EARTHJUSTICE

April 11, 2025

Overnight Delivery
Ms. Kris Abel
Records and Recording Division
Louisiana Public Service Commission
Galvez Building, 12th Floor
602 North Fifth Street
Baton Rouge, Louisiana 70802

Re: Application for Approval of Generation and Transmission Resources in Connection with Service to a Single Customer for a Project in North Louisiana, **Docket No. U-37425**

Dear Ms. Abel:

I have enclosed, on behalf of the Alliance for Affordable Energy and Union of Concerned Scientists, the original and two copies of the Non-Confidential Public Version of the Direct Testimony and Exhibits of three witnesses. I have included three USB flash drives, each of which contains one expert's non-confidential Direct Testimony.

In addition, I have also enclosed the original and two copies of the **Confidential** Version of the Direct Testimony and Exhibits of the same three witnesses. The confidential version contains information that is designated Highly Sensitive Protected Material and is being provided to you under seal, in separate envelopes, pursuant to the provisions of the LPSC General Order dated August 31, 1992, and Rules 12.1 and 26 of the Commission's Rules of Practices and Procedures. **Please note –** the Direct Testimony of Nicholas W. Miller contains two exhibits with highly confidential Critical Energy Infrastructure Information. Finally, I have also included three USB flash drives, each of which contains one expert's Confidential Direct testimony.

Thank you in advance for your assistance and cooperation and please do not hesitate to contact me should you have any questions or concerns.

Respectfully submitted,

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STATE OF LOUISIANA

BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

APPLICATION OF ENTERGY LOUISIANA, LLC FOR APPROVAL OF GENERATION AND TRANSMISSION RESOURCES PROPOSED IN CONNECTION WITH SERVICE TO A SIGNIFICANT CUSTOMER PROJECT IN NORTH LOUISIANA, INCLUDING PROPOSED RIDER, AND REQUEST FOR TIMELY TREATMENT	)	**DOCKET NO. U-37425**

Direct Testimony and Exhibits of

Catherine Kunkel

On Behalf of the

Alliance for Affordable Energy and

Union of Concerned Scientists

Public Redacted Version

April 11, 2025

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I. INTRODUCTION

Q. Please state your name, business address, and position.

A. My name is Catherine Kunkel, my address is PO Box 75362 Charleston, WV 25375, and I am an Energy Consultant with the Institute for Energy Economics and Financial Analysis ("IEEFA").

Q. On whose behalf are you testifying in this proceeding?

A. I am submitting testimony on behalf of the Alliance for Affordable Energy and Union of Concerned Scientists (collectively, the "NPOs").

Q. Please summarize your work experience and educational background.

A. I am an Energy Consultant with IEEFA. IEEFA is a non-profit, privately funded organization focused on researching fossil fuel and renewable energy markets and trends. I have submitted expert testimony and comments in utility resource planning cases, rate cases and natural gas pipeline cases on behalf of environmental, consumer and business organizations. My most recent IEEFA report focused on the proposed buildout of natural gas infrastructure to serve data centers in the southeastern United States. I have bachelor's and master's degrees in physics from Princeton and Cambridge. My resume is attached as Exhibit CMK-1.

Q. Have you previously testified before the Louisiana Public Service Commission ("LPSC" or "Commission")?

A. No. I have, however, submitted comments and testimony in several proceedings before other regulatory bodies, including the West Virginia Public Service Commission, Puerto Rico Energy Bureau, and Federal Energy Regulatory Commission. For a description of my prior testimony in regulatory cases, please see Exhibit CMK-1.

Q. What is the purpose of your testimony?

A. In its Application, Entergy Louisiana, LLC ("ELL") is, among other things, seeking Commission approval of three combined cycle gas plants (the "Planned Generators") and various transmission facilities in order to serve an estimated [[ ]] MW of load from a data center to be constructed by Laidley LLC ("Laidley"), a subsidiary of Meta Platforms, Inc.[1] The Application requests certification that the public convenience and necessity would be served by construction and use of three Planned Generators (referred to hereinafter as "CPCN" requests). My testimony analyzes the extent to which ELL's ratepayers are at risk of bearing costs if ELL's Application is approved. First, I summarize ELL's proposal. I then describe ELL's Electric Service Agreement ("ESA") and the importance of basing a decision in this case on the final negotiated agreement. Next, I evaluate ELL witness Datta's economic analysis of the Application's claimed economic benefit to ratepayers and discuss several important risks that are excluded from this analysis but would materially change the result. Finally, I describe additional financial risks that ratepayers would be exposed to by ELL's proposal.

Q. What information did you review in preparing your testimony?

A. I reviewed ELL's testimony, exhibits, workpapers, and discovery responses. I also reviewed large load tariffs and energy service agreements of utilities in other jurisdictions, natural gas combined cycle CPCN petitions in other jurisdictions, Midcontinent Independent System Operator, Inc. ("MISO") documents, and publicly available information regarding artificial intelligence technology and companies, as cited herein.

[1] Throughout its Application and testimony, ELL refers to Laidley as "the Customer," and the proposed data center as "the Project."

Q. Please summarize your recommendations.

A. Based on my review and analysis, I conclude that ELL's Application would put other ratepayers at risk of having to absorb hundreds of millions, if not billions of dollars, of additional costs associated with serving Laidley's data center. Consequently, I recommend that the Commission deny ELL's Application as proposed.

If the Commission is nevertheless inclined to approve the proposals in ELL's Application, I recommend that such approval be conditioned on the following:

- The Commission should review the final terms of the ESA, and approve such terms before issuing CPCNs for the Planned Generators.
    - To enable the Commission's review, Staff and other parties should be given an adequate opportunity to review the final ESA terms, and to provide testimony and briefing on such terms.
- The CPCNs should not be issued unless and until ELL and Laidley extend the initial term of the ESA to 25 years. This will more closely match the depreciable life of the Planned Generators and reduce the risk of stranded costs to other ratepayers.
- The Commission should inform ELL that any costs associated with the Planned Generators incurred before the effective date of the ESA will be disallowed for cost recovery from other ratepayers if Laidley's project is cancelled. Disallowing cost recovery would be reasonable in that the prudence of the Planned Generators depends on being able to recover the costs from the Laidley load.
- The Commission should require a credit to be applied to the FAC charge for other customers to account for the possibility that Laidley's load drives up net energy costs for all ratepayers, as described in Section V of my testimony.

- If, as a result of subsequent studies, analysis, or operating experience, additional transmission facilities are identified as necessary to serve the Customer's data center beyond those identified in (a) Table 1 on pages 13-14 of the Kline Direct Testimony, and (b) ELL's public response to discovery request LEUG 7-8 (public redacted version),[2] no portion of the cost of such facilities will appear in either ELL's retail or wholesale rates.

These conclusions and recommendations are set forth in detail below.

II. THE SIZE OF LAIDLEY'S DATA CENTER RELATIVE TO ELL'S EXISTING RATE BASE HIGHLIGHTS THE IMPORTANCE OF PROTECTING ELL'S EXISTING RATEPAYERS FROM BEING BURDENED WITH POTENTIAL COSTS FOR DATA CENTER-RELATED ELECTRICAL INFRASTRUCTURE

Q. What is the size of the proposed Laidley data center, and how does this compare to other ELL large loads?

A. Laidley is proposing to construct a [[ ]] data center. ELL has proposed that the data center take service under its "Large Load High Load Factor Power Service" ("LLHLFPS-L") rate schedule.[3] But this proposed data center is [[ ]] than the facilities currently on that schedule. In fact, the data center's load would be nearly [[ ]] any current customer on Schedule LLHLFPS-L.[4]

Q. How large is the proposed data center in relation to ELL's total load?

[2] ELL response to LEUG 7-8 (public redacted version) (attached as Exhibit CMK-2).
[3] Application at 19.
[4] According to ELL's HSPM response to discovery request Staff 1-28, the largest current customer on the LLHLFPS-L rate schedule had a peak demand [[ ]]. *See* ELL response to Staff 1-28, Supporting Documentation_HSPM, "LLHLFPS Meter Data" tab.

A. The data center represents between [[ ]]% of ELL's total forecasted energy load through 2050, as shown in Figure 1 below.[5]

[[

]]

Figure 1: ELL's projected energy load with and without the Laidley data center (HSPM)

Q. What infrastructure investments is ELL proposing to serve Laidley's data center load, and what is the estimated cost of these investments?

A. ELL is proposing to construct three new combined cycle ("CC") gas turbines (the "Planned Generators") with a total nominal capacity of 2,262 MW[6] and originally projected to cost $3.2 billion[7] (stated at [[ ]]),[8] as well as over [[ ]] in

[5] Figure derived from the HSPM response to Walmart 1-6 (attachment entitled "RL-U37425-00WMI001-L006_HSPM"), the estimated Laidley data center load presented in HSPM Exhibit RDJ-2, and the revised new data center load assuming a [[ ]] load factor.
Note: many of the HSPM documents discussed in my testimony have also been designated Attorney's Eyes Only.
[6] Application at 12.
[7] Direct Testimony of Phillip R. May at 23:17 ("May Direct Testimony").
[8] This includes [[ ]] in capital costs of each of the Planned Generators (see Exhibit E-1 to the CIAC Agreement) plus [[ ]] (Exhibit D to the CIAC Agreement). *See* HSPM Exhibit LKB-2 at 182, 184.

transmission improvements to be paid for directly by Laidley (known as the "Customer-Specific Transmission Projects").[9] Two of the three Planned Generators are proposed to be located adjacent to the data center site, with projected in-service dates of December 2028,[10] whereas the third Planned Generator is to be located at the Waterford site,[11] with a projected in-service date of December 2029.[12]

ELL is also planning to build a 500 kV Mt. Olive to Sarepta line and upgrades to the Sterlington substation (hereinafter collectively the "Mt. Olive to Sarepta facilities") at a cost of nearly $550 million.[13] These projects collectively represent over [[ ]] in capital investment.

It is worth noting that ELL arrived at this preferred infrastructure plan with a very limited analysis of alternatives.[14]

Q. How substantial are these investments in comparison to ELL's current revenue requirements?

A. ELL's current revenue requirement is $3.3 billion.[15] The estimated revenue requirement for the infrastructure described above in 2030 (the first full year in which all three of the Planned Generators are in service) will be approximately [[ ]],[16] about [[ ]]% of ELL's current revenue requirements.

