Final Report

Performance Audit

Of

Entergy Mississippi Inc.

Fuel Procurement and Fuel Adjustment Clause

On Behalf Of

Mississippi Public Service Commission

November 14, 2008

Performance Audit of Entergy Mississippi Inc. Fuel Procurement

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I. EXECUTIVE SUMMARY

A. PROJECT OBJECTIVE AND APPROACH

This performance audit of Entergy Mississippi Inc., (EMI) was conducted for the Mississippi Public Service Commission (MPSC or Commission). It involves a review of activities related to providing energy, capacity, and ancillary services for all customer classes of EMI. Since almost all procurement of fuels, energy and related planning is performed by Entergy Services Inc. (ESI), much of the work, including interviews and data gathering were done through ESI.

This audit looks primarily at current policies, procedures, processes, systems, organizations and strategies to determine if they are appropriate. Historical data is used to provide a baseline of results and to test proposed changes in policy. This audit is prospective in nature in that it looks to recommend improve on a going forward basis. Many of the recommendations offered will require discussion and action by the MPSC and other stakeholders. Our objective was to provide clear and independent information that can be used by all stakeholders in guidance on issues related to fuel procurement such as the Fuel Adjustment Clause (FAC) and long-term energy planning. A great deal of information is provided in graphs and tables for reference by the user of this audit.

The Audit was conducted under the Performance Audit Guidelines of the U.S. Government Accounting Office's Generally Accepted Government Auditing Standards (GAGAS). With respect to these standards, all parties acted accordingly. Vantage received unfettered access to all appropriate people and data. There was no pressure from any party and no impairment of our activities. The short duration of the audit (about ten weeks), coupled with two hurricanes that impacted Entergy in New Orleans and then Houston, did constrain our ability, at the time, to get immediate answers to questions or data we needed, however, once things settled down, we were satisfied with the amount and detail of information available for this assignment.

We do caution the reader that this is a Performance Audit that addresses, systems, procedures, policies, organization, models and trends. We did not examine specific contracts or procurement decisions and do not make any judgments as to prudence of any results. We do make an effort to present as much data and history of procurement activity, results and decision points so that the users of this report will have an unbiased source of information and reference point. In cases where we find anomalies in historical data, we do provide findings or conclusions on the data. In many respects, this audit compliments the reviews performed each quarter by the Mississippi Public Utilities Staff (MPUS or Staff), a separate state agency. Each quarter, the Staff reviews EMI's Energy Cost Rider (ECR) filing and verifies the inputs, calculations and impacts on rates. Further discussion of these audit activities are provided in Section IV-E of the report.

B. OVERALL CONCLUSIONS

Fuel and energy procurement for Entergy Mississippi Inc., is performed on an integrated basis with Entergy and its operating and support subsidiaries. Entergy Services Inc. (ESI) is the focus for procurement activities and is located in the Woodlands, TX, (just north of Houston). To a great degree it purchases energy, fuel, transmission rights and access and other related products on an integrated basis at the lowest overall cost to all of Entergy's subsidiaries.

An "Entergy System Agreement" between five operating utilities and ESI dictates relationship and cost sharing mechanisms among the parties. This agreement addresses objectives, obligations, composition and duties of the operating companies, reserve equalization and transmission equalization, exchange of energy, unit power purchases, distribution of revenue and operating expenses and merger fuel protection procedures. While Vantage referenced this document in order to understand its impact on procurement decisions, we did not attempt to analyze its effectiveness or direct impact on costs or operations.

Our analysis is detailed, with many findings and recommendations. However, we have found three root issues that need to be addressed; Accurate Models, Assumptions and Data Communication; Accurate and Timely Billing; and a Well Designed Electric System. As we provide the balance of our summary, we will attempt to relate to these three issues.

