BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

EX PARTE: **APPLICATION OF ENTERGY LOUISIANA, LLC, FOR REVIEW OF THE MANAGEMENT OF THE CONSTRUCTION OF LAKE CHARLES POWER STATION**	)))))	**DOCKET NO. U-____**

DIRECT TESTIMONY

OF

GARY C. DICKENS

ON BEHALF OF

ENTERGY LOUISIANA, LLC

PUBLIC REDCTED VERSION

DECEMBER 2021

TABLE OF CONTENTS

EXHIBITS

I. INTRODUCTION AND PURPOSE

A. Qualifications

Q1. PLEASE STATE YOUR NAME AND CURRENT BUSINESS ADDRESS.

A. My name is Gary C. Dickens. My business address is Parkwood Two Building, 10055 Grogan's Mill Road, T-PKWD-5A, The Woodlands, Texas 77380.

Q2. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Entergy Services, LLC ("ESL"), the service company for the Entergy Operating Companies,[1] as Vice President, Capital Projects. Before taking that position in May 2021, I served as Vice President, Project/Construction Management, New Generation Program Execution. In that role I was responsible for the owner's oversight during the development, design engineering, and procurement phases of the Lake Charles Power Station Project ("LCPS" or the "Project") that was market-tested in the 2015 Request for Proposals for Long-Term Developmental and Existing Capacity and Energy Resources (the "2015 RFP"), and was generally responsible for the continuing development, construction, start-up, and commissioning of LCPS. Those project development responsibilities included coordinating the activities of the Project Team to obtain all permits and contracts necessary after the transition from the development phase to execute the project.

[1] The five Entergy Operating Companies are Entergy Arkansas, LLC; Entergy Louisiana, LLC; Entergy Mississippi, LLC; Entergy New Orleans, LLC; and Entergy Texas, Inc.

Q3. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE AND EDUCATION.

A. I have worked in the energy industry since 1991, primarily with the development, design, construction, operation, and maintenance of industrial and utility power generation facilities. My initial entry into the industry was in operations, with the position of shift engineer and then into a management role as plant operations manager through a division of the Finnish Utility, IVO Generation Services, engaged in the design, building, ownership, operation and maintenance of combined-cycle gas turbine ("CCGT") power projects. Significant projects were the 260 megawatt ("MW") Glandford Brigg CCGT, the 360 MW CCGT Peterborough Power Station, and the 1,270 MW CCGT South Humber Bank Power Station. I joined Entergy in 1998 as the Operations Manager providing operations and commissioning oversight of Entergy's Saltend 1,200 MW Combined Heat and Power project in England. I also completed the commissioning of the 800 MW Damhead Creek CCGT project in England as commissioning manager, seconded to the engineering, procurement, and construction ("EPC") Contractor's team. Other notable functions were providing commissioning oversight of the first of a four-unit major overhaul and addition of a flue gas desulphurization plant at the 840 MW Maritza East III plant in Bulgaria. During the transition from overseas development, I relocated to the United States for Entergy in the role of director of commissioning for EntergyShaw LLC, completing the following

EPC projects: Crete Energy 320 MW combustion turbine ("CT"), Warren County 320 MW CT, and Harrison County 550 MW CCGT projects.

I transferred to Entergy Services Inc. ("ESI") (now ESL)[2] and represented fossil operations in the due-diligence and acquisition team for the 830 MW CCGT Perryville plant, 480 MW CCGT Attala plant, and the 320 MW CT Calcasieu plant. In 2007, I joined an EPC Contractor as a Senior Project Manager on power proposals and contract development for the United States and Central South America regions. In 2012, I returned to ESI as Director, Capital Projects to handle the construction of Ninemile 6. Following completion of that project, I became Vice President, Project/Construction Management, New Generation Program Execution. During my tenure in this position, in addition to the Project, I have also overseen the construction of the J. Wayne Leonard Power Station ("JWLPS"). In May 2021, I accepted my current position as Vice President, Capital Projects.

I am a graduate of the British Royal Naval School of Engineering (Mechanical). I served fifteen years in fleet engineering on conventional powered and gas turbine powered ships.

Q4. ON WHOSE BEHALF ARE YOU FILING THIS TESTIMONY?

A. I am filing this Direct Testimony on behalf of Entergy Louisiana, LLC ("ELL" or the "Company").

[2] On September 30, 2018, ESI was converted to a limited liability company from a Delaware corporation and is now known as ESL.

B. Purpose of the Testimony

Q5. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to provide information to the Louisiana Public Service Commission ("LPSC") about the LCPS Project that was substantially completed on March 26, 2020 and commenced commercial operations on March 28, 2020. In its Order No. U-34283 issued July 20, 2017, the LPSC found that the decision by ELL to undertake the construction of the Project was prudent and in the public interest.

My testimony provides a history and timeline of the Project and a breakdown of Project costs and schedule information through October 2021, as well as the estimate at completion. I also discuss the project management and controls used to oversee the Project and to manage Chicago Bridge & Iron, LLC ("CB&I"), the EPC contractor.[3] I discuss how the areas of risk that the Company previously identified as potentially affecting the Project's cost estimate, budget targets, and anticipated completion date were managed and/or mitigated. I also discuss the achievement of substantial completion, the status of work required by CB&I to achieve final completion under the EPC contract, and potential implications arising out of CB&I's decision to institute bankruptcy proceedings. Finally, I discuss how the actual costs of the Project compare to the estimates provided in Docket No. U-34283.

II. PROJECT OVERVIEW

Q6. WHAT ROLE HAVE YOU PLAYED IN THE DEVELOPMENT AND OVERSIGHT OF THE PROJECT?

[3] On May 10, 2018, CB&I, LLC merged with McDermott International, Inc.

A. In my prior role as Vice President, Project/Construction Management, New Generation Program Execution, I was accountable for the integration, coordination, oversight, and management of the entire Project, including the human and fiscal resources assigned, and I managed the interfaces between all project stakeholders including the Executive Steering Committee ("ESC"), the Project Performance Management Committee, and the assigned Project Team and interface with contractors including the EPC contractor.

More Specifically, my responsibilities have included:

1) Providing overall direction for the Project management and controls, and execution of the Project;

2) Establishing and maintaining appropriate Project Team resources;

3) Establishing and executing the Project in accordance with approved funding and budget objectives;

4) Directing and controlling the Project budget and schedule;

5) Providing oversight for the Directors and managers responsible for the financial and performance management of the vendors contracted to provide design, fabrication, installation, and quality assurance of the components for the Project; and

6) Providing the communication of Project performance to senior management.

Q7. PLEASE PROVIDE A BRIEF OVERVIEW OF THE PROJECT.

A. LCPS, located in Westlake, Louisiana, is a natural gas-fired 2-on-1 combined cycle power plant consisting of two nominal (at ISO[4] conditions) 267 MW Mitsubishi M501GAC gas turbine generators, two Nooter/Eriksen heat recovery steam generators ("HRSGs"), one nominal 463 MW Toshiba TCDF steam turbine ("ST") generator, and other balance of plant equipment. The Project has an initial ISO rating of 997 MW and Summer rating of 923 MW. The Project was predominantly executed using a fixed price, fixed schedule duration form of EPC contract with CB&I. The Project closely resembles the JWLPS project, which also utilized the 2-on-1 combined cycle power plant configuration and was also executed by CB&I serving as the EPC contractor.

Q8. HOW DID THE ACTUAL COST AND SCHEDULE COMPARE TO THE ESTIMATES IN DOCKET NO. U-34283?

