shape data, historical curtailment information for curtailable/interruptible customers, and transmission loss estimates.

B. Considerations for Allocation of Resources to ETI

Q16. HOW DOES THE ENTERGY SYSTEM DETERMINE THE ALLOCATION OF NEW RESOURCES AMONG THE OPERATING COMPANIES?

A. As discussed by Mr. Goin, the System Agreement (Section 4.02) allows the Operating Committee to allocate certain power purchases on a System-wide basis to all the Operating Companies by their responsibility ratios, or to directly assign a purchase to less than all of the Operating Companies, and do so on a basis other than responsibility ratio. The following factors have been considered by the Operating Committee in recent resource allocation decisions:

- Relative Total Production Costs – Long-term total production cost trends among the Operating Companies.
- Peak Load + 10% Capacity Deficit – Each Operating Company's resource capability position relative to its peak load plus a minimum reserve level of 10%.
- Supply Role Capacity Deficit – Each Operating Company's resource position with regard to its capacity requirements by supply role.
- Responsibility Ratio – Each Operating Company's resource position relative to its responsibility ratio.

- Supply Risks – Each Operating Company's supply risks associated with generation unit availability and price volatility.

Q17. PLEASE DISCUSS ETI'S SUPPLY POSITION RELATIVE TO THE OTHER ENTERGY OPERATING COMPANIES PRIOR TO THE ACQUISITION OF RESOURCES THAT BEGAN AFTER JUNE 30, 2011, THE TEST YEAR END OF ETI'S LAST RATE CASE.

A. During that period, ETI had a capacity deficit relative to other operating companies. From a planning perspective, ETI was in a "short" position, meaning that the capacity of its own resources was less than its peak demand plus a minimum reserve level of 10 percent. ETI also had a base load supply capacity deficit, meaning that relative to other companies, it was short base load resources. Because ETI's resources were fueled mostly by natural gas, its supply risks vis-a-vis price volatility was somewhat higher than other Entergy Operating Companies. Additionally, its relative production costs were generally higher than other Operating Companies, though this condition was mitigated somewhat by its receipt of Rough Production Cost Equalization payments from 2005 and 2011, as discussed by Company witness Michael J. Goin.

Q18. HOW DID ETI FIND ITSELF IN A CAPACITY SHORT POSITION?

A. There are two main reasons. First, the Company has historically experienced load growth in its service territory. Second, for much of the

last fourteen years the Company was under a regulatory directive to position itself for retail competition.[4] The uncertainty concerning whether ETI's retail customers would have access to other suppliers made it difficult to plan and commit to long term resources. In fact, that uncertainty and the corresponding regulatory directive resulted in the Company foregoing long-term resource procurement. During this period, ETI relied on the resources of other Entergy Operating Companies under Service Schedule MSS-1 of the System Agreement, though, as Mr. Goin discusses, ETI was required to make reserve equalization payments to other Operating Companies as also required by Schedule MSS-1. ETI also relied on short-term and limited-term purchases to meet its growing demand.

Q19. PLEASE SUMMARIZE THE COMPANY'S CURRENT RESOURCE POSITION?

A. In 2009, as a result of SB 1492, the directive to implement retail competition in ETI's service territory was lifted, and ETI entered into various PPAs to address its costs, its resource shortage situation and its

[4] *See* PURA Ch. 39 requiring retail competition in 2002 (adopted 1999); *Staff's Petition to Determine Readiness for Retail Competition in the Portions of Texas within the Southeastern Reliability Council*, Docket No. 24469 (Dec. 20, 2001) (delaying and setting conditions on the Company's transition to retail competition); *Application of Entergy Gulf States, Inc. for Certification of an Independent Organization for the Entergy Settlement Area in Texas,* Docket No. 28818 (July 12, 2004) (further delaying and setting conditions on the Company's transition to retail competition; PURA Ch. 39, Subchapter J (deferring the Company's transition to retail competition in 2005 and lifting the obligation to continue the transition to retail competition in 2009).

resource mix, including those PPAs addressed in my testimony. Notwithstanding the very significant improvements in ETI's capacity position, the fact of the matter is that ETI still does not own or control sufficient resources to serve its capacity requirements. The remainder of my testimony addresses the specific purchased power resources that ETI has acquired since the end of the test year in the last rate case and that are included in test year costs in this case.

III. ETI-ALLOCATED PURCHASED POWER AGREEMENTS THAT BEGAN AFTER JUNE 30, 2011

Q20. HOW IS THIS SECTION OF YOUR TESTIMONY ORGANIZED?

A. The System generally acquires the resources necessary to satisfy the forecasted load requirements of the System either through some type of RFP process to solicit competitive bids for resources or bi-lateral negotiations when the System receives unsolicited offers. Accordingly, I have divided the resources discussed in this section into those acquired through an RFP process and those acquired through bilateral negotiations following an unsolicited offer.

Q21. WOULD SPO ACQUIRE A RESOURCE THROUGH BILATERAL NEGOTIATIONS RATHER THAN AN RFP PROCESS?

A. Yes. As a practical matter, SPO cannot control whether an interested party makes an unsolicited offer outside the context of an RFP or the

timing of such an offer. It is appropriate that such offers be evaluated in the context of the needs of the System. SPO generally employs the same criteria as that used in an RFP to determine the need for the resource and the reasonableness of the price.

Q22. OTHER THAN YOUR TESTIMONY, DOES THE COMPANY'S FILING INCLUDE OTHER SUPPORT FOR THE TRANSACTIONS YOU DISCUSS IN YOUR TESTIMONY?

A. Yes. The workpapers to Schedule I-15 include portions of Entergy Operating Committee minutes and attachments that support the resources discussed and the allocation of those resources among the Operating Companies. My workpapers, discussed below, also provide support for the selection of these resources.

A. PPA Resources Acquired Through an RFP Process

Q23. PLEASE PROVIDE AN OVERVIEW OF THE ACQUISITION OF RESOURCES THROUGH THE RFP PROCESS.

A. The formal RFP process begins with the identification of the resource needs for the System, as I discussed above, which results in the determination of which products the RFP will request. SPO then oversees the design, development, and implementation of the RFP. As further described below, an Independent Monitor ("IM") is typically involved with this process. The objectives, products sought, process and other details

unique to each RFP are reduced to writing and publicly posted on ESI's RFP website, and interested parties are notified of the posting. I include in my workpapers the Main Body of the RFP conducted during the Reconciliation Period and discussed in my testimony.

Once the proposals have been received, the Planning Analysis group evaluates the proposals under strict confidentiality protocols, and recommends to the Operating Committee which proposals should be placed on the short list for further negotiation. After the Operating Committee approves the proposals to be included on the short list, SPO's Supply Procurement group manages the negotiations with the short-listed bidders. The resource planning principles, planning objectives, and resource supply strategies that the Operating Committee adopted to guide the overall planning process were described in detail in each formal RFP issued by ESI on behalf of the Operating Companies.