[9] Direct Testimony of Daniel Kline at 15:9 ("Kline Direct Testimony").
[10] Direct Testimony of Matthew Bulpitt at 17:10-19:1 ("Bulpitt Direct Testimony").
[11] Supplemental Testimony of Laura K. Beauchamp at 2:24-3:2 ("Beauchamp Supplemental Testimony").
[12] Bulpitt Direct Testimony at 40, Table 5.
[13] Kline Direct Testimony at 15:9-15.
[14] Other than a no-build alternative, the alternatives included: (a) a renewables-only option, (b) two natural gas-only alternatives, and (c) a transmission-only alternative. Direct Testimony of Laura K. Beauchamp at 43:11-18 ("Beauchamp Direct Testimony").
[15] ELL response to NPO 14-5 (attached as Exhibit CMK-3).
[16] *See* HSPM Exhibit RDJ-2, [ ]

Given the size of Laidley's proposed data center load, ELL's proposal presents novel challenges to ratemaking and cost allocation. The addition of large loads that, as here, are [[ ]] than typical industrial loads, are forcing utilities across the country to grapple with novel issues, both in terms of grid reliability (see the testimony of NPO witness Nicholas Miller) and ratemaking.

Q. What arrangements is ELL proposing for the allocation of these costs between Laidley and ELL's other ratepayers?

A. ELL has presented an Electric Service Agreement ("ESA") and an Agreement for Contribution in Aid of Construction and Capital Costs ("CIAC agreement"), which describe the financial agreements for Laidley to contribute to the cost of above-mentioned facilities. These agreements are attached to the direct testimony of Laura K. Beauchamp.[17] The CIAC agreement provides that Laidley will fully fund the capital cost of the Customer-Specific Transmission Projects and [[ ]].

The ESA is a 15-year agreement with up to three 5-year extensions (i.e. up to 30 years in total) that sets the terms by which the data center will receive service under ELL's Large Load High Load Factor Power Service (LLHLFPS-L) rate schedule. ELL states that the minimum monthly charges established in the ESA were designed to ensure that the payments received from Laidley are sufficient to recover the annual revenue requirements associated with the new electrical infrastructure (excluding the Mt. Olive to Sarepta facilities) during the term of the contract.[18] The annual revenue requirements for this infrastructure include annualized capital costs of the Planned Generators, non-fuel O&M, purchased capacity, and maintenance costs associated with the Customer-

[17] *See* HSPM Exhibit LKB-2 (ESA and CIAC agreement). The CIAC agreement, which can be found in LKB-2, is also reproduced separately in HSPM Exhibit LKB-3.
[18] Direct Testimony of Ryan D. Jones at 13:9-20 and 18:8-12 ("Jones Direct Testimony").

Specific Transmission Projects. The ESA also establishes [[ ]][19]

ELL proposes that the fuel costs associated with the Planned Generators, as well as market energy purchases required to serve the Laidley load, be rolled into the Fuel Adjustment Clause ("FAC"), which is ELL's annual mechanism for recovering fuel and purchased energy costs across all ratepayers (including Laidley).[20]

ELL proposes that its jurisdictional share ([[ ]]) of the Mt. Olive to Sarepta facilities be borne by all ELL ratepayers.[21]

Q. Is the ESA that you just described the final version of the ESA negotiated between ELL and Laidley?

A. No. The ESA presented in ELL's Application is not the final version of the ESA which is currently under re-negotiation because of Laidley's decision to increase its data center load by [[ ]].[22] (See next section).

Q. Has ELL presented a calculation of the revenues it anticipates earning through the ESA?

A. Yes. Exhibit 2 to the testimony of Ryan Jones (HSPM Exhibit RDJ-2) provides an illustration of projected revenues to ELL under the ESA, which are compared to the annual revenue requirements associated with the Planned Generators and the Customer-Specific Transmission Projects. The Exhibit's calculation of this annual revenue requirement includes [[

[19] HSPM Exhibit LKB-2 at 35-36.
[20] Direct Testimony of Joshua B. Thomas at 3:12-16 ("Thomas Direct Testimony").
[21] Direct Testimony of Samrat Datta at 8:4-8 ("Datta Direct Testimony").
[22] Beauchamp Supplemental Testimony at 4:5-8.

[redacted]]]. The Jones exhibit finds that the annual projected revenues to ELL during the initial term of the ESA are sufficient to cover the annual revenue requirements during that 15-year period.

Q. What are the limitations of the Jones analysis in terms of understanding the impact of ELL's proposals on ratepayers?

A. The Jones analysis does not provide insight into whether revenues are sufficient to cover costs beyond the initial 15-year term of the ESA. It also does not include the costs to ratepayers associated with investments that ELL does not propose to attribute directly to Laidley (namely the Mt. Olive to Sarepta facilities). These limitations are important to keep in mind given that ELL repeatedly cites the results of witness Jones's analysis to support its proposals.[23]

Q. ELL claims that existing ratepayers would not be unduly burdened by costs if its proposals are approved.[24] Do you agree?

A. No. In fact, ELL's proposals pose significant cost risks to ELL's existing customers. There are at least three categories of risks that ELL's filing fails to address. *First*, ELL's Application and testimony (including witness Jones's revenue requirements analysis) are based on an agreement that has not been finalized. As explained below in Section III, the ESA—which is cited more

[23] *See., e.g.*, May Direct Testimony at 26:19-27:3 ("The minimum bill charges and the amounts charged under Rate Schedule LLHLFPS-L to the Customer are sufficient to offset the incremental revenue requirement of the investments and costs necessary to serve the Customer during the 15-year term of the ESA."); Thomas Direct Testimony at 14 ("Finally, the expected revenue from the Customer exceeds the Planned Generators' revenue requirements during the ESA's original 15-year term and will offset not only incremental costs but also embedded costs now borne by existing customers. Thus, the Planned Generators' revenue requirements will not cause existing customers' bills to increase.").

[24] Thomas Direct Testimony at 17:10-13; Jones Direct Testimony at 23:12-15; Application at 4; May Direct Testimony at 26:16-19.

than 200 times in ELL's filing—is still being negotiated. Until those terms have been finalized, the Commission cannot meaningfully review ELL's proposals. *Second*, as noted above, the Jones analysis does not provide insight into the cost to ratepayers after the initial 15-year term of the ESA, nor does it include the costs to ratepayers associated with investments that ELL does not propose to attribute directly to Laidley (namely the Mt. Olive to Sarepta facilities). Although ELL attempted to address these issues in the testimony of Samrat Datta, witness Datta's analysis understates the potential costs of ELL's proposal. I discuss my evaluation of witness Datta's analysis in Section IV of this testimony.

Finally, as explained in Section V of my testimony, ELL has not addressed the risks that ratepayers may foot the bill for higher operating costs and/or for additional transmission mitigations to support the Laidley load.

III. BECAUSE THE APPLICATION IS BASED ON AN ESA THAT IS NOT FINAL, APPROVING ELL'S PROPOSALS WOULD EXPOSE RATEPAYERS TO UNREASONABLE RISKS

Q. Has ELL presented a final version of the ESA with Laidley in this proceeding?

A. No. As mentioned previously, the ESA and CIAC agreements filed with the Application formalize ELL's agreements regarding cost allocation to Laidley. ELL's Application was also based on the assumption that Laidley would be adding [[ ]] MW of data center load to the system.

But the ESA included with the Application is not the final version. In supplemental testimony filed on February 12, 2025, ELL revealed that the data center project has expanded [[ ]].[25] ELL is now proposing to

[25] Beauchamp Supplemental Testimony at 4:5-8.

construct additional transmission facilities, with the "expectation" that they be fully paid for by Laidley.[26]

As a result of the increase in Laidley's load, ELL witness Beauchamp stated that ELL and Laidley are still negotiating "the terms required to serve [the Customer's] additional load,"[27] and that this may result in amendments to the ESA.

This continues to be the case. In discovery, the NPOs asked if ELL intended to file a revised version of the ESA and CIAC agreement. In a discovery response that was served on March 21, 2025, ELL stated: "The Company and Customer have not reached agreement on additional commercial terms at this time. It is uncertain when, or if, such agreement will be reached."[28] This was further confirmed in an additional discovery response served on March 27, 2025.[29]

Q. Does ELL believe that the ESA requires Commission approval?

A. ELL's position is that the ESA does not require Commission approval because it is not a site-specific contract, rather it implements an existing approved tariff, namely the Large Load High Load Factor Power Service (LLHLFPS-L) tariff.[30]

Q. Do you agree that the ESA is simply an implementation of an already approved tariff?

A. No. Without taking a legal position on whether or not the ESA requires Commission approval, I note that the ESA represents a very substantial addition to the LLHLFPS-L tariff and is, in fact, central to ELL's arguments about the impacts of the proposal on other ratepayers. Rider 1 of the ESA adds significant new provisions around [[

[26] *Id.* at 4:23-24.
[27] *Id.* at 5:4-7
[28] ELL response to NPO 11-10 (attached as Exhibit CMK-4).
[29] ELL response to NPO 11-8 (public redacted version).
[30] Beauchamp Supplemental Testimony at 7:1-9.

[[redacted]] and more[31] that are not found in the LLHLFPS-L schedule. Rider 1 also defines certain parameters that are key drivers of how much revenue will be collected from Laidley. Specifically, [[redacted]] and, therefore, whether this revenue is sufficient to cover the annual revenue requirements of the Planned Generators and Customer-Specific Transmission Projects during the initial term of the ESA.

In short, key provisions of the ESA which are not found in the LLHLFPS-L tariff—including [[redacted]]—are key to ELL's argument that its proposal is sufficiently protective of other ratepayers.

Q. Would approving ELL's proposal without a final ESA in place expose ratepayers to additional risk?

A. Yes. The renegotiation of the ESA could result in material changes to that agreement, with as-yet-undisclosed consequences to other ratepayers. As just described, the terms of the ESA are critical to understanding the distribution of costs and financial risks between Laidley and other ratepayers. The importance of the ESA to ELL's case is reflected in the fact that the ESA is cited more than 200 times in ELL's initial filing.