ACCURATE MODELS, ASSUMPTIONS AND DATA COMMUNICATION

Here we are concerned with the many models, forecasts and calculations that go into the fuel and energy procurement process, the Entergy System Agreement and the Fuel Adjustment Clause (FAC) and ECR. We address the use of PROMOD, a system wide model used for many forecasts and allocations, fuel forecasts, and other intricate systems that are the basis of the entire energy production and procurement system.

Modeling

Entergy must use models for a number of very important functions. Vantage, in particular, raises questions about the PROMOD model being used for projecting future load requirements and the model used for projecting fuel prices. These two models are key in accurate forecasting, but are also likely to be inaccurate due to the very nature of Entergy's system. These models are only as good as the information that is entered into them and the quality of this information is based on a number of factors.

- PROMOD needs accurate information regarding the operating characteristics of every generating source that is likely to provide power into the Entergy system. Since a large portion of Entergy's overall energy portfolio is now from wholesale power providers and off-system purchases, this information is often estimated.

- Fuel cost volatility can lead to decisions that do not always reflect the lowest cost solution at a particular time. Changes in pricing of natural gas have occurred more frequently and with greater volatility than ever before. In addition to regional impacts such as weather and infrastructure, international prices for oil often dictate natural gas prices. Forecasting fuel prices has become much more difficult.
- Transmission constraints and planned changes to infrastructure can impact actual power production decisions. Oftentimes, production cost models do not accurately integrate transmission constraints or reserve margin and voltage/frequency quality control.

Entergy has begun to make changes and updates to its key models, including PROMOD and its fuel forecasting model. These changes should not be made in a vacuum.

Vantage reviewed the internal audits conducted by Entergy and were surprised at how few there were. Given the large cost of fuel and procured power and the current volatility in the markets a greater level of audits seem reasonable.

The organization and staff ESI has in place for procurement appears to be reasonable. The facility design, data availability, communication protocols and interaction of various experts on issues that arise is also reasonable. The staff Vantage interviewed were knowledgeable, well trained and able to provide any documentation and support we asked for.

ACCURATE AND TIMELY BILLING

Here we deal with the inputs, timing, review and implementation of the Fuel Adjustment Clause. Our analysis looks at historical accuracy of the ECR relative to energy price trends and makes recommendations for changes.

Fuel Adjustment Clause Design

The recent volatility in fuel prices has once again raised questions as to the proper design of the ECR. It is ironic that the FAC has been changed three times during the last decade, each occurring after similar price volatility upsets. Our analysis, as part of this audit, attempts to segregate issues and rank options. One key point that became obvious is that using historical fuel costs to project future fuel costs seems to add even more volatility than the current system of projecting cost. However, it does appear that by reducing the ECR adjustment period to a monthly basis and by spreading any over/under recoveries over a twelve-month period, the yoyo effect and large adjustments of late can be reduced.

The question of interest payments on under/over recovery must be evaluated and any changes might require compliance with of Mississippi State Law. Vantage has tried to describe the system currently in place. There is not however, adequate information available in our work to reach a definitive conclusion. One thing for certain is that the amount customers pay for over-collection and the amount EMI received for under-collection are not balanced.

WELL DESIGNED ELECTRIC SYSTEM

This issue deals with the portfolio for energy sources (Base, Intermediate and Peaking), energy sources (EMI, Entergy System, Wholesale Market and short-term purchases) and fuel contract sources, lengths and hedging activities. Our audit and analysis addressed all of these areas and culminates with discussion and recommendations regarding Integrated Resource Planning.

Integrated Resource Plan

The issue of implementing a formal Integrate Resource Plan (IRP) was raised during recent proceedings. While there are benefits to be gained from a formal IRP, the cost and regulatory work load increases significantly. Vantage's limited comment is that there may be an approach that serve the needs of the Commission and all stakeholders without the implementation of a long-term, annual program.

Hedging and Long Term Contracts

Vantage did a brief review of the hedging program EMI has in place. The issue of risk management with advanced hedging activities has become much better defined for utilities in recent years. Given the increased level of volatility in fuel prices, a more in-depth review of risk management practices that include expanded hedging programs and perhaps the use of other risk mitigation instruments should be considered. The practice of hedging only six months in advance of deliveries does not indicate a robust program.