Q24. WHAT IS THE ROLE OF AN IM IN THE RFP PROCESS?

A. ESI's RFP process typically involves the retention of an IM to ensure that the RFP is conducted in a fair and impartial manner. The IM (1) oversees the design and implementation of the RFP solicitation, evaluation, selection, and contract negotiations process to ensure that it will be impartial and objective, and (2) provides an objective, third-party perspective concerning ESI's efforts to ensure that all proposals are treated in a consistent fashion and that no undue preference is provided to

any bidder. The IM's responsibilities are set out in a Scope of Work made available on the Company's RFP website. The Main Body of the RFP discussed in my testimony and the IM report corresponding to that RFP is made part of my workpapers. Although I have attached this IM report as workpapers, it is important to note that the content of that report is solely the work of the IM, who is entirely independent of the Company and not a consultant to the Company.

Q25. IN GENERAL, HOW ARE RFP PROPOSALS EVALUATED?

A. For the RFP, the evaluation process considers the effect of each of the proposals on the overall expected production costs of the System. The evaluation of life-of-unit ("LOU") and day-ahead MUCCO and MUCPA proposals include production cost simulations to account for the fact that each of the resources has different characteristics, such as cost, availability, and duration.[5] The objective of the production costing evaluation process is to identify the resources that produced the lowest reasonable total System production cost for each incremental kilowatt added.

Qualitative evaluations of various non-economic factors are also performed. As the field of viable candidates is narrowed, further

[5] A MUCCO is a Multi-year Unit-Contingent Call Option. A MUCPA is a Multi-year Unit-Contingent Purchase Agreement for a generating resource.

negotiations with bidders are held to secure the most favorable terms possible.

Generally, the evaluation of proposals submitted through an RFP uses a process that includes the following three major steps:

1. initial individual proposal screening and production cost analysis which result in individual candidate proposal selection, and individual candidate proposal deliverability evaluation;
2. verification of individual candidate proposals considering deliverability evaluation; and
3. portfolio identification, portfolio production cost analysis, portfolio deliverability evaluation, and portfolio selection.

Q26. WHAT ROLE DOES THE OPERATING COMMITTEE SERVE IN THE DETERMINATION OF WHICH RFP OFFERS ARE ACCEPTED?

A. As Company witness Goin testifies, the Operating Committee has been delegated the authority through the System Agreement to determine which resources should be acquired for the System to meet its load obligations and serve its customers at a reasonable cost. As such, the Operating Committee determines which RFP offers are accepted once they have been evaluated through the RFP process.

Q27. DID ESI CONDUCT AN RFP THAT RESULTED IN TEST YEAR CAPACITY AND ENERGY COSTS THAT BEGAN AFTER JUNE 30, 2011?

A. Yes. During 2009 and 2010, ESI conducted the Summer 2009 Request for Proposals for Long-Term Supply-Side Resources ("Summer 2009 RFP"), seeking combined-cycle gas turbine ("CCGT"), combustion turbine ("CT"), and solid fuel resources. The Summer 2009 RFP resulted in the ten-year Carville PPA. Purchases pursuant to the Carville PPA began on June 1, 2012. Among other benefits, the Carville PPA was expected to reduce fuel costs due to the efficiencies of its generation. I discuss the Carville PPA in greater detail in the last section of my testimony addressing the Company's Special Circumstances request.

Q28. DO YOU ADDRESS ANY OTHER RESOURCES ACQUIRED THROUGH AN RFP PRIOR TO THE SUMMER 2009 RFP?

A. Yes. In the last section of my testimony, I discuss the Frontier PPA, which was acquired through the Winter 2009 Western Region RFP ("Winter 2009 RFP"). While the Frontier PPA has been presented for review in previous rate cases, I address capacity costs and savings associated with 150 MW of "Step-up Capacity," not included in current rates.

B. PPA Resources Acquired Through Bilateral Negotiations

Q29. WHAT RESOURCES WERE ACQUIRED THROUGH BI-LATERAL NEGOTIATIONS OUTSIDE OF A FORMAL RFP PROCESS?

A. The following resources were acquired through bi-lateral negotiations in the Reconciliation Period and Test Year:

- a 75 MW one-year call option between ETI and NRG for capacity and energy from the Exxon facility in Beaumont, Texas, with a delivery period that began on March 1, 2012, followed by a nine-month extension from March 1, 2013 until November 30, 2013;
- a 225 MW PPA between ETI and Sam Rayburn Municipal Power Agency ("SRMPA") for capacity and energy provided from SRMPA system resources for a delivery term of twenty-five years. Deliveries began on December 1, 2011; and
- a 186 MW one-year PPA with EAI that began January 2013 and expires on EAI's exit from the Energy System Agreement (December 19, 2013), for capacity and energy from certain resources from the group of coal and nuclear resources referred to as the EAI Wholesale Baseload resources ("2013 EAI WBL PPA").

Q30. PLEASE DISCUSS GENERALLY THE DECISIONS TO ENTER INTO THESE BILATERAL PURCHASES.

A. The two 75 MW purchases from NRG resulted from SPO's ongoing communications with generators in the ETI service area regarding

opportunities to address ETI's continuing need for capacity, and were both extensions of a previous contract for the same level of capacity that first began on March 1, 2011. Both contracts offer attractive capacity pricing.

SRMPA is a joint powers agency composed of the municipalities of Liberty, Livingston and Jasper, Texas and the City of Vinton, Louisiana. The 225 MW purchase from SRMPA will provide benefits to ETI as a system-based source of much-needed long-term base load capacity at an economically attractive price. In a filing before the FERC, SRMPA indicated that it restructured its long-term supply portfolio (which has been obtained largely from an affiliate of ETI) so that it could reduce its annual debt service obligations, which restructuring left SRMPA with additional resources that it offered to ETI.[6] The SRMPA PPA is a "system contingent" transaction, meaning SRMPA is required to deliver energy from its system resources to the extent its resources are available.

The EAI WBL PPA is a base load contract between ETI and EAI. ETI first entered into a PPA with EAI for EAI WBL resources in 2006. Since then, ETI has continuously taken capacity and energy from those resources. For example, the Test Years in ETI's two previous rate cases – Docket Nos. 37744 and 39896 – included PPAs for capacity and energy from EAI WBL resources, although the capacity cost for these PPAs was higher than the current capacity cost for the EAI WBL PPA. The

[6] *Entergy Services, Inc.*, Docket No. ER11-4415. *See also EWO Marketing, Inc.*, Docket No. ER11-4410.

immediately preceding WBL PPA – included in the Test Year for ETI's last rate case (Docket No. 39896) – was a three-year PPA selected as a result of the July 2009 RFP for Baseload Supply-Side Resources. All WBL PPAs have addressed both a System (and ETI) need for baseload resources and a need to meet System reliability targets.