Approving ELL's Application without the benefit of the final ESA would expose ratepayers to additional risk. As such, I do not think it is reasonable for ELL to expect the Commission to evaluate its proposal in the absence of a final ESA.

[31] *See generally* HSPM Exhibit LKB-2 at 27-52 (Rider 1).

Q. Are there other ways in which the increase in Laidley's load could expose other ratepayers to additional costs?

A. Yes. The increase in load exacerbates some of the risks discussed in the testimony of Nicholas Miller, which may lead to ratepayers paying higher costs related to transmission mitigations and ancillary services. These risks are discussed in Section V below.

IV. ELL'S ALLEGED ECONOMIC BENEFIT TO OTHER RATEPAYERS FROM THE PROPOSED PROJECT BECOMES A NET COST IF ELL'S ASSUMPTIONS ABOUT FUTURE RESOURCE NEEDS AND THE TIMING OF ESA NON-RENEWAL DO NOT MATERIALIZE AS PLANNED

Q. ELL asserts that its proposal will result in overall cost savings to its other customers.[32] Do you agree?

A. No. ELL's claim is based on the economic analysis presented by witness Datta, which finds a net benefit to ratepayers under a scenario in which Laidley terminates the ESA after the first fifteen-year term. As I elaborate on below, witness Datta's analysis hinges on ELL's assumption that it will need to construct additional gas generation in the 2041-2044 timeframe (the "Otherwise Needed Generators"). Under this assumption, if Laidley does not renew its contract after the initial term, ELL claims that the Planned Generators could substitute for the Otherwise Needed Generators, resulting in significant avoided cost savings.

In this section I discuss in detail several risks that are unaddressed in the Datta analysis, but which, should they materialize, would substantially change the analysis. Under different, but plausible, scenarios as described herein, the

[32] *See* Application at 5 ("This large financial commitment from the Customer is expected to result in substantial cost savings for ELL's other customers for years to come.").

alleged economic benefit to ratepayers becomes a net cost. The risks that ELL failed to address in its economic analysis include:

- The risk that the Planned Generators cannot be used to substitute for the Otherwise Needed Generators in the 2041 timeframe, either because (a) some or all of the Otherwise Needed Generators are unnecessary, or (b) ELL has already incurred substantial costs to construct them before Laidley decides to terminate the ESA.

- The risk that Laidley terminates the ESA after the Otherwise Needed Generators have already been built and entered into service.

- The risk that future MISO capacity market prices do not materialize as ELL projects.

- The risk of cost overruns on the Planned Generators (a particularly plausible risk with respect to the CC plant to be constructed at the Waterford site), which would expose ratepayers to additional costs in the event that Laidley does not renew the ESA for the full 30 years.

- The risk that Laidley pulls out of its data center project before the ESA takes effect, leaving ratepayers with stranded costs on Planned Generators that have already been partially constructed.

For the first of these three risks, the fact that the initial term of the ESA (15 years) is significantly shorter than the depreciable life of the Planned Generators (30 years[33]) means that ratepayers are exposed to significant risk of having to cover stranded costs associated with the Planned Generators, depending on the timing of when Laidley terminates the ESA and the timing of ELL's possible other generation resource needs.

Q. What are the findings of ELL's economic analysis regarding the impact of its proposal on other (non-Laidley) ratepayers?

A. ELL witness Datta presents an economic analysis of the net cost/benefit to other ratepayers from the Laidley data center and the generation and

[33] Jones Direct Testimony at 14:12-13.

transmission resources needed to serve it. The analysis specifically considers the case in which Laidley terminates the contract after the first fifteen-year term. It finds a [redacted]]] net benefit (net present value) to other ratepayers.[34]

Q. What drives ELL's result that termination of the ESA after the 15-year initial term still results in a net benefit to other ratepayers?

A. ELL's result hinges on the benefit that ratepayers would purportedly receive by avoiding the need to construct two combined cycle and two combustion turbine units in 2041-44. ELL asserts that it will need to construct these gas plants to serve future load, but the plants would not be needed if Laidley terminates the ESA in 2041. Witness Datta refers to these as the "Otherwise Needed Generators." The avoided cost benefit of the Otherwise Needed Generators is [redacted]]] (net present value), according to witness Datta's analysis. ELL claims that this benefit more than offsets other costs that ratepayers will incur, including paying off the remainder of the total 30-year revenue requirement of the Planned Generators (the net present value of the remaining revenue requirement that ratepayers will pay for after 2041 totals [redacted]]]).[35]

Q. Is witness Datta's calculation the only economic analysis that ELL conducted of the alleged benefits of Laidley's project?

A. Yes. Other statements by ELL regarding the economic development benefit of data center were taken directly from the project developer, Meta, with no independent evaluation by ELL.[36]

[34] Datta Direct Testimony at 16:17-22.
[35] HSPM Exhibit SD-2.
[36] *See, e.g.*, ELL response to Sierra 1-5 (attached as Exhibit CMK-5).

A. The Otherwise Needed Generators are poorly justified. Under other load forecast assumptions, they would not be fully needed and ratepayers would suffer a net loss as a result of the proposals in ELL's Application

Q. The Otherwise Needed Generators play a pivotal role in ELL's economic analysis. What justification has ELL provided to support the need for those generators in the 2041-2044 timeframe?

A. ELL has provided surprisingly little analysis to justify the Otherwise Needed Generators. The Otherwise Needed Generators are not included in ELL's most recent 2023 Integrated Resource Plan.[37] In response to a discovery request to "provide the analysis that led the Company to conclude that it would need to construct the 'Otherwise Needed Generators' if the ESA is not terminated," ELL provided only a forecast of load and projected capacity.[38] In follow-up discovery, ELL provided a narrative description of the load forecast.[39] However, it did not provide any capacity expansion modeling or analysis of other resource planning options—including demand-side resources, distributed generation, retirement deferrals or other non-gas supply-side resources—that could meet or partially meet capacity needs in the 2041-2044 timeframe. And ELL has confirmed that no resource planning modeling was performed in the development of its proposal here,[40] indicating that the addition of the Otherwise Needed Generators is not the result of capacity expansion modeling.

It is also worth emphasizing that, even if ELL had done resource planning modeling to justify the Otherwise Needed Generators, such modeling would be

[37] The Otherwise Needed Generators consist of a [[ ]] MW CC in 2041, a [[ ]] MW CT in 2042, a [[ ]] MW CT in 2043 and a [[ ]] MW CC in 2044. None of the three resource portfolios presented in the 2023 IRP show these resources being added in 2041 and 2042 (the last years of the IRP modeling). *See generally* Entergy Louisiana 2023 Integrated Resource Plan (May 22, 2023) ("ELL 2023 IRP"), https://cdn.entergy-louisiana.com/userfiles/content/irp/2023/Combined-Final-Report-05-22-23.pdf.
[38] ELL response to NPO 7-1(a) (referencing load and capability forecast produced in response to LEUG 1-8(a)) (attached as Exhibit CMK-6).
[39] ELL response to NPO 14-3, HSPM attachment entitled "NPO 14-3 BP25_Sales&Load_Forecast_ELL_HSPM."
[40] ELL response to NPO 11-5 (attached as Exhibit CMK-7).

subject to a high degree of uncertainty more than 15 years into the future. As ELL itself acknowledges: "Given the uncertainty and fluidity inherent in long-term resource planning, ELL's IRP provides a framework for the Company to plan for resources over the next several years but does not and cannot reasonably serve as a prescriptive plan to address ELL's long-term generation needs and options for meeting those needs. Circumstances will necessarily change, and to be reasonable and prudent, resource-procurement decisions must be made based on the best information reasonably available at the time those decisions are made."[41] Yet, despite this caveat, in this case ELL is making a $[[ ]] bet (with ratepayers' money) that the Otherwise Needed Generators will be needed in 2041-2044.

Q. What assumptions around future load growth does ELL make to justify the Otherwise Needed Generators?

A. ELL is assuming an average annualized peak demand growth rate from 2025 to 2044 of [ ]]% per year.[42]

Q. Do you believe it would have been prudent to consider a range of load forecasts?

A. Yes. There is significant uncertainty around load forecasts in general, due to uncertainty around new industrial loads (including data centers), vehicle electrification, and overall macroeconomic trends. Given this growing uncertainty, it is important to consider a range of plausible load forecasts.

Q. What might a lower load forecast sensitivity have shown?

A. MISO's most recent Independent Energy and Peak Demand Forecast (November 2023) estimated a growth rate of 0.94% per year from 2024-2043

[41] Beauchamp Direct Testimony at 24:18-25:3.
[42] Derived from ELL's response to NPO 8-9 and the attachment entitled "RL-U37425-00NPO008-L009_HSPM."

for Local Resource Zone 9, the zone which encompasses ELL's service territory.[43] Starting with ELL's projected 2025 peak demand and applying this lower growth rate would result in a projected 2044 peak demand of [[ ]] MW, or [[ ]] MW lower than ELL's projected 2044 peak demand.

Q. What implication would this lower load forecast have on the "need" for the Otherwise Needed Generators?

A. The Otherwise Needed Generators consist of a [[ ]] MW CC in 2041, a [[ ]] MW CT in 2042, a [[ ]] MW CT in 2043 and a [[ ]] MW CC in 2044.[44] If, for example, the first two of those resources turn out not to be needed because the load forecast materializes closer to the MISO forecast than the ELL forecast, then approximately half of the "avoided cost" benefit of the Otherwise Needed Generators would be eliminated.

Q. How would this scenario impact the conclusions of ELL's economic analysis?

A. In the scenario described above, in which half of the Otherwise Needed Generators are not actually needed, ELL would have significant excess capacity if the ESA terminates in 2041 and the Planned Generators are used to serve other non-Laidley load. Carrying that extra generation capacity, with its significant fixed and variable costs and only 48% of the initial capital investment paid for,[45] could pose a significant financial burden for ratepayers.