Generation Portfolio and Fuel Diversity

Our review of the current portfolio of base, intermediate and peaking sources raises questions as to the amount of base generation in the current plan. We also raise concerns about the large proportion of natural gas used by both Entergy plants and other sources which has been the basis for much of the recent fuel price volatility.

While procurement of energy from off-system sources can reduce overall costs, these purchases must be made with an understanding of operating constraints mentioned above, as well as a recognition of load uncertainties and market price fluctuations. Our analysis shows that EMI and all Entergy units procure a great deal of system power through long-term contracts and a variety of short-term procurement activities. In general, long-term purchases must be made with the recognition that the future load is uncertain. Weather and economic impacts may increase or decrease loads for any given period, or on any given day or hour. For that reason, ESI purchases a mix of types and durations of energy. Vantage cautions that one cannot simply look at a single purchase and compare to others done before, after, or for longer or shorter periods that may be at a lower cost. Market prices change over time and a well reasoned decision one day, may look odd at a different point in time.

The dispatch of all Entergy-wide units on a system-wide basis, along with short, medium and long-term off-system procurements should lead to a low cost solution of energy

procurement. We caution that this integrated procurement policy is complex and must take into account a number of operating, reliability and delivery constraints.

- Entergy must have actual control of adequate generation to maintain frequency and voltage control. This means that it must be able to automatically change load and voltage output to meet required regional parameters.
- Entergy must have adequate spinning reserve available and under its control to respond to the loss of the largest unit in the system.
- Entergy must have generation sources that account for transmission constraints. Transmission capability and distances must be considered when dispatching individual units.

Power Plant Performance

There is no evidence that EMI mismanages its power plants. Heat rates, forced outage rates, and capacity factors, all indicators that provide a view to reasonable operations, appear to be within normal ranges. Vantage Consulting, Inc., (Vantage) notes that many of the Entergy's older power plants have high heat rates, but these units have very low capacity factors as they are used for peaking purposes and therefore their efficiency is not paramount.

Coal inventory at the Independence Power Plant is well above the minimum levels needed for safe operation. Ironically, only a few years ago, a consultant might have been critical of having too much inventory. Now, with the risks of long-distance rail transportation, interruptions in gas and oil supplies and other weather-related fuel delivery interruption possibilities, ESI's decision to increase coal inventory is reasonable.

C. SPECIFIC RECOMMENDATIONS

Based on these questions and thoughts, Vantage provides the following recommendations for consideration. Vantage makes the observation that many of these recommendations require action or analysis on the part of the Mississippi PSC. Given the statutory separation of the Commissioners and the Mississippi Public Utilities Staff, a separate State Agency, this responsibility for action may need to be addressed by the Commissioners.

III-R1 Continue to use projected fuel costs for the FAC calculations, with the option of intervening when price swings result in anomalies.

The analysis performed shows that the deviations over time that arise form using historical costs are likely to be just as significant as those from projected costs. The real key is for Entergy to develop a fuel forecast model that is as accurate and responsive as possible. Entergy is currently in the process of modifying its fuel forecast models and expects better projections. However, natural gas prices are often affected by weather, economic and international political events that cannot be anticipated in any model.

The Commission always has the opportunity to intervene and adjust the FAC in cases where fuel costs begin to change rapidly from those in the FAC projection. In fact, this is what

occurred for the third quarter of 2008 when prices began to drop in July, August and September.

III-R2 Consider, with adequate input from stakeholders, changing to a monthly FAC, with recovery of over or under collections over twelve months.

The analysis in the audit suggests careful consideration be given to the following changes to the FAC/ECR.