A. As shown in Table 1 below and discussed in the Direct Testimony of Company witness Jerome M. Maddox, the Project is estimated to be under budget by $18.5 million, exclusive of transmission and interconnection costs. Transmission and interconnection costs are estimated to be $7.9 million over budget. This means estimated total project costs at completion will be $10.6 million under budget. LCPS was completed ahead of schedule.

[4] The International Organization of Standardization ("ISO") is an international standard-setting body comprised of representatives of various national standards organizations.

Table 1

$M	U-34283 Original Budget	Spending Through October 31, 2021	Estimated Spending at Completion	Variance (Over)/Under
Project Costs	828.7	808.7	810.2	18.5
Transmission Upgrades	43.0	50.9	50.9	(7.9)
Project and Transmission Upgrades Total	871.7	859.6	861.1	10.6

Q9. IN DOCKET NO. U-34283, IT WAS ESTIMATED THAT THE PROJECT WOULD COST ABOUT $832 PER KW. CAN YOU COMMENT ON THE ACTUAL COST PER KW?

A. Yes. I estimate the actual cost per kW, excluding the cost of the generator interconnection, transmission upgrades, and short, on-site transmission lines to connect to the Nelson Station switchyard, at $813 per kW based on an ISO rating of 997 MW.

Q10. WILL THE $10.6 MILLION UNDER RUN BE RETAINED BY ELL?

A. No. As discussed by Company witness Phillip R. May, ELL provides service to its customers at cost. As a result, ELL's customers pay only the prudently incurred costs of the Project, irrespective of the costs that were estimated in the 2015 RFP. Also, as I discuss later in my testimony, the estimated $10.6 million of unused contingency has been released from the Project and is not included in the estimate at completion.

Q11. GENERALLY SPEAKING, HOW DID ELL'S EXPERIENCE WITH J. WAYNE LEONARD POWER STATION INFLUENCE THE EXECUTION OF LCPS?

A. The LCPS and JWLPS projects were similarly designed facilities that were executed with non-parallel but overlapping schedules. As discussed in further detail below, the LCPS project utilized the same governance structure and project controls as the JWLPS project. Although the overlapping nature of the projects' schedules prohibited us from utilizing the exact same project teams on JWLPS and LCPS, the two project teams remained in close contact throughout the duration of both projects to maximize project efficiencies and promptly apply lessons learned. The Company's ability to leverage its efforts on the JWLPS project for this Project assisted the Company and the EPC contractor to complete LCPS ahead of schedule, under budget, and more efficiently. While JWLPS was constructed at $826 per kW, LCPS was constructed at $813 per kW.

III. PROJECT MANAGEMENT AND EXECUTION

Q12. PLEASE GENERALLY DESCRIBE HOW ELL MANAGED THE DEVELOPMENT AND CONSTRUCTION OF THE PROJECT.

A. Capital projects of this magnitude are developed and executed using the *Entergy Project Delivery System*, a three-phase, seven-stage process to ensure project predictability and outcomes. Initial development occurs in the Front-End Loading ("FEL") phase that includes Stages 1 and 2 for business case justification and project scope selection. Additional FEL occurs in the project definition associated with Stage 3. In Stage 3 a dedicated team of ESL employees and contractors with significant experience on other combined cycle and/or generation projects and project

management and project controls expertise are assigned to finalize FEL with a comprehensive project execution plan that transitions the project into the Project Execution phase inclusive of Stages 4 and 5 for detailed engineering and construction, respectively. Collectively, the assigned ESL site Project Team had more than 400 years of industrial engineering, construction, construction management, project management, and project controls experience and are responsible for approximately 78,000 MW of generation development and/or acquisition. The Project Team received executive oversight and support from the Project ESC. While ESL planned and managed the project, much of the work was executed through an EPC contract with CB&I.

A. Project Management Structure

Q13. PLEASE DESCRIBE THE ESL PROJECT TEAM RESPONSIBLE FOR MANAGING CONSTRUCTION OF THE PROJECT.

A. In my last role as the Vice President, Project/Construction Management, New Generation Program Execution, the Project was under my direct oversight and I had overall responsibility for ensuring that the key objectives of safety, scope, cost, schedule, environmental, and quality were met, and for consulting and communicating with the Project's ESC. The internal processes for which I had responsibility included project management, engineering design and review, equipment specification and review, budget, cost and schedule control, construction site management control and safety, start-up and commissioning, documentation control, and progress review and management. While serving as Vice President, Project/Construction Management,

New Generation Program Execution, I reported to Jonathan E. Long, who was my predecessor in my current role of Vice-President, Capital Projects. The Project organization is depicted on Exhibit GCD-1.[5] Following my promotion to my current role, I retained oversight of the Project.

The Project Team is a matrix arrangement reporting to the Project Director. Project, Controls, Engineering, and Site specialists report to the Project Director through the Project Manager. Other team members were matrix-assigned to the Project and Project Director through their respective functional Directors or Managers. Matrix roles engaged in the execution of the Project included Health, Safety, and Environmental, Supply Chain, Tax, Loss Control, Legal, Regulatory, Customer Service, Risk and Insurance, Project Controls, Fuels Supply, Fossil Operations, Distribution, and Transmission. The project management structure is discussed in greater detail later in my testimony.

Q14. DID ESL EMPLOY ANY ENGINEERING FIRMS TO ASSIST WITH THE PROJECT?

A. Yes. An owner's engineer is commonly retained to assist with utility construction projects. ESL retained Sargent & Lundy, LLC ("S&L") to serve in the role of owner's engineer on the project. An owner's engineer is typically a firm with expertise in engineering and either building or managing construction projects, which expertise can be used to supplement the staff of the owner in providing oversight over the EPC

[5] The organizational chart in Exhibit GCD-1 was revised as employee turnover occurred during the life of the Project. Exhibit GCD-1 is the most recent version of the Project organization.

contractor. With regard to LCPS, S&L performed field investigations, review and analysis of material and equipment selection, design calculations and drawing reviews, change order reviews, and participated in monthly Project Team meetings. Additionally, CB&I Environmental[6] was retained to develop and file environmental applications and permits on behalf of the Project.

Q15. PLEASE DESCRIBE THE PROJECT MANAGEMENT STRUCTURE.

A. As briefly mentioned above, the Project's teams are organized as a matrix. The oversight structure for the LCPS Project involved a tiered approach to address strategic, governance, controls, tactical, and operational levels of project delivery.

1) The LCPS Project Team Organization

ESL organized an experienced Project Team to provide tactical direction and oversight at an operational level, primarily through the Project Director, his direct reports, and matrixed and contracted discipline site experts. Operational level actions are the day-to-day activities accomplished by the groups and individuals assigned or contracted to the project, either directly or through functional matrix assignment. Key attributes of this team included manager-level personnel to oversee the areas of project management, design, engineering, procurement, construction, site integration, and project controls. This is depicted in the Project Organizational Chart contained in Exhibit GCD-1. The Project Team reviewed project status daily and met weekly with CB&I,

[6] CB&I Environmental subsequently became APTIM Environmental & Infrastructure, LLC.

until the commencement of commissioning activities, at which time various Project Team members met with CB&I daily.

2) Project Performance Management Committee ("PPMC")

Tactically, project execution and performance were monitored and managed by the Project Director and a matrixed team of subject matter experts assigned to the PPMC. The PPMC met monthly beginning with Stage 4 and discussed progress and issues facing the project.

3) Portfolio Performance Management Team ("PPM")

The PPM within the Capital Projects ("CP") group was instrumental to the successful planning and execution of the project and support of the Project team. This team was led by the Director of Portfolio Performance Management and provided for structured reviews in the areas of schedule, cost control, governance and execution and ensured that lessons learned from the Project were applied to other CCGT build projects in the current portfolio.