In theory, ELL could recoup some of the plants' costs by selling the excess capacity into the MISO capacity market. Witness Datta's analysis includes the benefit that ratepayers receive after 2041 from selling into the MISO capacity

[43] Liwei Lu et al., *2023 MISO Independent Energy and Peak Demand Forecast*, at 35 (Nov. 2023), https://www.purdue.edu/discoverypark/sufg/docs/publications/MISO/MISO%20forecast%20report%202023.pdf
[44] HSPM Exhibit SD-2.
[45] Datta Direct Testimony at 10:20-11:1.

market the capacity of either the Planned Generators (if the ESA terminates in 2041) or the Otherwise Needed Generators (if it does not). But whether or not the excess capacity revenues are sufficient to produce a net benefit or a net loss to ratepayers would depend on MISO capacity market prices 15-30 years into the future. In effect, the large excess capacity position resulting from this scenario would put ELL's ratepayers into the shoes of a merchant generator, forced to speculate in the capacity market. For some set of future market conditions, the overall net impact on ratepayers may be minimal or may even produce a benefit; under other sets of future market conditions, ratepayers may be exposed to a significant loss.[46]

In short, ELL's conclusion that termination of the ESA in 2041 would result in a net benefit to ratepayers is highly dependent on assumptions about future load and future MISO capacity prices, both of which have a high degree of uncertainty more than 15 years into the future. If ELL's forecasts turn out to not be accurate, ratepayers are at risk of bearing excess costs.

B. ELL witness Datta's analysis incorrectly assumes that ELL would be able to fully avoid the cost of the Otherwise Needed Generators under the notice provisions of the ESA.

Q. Let's turn to another issue. Assuming for the moment that all four of the Otherwise Needed Generators were needed in the 2041-2044 timeframe, would ELL be able to fully avoid the cost of these generators if Laidley does not renew the ESA in 2041?

A. Not necessarily. Witness Datta's analysis assumes that ELL will have perfect foresight into Laidley's decision regarding the renewal of the ESA in 2041. But in reality there is a substantial mismatch between the timeline required to

[46] For example, re-doing witness Datta's analysis assuming that future capacity market prices clear at the net Cost of New Entry, CONE (using the 2025/2026 Local Resource Zone 9 Net CONE value of $73/kW-year) results in a small net loss to ratepayers of $[[ ]] (net present value). If capacity market prices were, for example, to clear on average at half of Net CONE, ratepayers would experience a much larger net loss of $[[ ]].

construct a gas generator and the timeline by which Laidley must give notice if it does not renew the ESA (according to the provisions of the ESA). Because the construction timeline is much longer than the ESA's notice timeline, ELL could incur significant costs on the Otherwise Needed Generators before Laidley's renewal decision. Under the specific scenario discussed in the Datta testimony—termination of the ESA after the initial 15-year term—ratepayers could bear stranded costs for the partially-built Otherwise Needed Generators.

Q. Please elaborate.

A. ELL estimates a new combined cycle resource to require a 40-month (3.5 year) construction time,[47] but Laidley is only required to give 12 months' notice to renew the contract.[48] This mismatch in timelines could lead to ratepayers being stuck with stranded costs. The first of the Otherwise Needed Generators is a combined cycle resource with a projected in-service date of August 31, 2041.[49] Under the ESA, the date by which Laidley is required to give notice of not renewing the contract is November 30, 2040,[50] only nine months before the in-service date of the otherwise needed generator.

This means that ELL will likely incur more than [[ ]]% of the construction costs by the time that Laidley would be required to give notice to renew the contract or not.[51] Specifically for the [[ ]] MW CC that ELL plans to

[47] ELL response to Walmart 1-13 (attached as Exhibit CMK-8). Some costs will also be incurred prior to the start of the construction period. ELL witness Bulpitt cites a typical five-year total timeframe to construct a new CC and up to six years in today's constrained market conditions. *See* Bulpitt Direct Testimony at 16:11-17:8. In a subsequent discovery response, ELL cited a CCCT lead time of 6-6.5 years. ELL response to Sierra 6-7 (Exhibit CMK-9)

[48] Beauchamp Direct Testimony at 12. The ESA instructs the parties to use "best efforts" to provide 24-months notice, *id.*, but the only mandatory timing requirement is for 12 months notice.

[49] ELL response to Walmart 1-12 (attached as Exhibit CMK-10).

[50] Beauchamp Direct Testimony at 12 (initial term of ESA runs through 11/30/41, and the ESA "automatically renews for five-year renewal terms, unless either party to the ESA provides notice at least twelve months in advance that it does not intend to renew").

[51] ELL would have issued a Final Notice to Proceed to its EPC contractor well before Laidley is required to give notice to renew the ESA. If we assume that an EPC contract for the 2041 CC plant will be structured and priced similarly to the EPC contract in the current proceeding, the EPC cost will account

construct in 2041 (at a cost of $[[ ]][52]), more than $[[ ]] of costs would be incurred before Laidley is legally required to decide whether or not to renew the ESA.

Similarly, the second of the Otherwise Needed Generators is a combustion turbine with projected in-service date of August 31, 2042.[53] ELL estimates a 36-month construction timeline for combustion turbines, meaning that ELL would have already issued a Final Notice to Proceed and be about 15 months into construction of this CT plant by the notice date of November 30, 2040.

Q. Who would bear these stranded costs in this scenario?

A. In a scenario in which ELL has already made substantial progress on one or more of the Otherwise Needed Generators and Laidley then decides not to renew the ESA, other ratepayers would bear the stranded costs of the Otherwise Needed Generators. As just described, this could easily amount to [[ ]] in stranded costs.

C. ELL failed to analyze a scenario where Laidley withdraws from the ESA after the Otherwise Needed Generators are already in service.

Q. Why did ELL's economic analysis only evaluate the scenario in which Laidley decides not to renew the ESA after the first 15-year term?

A. According to ELL witness Datta, "if the Customer elects to continue taking service for its Project from ELL beyond 2041, that generally would be expected to reduce the costs and increase the benefits to ELL's other customers, and in

for approximately [ ]] of the total generation project cost (Table 3 of Bulpitt testimony) and more than [[ ]] of the EPC costs will be incurred before the final nine months of the project timeline (HSPM Exhibit MB-2). [[ ]] This represents an underestimate of the costs that will be incurred prior to the renewal notice date because some of the non-EPC costs will also be incurred prior to this date.

[52] ELL response to Sierra Club 2-13, HSPM attachment entitled "Sierra 2-13 2041 1x1 CCCT & 2042 CT Rev Req Model_Hydrogen_20241009_HSPM."

[53] ELL response to Walmart 1-13 (attached as Exhibit CMK-8).

that respect, the results of my economic analysis may reasonably be viewed as conservative."[54]

Q. Do you agree?

A. No.

Given how much the result of ELL's economic analysis depends on the benefit to ratepayers associated with the Otherwise Needed Generators that are purportedly needed just at the time when the ESA expires, it does not necessarily follow that benefits to ratepayers would increase if the ESA terminated at a later date. Witness Datta's conclusions rest on predictions of customer need and market capacity prices more than 15 years in the future as well as a very specific set of circumstances related to when Laidley would renew the ESA.

Q. What is the result of extending ELL's economic analysis to 2046?

A. I extended Datta's methodology to assume termination of the ESA in 2046 (i.e. assuming that Laidley elects to renew the ESA for the first 5-year renewal period). I also updated the future MISO capacity market prices to Net CONE (adjusted for inflation).[55] Under these assumptions, the net **cost** to other ratepayers is $[[ ]], as shown in the following diagram.[56]

[54] Datta Direct Testimony at 11.
[55] Net CONE (the net Cost of New Entry) is the estimated clearing price of the MISO Planning Resource Auction if the auction clears with the amount of capacity needed to meet reliability targets. As described previously, there is high degree of uncertainty with respect to future capacity market prices 20 or more years into the future.
[56] The only methodological change in my analysis was to adjust transmission O&M numbers for inflation at 2%/year.

[[]]

Figure 2: Waterfall analysis showing the $[[ ]] total net cost to ratepayers if the ESA is terminated in 2046 (HSPM)

Q. Your analysis assumes no avoided cost benefit to ratepayers. Is that necessarily the case?

A. By 2046, under ELL's assumptions, the Otherwise Needed Generators would already have been constructed. There would only be an avoided cost benefit to ratepayers in 2046 if the Planned Generators can partially substitute for other new generation that is otherwise likely to come online in the 2046 timeframe. As ELL itself has stated, resource planning exercises are highly uncertain so far in the future. While ELL does project some level of capacity to retire in the late 2040s, much of that capacity is assumed [[ ]].[57] In short, the high level of uncertainty around future resource availability as the analysis extends into the 2040s makes it highly uncertain whether the Planned Generators could provide any avoided cost benefit. What

[57] ELL 2023 IRP at 27 (stating that "ELL's CTs and CCGTs are generally assumed to have a remaining useful life of longer than 30 years").

is certain is that their remaining net book value will have to be paid off by ELL's other customers once the ESA terminates.

D. Capital cost overruns for the Planned Generators will result in higher costs to ratepayers if the ESA is not fully renewed

Q. How much of the total 30-year revenue requirement of the Planned Generators remains to be paid off if the ESA is not renewed after the initial 15-year term? And who will pay for it?

A. As stated by ELL witness Datta, "[as of 2041], approximately 48% of the total 30-year revenue requirement for these CCCTs will remain to be paid by ELL's other customers."[58]

Therefore, these other customers also bear part of the risk of capital cost overruns of the Planned Generators, if the ESA is not fully renewed for 30 years.

Q. Do you believe that the risk of capital cost overruns is likely to materialize?

A. I believe that there is a real risk of capital cost overruns with respect to the third of the Planned Generators, which is the combined cycle unit to be constructed at the Waterford site. Unlike the first two Planned Generators, which are scheduled to go into service in December 2028, the third Planned Generator is not as far along in development. ELL produced a breakdown of the capital costs of the first two Planned Generators in the testimony of Matthew Bulpitt, as well as a much more detailed list of milestone payments in the [[ ]] produced in response to discovery.[59] With regard to the third Planned

[58] Datta Direct Testimony at 10:22-11:1.
[59] *See* Bulpitt Direct Testimony at 27, HSPM Table 3 and response to Staff 3-5 HSPM.

Generator, ELL stated, "Unit 3 is expected to have similar costs to Units 1 and 2, but the expected costs will depend on the site specifics of the selected site."[60]

The market for new gas generation is tightening, costs are rising and thus it is not unreasonable to expect that the third Planned Generator will experience higher costs than the first two units.