The 2013 EAI WBL PPA differs from previous PPAs with EAI WBL resources in two important respects. First, EAI offered a different mix of WBL resources from previous WBL PPAs – namely, EAI did not offer the ANO-1 and Grand Gulf nuclear resources. Next, even though the total MW included in the 2013 EAI WBL PPA were less than in previous PPAs (336 MW v 186 MW), ETI was allocated the entirety of the PPA unlike previous WBL PPA with respect to which ETI was only allocated a portion of the capacity. The result was that ETI received more capacity (186 MW v 107MW) at a lower $/MW price.

The 2013 EAI WBL PPA also provided benefits that are not accounted for in a purely economic comparison:

- the 2013 EAI WBL PPA capacity provides 102 MW of dispatchable capacity from coal units that provides flexible capability:
- the 2013 EAI WBL PPA capacity offers fuel diversity that reduces the exposure to gas price fluctuations; and
- the 2013 EAI WBL PPA capacity resources have on-site fuel supply that reduces the potential exposure to short-term

delivery disruptions and the coal units provide high levels of dispatch flexibility.

C. Specific Allocation of Resources to ETI

Q31. WHAT IS ETI'S ALLOCATION OF THE CONTRACTS YOU IDENTIFY ABOVE?

A. The contracts were allocated by the Operating Committee to ETI as follows:

- the 485 MW Carville Contract was allocated 50% to ETI and 50% to EGSL, pursuant to ETI's sale of 50% of the associated capacity and energy to EGSL under Service Schedule MSS-4 of the Entergy System Agreement;[7]
- both 75 MW purchases from NRG were allocated 100% to ETI;
- the 225 MW purchase from SRMPA was allocated 100% to ETI; and
- the 2013 EAI WBL PPA was allocated 100% to ETI.

As discussed previously, the allocation decisions associated with these transactions are recorded in Minutes from the Entergy Operating Committee meetings, which minutes and attachment are included in the workpapers to Schedule I-15 of the filing.

[7] Company witness Goin describes the Entergy System Agreement and its associated schedules.

Q32. PLEASE SUMMARIZE THE REASONS FOR ALLOCATING THESE RESOURCES TO ETI?

A. As noted above, before the acquisition of these resources, ETI was short relative to its peak demand plus reserve; it was short relative to the capabilities of other Entergy operating companies; and it was short in its ownership of lower fuel cost base load resources including both solid fuel resources such as coal and nuclear and low heat rate, efficient natural gas resources. The Carville and 2013 EAI WBL PPA addressed both a need for System and ETI base load resources and reliability targets.

Even with these contracts, ETI remains the shortest Operating Company with respect to total capacity needs as of this date.

Q33. DO THE PPAS YOU HAVE DISCUSSED ABOVE HELP SATISFY IDENTIFIED RELIABILITY NEEDS OF THE SYSTEM, INCLUDING ETI?

A. Yes, for the reasons discussed above and as further set out in the presentations to the Operating Committee contained in the workpapers to Schedule I-15.

Q34. DO THE COMPANY'S RECENT RESOURCE COMMITMENTS TAKE INTO CONSIDERATION ENVIRONMENTAL INTEGRITY?

A. Yes. For example, two recent long-term transactions resulting from RFPs include express terms requiring the seller's compliance with all applicable

environmental laws, including compliance with changes in environmental laws and regulations.

Q35. ARE THE PPAS EXPECTED TO IMPROVE SERVICE OR LOWER COSTS TO CUSTOMERS?

A. Yes. As discussed above, the purchases are intended to help, and have helped, meet the Company's (and the System's) reliability needs, including those of ETI, at a cost lower than other alternatives. RFPs and negotiations conducted on behalf of the Company and the other Entergy Operating Companies are designed specifically to realize that objective. As a typical Entergy Operating Company RFP puts it: a primary objective of the RFP is "to solicit competitive proposals to...meet customer's needs in a reliable and economical manner." The evaluation process is designed "to...select proposals that meet ESI's resource planning and risk management objectives at the lowest reasonable cost." The primary objective of the economic evaluation is to procure resources that balance the System's objectives, including reliability, and lowest reasonable cost. This process includes a net System Benefits analysis that "relies on production cost modeling to assess the effects of each proposal, or combination of...proposals on total System cost." Based on this production cost analysis, a portion of the energy from the resources described above is expected to displace (and, has in fact already displaced) energy from higher cost system-owned generation. These

objectives and analyses guided the procurement of the resources described previously in my testimony – whether obtained through RFP solicitation and or bilateral (unsolicited) negotiations.

IV. SPECIAL CIRCUMSTANCES REQUEST FOR RECOVERY OF CAPACITY COSTS

Q36. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. I support the Company's request to recover certain capacity costs associated with the Frontier and Carville PPAs as reconcilable costs incurred during the Reconciliation Period. I provide a description of these two PPAs. I also discuss the monthly evaluation and analysis of the fuel and purchased power savings associated with these PPAs for the Reconciliation Period. Finally, I provide the results of my analysis, including the historical savings already obtained as a result of the PPA.

Q37. PLEASE SUMMARIZE YOUR RESULTS.

A. As described in greater detail below, with respect to that part of the Frontier PPA under consideration, my evaluation demonstrates a net savings to customers of $21,364,201 for the Reconciliation Period. These savings support special circumstances recovery of ETI's actual incurred fixed costs associated with this PPA, net of MSS-1 credits, of $17,519,110. With respect to the Carville PPA, my evaluation demonstrates a net savings to customers of $16,583,455 for the

Reconciliation Period. These savings support special circumstances recovery of ETI's actual incurred fixed costs associated with this PPA, net of MSS-1 credits, of $5,423,596. The combined total amount of capacity costs for these two PPAs for which the Company requests recovery as eligible fuel costs is $22,942,706. I present the results of my analysis in Exhibit RRC-1.

Q38. IS THE COMPANY'S SPECIAL CIRCUMSTANCES REQUEST ADDRESSED BY OTHER WITNESSES?

A. Yes. Support for this Special Circumstances request is also provided by Company witness Margaret McCloskey.

Q39. WHY IS THE COMPANY REQUESTING FUEL COST RECOVERY OF FRONTIER AND CARVILLE CAPACITY COSTS INCURRED DURING THE RECONCILIATION PERIOD?

A. As further described below, the Frontier and Carville capacity costs which the Company seeks to recover have not been previously recovered, either through current base rates or through any other recovery mechanism. Nevertheless, as I demonstrate below, the Company's customers have significantly benefited from a reduction in fuel costs (or fuel savings) directly associated with these two PPAs that are greater than the level of capacity costs ETI is requesting to recover.