4) Executive Steering Committee for the Project ("ESC")

The ESC provided strategic direction and oversight for the Project, monitored and provided direction relating to Project performance, key risks, and value drivers that may affect the Project risk profile, and provided guidance to the Project Team. The ESC acted as liaison between the Project Director and other executive groups and committees and was originally composed of the following key executives, and Proxies, whose organizations were directly supporting the successful completion of the Project:

- President and CEO of Entergy Louisiana, LLC as Project Sponsor – Phillip May

- Director, Operations Finance Business Partners – Donna Doucet
- Vice President, Capital Projects – Jon Long
- Vice President, System Planning and Operations – Kimberly Fontan
- Vice President, Regulatory Services – Shauna Lovorn-Marriage
- Vice President, Power Generation – Warren "Dale" Claudel
- Vice President, Regulatory and Public Affairs – Mark Kleehammer
- Vice President and Deputy General Counsel – Regulatory – Karen Freese

Q16. PLEASE GENERALLY DESCRIBE THE CP GROUP AS IT RELATES TO THE PROJECT.

A. The CP group is responsible for development and execution of the utility's largest, most complex projects. The Project Delivery System provides the framework for project planning and execution in order to drive predictability and certainty in project outcomes, which entails delivering high quality projects safely, on-time, on budget, and with realistic budgets and baseline schedules from the outset.

Project oversight involves the systematic evaluation of the completeness and quality of the project's business case, project management, and technical deliverables as the project progresses through the seven-stage gate process. Assurance is performed through rigorous stage gate reviews, independent project assessments, and reporting to ensure that projects are not only compliant with the Project Delivery Standard but that the project is well positioned to be successfully delivered.

Q17. WHAT WAS THE COMPANY'S PROJECT CONTROLS APPROACH FOR THE PROJECT?

A. The project controls approach integrated cost, schedule, progress measurement, and control techniques using a defined capital project process to tie together development and approval, design, manufacturing, planning, and implementation for purposes of monitoring and reporting project performance through leading key performance indicators, with focus on variance analysis, scope-change identification, risk assessment, and project-impact documentation. The Company's policies and procedures included a baseline standard for monthly reporting, adherence, and escalating requirements for risk assessment and issue management. The ESC independently reviewed project performance and provided direction as appropriate. In 2014, the PPM was established to provide stage gate reviews and independent project performance assessments. Since its inception, the PPM has engaged in oversight of the Project through monthly reviews. This executive/management-level oversight is in addition to the significant daily, weekly, and monthly update requirements executed at the Project Team level to ensure compliance with financial, project management, outage, self-assessment, construction, and engineering process procedures.

Q18. WHAT TYPES OF STATUS REPORTS WERE PREPARED AND CIRCULATED TO THE PROJECT STAKEHOLDERS TO HELP ENSURE ORDERLY MANAGEMENT OF THE PROJECT AND ITS COSTS?

A. The Project Team developed an ESC monthly report format that would provide management with clear visibility into project status and key leading performance

indicators, including safety performance, quality, budget, and schedule. The information provided in these monthly reports allowed the management structure to generally observe progress and adherence on the Project and identify and address issues with the potential to materially affect Project quality, cost, or schedule. These ESC monthly reports were compiled using information from the monthly EPC Contractor report, information gathered from the PPM and other meetings from the collective engineering groups and site teams. Meeting notes and monthly reports were consolidated into presentations that were reviewed with the Committee monthly. The ESC monthly reports were presented monthly to the ESC and other relevant stakeholders and provided all pertinent project related safety, quality, progress, and cost information to provide a more efficient method of communicating with the relevant stakeholders. The ESC monthly reports created for the Project are attached as Highly Sensitive Protected Materials ("HSPM") Exhibit GCD-2, *in globo*. A summary cost chart for project spending and forecast was also included in the Quarterly Monitoring Reports submitted to the Commission, which are attached to the direct testimony of Company witness Ryan D. Jones. Additional reports were generated, archived, and distributed to team members throughout the project including weekly construction progress (Weekly Project Controls Report) and schedule narrative reports. The EPC contractor compiled a comprehensive monthly project status report and facilitated monthly meetings with the Project Team to review safety, actual and forecasted spending, actual and forecasted progress, and issue mitigation. Information for this report was gathered from weekly reports from headquarters and the field. Weekly and daily construction reports covering weather, manpower by craft, safety issues and

concerns, major planned activities and issues were compiled by CB&I and reviewed in a weekly construction meeting on site.

Q19. WAS SENIOR MANAGEMENT INVOLVED WITH THE PROJECT OUTSIDE OF THE MONTHLY MEETING PROCESS?

A. Yes. Although not involved in the daily, on-site management of the project, senior management was actively engaged whenever a material issue arose. Any such issues would also be addressed in the monthly report, but senior management would have been engaged as appropriate between monthly meetings. From time to time, members of the ESC and senior management would attend EPC Contractor monthly meetings and tour the site to actively monitor safety, progress, and interface with craft and site-based teams.

Q20. WAS THE PROJECT'S GOVERNANCE AND CONTROL STRUCTURE SUBJECT TO AN OUTSIDE EVALUATION?

A. Yes. As discussed by Mr. Maddox, the Company retained KPMG, LLC ("KPMG") to provide a third-party perspective on project governance and cost controls relative to industry leading practices for both this Project as well as the JWLPS project. KPMG concluded that the Company had established industry leading or near industry leading practices for good project management, including the areas of organizational structure, schedule, cost, scope change, risk, issues, and document control.

B. EPC Contractor

Q21. WHAT IS AN EPC CONTRACTOR?

A. EPC is an acronym for Engineer, Procure, and Construct and often refers to an agreement structure under which a utility contracts with a single firm for the provision of engineering, procurement, and construction services for a large project. EPC is also used to describe the contractor that performs that function under an agreement for the ultimate project owner.

Q22. WHY ARE EPC CONTRACTORS USED TO CONSTRUCT LARGE POWER GENERATION PROJECTS?

A. A large construction project like LCPS is a substantial undertaking, and ELL does not have the in-house capability necessary to execute all engineering, procurement, and construction for such a project. The use of an EPC contractor who can perform all these functions under a single contract is cost effective and common within the power industry for such projects. EPC contracts are also a risk mitigation strategy for timely delivery of design, procurement, and construction.

Q23. IS THERE A SINGLE COMMON FORM OF EPC CONTRACT?

A. No. There are several types of EPC contracting approaches, and the suitability or desirability of each depends largely on the circumstances of the particular project under consideration. When a project's scope is uncertain and likely to vary,

EPC providers will either refuse to contract on a fixed price basis or perhaps agree to do so in exchange for a significant risk premium added to the fixed price. However, when a project (such as the Project) entails a well-defined scope of work and presents minimal risk of material changes in scope, EPC providers are more willing to contract on a fixed price basis without charging a significant risk premium. From an owner's perspective, fixed price contracts are generally preferred in these circumstances because of the certainty they provide to a project's overall cost.

Q24. WHAT EPC CONTRACTING STRATEGY DID ELL ELECT TO USE?

A. As explained in Docket No. U-34283, ELL elected to use a fixed price, fixed schedule approach for the EPC contract. ELL was able to negotiate a fixed price, fixed schedule EPC contract with CB&I that reflected a detailed scope of work. The contract price was subject to escalation if full notice to proceed ("FNTP") was issued after August 1, 2017, and then the price would escalate pursuant to well-defined terms in the agreement. The contractor was required to complete construction within 1,004 days of receiving FNTP or else pay daily liquidated damages as defined in the agreement. The contractor also had the opportunity to earn an incentive if the Project was completed before the required date.