Q. Please elaborate.

A. The first two Planned Generators have an estimated cost of $[[ ]], or $[[ ]].[61] But more recent gas combined cycle projects are coming in at significantly higher costs. For example, recently filed testimony in Texas in February 2025 mentioned increased costs associated with Entergy Texas's 754 MW Legend combined cycle plant, which is now estimated to cost $1.433 billion (excluding interconnection costs), or $1,900/kW.[62] This cost is aligned with other recently announced CC projects.[63] In other words, several recently announced natural gas combined cycle projects (similar in size to the third Planned Generator) in other jurisdictions have costs more than [[ ]]% higher than what ELL is projecting for the third Planned Generator.

[60] Bulpitt Direct Testimony at 42:7-9. Although witness Beauchamp's Supplemental Testimony identifies the location of the third CCCT, ELL did not provide an updated cost estimate for this proposed generator. And in a discovery response provided on March 27, 2025, ELL conceded that "[t]he cost estimate for CCCT #3 (to be located at the Waterford facility . . .) has not changed. It remains a Class 5 estimate." ELL response to Staff 3-6 (public version) (attached as Exhibit CMK-11)

[61] ELL response to Staff 3-10, HSPM (attached as HSPM Exhibit CMK-12). $/kW cost based on 754 MW nominal capacity of each planned generator.

[62] Direct Testimony of Sherryhan Ghanem, Public Utility Commission of Texas at 19 (Feb. 26, 2025). https://interchange.puc.texas.gov/Documents/56693_301_1472676.PDF

[63] See, for example, the CPCN petition of LG&E before the Kentucky Public Service regarding the Brown 12 and Mill Creek 6 CC plants, both of which are projected to cost $2,100-$2,200/kW (including transmission work). https://psc ky.gov/pscecf/2025-00045/rick.lovekamp%40lge-ku.com/02282025010202/04-KU_LGE_Joint_Application_2025-00045.pdf. Duke Energy Indiana similarly is petitioning for a CPCN for two new CC plants at a cost greater than $2,000/MW. (https://iurc.portal.in.gov/_entity/sharepointdocumentlocation/0940df1c-4aea-ef11-be20-001dd80ad83d/bb9c6bba-fd52-45ad-8e64-a444aef13c39?file=NEW%20CAUSE_Duke%20Energy%20Indiana_Petition_021325.pdf).

If the capital cost of any of the Planned Generators is greater than expected, other ratepayers will pay for the remaining revenue requirement associated with that cost overrun if the ESA is terminated before the end of the full 30-year period.

E. Ratepayers are also at risk of bearing stranded costs if Laidley backs out of its project before the ESA enters into effect.

Q. What is the earliest date that the ESA could enter into effect?

A. The effective date of the ESA is "the later of December 1, 2026, Commission approval of the 'System Generation Capacity Upgrades' (as that term is defined in the CIAC Agreement), or completion of the first phase (and partial energization of) the Smalling Facility."[64] Therefore, the earliest that the ESA could take effect is December 1, 2026.

Q. How much of the cost of the Planned Generators will be incurred prior to December 2026?

A. Based on the payment schedule for the first two Planned Generators, $[[ ]] will be incurred before December 1, 2026, for those two units.[65] Given that the schedule for the third unit is about a year behind, I estimate that approximately $[[ ]] would be incurred before December 2026; this cost will be higher if there are capital cost overruns for this plant, as discussed in the previous section.[66] Thus for all three units, approximately $[[ ]] would be incurred.

[64] Beauchamp Direct Testimony at 13:14-18.
[65] ELL response to Staff 3-5, HSPM attachment, Exhibit B, Attachment B-1 ([[ ]]).
[66] Based on the schedule of milestone payments provided in HSPM Exhibit MB-2 and assuming that cost of the third Planned Generator is half of the combined cost of the other two generators.

Q. How much would Laidley be responsible for contributing to the capital costs of the Planned Generators if it terminates the CIAC agreement before the ESA goes into effect?

A. Laidley is responsible for paying [[ ]] under the CIAC agreement, unless Laidley and ELL jointly agree to increase this amount.[67]

Q. How much in stranded costs would other ratepayers be responsible for in this scenario?

A. Depending on how far along construction on the Planned Generators is when the CIAC agreement is terminated, other ratepayers will be on the hook for up to $[[ ]] in stranded costs if the ESA takes effect on December 1, 2026. If the ESA takes effect at a later date—see the testimony of NPO witness Nicholas Miller—this amount could be greater.

Q. Many of the risks described above stem from the premise that Laidley might not fully renew the ESA for its 30-year term. Why should the Commission take this risk seriously?

A. The Laidley data center is specifically being built to serve artificial intelligence (AI) computing demands.[68] As I described in a recent report for the Institute for Energy Economics and Financial Analysis, there is significant uncertainty around the future energy demands of AI.[69] For one thing, the recent release of the Chinese model Deepseek, which purports to be multiple times more efficient than previous large language models, underscores the possibility that

[67] HSPM Exhibit LKB-2 at 121-22 (CIAC Agreement at 6-7).
[68] Louisiana Economic Development, *Meta Selects Northeast Louisiana as Site of $10 Billion Artificial Intelligence Optimized Data Center; Governor Jeff Landry Calls Investment 'A New Chapter' for State* (Dec. 4, 2024), https://www.opportunitylouisiana.gov/news/meta-selects-northeast-louisiana-as-site-of-10-billion-artificial-intelligence-optimized-data-center-governor-jeff-landry-calls-investment-a-new-chapter-for-state.
[69] IEEFA, *Data Centers Drive Buildout of Gas Power Plants and Pipelines in the Southeast* (Jan. 2025), https://ieefa.org/sites/default/files/2025-01/UPDATED-REVIEWED-Southeast%20Gas%20Infrastructure%20and%20Data%20Cente.pdf

AI could use significantly less electricity than typically forecast. At the same time, AI models are currently priced far below cost and pure AI companies such as OpenAI and Anthropic are currently not profitable. This indicates that a path to profitability likely requires either raising prices or substantially enhancing efficiency, either of which would likely result in reduced energy demands vis-à-vis current forecasts.

My report concludes that there is likely going to be an overbuilding of electrical infrastructure to serve data centers and AI computing demands.[70] To the extent that this impacts Meta and the Laidley project, it could result in Laidley choosing to scale back its project and/or exit the ESA before its full 30-year term.

V. RATEPAYERS ARE AT RISK OF PAYING FOR OTHER COSTS NOT IDENTIFIED IN ELL'S APPLICATION

Q. What additional costs might other ratepayers be at risk of incurring that were not identified in ELL's filing?

A. Broadly speaking, ratepayers run the risk of being exposed to additional costs in three categories: (1) costs related to transmission mitigations and ancillary services to accommodate Laidley's load, (2) costs related to operation of the Planned Generators, and (3) transmission-related costs that may be needed for the Planned Generators to serve other load after termination of the ESA.

Q. Please explain why it is likely that additional costs related to transmission mitigations and ancillary services will be incurred to serve the Laidley data center.

[70] This may already be occurring. See recent statements from Microsoft CEO Satya Nadella regarding overbuilding of data centers. Dwarkesh Patel, *Satya Nadella – Microsoft's AGI Plan & Quantum Breakthrough*, Dwarkesh Podcast (Feb. 19, 2025), https://www.dwarkesh.com/p/satya-nadella.

A. As described in detail in the testimony of NPO witness Nicholas Miller, there is a risk that additional transmission investments will be required, beyond the Customer-Specific Transmission Projects and the Mt. Olive to Sarepta facilities described in ELL's Application and the additional facilities referenced in witness Beauchamp's supplemental testimony. There may also be higher ancillary services costs. These additional costs may result from transmission mitigations needed to avoid transmission constraints that ELL has not yet adequately evaluated, and/or mitigations related to the impact of the data center's dynamic load behavior on the power grid.

Q. How would these additional costs be allocated?

A. My understanding is that [[ ]]. Therefore, these additional costs would be allocated across ELL's customer base. Existing ratepayers would likely bear the majority of these costs.

Q. Referring to your second category of costs, please explain why ratepayers may be exposed to higher operating costs as a result of Laidley's operations.

A. ELL has presented an analysis of net energy costs (net market purchases plus fuel and variable operating costs) in 2028 that shows that, at least for that year, net energy costs will be substantially higher with the Laidley data center load and Planned Generators than they would have been under the Business Plan 2024 assumptions (i.e., without that new load and generation). The following figure shows the results of ELL's analysis. As the figure demonstrates, the most probable outcome is that net energy costs are approximately $[[ ]] higher with the new load and generation:

[[

Figure 3: Expected net energy costs under BP24 Reference Case (without the Laidley load and Planned Generators) and with the Laidley load and Planned Generators (the "Added Load and Gen" scenario) (HSPM)[71]

I expect that a substantial portion of those higher costs would be borne by ELL's retail customers.

The following figure presents this increase in net energy costs on a per MWh basis:

[71] ELL response to Sierra Club 1-4, "Sierra 1-4 Attachment (3) to Response to Sierra Club 1-4(b)_HSPM," at 28.

[[

]

Figure 4: Expected net energy costs shown in Figure 3 on a $/MWh basis (HSPM)[72]

It is worth noting that ELL's analysis was conducted before Laidley increased its proposed load [[ ]], and therefore the impact on net energy costs is likely to be even greater.

Q. How are operating costs recovered from Laidley and from other ratepayers?

A. The cost of ELL's fuel and market energy purchases are recovered from all ratepayers in the Fuel Adjustment Clause (FAC), which is calculated on a per MWh basis. Therefore, if the addition of Laidley's load and the Planned Generators drives up net energy costs above what they otherwise would have been without the data center that will result in higher costs to all ELL ratepayers. According to ELL's analysis, this is the most probable outcome, at least in 2028.

[72] *Id*.

Q. How could ELL mitigate the risk that ratepayers may be exposed to higher operating costs as a result of Laidley's operations?