- The current quarterly FAC should be replaced with a monthly FAC/ECR.
- For example, the FAC charge should be calculated for January based on the energy forecast for that month and projected natural gas prices.
- In February, when actual fuel costs are received, an over/under calculation should be performed in a manner similar to the current method.
- In March, the projected fuel cost should be adjusted and one-twelfth of any over/under amount should be applied. (We are assuming that actual fuel costs and adjustments can be made in the month following the actual month. If this is not feasible, there will need to be a two month delay for adjustments.)
- The over/under charges will be phased in over a twelve month period, permitting a smoothing of any large fluctuations.
- Interest payments for over/under should be applied monthly, either through the current method of a modified formula that provides balance.
- Adjustments for hedging and Attala costs should also be adjusted monthly as well.

This change is likely to result in reduced volatility that has occurred with the ECR. By adjusting every month, the impact of inaccurate fuel projections is minimized and the current three month lag is eliminated. By amortizing the over/under adjustment over twelve months, sharp changes in ECR costs are mitigated. Volatility can also be reduced by an expanded hedging program which is addressed later in this report. The issue of interest payments is also addressed late in the report.

III-R3 Implement a combination of IRP and SSRP plans in order to achieve the level of planning needed, input form all stakeholders and clear decisions, while minimizing overall costs and regulatory intervention.

Our recommendation on this issue is intended to suggest that this decision to implement an IRP should be taken in the context of providing necessary guidance, with stakeholder input on a periodic basis. It is our understanding that statewide energy planning is required every five years. We would therefore suggest that a full IRP be developed every five years and that in the interim the current SSRP be continued..

III-R4 Entergy should be asked to provide an analysis using ten years of data that shows the actual results of over and under collections calculation as required in the FRP.

This should be an annual analysis that calculates the actual adjustment to each side, as well as what the amount would have been if the collection had been reversed.

IV-R1 Entergy should be required to provide a detailed analysis as to any weakness or inaccuracy that PROMOD has, along with plans to improve its capability.

PROMOD, since it is used for many purposes, should be tested to determine its accuracy and current value. This test should use retrospective testing as well as an assessment of which input parameters are perhaps vulnerable to inaccuracies. Entergy should provide this analysis to the Commission for evaluation and follow-up questions.

IV-R2 Mississippi PSC, Public Utilities Staff and other stakeholders, with a need, should receive a detailed view of how the revised PROMOD and fuel procurement models work and an explanation as to why it is better.

These models are key to both cost effective procurement decisions as well as accurate design of a FAC going forward. It is imperative that key stakeholders understand and feel confident with the techniques used.

IV-R3 Open a dialogue, with Entergy and other stakeholders to determine if a more robust risk management program, that includes more advanced hedging opportunities, makes sense given the growing volatility in today's energy markets.

Techniques for reducing risk volatility are becoming much more sophisticated. They include formal hedging programs with both programmatic and opportunistic elements, timing of initial hedges that are spread over longer periods, calculations of mark-to-market to give real time assessments of risk management success, and the use of financial instruments to reduce out of market results.

This activity requires significant effort and a detailed understanding of how risk management tools can work in the energy procurement market. The recent turmoil in the financial markets has raised questions about uses of many of these same techniques when not associated with parties taking actual delivery. As our financial markets settle, it may be appropriate to ask how EMI can best be served through an examination of the current hedging program.

IV-R4 The Mississippi PSC should order, or at least encourage, Entergy to increase the number and scope of internal audits that address fuel procurement policies, systems contracts, operational effectiveness and quality.

Vantage is not certain that the Mississippi PSC has the authority to order Entergy to increase the number and scope of internal audits, but believe the Company and all of its stakeholders would be well served if Entergy responded affirmatively. We recommend that Entergy consider addressing the following key, but not all inclusive, areas.

- **Fuel Commodity Price Modeling and Forecasts** – This audit should review the sources and accuracy of fuel forecasts. This is clearly a key source of problems with FAC calculations and needs to be addressed by a group external to the fuel department.