Q40. PLEASE DESCRIBE THE FRONTIER PPA.

A. The Frontier PPA is a ten-year agreement that commenced on May 1, 2010 at an initial capacity level of 150 MW. On May 1, 2011, the capacity provided under the PPA increased from 150 MW to 300 MW ("Step-up Capacity"). ETI retains 100% of the capacity and energy from the PPA. The PPA was acquired through the Winter 2009 RFP, which solicited long-term resources to meet reliability needs within the Western Region, utilizing the processes, analyses, and decision-making criteria associated with RFPs that I have addressed previously.

In addition to the fuel and purchased power savings discussed below, the Frontier PPA (1) provides attractive pricing when compared to the market, (2) addresses the System's Western Region resource supply objectives, (3) provides operational flexibility, and (4) enhances reliability during summer and winter peaks, as well as locational reliability in the Western Region.

Q41. PLEASE DESCRIBE THE CARVILLE PPA.

A. As discussed previously, the Carville PPA is a ten-year 485 MW agreement acquired through the Summer 2009 RFP, which commenced on June 1, 2012. The PPA is allocated 50% to ETI and 50% to EGSL pursuant to ETI's sale of 50% of the associated capacity and energy to EGSL under Service Schedule MSS-4 of the Entergy System Agreement. ETI (along with EGSL) previously received capacity and energy from the

Carville Energy Center, the resource involved with the Carville PPA, pursuant to a one-year contract from June 1, 2008 through May 31, 2009.

In addition to the fuel and purchased power savings discussed below, the Calpine PPA (1) provides attractive pricing when compared to the market, (2) addresses the Entergy System's resource supply objectives, (3) provides operational flexibility, and (4) enhances reliability during summer and winter peaks.

Q42. HAVE THE FRONTIER AND CARVILLE PPAS PREVIOUSLY BEEN SUBMITTED TO THE PUBLIC UTILITY COMMISSION OF TEXAS FOR REVIEW?

A. Yes. The Frontier PPA was submitted in the Company's base rate case filed in December 2009 (Docket No. 37744). The Carville PPA was submitted in the Company's recent base rate case filed in November 2011 (Docket No. 39896).

Q43. PLEASE EXPLAIN WHETHER COSTS ASSOCIATED WITH THESE TWO PPAS WERE INCURRED DURING THE TEST YEARS FOR THE TWO BASE RATE CASES ADDRESSED ABOVE.

A. The Frontier PPA commenced on May 1, 2010 with a first-year capacity level of 150 MW ("First Year Capacity"). On May 1, 2011, the capacity provided increased from 150 MW to 300 MW ("Step-up Capacity"). The Carville PPA began on June 1, 2012. The test year for Docket No. 37744,

which began on July 1, 2008 and ended on June 30, 2009, did not include any of the costs associated with either of these PPAs. The test year for Docket No. 39896 ("TY 39896") began on July 1, 2010 and ended on June 30, 2011; accordingly, with respect to the Frontier PPA, a full 12-month level of First Year Capacity costs (July 1, 2010 through June 30, 2011) and two months of Step-up Capacity costs (May 1, 2011 through June 30, 2011) were included in TY 39896, and were used to establish the level of current rates (resulting from Docket No. 39896). I address below the two months of Step-up Capacity costs included in TY 39896. None of the costs for the Carville PPA were included in the Docket No. 39896 Test Year.

Q44. DOES THE COMPANY REQUEST RECOVERY OF COSTS INCLUDED IN THE TEST YEAR FOR DOCKET NO. 39896?

A. No. The Company is seeking recovery of only those capacity costs for these two PPAs that were not included in the Test Year in Docket No. 39896. Accordingly, my analysis supports recovery of all capacity costs associated with the Carville PPA for each month of the Reconciliation Period, subject to the adjustments I describe below. With respect to the Frontier capacity costs, my analysis addresses only those costs associated with the 150 MW Step-Up Capacity and includes an adjustment – further described below – that takes into account the two

months of Step-up Capacity costs (May and June 2011) included in current rates.

Q45. PLEASE SUMMARIZE THE METHODOLOGY YOU EMPLOYED TO EVALUATE THE FUEL AND PURCHASED POWER SAVINGS ASSOCIATED WITH THE FRONTIER AND CALPINE PPAS.

A. The evaluation methodology calculates the net benefits associated with both the capacity and energy components of the PPA separately and on a monthly basis. With respect to capacity, the calculation compares the total cost of the capacity received from the Frontier PPA to the equivalent MSS-1 Reserve Equalization expense that ETI would incur if the contracted capacity were not included in ETI's capability calculation.

The monthly determination of the net capacity cost of each PPA can be stated as follows:

PPA Capacity Charge

– MSS-1 Reserve Equalization Offset

Net PPA Capacity Cost

Because the capacity charge for the Calpine PPA varies per month, during certain months the MSS-1 offset is greater than the capacity charge. In those months, for the purpose of my analysis, I record the capacity charge sought to be recovered as zero.

With respect to energy costs, the calculation compares the PPA's realized energy costs to an equivalent amount of energy assumed to be sourced from the MSS-3 Entergy System Exchange:

Contract Energy Charge

– MSS-3 Entergy System Exchange Energy

Net Energy Cost/Benefit

Q46. HOW HAVE YOU CALCULATED NET FIXED COSTS FOR THE TWO PPAS?

A. The Net Fixed Costs are calculated on a monthly basis based on the actual billed amount for each PPA less a calculated MSS-1 Reserve Equalization offset. The Reserve Equalization offset reflects the reduction in MSS-1 charges or increase in MSS-1 revenues associated with the addition of these two PPAs in ETI's resource portfolio. The offset is calculated as the product of the contract capacity in MW times ETI's monthly Reserve Equalization cost in $/MW times (1 – ETI's Responsibility Ratio).

Q47. HOW HAVE YOU CALCULATED VARIABLE COST SAVINGS FOR THE TWO PPAS?

A. Variable Cost Savings are calculated on a monthly basis based on the actual billed amount for each PPA less a calculated MSS-3 Exchange Energy offset. The Exchange Energy offset reflects the reduction in

MSS-3 charges or increase in MSS-3 revenues associated with the addition of the PPA in ETI's resource portfolio. The offset is calculated as the product of the actual contract energy produced each month during the Study Period times the weighted average cost of ETI's monthly sales and purchases from the Entergy System Exchange in $/MWh.

Q48. WHY IS IT APPROPRIATE TO USE MSS-3 EXCHANGE ENERGY IN YOUR CALCULATION?