A. ELL's modeling suggests that the addition of the Laidley load and Planned Generators is driving up energy market pricing at some nodes higher than what it would otherwise be. Left unaddressed, this creates a form of cross-subsidization that is difficult to identify as it requires modeling of what prices otherwise would have been in the absence of the project. One mechanism, albeit imperfect, to attempt to address this effect and minimize the burden on other ratepayers would be periodically (perhaps at the time of ELL's base rate case) perform a nodal simulation of net energy costs ($/MWh) with and without the data center and Planned Generators. The difference in expected energy cost ($/MWh) could be applied as a credit to the Fuel Adjustment Clause for non-Laidley ratepayers, with Laidley making up the difference.

Q. Referring to your third category of additional costs, please explain why additional investments may be required for the Planned Generators to serve other load if Laidley does not fully renew the ESA.

A. As discussed in the prior section, ELL's economic argument in this case rests on the ability of the Planned Generators to serve other load in the event that Laidley decides not to fully renew the ESA. However, if Laidley decides not to renew the ESA in 2041, that would mean that fully [[ ]]% of ELL's total load[73] would be withdrawn from ELL's system in North Louisiana. And although the two Planned Generators located in North Louisiana would remain operational to serve other ELL load, the bulk of that load is located in South Louisiana. This would significantly impact power flows on ELL's transmission system.

[73] See Figure 1 above.

Q. Has ELL done any power flow modeling to determine whether transmission investments, substation upgrades or other mitigations would be required to allow the Planned Generators to serve other ELL load?

A. No.[74] However, if such investments and mitigations turn out to be needed, these are all costs that would be recovered in rates from non-Laidley customers.

VI. CONCLUSION AND RECOMMENDATIONS

Q. Please state your conclusions.

A. My conclusions are as follows:

- Laidley's proposed data center would represent a significant increase to ELL's load, and ELL is proposing a major investment in generation and transmission to serve it. Given these circumstances, it is critical to ensure that other ratepayers are not at risk of bearing additional costs, including stranded costs, that would not exist absent Laidley's data center.
- Although ELL's Application was filed assuming Laidley's data center load would be [[ ]] MW, the project has since expanded in size to [[ ]] MW. ELL has justified its argument that the generation and transmission investments needed to serve this load are in the public interest in part based on the cost allocation and terms of an Electric Service Agreement negotiated for the original, lower load. The final terms of the Electric Service Agreement for the [[ ]] MW project have not been presented to the Commission.
- ELL's argument that the project is in the public interest is also based, in part, on its economic analysis that purports to show a net benefit to other ratepayers even if Laidley stops taking service under the ESA after its initial 15-year term. This net benefit is highly dependent on ELL's assumption

[74] ELL response to NPO 7-1(c) (attached as Exhibit CMK-6).

that it will require a substantial amount of new natural gas generation at the same time as the ESA is expiring; under ELL's analysis, this capital cost can be avoided if the ESA terminates after 15 years and the three Planned Generators can shift to serving other ELL load. ELL's analysis is highly sensitive to assumptions around load growth, future MISO capacity market prices, and the timing of when Laidley decides to give notice not to renew its contract. In reality, ratepayers are exposed to hundreds of millions of dollars of stranded cost risk under various scenarios that could materialize if: (a) less natural gas generation is needed in the future than ELL currently forecasts and MISO capacity market prices are lower than ELL currently forecasts, (b) new natural gas generation is substantially built before Laidley gives notice of terminating the contract, (c) the Planned Generators experience significant cost overruns, or (d) Laidley withdraws from the project before the ESA enters into force.

- As described in the testimony of Nicholas Miller, ELL's Application fails to consider additional transmission system mitigations, including increased ancillary services purchases, that may be needed to serve this new, massive data center load. Absent other cost recovery provisions, these costs would be borne by other ratepayers.

- The ESA fails to include a true-up for operating costs despite ELL's admission that, in 2028 alone, Entergy is likely to pay about [[redacted]] more in net energy costs than it would in the absence of Laidley's project. I anticipate that a substantial portion of those costs would be borne by ELL's retail customers.

Q. What do you recommend to the Commission?

A. I recommend the Commission deny ELL's Application as proposed, based on the risks identified in my testimony that other ratepayers could be on the hook

for hundreds of millions, if not billions of dollars, of additional costs associated with serving Laidley's data center.

If the Commission is nevertheless inclined to approve ELL's requests, I would urge that such approval be conditioned on the following:

- The Commission should review the final terms of the ESA, and approve such terms before issuing CPCNs for the Planned Generators.
    - To enable the Commission's review, Staff and other parties should be given an adequate opportunity to review the final ESA terms, and to provide testimony and briefing on such terms.
- The CPCNs for the Planned Generators should not be issued unless and until ELL and Laidley extend the initial term of the ESA to 25 years. This will more closely match the depreciable life of the gas plants and reduce the risk of stranded costs to other ratepayers.
- The Commission should inform ELL that any costs associated with the Planned Generators incurred before the ESA enters into service will be disallowed for cost recovery from other ratepayers if Laidley's project is cancelled. Disallowing cost recovery would be reasonable in that the prudence of the Planned Generators depends on being able to recover the costs from the Laidley load.
- The Commission should require a credit to be applied to the FAC charge for other customers to account for the possibility that Laidley's load drives up net energy costs for all ratepayers, as described in Section V of my testimony.
- If, as a result of subsequent studies, analysis, or operating experience, additional transmission facilities are identified as necessary to serve the Customer's data center beyond those identified in (a) Table 1 on pages 13-14 of the Kline Direct Testimony, and (b) ELL's response to discovery

request LEUG 7-8 (public redacted version),[75] no portion of the cost of such facilities will appear in either ELL's retail or wholesale rates.

Q. Does this conclude your testimony?

A. Yes.

[75] ELL response to LEUG 7-8 (public redacted version) (attached as Exhibit CMK-2).

BEFORE THE LOUISIANA PUBLIC SERVICE COMMISSION

ENTERGY LOUISIANA LLC, ex parte

***IN RE*: APPLICATION FOR APPROVAL OF GENERATION AND TRANSMISSION RESOURCES IN CONNECTION WITH SERVICE TO A SINGLE CUSTOMER FOR A PROJECT IN NORTH LOUISIANA**	**DOCKET NO. U-37425**

AFFIDAVIT

I, Catherine Kunkel, being first duly sworn, deposes and says that she is the same Catherine Kunkel whose Direct Testimony accompanies this affidavit; that such testimony was prepared by her; that she is familiar with the contents thereof; that the facts set forth therein are true and correct to the best of her knowledge, information and belief; and that she adopts the same as his sworn testimony in this proceeding.

Catherine Kunkel

#16

Sworn to and subscribed before me on this 4 day of April, 2025, in San Juan, Puerto Rico, who I identified through personal knowledge, resident of West Virginia, USA.

NOTARY PUBLIC

My commission expires: N/A

ZOÉ C. NEGRÓN COMAS
ABOGADA-NOTARIA

Exhibit CMK-1

Resume of Catherine M. Kunkel

Catherine M. Kunkel

cathykunkel@gmail.com // 304-237-3802 // Charleston, WV

Professional Experience

Institute for Energy Economics and Financial Analysis, energy consultant 2013-2019, 2023-present
Lead research projects on utility rates, data centers, power plant finance, utility mergers and transactions, midstream natural gas, and Puerto Rico's electrical system.

CAMBIO, energy program manager 2021-2023
Provided research support and drafted regulatory filings for *Queremos Sol* coalition to advance distributed renewable energy in Puerto Rico.

Kunkel Energy Research, president 2012 - present
Provide consulting services to non-profit organizations and lead research projects, primarily related to the electric utility industry.

Education

University of California at Berkeley – Ph.D. student (unfinished), Energy and Resources Group, 2008-2010.
Cambridge University – Master of Advanced Study, with Distinction, Department of Applied Mathematics and Theoretical Physics (Churchill Scholar), 2008.
Princeton University – B.A., *Summa cum laude*, Physics, 2006.

Selected Presentations, Publications and Testimonies

Cathy Kunkel, *Data centers drive buildout of gas power plants and pipelines in the Southeast*, Institute for Energy Economics and Financial Analysis, January 2025.

Cathy Kunkel, *Declaration in support of Puerto Rico Senate*, U.S. Bankruptcy Court for the District of Puerto Rico, Adv. Proc. No. 24-00062-LTS in 17 BK 4780-LTS, October 2024.

Cathy Kunkel, *The Need for New Natural Gas Pipelines in the Southeast?,* presentation to Property Rights and Pipeline Center conference, October 2024.

Tom Sanzillo and Cathy Kunkel, *Solar at a Crossroads in Puerto Rico*, Institute for Energy Economics and Financial Analysis, June 2024.

Cathy Kunkel, *Updates on the Puerto Rico Electric Power Authority's Plan of Adjustment*, presentation to the Puerto Rico Association of Private Colleges and Universities board meeting, February 29, 2024.

Tom Sanzillo and Cathy Kunkel, *Guyana Gas to Energy Project is Unnecessary and Financially Unsustainable*, Institute for Energy Economics and Financial Analysis, October 2023.

Ingrid Vila and Cathy Kunkel, *Green Hydrogen for Power Generation in Puerto Rico*, CAMBIO, March 2023.

Cathy Kunkel and Agustin Irizarry, *Opportunities for DERs and Electric Vehicles in Puerto Rico*, presentation at IEEFA's Energy Finance 2022, October 17, 2022.

Ingrid Vila, Cathy Kunkel, and Agustin Irizarry, *Puerto Rico Electric Vehicle Integration Study*, CAMBIO, January 2022.

Testimony of Cathy Kunkel before the Puerto Rico Senate Committee on Energy and Strategic Projects, January 25, 2022.

Before the Puerto Rico Energy Bureau, *Comments of Queremos Sol coalition on proposed electric rate increase*, Case No. NEPR-MI-2020-0001, September 2021.

Ingrid Vila, Cathy Kunkel and Agustin Irizarry, *We Want Sun and We Want More*, CAMBIO and the Institute for Energy Economics and Financial Analysis, March 2021.

Before the Federal Energy Regulatory Commission, *Comment of Institute for Energy Economics and Financial Analysis under PL19-4*, April 2019.

Cathy Kunkel and Lorne Stockman, *The Vanishing Need for the Atlantic Coast Pipeline*, Institute for Energy Economics and Financial Analysis, January 2019.

Testimony of Cathy Kunkel before the Puerto Rico Senate Special Committee on Energy Affairs, August 2018.

