delegation, SERC is responsible for promoting and improving the reliability, adequacy, and critical infrastructure of the bulk power supply systems in all or portions of 16 central and southeastern states, including Louisiana. Owners, operators, and users of the bulk power system in these states cover an area of approximately 630,000 square miles and comprise what is known as the SERC Region.

B. The Planning Process

Transmission planning is performed to ensure that the interconnected Entergy Transmission System: (1) remains compliant with applicable NERC Reliability Standards, SERC standards, and each EOC's local planning criteria; and (2) is designed to deliver energy efficiently to end-use customers at the lowest reasonable cost. Expansion of, and enhancements to, transmission facilities must be planned well in advance of the need for such improvements given that regulatory processes, permitting processes, and construction activities can take multiple years to complete. The advanced planning employed by the Company requires that computer models of forecasted future year conditions be used to assess the performance of the transmission system, taking into account planned uses of the system, generation and load forecasts, and planned transmission facilities. These models are coordinated among other MISO members and with the remainder of the Eastern Interconnection[5] to ensure that the interconnected transmission facilities that are ultimately constructed will operate in an efficient and reliable manner and comply with applicable regulations and standards. ELL, and ESL planning staff on behalf of the Company, perform a

[5] The Eastern Interconnection is a large-scale power grid that permits utilities in the eastern, southern, and midwestern United States and portions of eastern Canada to operate at the same frequency. The entire SERC Region is included within this broad geographic area.

myriad of analyses to assess the reliability and economic performance of the Company's portion of the interconnected transmission system. Consistent with applicable regulations and standards, these analyses are then used to plan future transmission facilities that will be needed for continued reliable and efficient operations.

C. Role of MISO

As a Transmission Owner in MISO, the Company's transmission system is planned in accordance with the MISO Open Access Transmission, Energy and Operating Reserve Markets Tariff ("MISO Tariff"). On behalf of the Company, the PDP group oversees the preparation of annual assessments of the Company's transmission facilities and conducts local reliability planning through MISO's reliability planning process. To do so, the PDP group applies the NERC and SERC reliability standards and local planning criteria I discussed above to identify upgrades needed to ensure compliance, maintain reliable service to existing customers, and accommodate future load growth. The product of this process is a local reliability plan that is provided to MISO for use in its overall regional planning process.

The process of planning the transmission grid in the MISO region is guided by four different, but related, points of view: top-down regional (or MISO-wide) planning, bottom-up (or locally-driven) planning, access planning (which includes transmission-service-request and generator interconnection-driven transmission planning), and state/federal policy-driven planning. The result of this process is a plan for the enhancement of the transmission grid in MISO. This plan is referred to as the MISO Transmission Expansion Plan ("MTEP"). The MTEP process is broadly driven by multiple objectives: maintaining system reliability, meeting state and federal policy objectives, lowering production cost by proposing economic transmission projects, and addressing generation interconnection requests and transmission

service requests. To accomplish these goals, the MTEP process includes opportunities, including meetings and the submission of written comments, for input from various stakeholders and participants. For instance, economic projects are generally developed through the top-down portion of the MTEP, which utilizes MISO's economic assessment of the transmission system and stakeholder input – including the opportunity to submit candidate projects for consideration – to identify potential congestion on the system and develop cost-effective solutions to that congestion, if possible. Local reliability-driven projects are generally developed in the bottom-up process, which relies on the identification of need by the local Transmission Owners and analyzes that need (and the proposed solution) with significant stakeholder review and input. Transmission access planning is driven by customers requesting generator interconnection and transmission service.

No matter how a project is developed, the MTEP process relies on MISO's broad analysis of the MISO transmission system (and its neighboring systems), stakeholder review of and input on that analysis and proposed projects, and, ultimately, a decision from the MISO Board of Directors (the "MISO Board") regarding approval of any projects recommended to it.

Each MISO MTEP planning cycle is an 18-month process that begins in June of each year and concludes in December of the following year. For example, MTEP23 began its process in June 2022 with a requirement that Transmission Owners submit their proposed MTEP23 projects to address reliability no later than mid-September 2022, and concluded in December 2023 with MISO Board approval of MTEP23. With respect to reliability planning, projects generally are proposed to MISO by the Transmission Owner. Based on its significant knowledge of and experience planning for its transmission system, a MISO Transmission

Owner's proposal identifies reliability deficiencies on the transmission system (*i.e.*, instances in which a project is needed to address a violation of an applicable NERC standard, local planning criterion, or other reliability requirement) and recommends projects needed to address the violation. MISO selects the preferred method to mitigate any reliability deficiencies that have been identified in the proposals. MISO's study of the proposed projects is part of the annual MTEP process I outlined above, which includes review of the projects with stakeholders at scheduled sub-regional planning meetings throughout the year in order to obtain robust stakeholder input on the proposed projects. If appropriate, MISO also optimizes the plans submitted by different stakeholders, selecting alternative projects that may address identified needs more efficiently than those proposed by individual stakeholders. At the conclusion of the MTEP planning cycle, the MISO Board considers for approval the projects recommended by the MISO planning staff that are determined to effectively and efficiently meet reliability needs.