Q25. WHY DID ELL ELECT TO USE A FIXED PRICE FORM OF EPC CONTRACT?

A. A fixed price cost strategy was expected to yield the lowest reasonable cost with an adequate level of risk mitigation if the project site could accommodate a standard CCGT design with a minimal amount of retrofit into an existing site. ELL, working

with CB&I, was able to develop a site plan that accommodated a standard CCGT design and minimized the retrofit scope. Also, given the number of CCGT plants constructed in the United States in the last two decades, construction of these plants is fairly standard. ELL utilized a fixed price form of EPC contract to successfully execute the Ninemile 6 CCGT project.[7] Therefore, LCPS was suitable for a fixed price, fixed schedule structure.

Q26. WHAT WORK DID CB&I PERFORM AS THE EPC CONTRACTOR?

A. Under the fixed price EPC contract structure, CB&I acted as an independent contractor with respect to the engineering, procurement, and construction services defined in the scope of work. CB&I procured the CTs, HRSGs, and ST from the original equipment manufacturers ("OEMs"). CB&I also provided a "wrap" (*i.e.*, guarantee) of the commitments on schedule and performance for the entire Project, providing for risk mitigation if there were delays or performance shortfalls. CB&I's procurement of this equipment allowed for full coordination and scheduling with the OEMs in order to meet the fixed schedule provided in the agreement.

Q27. WHAT ARE THE GENERAL TERMS OF THE EPC CONTRACT?

A. The contract was provided to the parties in Docket No. U-34283, but the general terms and conditions of the EPC contract are summarized in HSPM Exhibit GCD-3.

[7] Although the Company also successfully executed the JWLPS project through use of a fixed price form of EPC contract, that project was not completed at the time a decision was made to use of an EPC contract for the LCPS Project.

Q28. YOU MENTIONED THAT THE EPC CONTRACT PROVIDED FOR A FIXED PRICE FOR THE WORK SCOPE PROVIDED IN THE EPC AGREEMENT. DID CB&I PERFORM ANY WORK OUTSIDE OF THE DEFINED EPC SCOPE?

A. Yes. At the request of ELL, CB&I performed various tasks that were outside the original scope of work of the EPC, but which were determined by ELL to be necessary or important for the safety or performance of the Project. This additional work and the associated cost were agreed to by ELL and CB&I through issuance of change orders and properly included in the overall project cost.

Q29. PLEASE DESCRIBE THE CHANGE ORDER PROCESS.

A. The Project Manager, Controls Manager, and Project Analyst, with support from the Project Team, managed Change Control in general conformance with PMM 1130 – The Entergy Project Change Management Procedure. All change requests were documented and tracked through disposition and required approval of the ESC. Approved change requests were posted to the Project Management Information Site and became part of the official record. Change Orders under the EPC Agreement conformed to the provisions of Section 5 (Change Orders) in the agreement. Approved Change Orders were communicated to the EPC Contractor by the Entergy Contract Manager utilizing the forms and processes identified in the EPC Agreement.

Q30. PLEASE DESCRIBE THE CHANGE ORDERS THAT WERE AGREED TO BY ELL AND CB&I.

A. Nine change orders have been agreed to and executed between ELL and CB&I for the Project at this time. Some of the change orders include multiple line items including debits for additional work and credits for work not needed.

An initial change order titled CO-01 was signed in March 2018 for a credit to ELL in the amount of ($1.6 million). This change represented five debits and two credits including a credit of ($1.9 million) to change the HRSG design from modular to c-frame.

Change order CO-02 was signed in September 2018 for $7.4 million. The majority of the change order cost is attributed to 1) site drainage work to improve soil and ground conditions identified during detailed engineering performed by the EPC contractor while conducting the geotechnical study and 2) engineering design and construction changes required in order to conform with 100-year flood requirements adopted following the Calcasieu Parish design review post-Hurricane Harvey.

Change order CO-03 was signed in April 2019 for credit to ELL of ($3.59 million). This change represented nine debits totaling $1.93 million and five credits totaling $5.52. The credit includes items such as ($1 million) for deletion of the Turbine Cooling Air Cooler (TCAC) pumps and ($4.3 million) for Labor Wage & Per-diem rate true-ups.

Change order CO-04 was signed in June 2019 for $6.2 million to add a filter press to the Clarifier Sludge Discharge System as required by the Louisiana Department of Environmental Quality ("LDEQ") for the Louisiana Pollutant Discharge Elimination System ("LPDES") Permit.

Change order CO-05 was signed in December 2019 for $1.26 million. This change represented nine debits including but not limited to double walled fuel gas drain tanks, additional badge access points, Dynamic Disturbance North American Electric Reliability Corporation ("NERC") PRC_002 Compliance, and sheet piling for the site intake structure located by the water source from the Sabine River Authority.

Change order CO-06 was signed in December 2019 in the amount of $5.24 million as an amendment to the EPC contract to address costs associated with the labor and per diem escalation true-ups of the contract, ad valorem taxes incurred associated with a Presidential Executive Order on taxed products from overseas, and direct and indirect labor retention associated with the bankruptcy of CB&I.

Change order CO-07 was signed in June 2020 to amend the milestone payment terms of change order CO-06. This change order had no financial impact on the Project.

Change order CO-08 was signed in November 2020 and was comprised of a credit to ELL of approximately ($1.0 million) and is associated with debits where CB&I was unable to contract work or obtain parts due to their bankruptcy, as well as costs

associated with CB&I subcontractors cancelling work due to government travel restrictions associated with COVID-19, extension of trailer rentals due to social distancing, and other items. Costs associated with COVID-19 were $47,304.

Change order CO-09 was signed in February 2021 and was comprised of a credit to ELL of approximately ($348,000) and is associated with costs of replacing steam turbine thrust bearing pads. This amount is equal to the EPC's 50% share of the cost for replacing the steam turbine thrust bearing pads as further discussed below in the response to question 43.

Q31. YOU MENTIONED THE EPC CONTRACT PROVIDED FOR A FIXED SCHEDULE. WERE THERE ANY PROVISIONS FOR AN ADJUSTMENT TO THE SCHEDULE?

A. Yes. I would note that the schedule duration was important because it defined whether CB&I would be entitled to an early completion incentive payment or be required to pay liquidated damages for late completion. The EPC Agreement provided that the required completion date would be adjusted to account for delays associated with events of force majeure, as defined in the agreement, and any instances in which ELL failed to provide certain critical path items necessary for CB&I to proceed with the work. No schedule relief was provided as part of the contract.

Q32. CAN YOU GIVE SOME EXAMPLES OF CRITICAL PATH TASKS THAT ELL HAD TO PROVIDE FOR THE PROJECT?

A. Yes. The critical path tasks are referenced in the EPC Agreement as Owner Milestones and ELL was required to complete seven[8] milestones for the project. For example, ELL had to complete transmission work to allow backfeed of power to the Project and ELL had to provide gas supply to support first fire. The dates by which ELL had to provide these items were not fixed and determined; rather, ELL had to plan and time these critical path items based on the schedule provided by CB&I. For example, Attachment A-7 of the EPC Agreement specified Owner milestones and due dates based on calendar days after FNTP. If ELL failed to satisfy any of these milestones, CB&I would be entitled to a day for day extension of the contractually required substantial completion date.

C. EPC Oversight

Q33. YOU MENTIONED THAT CB&I ACTED AS AN INDEPENDENT CONTRACTOR. WHAT WAS ELL'S ROLE IN PROVIDING OVERSIGHT OF CB&I?