- **Energy and Transmission Modeling** – Entergy uses and upgrades its models on an as needed basis. An audit to determine if they are functioning as intended and providing accurate timely information should be conducted.

- **Off-System Purchase Decision Models and Policies –** This area is of great concern by regulators and potential suppliers. A comprehensive audit that addresses the decision and contracting process would be worthwhile.

- **Facility Continuation Audit –** Entergy has a large number of aged units with poor heat rates and potential long term costs. While the SSRP addresses these concerns to some degree, it would be appropriate to have an outside auditor or engineering firm provide an independent assessment of the long-term costs, reliability and efficiency.

- **Fuel Quality and Transportation Audit** – While Entergy has looked at the Peabody coal quality contract requirements, it should also look at long-term transportation issues and coal source issues.

II GENERAL BACKGROUND INFORMATION ON ENTERGY

A. CORPORATE ENTITIES AND ORGANIZATION

Entergy has a complex organization of regulated utility and non-regulated competitive businesses. The organization chart below and brief descriptions of each subsidiary company are provided to introduce the reader to details that may be discussed later in the report.

UTILITY

Entergy's utility companies generate, transmit, distribute and sell electric power, with a small amount of natural gas distribution. Five electric utilities with 2.6 million customers, Four states – Arkansas, Louisiana, Mississippi, Texas. Over 22,000 MW generating capacity. Two gas utilities with 237,000 customers.

ENTERGY ARKANSAS, INC. (EAI)

Entergy Arkansas, Inc., generates, transmits, distributes and sells electric power to approximately 660,000 retail customers in portions of Arkansas.

ENTERGY GULF STATES, INC. (EGSI)

Entergy Gulf States, Inc., generates, transmits, distributes and sells electric power to approximately 709,000 retail customers in portions of Texas and Louisiana. EGSI also provides natural gas utility service to approximately 90,000 customers in the Baton Rouge, Louisiana area.

ENTERGY LOUISIANA, INC. (ELI)

Entergy Louisiana, Inc., generates, transmits, distributes and sells electric power to approximately 657,000 retail customers in portions of Louisiana.

ENTERGY MISSISSIPPI, INC. (EMI)

Entergy Mississippi, Inc., generates, transmits, distributes and sells electric power to approximately 416,000 retail customers in portions of Mississippi.

ENTERGY NEW ORLEANS, INC. (ENOI)

Entergy New Orleans, Inc., generates, transmits, distributes and sells electric power to approximately 189,000 retail customers in the city of New Orleans, Louisiana. ENOI also provides natural gas utility service to approximately 147,000 customers in the greater New Orleans area.

SYSTEM ENERGY RESOURCES, INC. (SERI)

System Energy, Inc., owns and leases 90 percent of the Grand Gulf 1 nuclear generating facility. SERI sells power and capacity from Grand Gulf 1 at wholesale to Entergy Arkansas, Entergy Louisiana, Entergy Mississippi, and Entergy New Orleans.

UTILITY NUCLEAR PLANTS

Entergy owns and operates five nuclear units at four plant sites to serve its regulated utility business: Arkansas Nuclear One (ANO) Units 1 and 2 near Russelville, Arkansas; Grand Gulf Nuclear Station in Port Gibson, Mississippi; River Bend Station in St. Francisville, Louisiana; and Waterford 3 in Taft, Louisiana.

ENTERGY NUCLEAR

Entergy's non-utility nuclear business owns and operates five nuclear power plants in the northeastern portion of the United States: Pilgrim Nuclear Station in Plymouth, Massachusetts; James A. Fitzpatrick in Oswego, New York; Indian Point 2 & 3 in Westchester County, New York; and Vermont Yankee in Vernon, Vermont. This business is primarily focused on selling power produced by those plants to wholesale customers. This business also provides operations and management services to nuclear power plants owned by other utilities in the United States. Five plants in northeastern U.S. 4,000 MW owned generating capacity 800 MW under management services contract Contracts with other nuclear owners to manage decommissioning for 1 plant, license renewal for 4 plants.