A. Entergy System generating resources are committed and dispatched to produce the lowest total System production cost subject to constraints and while meeting requisite reliability criteria. ETI, as a participant in the Entergy System Agreement, realizes benefits and shares costs with other System Operating Companies through various Services Schedules of the System Agreement. To the extent that a participating Operating Company's generating resources produce more or less energy than needed, Service Schedule MSS-3 allocates the energy costs of the participating companies to the System Exchange. The Frontier and Calpine PPAs are committed and dispatched by the System Operator to meet System needs, and thus affect the amount of energy that ETI buys from, or sells to, the Exchange. Accordingly, the price of energy that ETI sells to the Exchange, or buys from the Exchange, is an appropriate measure of the value of the energy displaced by these PPAs.

Q49. PLEASE EXPLAIN YOUR ADJUSTMENT TO TAKE INTO ACCOUNT THE TWO MONTHS (MAY AND JUNE 2011) OF THE FRONTIER STEP-UP CAPACITY COSTS INCLUDED IN CURRENT RATES.

A. The application of the methodology described above for each month of the Reconciliation Period results in an adjusted monthly capacity cost for the Frontier PPA that does not reflect the Company's previous recovery of the two months of Step-up Capacity costs included in current rates. Current rates – set in Docket No. 39896 – were first billed in October 2012, effective back to July 2012. To reflect the Step-up Capacity costs recovered in rates beginning with July 2012, an adjustment was made that takes into consideration both (1) the cost of Step-up Capacity costs for May and June 2011 as well as (2) the effect of the reduction in ETI's MSS-1 payments corresponding to the increased Step-up Capacity (150 MW) for each of the same two months. The reduction in MSS-1 payments reduces the amount associated with the capacity cost otherwise included in rates. Accordingly, the adjustment for Step-up Capacity costs included in rates reduces the monthly Frontier capacity costs otherwise requested in the Company's Special Circumstances request by an amount that is the difference between (1) 1/12 of the Step-up Capacity costs for May and June 2011 and (2) 1/12 of the corresponding MSS-1 offset.

Q50. HAVE YOU PROVIDED AN EXHIBIT SUPPORTING THE COMPANY'S SPECIAL CIRCUMSTANCES REQUEST OF CAPACITY COSTS ASSOCIATED WITH THESE PPAS, CONSISTENT WITH THE METHODOLOGY YOU HAVE EXPLAINED ABOVE?

A. Yes. I have attached Exhibit RRC-1 supporting a total request of $22,942,706 (total Company) for both PPAs. The exhibit evaluates each PPA separately, including the capacity (or fixed) cost ("ETI Contract Demand Charge") incurred for each month of the Reconciliation Period, for the period that each PPA was in effect. The dollar amount of the monthly "MSS-1 Offset" is then identified and applied as a reduction to the ETI Contract Demand Charge.

For the Carville PPA, the application of the MSS-1 Offset to the Contract Demand Charge results in either a reduced net fixed cost recorded in the column labeled "ETI Net Fixed Cost" or, in those months for which the MSS-1 Offset exceeds the fixed cost, a zero is recorded. The monthly Net Fixed Cost is then compared to the monthly savings ("Variable Cost Savings") associated with the Carville PPA, as I have previously described the calculation of those savings.

The monthly amount of capacity costs requested for the Carville PPA is the lower of the monthly Net Fixed Cost or the monthly cost savings to customers. The monthly "lower of" costs are then summed to produce the total amount of capacity costs requested for the Carville PPA.

For the Frontier PPA, after application of the MSS-1 Offset to the Contract Demand Charge, an additional adjustment/reduction is applied ("Adjustment for Base Rate Impact") beginning in July 2012 to reflect the Step-up Capacity costs already recovered in rates, as described above. The resulting Net Fixed Cost for each month is then compared to the Variable Cost Savings. The monthly "lower of" costs are then summed to produce the total amount of capacity costs requested for the Frontier PPA.

As reflected in Exhibit RRC-1, based on the methodology employed, the savings to customers associated with each contract exceeds the amount of capacity costs requested. In the case of the Carville PPA, the associated savings total $16,583,455 compared to the Company's requested recovery of capacity costs of only $5,423,596. For the Frontier PPA, the associated savings total $21,364,201 compared to a requested recovery of $17,519,110 in capacity costs. The Company's combined total Special Circumstances request is $22,942,706 (total Company).

Q51. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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This exhibit contains information that is highly sensitive and will be provided under the terms of the terms of the Protective Order (Confidentiality Disclosure Agreement) entered in this case.

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DOCKET NO. 41791

APPLICATION OF ENTERGY TEXAS, INC. FOR AUTHORITY TO CHANGE RATES AND RECONCILE FUEL COSTS	§ § § §	PUBLIC UTILITY COMMISSION OF TEXAS

DIRECT TESTIMONY

OF

GERARD L. FONTENOT

ON BEHALF OF

ENTERGY TEXAS, INC.

SEPTEMBER 2013

ENTERGY TEXAS, INC.
DIRECT TESTIMONY OF GERARD L. FONTENOT
2013 RATE CASE

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I. INTRODUCTION

A. Introduction and Qualifications

Q1. PLEASE STATE YOUR NAME, ADDRESS, AND BUSINESS AFFILIATION.

A. My name is Gerard L. Fontenot. My business address is 10055 Grogan's Mill Road, The Woodlands, Texas 77380.

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

A. I am employed by Entergy Services, Inc. ("ESI") as Director of the Northwest Region for the Fossil Generation organization.

Q3. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of Entergy Texas, Inc. ("ETI" or the "Company"). ETI is a subsidiary of Entergy Corporation, which owns a number of subsidiaries, including five other electric Operating Companies: Entergy Louisiana, LLC ("ELL"), Entergy Gulf States Louisiana, L.L.C. ("EGSL"), Entergy New Orleans, Inc. ("ENOI"), Entergy Arkansas, Inc. ("EAI"), and Entergy Mississippi, Inc. ("EMI").

Q4. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I hold a Bachelor of Science Degree in Business Administration with a major in management from Delta State University.

As an employee of Gulf States Utilities Company from 1977 to 1988, I held the positions of Equipment Operator and Control Operations Supervisor, operating a 550 megawatts ("MW") natural gas and oil fired supercritical pressure electrical generating unit at the Roy S. Nelson Station. From 1988 through 1996, I held the position of Control Operations Supervisor, operating two 105 MW Circulating Fluidized Bed Boilers at the NISCO facility located at the Nelson Plant. From 1996 to 1998, I held the position of Sr. Planner/Scheduler Coordinator with the responsibilities of coordinating all corrective and preventive maintenance, developing and implementing scheduled and emergency outage work plans to maximize operational reliability while minimizing time off line. From 1998 to 1999, I was the Process Superintendent at the NISCO site. In this position, I was responsible for continuous improvement in operational performance with a goal of increasing reliability and minimizing cost. From 1999 through 2002, I was the Production Superintendent at the Gerald Andrus Plant (EMI) where I was responsible for all operational performance and plant improvement activities for a one unit, 747 MW, supercritical pressure natural gas and oil-fired electrical generation facility. From 2002 to 2006 I was the Production Superintendent at the Sabine Plant (ETI) with the responsibilities of operations, maintenance, planning and stores for a five-unit, 1800 MW natural gas electrical generating facility. From 2006 to 2013, I held the position of Plant Manager at Waterford 1&2, Little Gypsy and Ninemile Point Plants (ELL). My

responsibilities included managing and developing people and processes related to producing megawatts safely, reliably, cost effectively and with operating flexibility.