A. Even though CB&I was an independent contractor, ELL provided appropriate oversight of CB&I's performance under the EPC contract. It is worth noting that costs incurred under the EPC contract represented over two-thirds of the total costs incurred on the Project. Accordingly, a great deal of time and effort was focused on verifying

[8] Attachment A-7 of the EPC contract identifies the seven Owner milestones for the project. Attachment A-7 inadvertently identifies two separate milestones as Item No. 5.

that CB&I's performance adhered to the terms of the EPC contract. One such effort was a detailed risk review of CB&I's internal management and controls to provide confidence in CB&I's ability to execute the project in a timely and quality manner. The findings of this review are reflected in a report issued by KPMG, which is attached as HSPM Exhibit GCD-4. In sum, KPMG concluded that the primary aspects of CB&I's management of the Project were consistent with industry practice and in line with KPMG's experience from other large utility projects. The report did identify some opportunities for CB&I to enhance its ability to execute the project in-line with the Company's objectives. As I discuss later in my testimony, one such improvement was to establish a partnering approach between the owner and EPC contractor that encouraged early and open discussion of any item that had the potential to affect schedule, cost, or quality. CB&I also instituted a gate review process to ensure that procedures, processes, and tools were implemented as required to meet requisite quality and accuracy. CB&I started utilizing a schedule analysis software (Acumen Fuse) to assess the health of its schedule which helped improve schedule quality. A more detailed Risk Management Plan was also implemented to better understand and assess the project risks. Also, as was done with the JWLPS project, a Quantitative Risk Analysis ("QRA") of the schedule was conducted by PricewaterhouseCoopers with help from a CB&I foreman to understand the impact of potential risks on forecast durations and key milestones. This QRA informed all stakeholders of worst case, most likely, and best-case windows in which major milestones would be completed and when the Project would be in service. In summary, all these adjustments and improvements contributed to the successful outcome of the Project.

Q34. PLEASE EXPLAIN THE PROCESS EMPLOYED BY ELL TO ENSURE THAT PAYMENTS MADE TO CB&I WERE APPROPRIATE UNDER THE TERMS OF THE EPC AGREEMENT.

A. Payments to CB&I under the EPC agreement were made in accordance with well-defined milestones. ELL monitored CB&I's progress toward milestones and was able to challenge or validate that all requirements of a specific milestone, including those related to quality of work, had been met prior to payment being issued. Achievement of milestones had to be substantiated with documentary, photographic, or other evidence. If the Project Team was satisfied that a milestone was met, supporting documentation was submitted to the Contract Manager for verification that the milestone was achieved, and payment was required under the EPC agreement. The Project Team's objective was to pay CB&I only what was required under the EPC agreement and only when required. Mr. Maddox discusses the controls relating to invoice processing and payment in his direct testimony.

Q35. WAS THE WORKING ARRANGEMENT BETWEEN THE COMPANY AND CB&I TYPICAL OF WHAT YOU HAVE EXPERIENCED ON PRIOR CONSTRUCTION PROJECTS?

A. The relationship between ELL and CB&I was more collaborative than that typically seen between an owner and EPC contractor. In connection with the execution of JWLPS, the Company and CB&I adopted a partnering approach in order to gain alignment between the two companies' goals, wherever possible, This approach was carried forward into LCPS. This alignment enabled any emerging issues to be

addressed promptly and effectively. This approach was a significant driver behind the Project's success, because it established team ownership of the Project and accountability of the Project Team with a written, well-communicated charter that defined acceptable behaviors and core values. Throughout the Project, I observed the companies' pursuit of a mutually beneficial relationship manifested through honesty, integrity, trust, and mutual respect.

IV. RISK MANAGEMENT

Q36. HOW DID THE COMPANY CONDUCT RISK ASSESSMENT AND RISK TRACKING INTERNALLY?

A. The Project Team used a structured and procedure-driven risk identification, ranking, and resolution process. This process involved a database to capture, organize, and prioritize risk issues related to the project and to track the disposition of individual items. The Project Team also conducted periodic risk reviews of open and closed risk items to ensure proper prioritization and disposition. These assessments were included in monthly reports to the ESC. Furthermore, a monthly project cost QRA was conducted to determine the level of contingency based on known risk, unknown risk, and estimate uncertainty. The contingency value obtained from the QRA would then be compared to the project contingency to ensure sufficient contingency was kept in the project estimate. All these analyses helped the Project Team understand, assess, and mitigate cost and schedule risk to the project.

Q37. DID CB&I HAVE PROCESSES IN PLACE TO IDENTIFY, WITHIN THE SCOPE OF ITS RESPONSIBILITIES, POTENTIAL CHALLENGES TO THE SAFETY, QUALITY, SCHEDULE, AND COST OF THE PROJECT?

A. Yes. CB&I maintained an active matrix for risk items and discussed any new risk items during the weekly status meetings with the Project Team. The risk items were tracked in the CB&I action tracking database. In addition, CB&I conducted regular meetings with its subcontractors to assess risk.

Q38. DID ELL ESTABLISH ACTION PLANS TO MANAGE SIGNIFICANT RISKS?

A. Yes. The Project Team ensured that risk issues were formally evaluated and assigned ratings based on probability and consequence. Any issue meeting a defined threshold required a contingency or mitigation plan to be developed. Plans that addressed risks that could significantly affect the Project's safety, quality, cost, or schedule were submitted to the ESC for approval. The submission had to include justification for the contingency plan, as well as details for the proposed actions and the associated costs which would ultimately be funded from the contingency fund. Any high-risk items were presented to and reviewed by the ESC.

Q39. WHAT DID YOU IDENTIFY AS THE MOST SIGNIFICANT RISKS FOR THE PROJECT AND HOW WERE THOSE RISKS MANAGED?

A. Below are the most significant risks identified during the Project and their associated mitigation:

1) Contractor staffing — Availability of skilled workers in the local market was adversely affected by the amount of work being performed elsewhere in the area. To attract more workers, CB&I changed their pay rate, per diem, and retention bonus. Thorough staffing reviews were conducted monthly during the onsite project review meetings. Entergy project and controls management groups worked with CB&I weekly to ensure adequate staffing was available to manage the critical path in an effort to ensure that staffing was never a threat to the contractual schedule.

2) Labor productivity — Lower than expected contractor labor productivity was experienced during construction, with the potential to affect pipefitting welding, and electrical and instrument craft schedules. Because of the relationship between staffing head-count and productivity, the Project Team worked both issues together on a weekly basis to manage the schedule.

3) Construction work quality — On new-build generation projects, quality of workmanship has the potential to affect both the near-term start-up and long-term life cycle operation of the plant. Entergy employed a Quality Assurance/Quality Controls ("QA/QC") Specialist on-site who worked with the Entergy and contractor field engineers to ensure quality installation of all systems. In addition to daily walk downs and system inspections by the engineers, the QA/QC Specialist orchestrated monthly quality audits with the Project Team throughout the project.

4) Hurricane risk — The Project was exposed to the June 1 through November 30 Atlantic Hurricane seasons starting in the summer of 2017 and continuing

annually through the completion of the Project. Mitigation planning for each of these seasons included individual hurricane preparedness plans by CB&I and Entergy and a combined collaborative plan to protect the site.

5) Financial Health of EPC Contractor – During the pendency of the Project, it became apparent that CB&I was having significant financial difficulties. These difficulties culminated in CB&I instituting bankruptcy proceedings on January 21, 2020. In order to mitigate these risks, [redacted] On June 30, 2020, CB&I's bankruptcy plan was confirmed and the EPC contract was assumed as part of this confirmation. CB&I was ultimately able to take the Project to Substantial Completion and the Company's mitigation efforts were not needed.