ENERGY COMMODITY SERVICES

The energy commodity services business includes the operations of Entergy-Koch, LP and Entergy's non-nuclear wholesale assets business.

NON-NUCLEAR WHOLESALE ASSETS BUSINESS

Entergy's non-nuclear wholesale assets business sells electric power produced by seven power plants to wholesale customers.

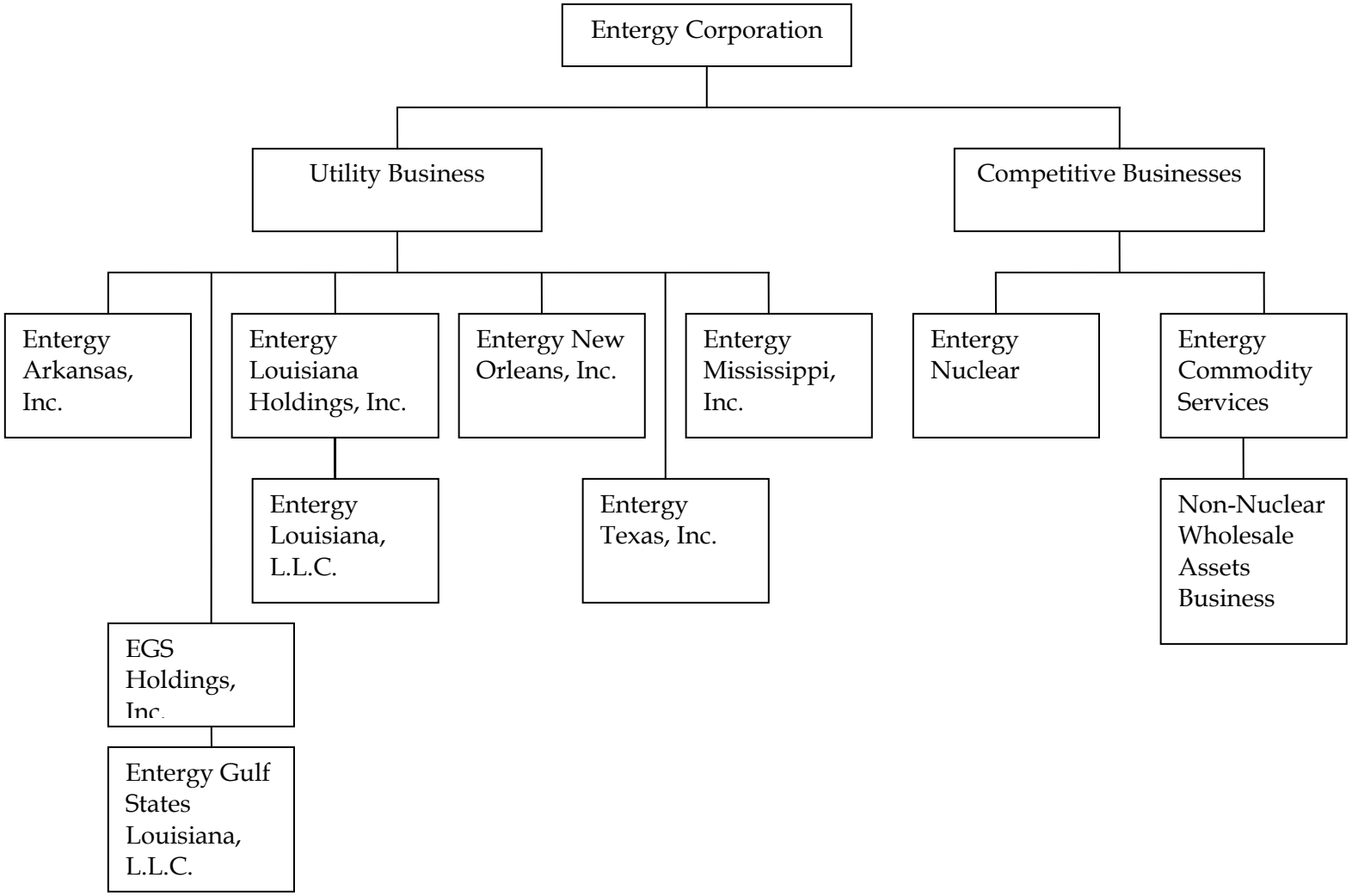
ENTERGY SERVICE INC.