In February 2013, I accepted my current position with ESI as Director of the Northwest Region for the Fossil Operations organization. In this capacity, I was responsible for oversight and management of all of EAI's and ETI's fossil and hydro units.

B. Purpose of Testimony

Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to:

- describe ETI's fossil power plants and address the role of ESI's Fossil Generation group in managing the fossil power plants, including ETI's oversight of Big Cajun II, Unit 3;
- address the reasonableness and necessity of ETI's total fossil plant operations and maintenance expenses (non-fuel) incurred during the Test Year;
- address the reasonableness and necessity of the capital projects closed to plant during the period July 1, 2011 through March 31, 2013 for ETI's fossil plants;
- sponsor the class of affiliate service that supports the operation and maintenance of ETI's fossil plants and its associated affiliate costs;
- demonstrate that this class of service is necessary and that its associated costs are reasonable;
- demonstrate that the allocated costs are a reasonable share of the actual cost of the service;

- provide assurance that the cost per unit charged for this service to ETI is no higher than the cost per unit charged to other affiliates for the same or similar service;
- provide assurance that the affiliate service provided by ESI Fossil Generation is not duplicated by other affiliates or at ETI;
- describe the operations and maintenance practices of ESI and ETI; and
- detail ETI's fossil unit performance during the Reconciliation Period (July 1, 2011 through March 31, 2013), including the Test Year (April 1, 2012 through March 31, 2013), and how that performance compares to other fossil generating units within the North American Electric Reliability Council ("NERC"), and the combined Electric Reliability Council of Texas ("ERCOT") and the Southwest Power Pool ("SPP").

Q6. HOW DOES YOUR TESTIMONY RELATE TO THE COMPANY'S REQUEST TO CHANGE ITS BASE RATES AND THE FUEL RECONCILIATION?

A. For the base rate portion of the case, I demonstrate the reasonableness and necessity of ETI's fossil plant total electric production non-fuel operations and maintenance ("O&M") expense for the Test Year. In addition, I sponsor the capital projects closed to plant attributable to ETI's fossil operations that the Company seeks to include in rate base. I also address the affiliate classes of service provided by Fossil Generation and Nelson 6 to ETI included in the Test Year O&M expense. I also explain that ETI's generating unit performance during the Test Year was reasonable, which further demonstrates the reasonableness of non-fuel O&M expenses incurred during the Test Year.

For the Company's fuel reconciliation case, I demonstrate that ETI's fossil unit performance provided reasonable levels of reliability and efficiency to support the Company's provision of reliable electric service to its customers at a reasonable cost.

II. OVERVIEW OF FOSSIL GENERATION

A. Organization, Management, and System Description

Q7. HOW IS FOSSIL GENERATION ORGANIZED?

A. I have attached as Exhibit GLF-1 an organizational chart for Fossil Generation, which indicates the functional groups that reported to the Vice President of Fossil Generation during the Test Year. Page 1 of this exhibit lays out how Fossil Generation was organized at the beginning of the Test Year. Page 2 of this exhibit shows the organization at the end of the Test Year.

Q8. HAS FOSSIL GENERATION HAD ANY REORGANIZATION CHANGES SINCE THE LAST RATE CASE?

A. Yes. With the retirement of the Vice President, Power Plant Operations and a re-organization of the Generation Development & Support ("GDS") organization, all Fossil departments now directly report to the Vice President of Fossil Generation. Additionally, GDS was separated into two broad groups – Capital Project Management & Technology ("CPMT") and Compliance & Operations Support ("COS"). CPMT was moved under the

Executive Vice President & Chief Operating Officer of Entergy Corp. and COS began reporting to the Vice President of Fossil Generation. See Exhibit GLF-1 for additional information.

Q9. PLEASE PROVIDE A BRIEF DESCRIPTION OF ESI'S FOSSIL GENERATION ORGANIZATION.

A. Fossil Generation is the business unit responsible for the operation, maintenance, and support of the 31 operating fossil and hydro power plants owned and operated by the Entergy Operating Companies, including the two plants solely owned and operated by ETI during the Test Year. These 31 plants provide approximately 21,000 MW of dependable generating capacity. In most instances, on-site plant management and power plant operation and maintenance are provided by employees of the Entergy Operating Company owning each plant. As such, ETI employees operate and maintain ETI's plants (Sabine and Lewis Creek) on a day-to-day basis and provide the necessary on-site management, while ESI employees provide the executive management and necessary in-house fossil power plant support services.

The ESI employee groups identified in Exhibit GLF-1 are staffed by trained and experienced personnel who provide executive and management oversight, compliance, support, planning and training services, environmental support and safety services, fleet maintenance, plant support, and other support services necessary for the efficient and

effective operation and maintenance of ETI's plants. This organizational structure allows those support activities that are common to all fossil plants to be shared by the Operating Companies, thereby reducing the overall cost to each Operating Company through a more efficient utilization of the staff. The Fossil Generation organization has been designed to minimize duplication of functions, activities, and responsibilities among ESI employees and those of the Operating Companies, including ETI. Fossil Generation operates as a single, integrated organizational unit.

Q10. PLEASE PROVIDE A BRIEF DESCRIPTION OF ETI'S FOSSIL GENERATION SYSTEM.

A. ETI's fossil generation plants/units consist of Nelson Unit 6; Big Cajun II, Unit 3; and the Lewis Creek and Sabine Plants.

- Nelson Unit 6 is a coal unit (550 MW) located at Westlake, Louisiana, just outside of Lake Charles, Louisiana. Nelson Unit 6 has no natural gas burning capability. ETI owns 29.75% (164 MW) of the unit, which is operated and maintained by EGSL. The remaining percentages are owned as follows: EGSL owns 40.25% (221 MW); EAM Nelson Holdings owns 10.9% (60 MW)[1];

[1] EAM Nelson Holdings is a wholly owned un-regulated subsidiary of Entergy Asset Management/Entergy Corp.

Sam Rayburn G&T, Inc. owns 10% (55 MW); and East Texas Electric Cooperative owns 9.1% (50 MW).