Q40. DID THE PROJECT OBTAIN ALL REQUIRED REGULATORY APPROVALS?

A. Yes, it did. In addition to the approvals required by the Commission, the Company obtained several other approvals required to complete the Project. In the course of planning for the Project, the Company (a) determined that it might need certain

regulatory approvals from the United States Army Corps of Engineers ("USACE"), Louisiana Department of Environmental Quality ("LDEQ"), Louisiana Department of Transportation and Development ("LADOTD"), Federal Aviation Administration ("FAA"), the Louisiana Department of Health ("LDH"), and Calcasieu Parish and (b) studied which approvals were required. Table 2 summarizes the permits and approvals that were obtained.

1

Table 2

Permit	Permit Number and Date Issued
Air (PSD, Title V, Acid Rain)	The LDEQ issued the following permits on 9/20/2017: • PSD-LA-818 (PSD) • 0520-00497-V0 (Title V) • 0520-00497-IV0 LDEQ issued Temporary Variance to 0520-00497-V0 for additional commissioning emissions issued September 6, 2019 and expires March 31, 2020 LDEQ issued minor modification to Permits 0520-00497-V1 and PSD-LA-818 (M-1) on September 26, 2019
Wetland Jurisdictional Determination	The USACE issued the following preliminary jurisdictional determinations: • MVN-2015-02516-SK, Issued 10/27/2016 • MVN-2015-02516-1-SR, Issued 4/11/2017
Clean Water Act Section 401	The LDEQ issued Section 401 Water Quality Certification WQC 170315-01 on 5/23/2017.
Clean Water Act Section 404	The USACE issued Section 404 Permit MVN-2015-02516-WPP on 9/19/2017, and issued modified permit on 11/16/2018 to include Hwy 379 road widening.
Louisiana Pollutant Discharge Elimination System ("LPDES")	LDEQ issued LPDES permit LA0127334 on 9/19/2019. The permit became effective on October 1, 2019.
Department of Transportation	LADOTD issued a Letter of Compliance approving roadway improvements and mitigation measures outlined in ELL's Traffic Impact Study (TIS) on 4/3/2018. LADOTD issued the Access Connection Permit Certificate on July 26, 2019.
Federal Aviation Administration	The FAA issued Determination of No Hazard to Air Navigation letters on 1/28/2016 for the Stacks A and B at the LCPS. The FAA Stack A Maximum Height Notification was submitted on 10/4/2018 and the notification for Stack B was submitted on 11/1/2018.
Louisiana Department of Health	The LDH certified the sanitary waste system for installation in LA on 1/31/2019 and a Temporary Permit for construction of On-Site Wastewater Treatment System was issued on 2/7/2019. Sewerage treatment plant installer certification was provided to LDH on 1/17/2020.

V. PROJECT COMPLETION

Q41. YOU MENTIONED THAT SUBSTANTIAL COMPLETION OCCURRED ON MARCH 26, 2020. CAN YOU EXPLAIN WHAT WAS REQUIRED UNDER THE EPC AGREEMENT FOR THE WORK TO BE CONSIDERED SUBSTANTIALLY COMPLETE?

A. Yes. In order to achieve "substantial completion" as defined in Section 1.42 of the EPC Agreement and Exhibit A, Section 4.0 paragraph 1, CB&I was required to demonstrate that it had met several enumerated criteria for the Project to operate as planned, completed commissioning of the equipment, agreed with ELL on a "punch list" of items to be completed, and provided appropriate documentation.

Q42. WHAT IS INVOLVED IN COMMISSIONING THE EQUIPMENT?

A. During start-up and commissioning of any new power plant, there is a significant amount of adjustment and tuning required to prepare the plant for commercial operation. CB&I used a dedicated team of specialists to perform start-up and commissioning and employed representatives of the OEMs for various aspects of start-up and commissioning.

Q43. DURING COMMISSIONING, WERE ANY ISSUES ENCOUNTERED AND ADDRESSED?

A. Yes. A majority of the issues encountered during commissioning were typical adjustment and tuning activities associated with the start-up of a new plant. These

types of activities are addressed as soon as they become apparent. A few unexpected concerns did surface and are discussed below.

During construction, the CT OEM issued a revised design on the turbine combustion baskets that were replaced by the EPC contractor and OEM at no additional cost to the Company. Associated with this basket change, the CT OEM has also installed some piping, valves, and controls on the gas turbines to assist in achieving the load turndown requirements. The changes made allow the units to meet this load turndown requirement during steady state conditions, however additional tuning is needed for the units while modulating load. At this time, this is expected to be at no additional cost to the Company.

The cooling tower fan blades have experienced delamination of the coating on many of the blades due to the ambient conditions in which the coating was applied during the manufacturing process. The OEM manufactured a complete set of new fan blades at no cost to the Company. The new blades were installed in July 2020 and no issues have been observed to date.

The following valves, FWS-FV-0570 (two), FWS-FV-0537 (two), and FWS-FV-0235 (four), experience severe service for their intended purpose. Generally, they are designed to avoid a cavitating condition or flashing condition, however we are experiencing both cavitating conditions and flashing conditions. In working with the EPC contractor and OEM's to address these conditions, they changed out the valves to meet both severe service conditions for a total cost of $53,428 to the Company. The EPC paid all remaining costs, approximately $500,000, to change out these valves.

Additionally, the project experienced issues with the HRS-PV-0030 (two) valves. The valves were upgraded to a stronger seat material and strainers were added in as well. The EPC paid for the two new seat rings and one strainer assembly and Entergy agreed to pay $34,674 for one of the strainer assemblies.

Insulation lining in the HRSG also experienced some fouling, which has caused operational issues. A resolution was installed in one area of each HRSG in May 2020 and the other areas of each HRSG were replaced in Spring 2021 at no cost to the Company.

Another issue was excessive boiler feed pump drive motor vibrations. A root cause analysis involving Entergy, the EPC contractor, and the boiler feed pump motor OEM vendor identified a solution for this issue which required a stator re-design for the motors. All boiler feed pump motors were replaced with this new stator re-design with two occurring prior to commercial operation and two occurring in May 2020 at no cost to the Company. All four of the new redesigned motors have been operating within the OEM specified design limits since replacement with no issues.

There was also damage to the steam turbine thrust bearing pads which was the result of the entry of an incorrect logic sequence which resulted in abrupt shut down of the steam turbine. The resulting repairs totaled approximately $696,000. The EPC paid 50% these costs, which is reflected in change order CO-09.

Q44. WAS ANY PERFORMANCE TESTING REQUIRED FOR THE PROJECT TO BE DECLARED SUBSTANTIALLY COMPLETE?

A. Yes. CB&I was required to demonstrate that the unit met contract requirements for overall plant output (kW) and heat rate, while complying with environmental permits. The test is conducted generally according to The American Society of Mechanical Engineers Performance Test Code 46 within a 24-hour period with both CTs at base load, evaporative coolers on, and HRSG duct firing in service. Table 3 below, which contains HSPM, reflects the contractual requirement and the results of the test:

Table 3 [redacted]

Description	Plant Net Power Output (kW)	Plant Heat Rate (Btu/kWh, HHV)
Guarantee Point	[redacted]	[redacted]
Corrected Test Average	[redacted]	[redacted]
Difference	[redacted]	[redacted]
Result	Pass	Pass

Q45. SUBSEQUENT TO SUBSTANTIAL COMPLETION, HAS THE UNIT PERFORMED AS EXPECTED?

A. Yes. Even though substantial completion has occurred, the unit is a new plant consisting of 154 systems that require significant testing, tuning, and adjustment. In this period, adjustments are made to the unit based on operating experience.