Testimony of Cathy Kunkel and Anna Sommer before the Puerto Rico Energy Bureau, Case No. CEPR-AP-2017-0001, *In Re: Aguirre Site Economic Analysis*, June 2017, on behalf of El Puente and Comite Dialogo Ambiental.

Testimony of Cathy Kunkel and Tom Sanzillo before the Puerto Rico Energy Bureau, Case No. CEPR-AP-2015-0001, *In Re: Puerto Rico Electric Power Authority Rate Review*, on behalf of the Institute for Competitiveness and Sustainable Economy.

Cathy Kunkel, *Regulatory, Jurisdictional and Social Issues Affecting Pipeline Development,* presentation at Platts 9th Annual Appalachian Oil & Gas Conference, October 25, 2016

Cathy Kunkel, *Re-regulating Coal Plants in West Virginia: A Boon to FirstEnergy, A Burden to Ratepayers*, Institute for Energy Economics and Financial Analysis, September 2016.

Cathy Kunkel and Tom Sanzillo, *Risks Associated with Natural Gas Pipeline Expansion Across Appalachia*, Institute for Energy Economics and Financial Analysis, April 2016.

Testimony of Cathy Kunkel before the West Virginia Public Service Commission, Case No. 15-1351-E-P, *In Re: Petition to initiate the annual review and to update the ENEC rates currently in effect*, on behalf of West Virginia Citizen Action Group.

Testimony of Cathy Kunkel before the West Virginia Public Service Commission, Case No. 15-0303-E-P, *In Re: Petition for review and determination of 2015 Energy Efficiency/Demand Response program rates*, on behalf of West Virginia Citizen Action Group.

Recognitions

2024 Medal of the Puerto Rico Bar Association

Exhibit CMK-2

ELL Response to LEUG 7-8 (public redacted version)

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the Seventh Set of Data Requests
of Requesting Party: Louisiana Energy
Users Group

Question No.: LEUG 7-8 Part No.: Addendum:

Question:

Supplemental Testimony of Entergy Laura Beauchamp submits that additional Transmission facilities will be needed to accommodate the new Data Center customer increase in load: Please identify and explain:

f. Has the new customer agreed to pay for the additional Transmission facilities;

g. Has the new customer agreed to be responsible for the O&M costs for the additional Transmission facilities;

h. What are the additional Transmission facilities;

i. What is the cost estimate of each individual additional Transmission facility including the Class level for the estimate;

j. Will the additional Transmission facilities be owned by Entergy or by the new customer.

Response:

Information responsive to this request has been designated as Highly Sensitive Protected Material ("HSPM") and will be produced only to the appropriate Reviewing Representatives in accordance with the Confidentiality Agreement in effect and executed in this docket. HSPM files will be served upon appropriate reviewing representatives through a ShareFile link. Any downloads of such files shall be treated in accordance with the applicable provisions of the Confidentiality Agreement regarding duplication of HSPM files.

The Company objects to this request, including all subparts, as it seeks information which is not relevant to this proceeding and is not reasonably calculated to lead to the discovery of admissible evidence. The proposed agreement with the Customer has not been confected at this time, and, as stated in the Supplementary Direct Testimony of Laura Beauchamp, neither the Customer's additional load nor the Additional Facilities contemplated by that agreement require approval from the Commission, and neither of these are included within the relief requested in this proceeding. Subject to and without waiving these objections the Company responds as follows:

a. Please see the Supplemental Direct Testimony of Laura K. Beauchamp Question 11. The Company's expectation is that the Customer will pay for the entirety of the Additional Facilities.

b. Please see subpart (a).

c. The additional agreement with the Customer is not finalized at this time. However, the anticipated Additional Facilities needed include a new 500kV Transmission line connecting the Car Gas Road and Mt. Olive substations and associated upgrades at each terminal station to accommodate the interconnection of the new line. A study is currently underway to determine the optimal routing of the new circuit, but the preliminary routing assumption assumes a total length of approximately 38 miles of new 500kV line construction, including a river crossing. The addition of this new 500kV source into the Car Gas Road substation would eliminate the need for six new capacitor banks at the Smalling 230kV substation which were identified in the solution set for the Customer's original load level.

d. The current Class 5 estimate for the additional Transmission facilities is [redacted] This includes:
   - [redacted] for construction of the new Car Gas Road to Mt. Olive 500kV line
   - [redacted] for expansion of the Mt. Olive 500kV station to accommodate the interconnection of the new line
   - [redacted] for expansion of the Car Gas Road 500kV station to accommodate the interconnection of the new line There is also a [redacted] savings in the total cost due to the elimination of the aforementioned six capacitor banks from the original project scope. The Class 5 estimate is subject to change pending the results of the routing analysis for the new 500kV line.

e. The additional Transmission facilities will be owned by the Company.

Exhibit CMK-3

ELL Response to NPO 14-5

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the Fourteenth Set of Data Requests
of Requesting Party: Non-Profit Organizations

Question No.: NPO 14-5 Part No.: Addendum:

Question:

Please identify ELL's (a) total net plant in service and (b) current annual revenue requirement.

Response:

The Company objects to this request to the extent it requests information that is in the public record and is thus equally available to the requestor. Subject to and without waiving these objections the Company responds as follows:

Please see Section 3, Attachment B of the attached ELL's Public Redacted TY23 Formula Rate Plan Evaluation Report, filed August 27, 2024. Per the attached:

a. ELL's Net Utility Plant in Service is $16,740,229,799

b. ELL's LPSC Retail Revenue Requirement is $3,323,655,504

Exhibit CMK-4

ELL Response to NPO 11-10

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the Eleventh Set of Data Requests
of Requesting Party: Non-Profit Organizations

Question No.: NPO 11-10 Part No.: Addendum:

Question:

Refer to page 7, lines 1-7 of the Beauchamp Supplemental Direct.

a. Does the Company intend to file an amended version of HSPM Exhibit LKB-2 (i.e., the ESA) reflecting the revisions to the Project described on pages 4-5 of Witness Beauchamp's supplemental testimony? If so, when does the Company intend to file the revised Exhibit?

b. Does the Company intend to file a amended version of HSPM Exhibit LKB-3 reflecting the revisions to the Project described on pages 4-5 of Witness Beauchamp's supplemental testimony? If so, when does the Company intend to file the revised Exhibit?

Response:

The Company objects to this request, including all subparts, as it seeks information which is not relevant to this proceeding and is not reasonably calculated to lead to the discovery of admissible evidence. The proposed agreement with the Customer has not been confected at this time, and, as stated in the Supplementary Direct Testimony of Laura Beauchamp, neither the Customer's additional load nor the Additional Facilities contemplated by that agreement require approval from the Commission, and neither of these are included within the relief requested in this proceeding. Subject to and without waiving these objections the Company responds as follows:

The Company and Customer have not reached agreement on additional commercial terms at this time. It is uncertain when, or if, such agreement will be reached. To the extent an agreement is reached between the parties, the Company will provide a copy of the agreement(s) on an Attorney's Eyes Only HSPM basis.

Exhibit CMK-5

ELL Response to Sierra 1-5

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the First Set of Data Requests
of Requesting Party: Sierra Club

Question No.: SIERRA 1-5 Part No.: Addendum:

Question:

Refer to the Direct Testimony of Company Witness May at 38 regarding local jobs.

a. Are those jobs all expected to be locally-based (as compared to remote)?

b. Does ELL expect that the Company will employ people who live in the area (relative to bringing in people from outside the community)?

Response:

ELL objects to this Request to the extent it characterizes the assertions regarding local jobs as one from ELL. As set forth on page 38 of Company Witness May's testimony, the information concerning jobs is based on ELL's understanding of the commitment made by the customer. That commitment has been made in publicly available press releases and other, similarly public resources, which are equally available to the requesting party. *See, e.g.*, https://datacenters.atmeta.com/wp-content/uploads/2024/12/Metas-Richland-Parish-Data-Center.pdf.

Exhibit CMK-6

ELL Response to NPO 7-1

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the Seventh Set of Data Requests
of Requesting Party: Non-Profit Organizations

Question No.: NPO 7-1 Part No.: Addendum:

Question:

Refer to page 12, lines 1-4 of Samrat Datta's direct testimony, which states, "the termination of the Customer's ESA obviates the need for two assumed combined cycle resources… and two combustion turbine-generators," referred to as the "Otherwise Needed Generators."

a. Please provide the analysis that led the Company to conclude that it would need to construct the "Otherwise Needed Generators" if the ESA is not terminated.

   i. If any modeling files or workpapers were created, used, or relied on in developing such analysis, please produce a complete copy of such modeling files or workpapers (in machine-readable electronic format with formulas intact).

b. Has ELL analyzed where these "Otherwise Needed Generators" would be constructed?

c. Has the Company conducted any power flow study with the following assumptions: 1) no load from the Customer, 2) full load at the three CCGTs that are the subject of this proceeding (hereinafter, the "Planned Generators"), and 3) no additional transmission upgrades beyond those proposed in the instant filing? If so, please provide

   i. All workpapers created either to support inputs to these studies and/or to produce work products resulting from these studies, changing nothing.

   ii. Any internal presentations or reports related to these analyses including but not limited to documentation on specific results that support conclusions on what transmission and generation upgrades were necessary as well as what and why alternatives were found to be inadequate. In addition, documentation on the type, frequency, and severity of violations (e.g. voltage and thermal violations).

iii. Any information documenting the costs of upgrades needed to address identified violations.

d. Please provide ELL's resources relative to forecasted load annually through 2044 for the summer, winter, spring, and fall seasons under MISO's seasonal resource adequacy construct, (i) under the assumption that the ESA is renewed, and (ii) under the assumption that the ESA is not renewed.

e. Please provide the forecasted annual capacity factor for each of the three Planned Generators for each year through 2041.

f. Please provide the forecasted annual capacity factor for each of the Planned Generators after 2041 in the event that the ESA is not renewed.

g. Under a scenario in which the ESA is renewed, please provide the forecasted annual capacity factors for each of the "Otherwise Needed Generators."

h. Please provide, in machine readable electronic format with formulas intact, all supporting workpapers for confidential Exhibit SD-2.