- The Lewis Creek Plant is located at Willis, Texas, north of Conroe, Texas (near Lake Conroe), and consists of two gas-fired units (460 MW total) owned and operated by ETI.
- The Sabine Plant is located at Bridge City, Texas, on the north shore of Sabine Lake in southeast Texas, and consists of five gas-fired units (1,890 MW total) owned and operated by ETI.
- Big Cajun II, Unit 3 (588 MW) is a coal unit located at New Roads, Louisiana, on the Mississippi River north of Baton Rouge, Louisiana. Effective January 1, 2008, unit capacity increased from 575 MW to 588 MW due to a main turbine seals upgrade. This unit has no natural gas burning capability. The unit is operated and maintained by Louisiana Generating L.L.C., which owns 58% (341 MW) of the unit. ETI owns 17.85% (105 MW) and EGSL owns 24.15% (142 MW) of the unit. Louisiana Generating acquired its share of the Big Cajun II plant from Cajun Electric Power Cooperative, Inc. ("Cajun") effective April 1, 2000.

ETI's fossil generating units are listed in Exhibit GLF-2 (page 2) with additional information regarding each unit. Further information concerning each of ETI's operating units is provided in Schedule H-12.3b.

Q11. CAN THE ETI GAS UNITS BURN FUEL OIL AS A SECONDARY FUEL?

A. ETI's gas units are not functionally capable of burning fuel oil as a secondary fuel. A small amount of fuel oil is used at Sabine Unit 5 for ignitors (refer to Schedule H-12.3b "Sabine 5 Boiler" section).

Q12. DO NELSON 6 AND BIG CAJUN II, UNIT 3 ALSO BURN FUEL OIL?

A. Yes. It is necessary for both coal units to burn a small amount of No. 2 fuel oil as an ignitor and warm-up fuel. The ignitors are used to light the coal burners and to provide flame stabilization during startups and shutdowns. In addition, No. 2 fuel oil is used during unit startups to warm up the boiler and to increase boiler pressure prior to switching to coal (refer to Schedule H-12.3b "Nelson 6 and Big Cajun II No. 3 boiler" sections).

Q13. HOW ARE ETI'S FOSSIL PLANTS MANAGED WITHIN FOSSIL GENERATION?

A. Within Fossil Generation, the Director of the Northwest Region has management responsibility for the Sabine and Lewis Creek Plants. The Director of the Central Region has management responsibility for Nelson Unit 6. ESI's System Planning Organization ("SPO") oversees ETI's ownership interest in Big Cajun II, Unit 3 through a Joint Ownership Participation and Operating Agreement ("JOPOA").

Q14. HOW ARE ETI'S FOSSIL GENERATING UNITS INTEGRATED INTO THE REST OF THE ENTERGY SYSTEM'S GENERATION SYSTEM?

A. As discussed in the direct testimony of Company witness Devon S. Jaycox, the generation resources of the Entergy Operating Companies (including ETI) are planned and operated as a single, integrated power system. The SPO economically dispatches the Entergy System's generating units on behalf of all the Entergy Operating Companies as a single integrated operating system in order to minimize the overall cost of power production for the Entergy System. Company witness Michelle H. Thiry addresses the details of the SPO's operation, and Company witness Jaycox discusses the details of the system dispatch process.

B. ETI's Oversight of Big Cajun II, Unit 3

Q15. PLEASE DESCRIBE ETI'S OVERSIGHT OF OPERATIONS AND MAINTENANCE FOR ITS OWNERSHIP SHARE OF BIG CAJUN II, UNIT 3.

A. As stated above, ESI's SPO oversees ETI's ownership interest in Big Cajun II, Unit 3, which is governed by the JOPOA executed by the Company and Cajun in 1981. In April 2000, Louisiana Generating acquired Cajun's ownership in Big Cajun II, Unit 3 and assumed all rights and responsibilities of Cajun under the JOPOA.

III. FOSSIL PLANT EXPENSES

A. Types of Non-Fuel Expenses

Q16. PLEASE SUMMARIZE THE TYPES OF NON-FUEL EXPENSES INCURRED BY ETI'S FOSSIL GENERATION IN THE NORMAL COURSE OF BUSINESS.

A. There are two general types of non-fuel expenses: O&M expenses and capital expenses. Production non-fuel O&M expenses are made up of baseline O&M expenses (*e.g.*, employee payroll) and O&M project expenses (*e.g.*, boiler feedwater pump overhaul). Capital expenses refer to investment in plant through addition or replacement of plant components.

Most of ETI's fossil plant O&M expenses relate generally to ETI employees, equipment, supplies, materials, parts and labor acquired for ETI's plants. During the Test Year, such expenses accounted for approximately 65% of the total ETI fossil O&M expenses. The balance of ETI's fossil plant operations expenses result from services provided by affiliates, which I discuss in detail in Section IV of my testimony.

The executive and management oversight function performed by the Fossil Generation organization has management responsibility for all of the non-fuel expenses identified above, including both affiliate and ETI non-affiliate expenses.

B. Budgeting and Cost Controls

Q17. DESCRIBE THE PROCESSES THAT FOSSIL GENERATION UTILIZES TO PREPARE, REVIEW, AND CONTROL THE BUDGETS ASSOCIATED WITH ETI'S FOSSIL PLANT OPERATIONS.

A. Preliminary annual budgets are prepared by each department and plant and are reviewed by each level of management up through the Vice President of Fossil Generation. These budgets include proposed O&M projects, projected baseline O&M costs, and proposed capital projects. Projects are thoroughly reviewed to be sure they are necessary and that the costs are reasonable. This review process also prioritizes capital and O&M projects System-wide based on the projected relative benefits, determined by weighing the cost against the benefits of improved safety, reliability, and efficiency. Baseline O&M expense budgets are reviewed in light of projected operational requirements for each plant.

Q18. WHAT STEPS ARE TAKEN TO CONTROL AND MONITOR ACTUAL COSTS ONCE THE BUDGET IS SET?

A. Monthly and year-to-date expenditures are routinely reviewed and compared to budget. Variance explanations are provided to Fossil Generation management for review and, as necessary, for corrective action. All expenditures require at least one level of supervisory approval. In addition, each capital or O&M repair project is assigned to either a plant or support office employee to manage. The project manager will develop

the project work scope and arrange for parts, material and labor as necessary. The parts, material, and labor are either provided by contractors or secured competitively from the market. While the project is underway, the project manager routinely monitors the quality of work and verifies the accuracy of billings.

Q19. CAN YOU PROVIDE ANY SPECIFIC EXAMPLES OF RECENT EFFORTS TAKEN TO EVALUATE OR INVESTIGATE OPPORTUNITIES TO REDUCE O&M EXPENSE AT ETI'S FOSSIL PLANTS?