Q46. HAS THE PROJECT ACHIEVED FINAL ACCEPTANCE?

A. No, not yet. Final Acceptance is defined in the EPC agreement in Section 1.20 and in order to achieve final completion, CB&I is required to complete the punch-list items agreed to prior to substantial completion and provide documentation as described in

Exhibit A, Section 4.0, paragraph 2 of the EPC Agreement. As allowed under the EPC agreement, at Substantial Completion, Entergy withheld payment in the amount of $2.0 million until all required performance and reliability tests are completed along with the $8 million in associated milestones for successfully completing these tests. Additionally, CB&I provided an ascending letter of credit in the amount equal to the agreed-upon value of the punch-list items, with such amounts to be released as punch-list items are completed. While CB&I has made progress on the punch-list items, some of that work remains to be complete as reflected on the current punch-list (as of August 17, 2021), which is attached as Exhibit GCD-5. Additionally, CB&I is required to meet several additional testing requirements required in Sections 9.0, 10.0, and 11.0 of EPC Agreement Exhibit A and described in further detail below.

Q47. WHAT IS THE STATUS OF THE TESTING MENTIONED ABOVE?

A. The testing that remains to be completed is the Demonstration Testing which is comprised of the Steam Turbine Trip Test, 1B Gas Turbine Islanding Testing, Turndown Testing, and Boiler Feed Pump Tests. The 1A Gas Turbine Islanding Test has been completed successfully. The remaining testing will be conducted when Midcontinent Independent System Operator, Inc. determines such testing and outages can occur without interfering with reliable operation of the transmission system.

Q48. WHEN IS FINAL ACCEPTANCE EXPECTED?

A. Including the current change orders, Final Acceptance is expected to occur in the Spring of 2022. The EPC Agreement requires that Final Acceptance occur no later

than 12 months following Substantial Completion. Although Final Acceptance will not occur within the delays specified in the EPC Agreement, the Company has secured approximately $4 million of financial assurances to ensure Final Acceptance is completed.[9] Additionally, when Final Acceptance does occur, the ongoing issues mentioned in my response to question 43, namely the valves and insulation issues, will be excepted from Final Acceptance and resolved during the power station's planned Spring 2022 outage.

Q49. IS THE MAJOR EQUIPMENT COVERED UNDER ANY WARRANTIES?

A. Yes. The EPC contract provides a Base Warranty Period of 12 months following substantial completion on design, workmanship, material, major equipment, and balance of plant equipment which is subject to the overall limit of liability provided in the EPC agreement. Furthermore, an Extended Warranty is included to cover repaired or replaced items for an additional twelve months, but not greater than 24 months from the original warranty period. In addition to the base warranty from CB&I, separate 12-month warranties for certain major equipment were provided by the respective OEMs.

Q50. DID ANY ISSUES EXPERIENCED DURING START UP AND COMMISSIONING ADVERSELY AFFECT WARRANTY COVERAGE?

A. No. We are, however, continuing to monitor the issues mentioned in question 43.

[9] These financial incentives consist of $1 million in withheld milestone payments and a $3 million letter of credit in favor of the Company.

VI. ACTUAL PROJECT SCHEDULE AND COSTS

Q51. PLEASE PROVIDE A CHRONOLOGICAL SUMMARY OF THE PROGRESS OF THE PROJECT.

A. Table 4 below shows the dates of successful completion of the major milestones for the Project.

Table 4

	EPC Baseline Date	Completed	Forecast
Limited Notice To Proceed	Feb 2017	Feb 2017	Complete
Order Major Equipment	Mar 2017	Mar 2017	Complete
Full Notice to Proceed	Aug 2017	Aug 2017	Complete
Site Mobilization	Oct 2017	Oct 2017	Complete
Start HRSG Deliveries	June 2018	June 2018	Complete
Start CTG Deliveries	Aug 2018	Aug 2018	Complete
Start STG Deliveries	Nov 2018	Nov 2018	Complete
Backfeed Power Available	Jul 2019	June 2019	Complete
First Fire Unit 1	Nov 2019	Dec 2019	Complete
Contractually Required EPC Substantial Completion Date	May 2020	Mar 2020	Complete
Project Substantial Completion	May 2020	Mar 2020	Complete

Q52. PLEASE IDENTIFY THE ACTUAL EXPENDITURES FOR THE PROJECT, INCLUDING THE PRINCIPAL COST CATEGORIES AND A DESCRIPTION OF WHAT THE SPENDING ACCOMPLISHED.

A. Table 5 below, which contains HSPM, summarizes actual expenditures through October 31, 2021.

Table 5 [redacted]

Actual Costs Through October 31, 2021 ($000s)					
$M	Original Budget (1)	Spending Inception thru October 31, 2021 (2)	Estimated Future Spending (3)	Revised Forecast (2+3)=(4)	Variance (Over) / Under (1-4)
EPC Costs	[redacted]				
Sales Tax	[redacted]				
Other Costs	[redacted]				
Owner Contingency (Direct and Indirect)	[redacted]				
AFUDC	[redacted]				
Total Project Cost	**828.7**	**808.7**	**1.5**	**810.2**	**18.5**
Transmission Upgrade Projects	43.0	50.9	0.0	50.9	(7.9)
Total Project Cost and Transmission Upgrades Projects	**871.7**	**859.6**	**1.5**	**861.1**	**10.6**

I would note that Table 5 is presented in a format that permits a relative comparison to the estimate provided in Docket No. U-34283. Internally, the cost associated with the short, on-site transmission lines to connect the CTs and the ST to the Nelson switchyard are tracked against a transmission funding project, as opposed to the budget to construct the Project; these costs of approximately $50.9 million are included in the "Transmission Upgrade Projects" row of Table 5. The Project-related transmission funding projects[11] total $50.9 million and the Project construction costs total $810.2 million, for a grand total of $861.1 million.

[10] Amounts may not tie due to rounding.

[11] These are the costs for the short, on-site transmission lines, generator interconnection in the Nelson switchyard, and transmission upgrades associated with the Project.

Q53. PLEASE DESCRIBE WHAT KIND OF COSTS ARE INCLUDED IN THE EPC COST ITEM LISTED IN HSPM TABLE 5 ABOVE.

A. EPC Cost includes costs incurred by CB&I and billed to ELL in the performance of the EPC agreement, including the following:

1. engineered equipment, including the CTs, ST, HRSGs, generator step-up transformers, boiler feed pumps, auxiliary transformers, and water treatment system;
2. home office engineering and construction management services, including procurement, project controls, scheduling, and progress tracking;
3. supervisory and administrative staffs at the construction site;
4. craft labor (such as welders, electricians, and pipefitters);
5. construction materials (copper, steel, concrete, etc.) used by both CB&I and subcontractors;
6. subcontractors;
7. other site improvements and balance of plant requirements;
8. the indirect construction costs that support the construction project (such as scaffolding, administrative offices, or safety equipment);
9. sales taxes born by CB&I on consumables; and
10. labor and materials associated with the dedicated start-up and commissioning teams.

Q54. WHAT TYPES OF COSTS ARE INCURRED OUTSIDE OF THE SCOPE OF THE EPC AGREEMENT?

A. These are costs that were or will be incurred by ELL directly:

Sales Tax: ELL paid sales tax outside of the EPC agreement for permanent facilities. This original budget was based upon ESL's interpretation of the sales tax rules in Calcasieu Parish at the time of the self-build proposal submittal.

Other Costs: This category captures the costs incurred directly by the Company outside of the EPC agreement, including internal cost of ESL labor, outside services and related expenses to manage the construction of the Project. This category includes spare parts that would be used after the plant is constructed; O&M related tools and equipment; and gas pipeline connection costs and fees during construction. This category also includes the cost of insuring the Project during construction.