The Project was developed by ESL through the bottom-up process described above, proposed to MISO, and approved, through the MTEP23 process.[6] As noted by Company affiant Ms. Laura Beauchamp, the Project is one component of a larger project that MISO approved as "Amite South Reliability Project – Phase 2" ("Phase 2 Project") in MTEP23. The Company will be addressing the balance of the Phase 2 Project as well as certain other projects that were

[6] *See* MISO MTEP23 Appendix A – New Projects recommended for approval, *available at* https://cdn.misoenergy.org/MTEP23%20Appendix%20A%20-%20New%20Projects%20recommended%20for%20approval629964.xlsx, MISO Project ID 23957 (row 401). As noted below, "Amite South Reliability Project - Phase 2" is the name of the Company's submission to MISO that included the Company's Project as a component part. Also, with the receipt of the Customer's signed Electric Service Agreement in December 2023 and the confirmation of the location of the Customer's load, the Company designed the new Audubon Substation and designated it, instead of the existing Conway Substation, as the point of injection, due to the new substation's proximity to the Customer's load.

approved in MTEP23 and that are necessary to serve the projected load growth in the Amite South region, in filings that are expected to be made later, as appropriate, in 2024.

V. DEVELOPMENT OF THE PROJECT

A. Project Development

As discussed by Ms. Beauchamp, in October 2021, the Customer announced the planned construction of the Customer Complex. The Customer has requested [redacted] to support the Complex. The Customer has requested permanent service to be supplied at 230 kV, with initial service requested in [redacted] and an overall project in-service-date ("ISD") of [redacted]. Also as discussed by Ms. Beauchamp and Company affiant Mr. Ryan Jones, in December 2023, the Customer executed a binding Electric Service Agreement ("ESA") for service to the Complex.

The Company's major electrical sources in the area of the Customer Complex consist of the Waterford 500 kV, Willow Glen 500kV, Conway 230kV, and Panama 230kV substations, served by existing generation at the Waterford generation station. Existing transmission lines include the Waterford to Willow Glen 500kV, Conway to Bagatelle 230kV, and the Conway to Panama 230kV transmission lines. As currently configured, typical power flows are from north to south from the existing 500 kV system (Waterford to Willow Glen) to existing, largely industrial, loads.

Currently, the transmission system in the Amite South region in the industrial corridor between Baton Rouge and New Orleans is highly constrained, including the area on the East Bank of the Mississippi River where the Customer's Complex is to be located. The transmission system in the area is a critical path for importing power into the Amite South load

pocket. Based on the Customer's demand and the planned location of the Customer's Complex, without additional transmission capability, service to the Customer Complex would further constrain the transmission system in this area. While there have been no violations of NERC Reliability Standards identified along the area's transmission system under current system conditions, there is very little incremental capacity available to serve industrial block load additions in this area without creating such a violation. Additionally, the possible acceleration of generator deactivations in the Amite South load pocket due to changing environmental regulations would further constrain the transmission system in this corridor, as it would necessarily increase the power imports through that path.

In order to determine the capability of the transmission system to provide reliable service to the Customer's Complex, an initial study was performed based on the current configuration of the system with only the Customer's Complex modeled as an incremental load at the level requested by the Customer. This study indicates that, under existing conditions, with the addition of the Customer's Complex, various transmission facilities will overload, and low voltages will occur as a result of various transmission contingency events. Based on the Company's evaluation of the overload/low voltage conditions identified, a corrective action plan – in this case, the Project – was developed to resolve the violations. The main components of the Project are a new 500/230kV Substation and approximately 7.8 miles of new transmission line connecting the new substation to existing 230kV and 500kV transmission lines and to the Customer-owned substation. Exhibit BDS-1 (Highly Sensitive Protected Material ("HSPM")) shows the Company's existing transmission facilities and the new facilities added by the Project. Subsequent power flow analysis incorporating both the Customer Complex's incremental load and the new facilities included in the Project verified

the sufficiency and efficacy of the Project to resolve the violations. The results of these studies are reflected in Exhibit BDS-2 (HSPM), which shows the estimated transmission element overload and/or low voltage condition in the initial study and the subsequent results with the Project incorporated into the study. The results reflected in Exhibit BDS-2 (HSPM) demonstrate that the Project is necessary to accommodate the electrical requirements of the Customer's Complex, and the Project is being proposed and undertaken primarily for that purpose. MISO also has performed an independent evaluation of the assumptions and inputs modeled in the Company's studies, and the results of its evaluation confirm the necessity of the Project to reliably serve the Customer's Complex.[7]

Company affiant Ms. Catherine Ward provides a detailed description of all the component facilities that comprise the Project. All of the new and upgraded facilities included in the Project, as described in Ms. Ward's affidavit, are necessary to provide service to the Customer's Complex and are being undertaken primarily for that purpose.[8]

B. MISO Classification of Project

The Project is classified by MISO as an "Other" project. An Other project is defined in the MISO Transmission Planning Business Practices Manual ("BPM-20") as a project that addresses local reliability issues on the MISO transmission system other than violations of NERC or regional reliability criteria. As defined in BPM-20:

> Other projects represent local transmission projects that address localized Transmission Issues other than the reliability issues addressed by Baseline Reliability Projects, and thus other projects

[7] As explained above (and in Footnote 6), the Project is listed in MTEP23 Attachment A as a project approved in MISO's MTEP23 process.