Response:

The Company objects to these requests to the extent that they seek calculations or analyses that have not been performed. Subject to and without waiving this objection, the Company responds as follows:

Information responsive to this request has been designated as Highly Sensitive Protected Material ("HSPM") and will be produced only to the appropriate Reviewing Representatives in accordance with the Confidentiality Agreement in effect and executed in this docket. HSPM files will be served upon appropriate reviewing representatives through a OpenText™ Core Share link. Any downloads of such files shall be treated in accordance with the applicable provisions of the Confidentiality Agreement regarding duplication of HSPM files.

a. See the Company's response to LEUG 1-8(a).

b. No.

c. In reference to the Customer's request, ELL did 1) not perform Power Flow analysis with no Customer load addition; 2) perform Power Flow analysis with the additional 2,640MW at (2) 1x1 CCCTs at Smalling Station and (1) 1x1 CCCT at Big Cajun, which is not the siting location for the third CCCT and 3) perform Power Flow analysis with transmission assumptions that are not proposed in this filing. See the Company's responses to NPO 5-2 and 5-8 for all Power Flow studies performed in response to the Customer load request.

d. See the Company's response to LEUG 1-8(a) regarding subpart (i). Regarding

subpart (ii), that analysis has not been performed.

e. See the highly sensitive attachment.

f. The requested analysis has not been performed.

g. See the attachment provided in the response to subpart (e).

h. See the Attorney's Eyes Only attachments provided in Company’s responses to SREA 1-19 and 1-20.

Exhibit CMK-7

ELL Response to NPO 11-5

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the Eleventh Set of Data Requests
of Requesting Party: Non-Profit Organizations

Question No.: NPO 11-5 Part No.: Addendum:

Question:

Refer to page 43, lines 4-19 of the Beauchamp direct testimony, which discusses ELL's consideration of four discrete scenarios for serving the new customer load in addition to the proposed solution. Did ELL use any resource planning software, such as Aurora, to model the optimum configuration of lowest-cost generation resources?

a. If so:

i. Please identify which modeling software was used.

ii. Please produce any modeling files (including input and output files) and workpapers created, used, or relied on in considering the alternatives described in portion of Witness Beauchamp's testimony.

b. If not, please explain why not. As part of your answer, please also explain why ELL did not use the modeling approach that ELL used for scenario analysis in its 2023 IRP (see 2023 IRP, p. 80).

Response:

No such resource planning software was used. Given the forecasted load factor and the peak load of the Customer's facility, and the timeframe by which the Customer has requested the interconnection of their electrical load to the grid, the only viable supply portfolio capable of maintaining resource adequacy of the ELL electrical system was found to be the three combined cycle combustion turbine ("CCCT") resources have been proposed in the Company's Application. The very tight timelines by which a supply solution had to be identified for the Customer's consideration made it impossible to carry out the planning analyses and modeling approach that is typical of the IRP process.

Exhibit CMK-8

ELL Response to Walmart 1-13

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the First Set of Data Requests
of Requesting Party: Walmart Inc.

Question No.: WALMART 1-13 Part No.: Addendum:

Question:

Please reference the Direct Testimony of Samrat Datta at p. 13, lines 11-16 and answer the following:

a. How many years in advance would the Company need to begin planning for the Otherwise Needed Generators in order for them to come online in the time period projected by Company witness Datta as described in Walmart 1-12?

b. How long does it take to construct (without regarding to scoping, design, and procurement or any other pre-construction phase) a combined cycle generation resource?

c. How long does it take to construct (without regarding to scoping, design, and procurement or any other pre-construction phase) a combustion turbine generation resource?

Response:

a. See the testimony of ELL Witness Matthew Bulpitt at pages 16-17.

b. Based on current conditions, ELL estimates a construction period of approximately 40 months for a new combined cycle generation resource.

c. ELL currently projects a construction period of approximately 36 months for a new combustion turbine generation resource.

Exhibit CMK-9

ELL Response to Sierra 6-7

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the Sixth Set of Data Requests
of Requesting Party: Sierra Club

Question No.: SIERRA 6-7 Part No.: Addendum:

Question:

Regarding the lead time for Entergy to bring online a new CCGT plant.

a. What is the current lead time for a new CCGT?

b. What is the current lead time for a new CT?

c. What was the lead time for a new CCGT at the time Entergy made its BP24?

d. What was the lead time for a new CT at the time Entergy made its BP24?

Response:

a. See the direct testimony of Matt Bulpitt pages 16-17 as well as the responses to NPO 3-4, Walmart 1-13, and LEUG 6-9. Each generation project has its own attributes which may impact the overall development timeline; however, in a hypothetical situation with all other project attributes being the same and based on ELL's recent and current project experience, the generic development and execution timeframe of new combined cycle natural gas resources is approximately six years to six and a half years.

b. Please see the direct testimony of Matt Bulpitt pages 16-17 as well as the responses to NPO 3-4, Walmart 1-13, LEUG 6-9, and the answer above in Sierra 6-7 subpart a. Each generation project has its own attributes which may impact the overall development timeline; however, in a hypothetical situation with all other project attributes being the same and based on ELL's recent and current project experience, the generic development and execution timeframe of new combustion turbine natural gas resources is approximately six months shorter than a combined cycle resource.

c. The generic technology assessment used in BP24 does not specify a definitive or binding lead time. The lead time for a project at the time that BP24 was prepared was not materially different than the current lead time.

d. The generic technology assessment used in BP24 does not specify a definitive or binding lead time. The lead time for a project at the time that BP24 was prepared was not materially different than the current lead time.

Exhibit CMK-10

ELL Response to Walmart 1-12

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the First Set of Data Requests
of Requesting Party: Walmart Inc.

Question No.: WALMART 1-12 Part No.: Addendum:

Question:

Please reference the Direct Testimony of Samrat Datta at p. 12, lines 1-4 and answer the following:

a. Specify whether, by unit and commercial operation date, "the two assumed combined cycle resources with commercial operation dates in 2041 and 2044, respectively, and two combustion turbine-generators with CODs in 2042 and 2043, respectively" were projected to be needed to serve future load, meet resource adequacy requirements, or both.

b. Can your analysis accurately predict the least cost option for generation needs 15+ years into the future? What is the margin of error in the analysis?

Response:

a. The four resources are all projected to be needed to meet ELL's resource adequacy requirements, which are based on ELL's projected load at that time and assumptions regarding the applicable MISO reserve margin and transmission loss factors. The commercial operation dates assumed for the 2041 and 2044 combined cycles are 8/31/2041 and 5/31/2044, respectively. The commercial operation dates assumed for the 2042 and 2043 combustion turbines are 8/31/2042 and 8/31/2043, respectively. These dates correspond to the last day prior to the beginning of the summer and fall planning periods within the MISO Planning Year as defined in MISO's current Tariff.

b. The Company's projected future capacity additions are based on its periodic Integrated Resource Plan ("IRP") analysis and other ongoing resource planning analysis, informed by its Technology Assessment process which evaluates the viability and economics of available supply alternatives on an ongoing basis. The objective of these analyses is to balance cost, reliability, and sustainability. The Company recognizes there is uncertainty associated with many of the input assumptions in the models used to generate these projected resource additions. However, it has not calculated a margin of error associated with such analyses.

Exhibit CMK-11

ELL Response to Staff 3-6 (public version)

ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
Docket No. U-37425

Response of: Entergy Louisiana, LLC
to the Third Set of Data Requests
of Requesting Party: Louisiana Public Service Commission Staff

Question No.: STAFF 3-6 Part No.: Addendum:

Question:

Please provide the most recent fully detailed budget for each of the three generation and System Improvement Transmission Projects associated with the Application. In the response, please provide the construction cost estimate class of each budget with the classes ranges of accuracy.

Response:

Information responsive to this request has been designated as Highly Sensitive Protected Material ("HSPM") and will be produced only to the appropriate Reviewing Representatives in accordance with the Confidentiality Agreement in effect and executed in this docket. HSPM files will be served upon appropriate reviewing representatives through a OpenText™ Core Share link. Any downloads of such files shall be treated in accordance with the applicable provisions of the Confidentiality Agreement regarding duplication of HSPM files.

The cost estimate for Franklin Farms Units #1 and #2 is a Class 3 estimate. The below table provides a comparison of the current estimate with the estimate included in the Direct Testimony of Company witness Matthew Bulpitt (page 27). The total Project Cost estimate is $42.8M lower than it was at the time of the filed testimony. For additional detail regarding the buildup of this estimate, see the attachment to the Company's response to LEUG 1-21.

Updated Capital Cost Estimate (Millions) for Units 1 and 2 (HSPM)

Cost Component, $M	As Filed	Current
EPC Contract	[redacted]	[redacted]
Other Vendors		
Entergy Labor		
Other		
Total Direct Costs		
Total Indirect Costs		
Contingency		
Generation Project Cost	**$2,381.9**	**2,339.1**
Transmission Interconnection Project Cost	$4.7	$4.7
Total Project Cost	**$2,386.6**	**$2,343.8**

The cost estimate for CCCT #3 (to be located at the Waterford facility as described in ELL Witness Beauchamp's Supplemental testimony) has not changed. It remains a Class 5 estimate.

The cost estimate for the System Improvement Transmission Projects has not changed. It remains a Class 5 estimate.

Exhibit CMK-12

ELL Response to Staff 3-10 & "Staff 3-10 Basis of Estimate_HSPM" attachment (HSPM)

(REDACTED DUE TO HIGHLY SENSITIVE PROTECTED MATERIALS PURSUANT TO CONFIDENTIALITY AGREEMENT IN LPSC DOCKET NO. U-37425)

CERTIFICATE OF SERVICE

I, Susan Miller, hereby certify that I have this 11th day of April, 2025, served copies of the Public Version of the Direct Testimony and Exhibits of Constantine Gonatas, Catherine Kunkel, and Nicholas W. Miller, on Behalf of the Alliance for Affordable Energy and the Union of Concerned Scientists, on all known parties on the Official Service List for Docket No. U-37425 via electronic mail.

In addition, I hereby certify that I emailed a link to the CONFIDENTIAL HSPM Version of the Direct Testimony and Exhibits of Constantine Gonatas, Catherine Kunkel, and Nicholas W. Miller to those parties designated by Entergy Louisiana, LLC as being entitled to receive the confidential information.

Susan Stevens Miller

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