A. Yes. Fossil Generation routinely looks for and evaluates opportunities to reduce costs while still maintaining an acceptable level of safe and reliable operations. The following are examples of this effort:

- The Virtual Resource Center ("VRC") was organized in 2004 and is a program administered by the Resource Management & Training Department. The goal of the VRC is to reduce contractor costs and/or overtime through the utilization of a flexible workforce designed to rotate out of "home" fossil power plants to work at other Entergy System facilities on an as-needed basis. In addition to existing employees, the VRC utilizes retired employees with specialized skills to achieve the VRC goals. The ETI cost savings resulting from the VRC in the year 2012 were approximately $500,000.

- Fossil Generation implemented the Six Sigma Program in 2002. Six Sigma is a measurement philosophy focused on eliminating mistakes, waste, and rework, and it identifies projects that improve quality while improving customer satisfaction and reducing costs. Six Sigma defines a problem area through the eyes of the customers, uses tests to measure current performance, analyzes how the process is working compared to what is possible, improves the process, and implements measures to keep the process within the new operating limits. The following are recent examples of Six Sigma studies that have been performed at ETI and are still on-going:

  ✓ Sabine Unit 5 Superheat Temperature Fluctuations: The 2012 Superheater temperatures on Sabine Unit 5 have exceeded the temperature limits by the following percentages. "A" superheat temperatures 13.22% and "B" superheat temperatures 8.17%. These temperature excursions can damage plant equipment and potentially threaten the reliability of the unit. The inability of the temperature controls to perform effectively challenges the Control Board Operators which have the task of operating Sabine 4 and 5 and Toledo Bend Hydro Units 1 and 2.

  The objective of this team is to develop improvement strategies to ensure superheat temperatures do not exceed 955 degrees Fahrenheit by more than 1% of operating time each quarter. This success will provide increased reliability of the unit, reduction in employee hours for both operational and maintenance activities and reduced cost. Program improvements and recommendations are still being evaluated.

  ✓ Lewis Creek Phosphate Level Study: Phosphate is injected into the boiler drum to control scale deposits and insoluble products in the boiler tubes. Elevated phosphate levels in the feed water system resulting from steam carryover is

causing water chemistry issues resulting in the loss of 7 gallons of process water per minute due to the flash tanks having to be removed from service. In addition, Lewis Creek has recorded high levels of phosphate in the boiler feed water system. These ionic contaminations are potentially contributing to chemistry issues on both units.

The objective of this team is to develop and implement a solution to reduce feed water phosphate levels to less than 1 part per billion with the flash tanks in service. Solving this issue will reduce the excess waste of process water and prevent boiler tube failures due to water chemistry issues. Program improvements and recommendations are still being evaluated.

✓ Macro Fouling at Sabine Intake: Sabine Plant has been experiencing severe macro fouling at the intake structures (trash racks, circulating lines, circulating pits, and water boxes), with no way to predict when this is likely to occur. Macro fouling can cause the plant to have significant operating events including de-rates, equipment failures, unit trips, and unplanned maintenance outages to remove the macro fouling. There are 4 circulating water pumps on Unit 4 and the macro fouling does not impact all the pumps uniformly.

The goal of this team is to develop and implement processes to predict when the macro fouling will form and create action level limits with associated activities to minimize de-rates and unplanned outages. In addition, developing macro fouling elimination and control techniques to prevent the formation and buildup of organisms on plant equipment will reduce unit restrictions and unplanned outages. Program improvements and recommendations are still being evaluated.

- Entergy Continuous Improvement Process ("ECI"): The ECI process was implemented in Fossil Generation in 2005 and employees at all levels have received formal training on the ECI philosophy and tools. ECI provides employees with a structured means for seizing opportunities to improve processes, eliminate unnecessary work, eliminate waste, and achieve other business

goals. ECI promotes improvement through two avenues: natural work teams and charter teams. Natural work teams focus on improvements that can be made as part of the work employees are already performing on a daily basis. Charter teams focus on opportunities that are broader, more complex, or strategic. The following are some examples of recent ECI studies that have been performed at ETI:

✓ Sabine Plant Pump Overhauls Utilizing Condition-Based Analysis: The Condition-Based Outage Auxiliary Team needed to identify work load issues that dominated valuable man-hour oversight. The team identified auxiliary pumps as a possible candidate since there was no formalized assessment data process and there were several pump overhauls planned based solely on past history and time intervals. While this is effective using the limited data available, time-based maintenance is not efficient, and could result in equipment being overhauled unnecessarily, or not overhauled when it should be. Various pumps in the plant were maintained at set time intervals instead of taking into account the condition of the equipment.

In the spring of 2011, performance tests and/or PI assessments were conducted to provide condition-based information which can greatly enhance decision making of the CBO Team during team review. Utilizing BFP Dashboard methodology, system history, maintenance records, vibration reports, online testing data and OEM inspections, the Company performed detail pump assessment and developed an automatic condition based approach for the CBO Auxiliary Team to utilize to base overhaul decisions. This testing improvement provided assurance that the outage team's focus was on performing required work during planned outages and optimizing man-hour oversight. Benefits with this change include:

- Reducing the risk that pump and other equipment issues would be overlooked or put off until the next scheduled inspection.

- Increased ability to predict future issues that can be cyclical while allowing improved ability to allocate funding for future inspections and repairs.
- Maximized scheduling of equipment repairs based upon equipment assessments and not simply time intervals. This results in maintenance being performed at the correct time, saving valuable man-hours and costs.

✓ Lewis Creek Traveling Screen Viewing Door: Lewis Creek had no feasible method for checking spray nozzles on the spray side of the traveling screens. This may lead to screen carryover which could cause water box problems and potentially damage the circulating water pumps.

Plant personnel modified the traveling screen guard with the addition of a viewing door on the spray side of the screens just above the spray plane. This allowed for monitoring of the cleaning process to verify safe and effective cleaning during operator rounds.

Equipment performance was enhanced with this improvement by having the ability for better inspections of the screens and helping to eliminate carryover of debris into the waterboxes which could lead to condenser tube fouling and failures. This improvement also can extend the life of the screens because of less stress on the individual baskets from insufficient spray performance. This improvement gives Lewis Creek employees a 100% ability to inspect screens during operator rounds, where previously they had 0% ability.

✓ Sabine Unit 3 Circulating Water Pump Motor Winding Temperature Indicators: Sabine Unit 3 Circulating Water Pump Motors are equipped with bearing temperature indication thermocouples (T/Cs). These T/Cs monitor the temperature of the bearing metal, which can indicate when there is a problem present with the motor on the driven pump. These temperature indicators are set in the control system to signal operations of the status of the bearing metal temperatures by sounding alarms in the control room. When the alarms are activated, operators are dispatched to the location of the motors to investigate the conditions. While assessing the situation, the operators are in very close proximity of the motors and pumps. The bearing T/Cs are not indicative of the winding temperatures of the motors, they only monitor the bearing metal temperatures.