Owner Contingency: The original budget included a general contingency estimate of approximately 3.4%% of the total Project cost, excluding transmission upgrades, to allow for circumstances that could affect the cost of the Project that were unidentified or uncertain.

Allowance for Funds Used During Construction ("AFUDC"): An allowance for funds used during construction calculated at the Company's weighted average cost of capital.

Transmission Upgrade Projects: The cost to interconnect generators in the Nelson switchyards and transmission upgrades necessary to allow the Project to obtain network resource status.

Q55. PLEASE EXPLAIN THE VARIANCES NOTED IN TABLE 5 ABOVE.

A. The variances in Table 5 are summarized as follows:

EPC Costs - The negative variance is due to the change orders related to various design and scope changes as well as per diem adjustments.

Sales Tax - The negative variance is due to a revised sales tax estimate based on a change in Louisiana state tax laws.

Other Costs - The negative variance is due to additional internal operating expenses, consulting costs, and additional environmental scope. These increased expenses were largely offset by changes to the material loader rates and minimal owner forecast refinements.

Owner Contingency - As the project nears Final Acceptance, the risk register was updated and as a result, the total project cost has been reduced by $10.6 million, which was removed from contingency.

AFUDC - The positive variance resulted from the earlier Substantial Completion date of March 26, 2020 that eliminated April and May 2020 AFUDC charges from the total. The variance was also positively affected by using fewer contingency dollars than originally expected. The actual AFUDC, capital suspense, and material loader rates continue to be less than the budgeted rates.

Q56. HOW WAS THE CONTINGENCY FUND UTILIZED ON THE PROJECT?

A. The Project Team tracked all project cost changes, including EPC change orders or changes to the other costs on the project and used the contingency fund to off-set those changes where underruns in other cost categories were insufficient. Other than the

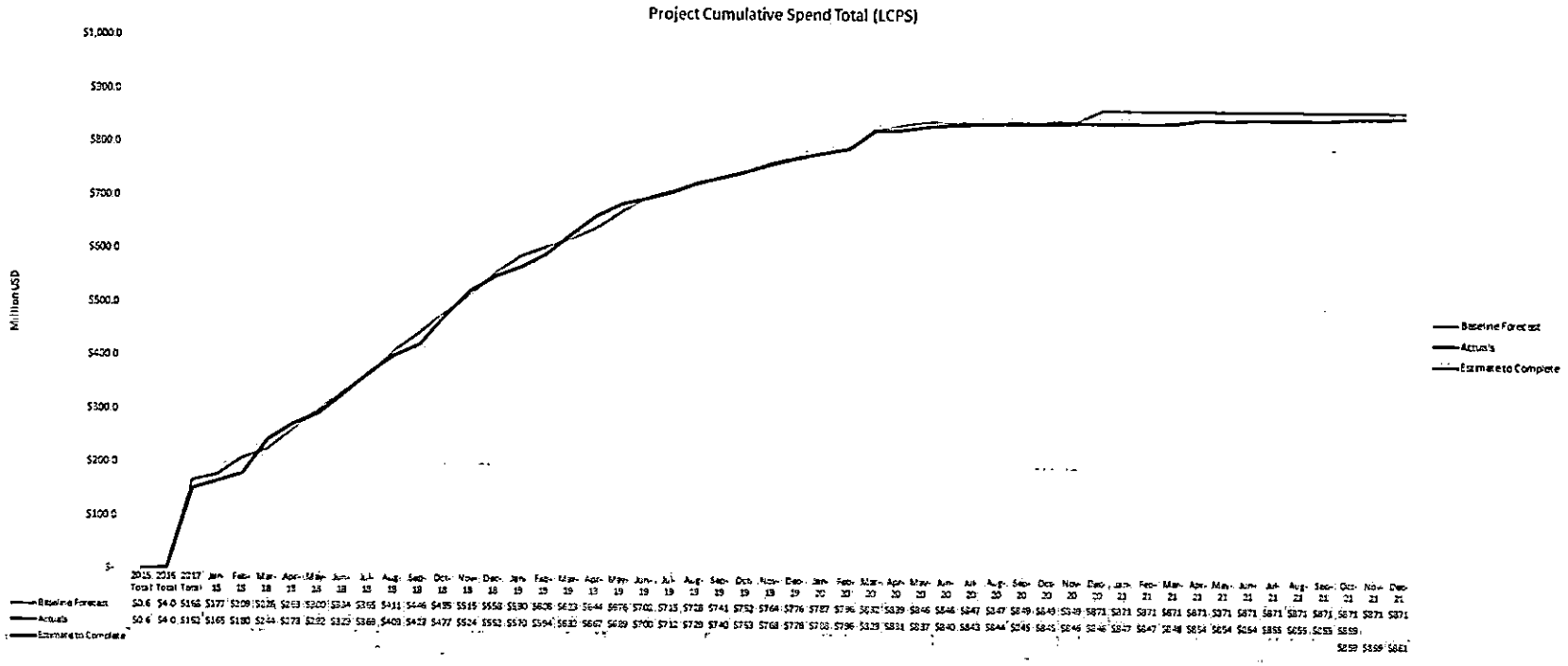
change orders discussed earlier, changes in other cost categories included AFUDC and other Indirect Costs, such as Capital Suspense.

Q57. PLEASE SUMMARIZE THE TIMING OF THE SPENDING AND FINANCIAL COMMITMENTS ASSOCIATED WITH THE PROJECT.

A. Figure 1 illustrates the Project's cumulative spending to date by month through October 31, 2021 (black line). Also reflected on Figure 1 is the cumulative spending projected through the end of the project (red line) versus the originally budgeted cumulative cash flows (blue line).

1

Figure 1


Project Cumulative Spend Total (LCPS)
Million USD
$1,000.0
$900.0
$800.0
$700.0
$600.0
$500.0
$400.0
$300.0
$200.0
$100.0
$-
Baseline Forecast
Actuals
Estimate to Complete

2

Q58. HOW DID THE PROJECT TEAM TRACK COST EXPENDITURES?

A. Initially, a cost model was developed using the baseline budget for each cost category. An initial cashflow was developed using the baseline schedule milestones which were tied to CB&I payment milestones. At the completion of each month, the actuals were pulled from financial software and input into the cost model while adjusting the remaining cashflow. The actual charges were verified by the Project Controls Manager and the Project Analyst and communicated to the Project Manager and the rest of the Project Team for verification. The Project Team conducted monthly meetings at which the team reviewed monthly actuals, monthly and overall project variances, and necessary adjustments to the future cashflow. Contingency was tracked and recorded if the actual charges were part of additional scope of work and recalculated each month. Any additional cost outside of the baseline budget numbers was tracked using the Change Management Process as explained earlier in my testimony.

Q59. DID CB&I EARN ANY INCENTIVES UNDER THE EPC AGREEMENT?

A. Yes. In accordance with the EPC agreement, CB&I earned a $1.725 million early completion incentive relating to CB&I's completion of the project 36 days ahead of their EPC agreement date. CB&I did not earn any other incentives.

Q60. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, at this time.

AFFIDAVIT

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LA Public Service Commission

STATE OF TEXAS

COUNTY OF MONTGOMERY

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

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

Gary Dickens

SWORN TO AND SUBSCRIBED BEFORE ME
THIS 19th **DAY OF** November**, 2021**

Carol Tompkins
NOTARY PUBLIC

My commission expires: February 1, 2025

CAROL TOMPKINS
My Notary ID # 130989368
Expires February 1, 2025