[8] Based on sound and prudent utility practices incorporated in its design, the construction of the Project may also provide incremental transmission capacity to accommodate future load growth in the East Bank industrial corridor.

> are not projects used to address projected violations of NERC and regional reliability standards. Other projects may include projects to satisfy Transmission Owner and/or state and local planning criteria other than NERC or regional reliability standards, interconnect new Loads, relocate transmission facilities, address aging transmission infrastructure, replace problematic transmission plant, improve operational performance or address other operational issues, address service reliability issues with end-use consumers, improve aesthetics including but not limited to undergrounding overhead transmission facilities, address localized economic issues, and address other miscellaneous localized needs.

Although, as I noted above, the planning analysis for this Project shows it to be needed in order to ensure compliance with NERC reliability standards, it is not classified as a Baseline Reliability Project ("BRP") – which is the MISO project type ordinarily associated with such projects – because of timing issues regarding the load addition at issue. Specifically, due to MISO's planning/modeling criteria, this future large block load was not included in its base case models. Consequently, the violations that would have been triggered by the addition of the Customer's load and that would have been mitigated by the Project were not identified as NERC criteria violations during the MTEP23 planning process, and thus the Project did not qualify as a BRP in MTEP23. In other words, if the load associated with the Customer Complex were added to the system without the Project, it would be expected that the Project would be classified as a BRP in the next MTEP after such addition.[9]

The Project does not qualify as either a Market Efficiency Project ("MEP") or a Multi-Value Project ("MVP"), which are the two primary types of economic projects allowed under

[9] As demonstrated by the transmission studies discussed in my testimony, were the Company to have moved forward with service to the Customer's Complex without the Project in place, it would have resulted in a substantial risk of potential load shed or loss of power events. Alternatively, it is reasonable to consider that the prospect of such a risk could have resulted in the Customer seeking another location with another supplier for the Complex, possibly outside of Louisiana.

the MISO Tariff, because the driver of the Project is not that it will provide economic benefit in excess of its cost, and, in fact, it does not provide such net benefits in an amount sufficient to qualify as an MEP or MVP.

Although the Project does not qualify as a BRP because of the timing issue noted above, this does not have a material effect on the manner in which the costs of the Project are allocated under the MISO Tariff. As an Other type project that has not been qualified as either a MEP or MVP, the Project (just as if it were classified as a BRP) will have its cost assigned to the local Transmission Pricing Zone ("TPZ") in which the Project is constructed -- i.e., the ELL TPZ. All customers of the transmission system that receive transmission service in that TPZ will be allocated a portion of the cost of the Project on the basis of their load ratio share within the TPZ, per Attachment O of the MISO Tariff. Based on the most recent Attachment O filing in June 2023, ELL would be responsible for approximately 78% of the costs of the Project, while other transmission customers who receive transmission service in the ELL TPZ would be responsible for approximately 22% of the costs. These figures are estimates; the actual allocation of costs would be determined based on future circumstances regarding the amount and type of transmission service that ELL and other transmission customers actually obtain when the Project is placed in service.

Further affiant sayeth not."

Bradley D. Skok
BRADLEY D. SKOK

SWORN AND SUBSCRIBED TO before me, the undersigned authority, on this 23rd day of January, 2024.

Aletta B. Walker
Notary Public

STATE OF MISSISSIPPI
ALETTA B WALKER
NOTARY PUBLIC
Madison County
My Commission Expires
November 4, 2025
COMMISSION NUMBER 116794

BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

ENTERGY LOUISIANA, LLC'S NOTICE OF EXEMPTION REGARDING THE AUDUBON SUBSTATION AND RELATED TRANSMISSION FACILITIES CONSISTENT WITH LOUISIANA PUBLIC SERVICE COMMISSION GENERAL ORDER DATED OCTOBER 10, 2013	)	**DOCKET NO. U-____**

EXHIBIT BDS-1

HIGHLY SENSITIVE PROTECTED MATERIAL

INTENTIONALLY OMITTED

JANUARY 2024

BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

ENTERGY LOUISIANA, LLC'S NOTICE OF EXEMPTION REGARDING THE AUDUBON SUBSTATION AND RELATED TRANSMISSION FACILITIES CONSISTENT WITH LOUISIANA PUBLIC SERVICE COMMISSION GENERAL ORDER DATED OCTOBER 10, 2013	)	**DOCKET NO. U-____**

EXHIBIT BDS-2

HIGHLY SENSITIVE PROTECTED MATERIAL

INTENTIONALLY OMITTED

JANUARY 2024