Entergy Services, Inc., is a service corporation that provides a broad range of shared services to the various operating companies. In the area of fuel procurement, System Planning provides most of the direct activities.

The functional organization for all of these entities is shown in Exhibits II-1 and II-2.

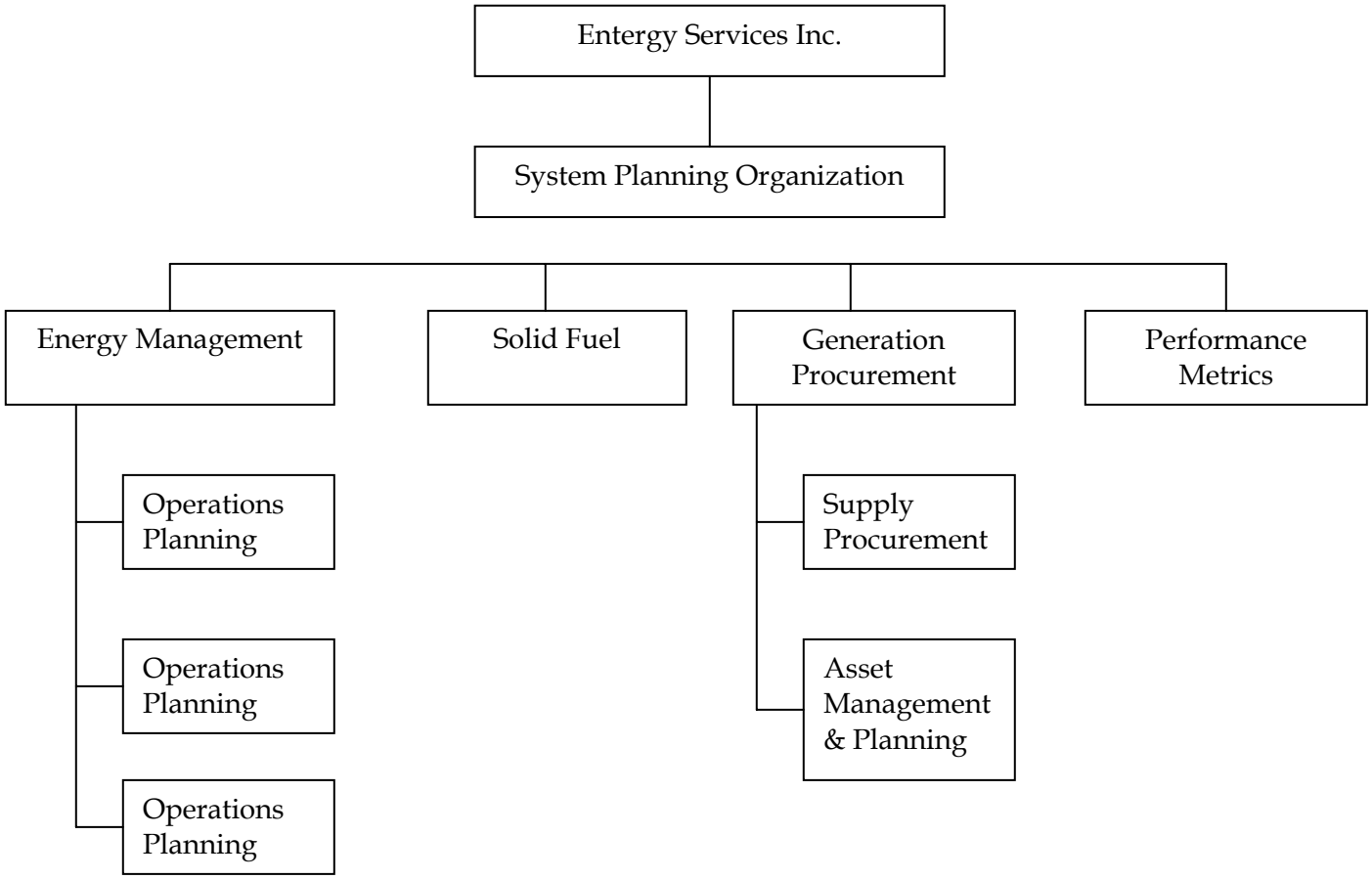
Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-1
Entergy Corporate Organization



Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-2
Entergy Services, Inc. Organization



B. ENTERGY MISSISSIPPI INC. OPERATING STATISTICS

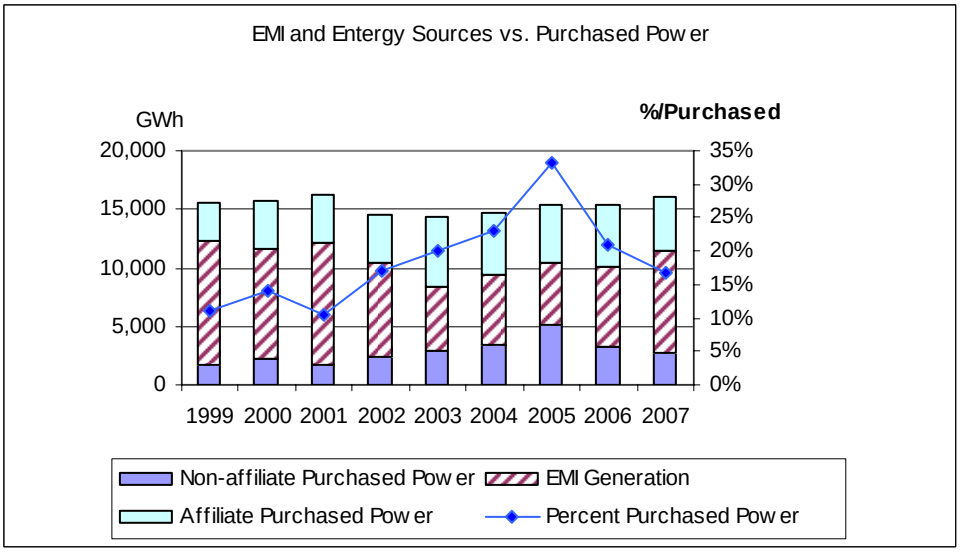
Vantage's analysis of fuel procurement begins with a brief analysis of operating statistics from both Entergy Mississippi Inc., and Entergy System. Vantage performed this analysis to understand the assets, trends, constraints and operating characteristics in which ESI procures electricity for its customers.

Some key observations include the following.

- EMI's generation sources from purchased power have decreased from a high of 33% in 2005 to 17% in 2007. This represents a 47% reduction.
- Grand Gulf Nuclear Plant provides approximately 3 million MWh annual of affiliate purchased power. Entergy rates Grand Gulf at 1280 MW. Entergy owns 90% and SMEPA owns 10%. Of Entergy's 90%, EMI owns 33%. Therefore, EMI is considered the owner of about 380 MW.
- The price of power from Grand Gulf has trended down since 2000 ($74.42/MWh) and is now almost 31% lower ($51.52/MWh).
- Fuel prices, in both absolute terms and in $/KWh, dropped significantly in 2007 from 2006 levels and were even lower than 2004-05.
- EMI has owned generation that consists of 45% Peaking, 42% Intermediate and 13% Base Load. However, when the EMI portion of Grand Gulf is considered as base load, the percentages change to 40% Peaking, 38% Intermediate and 22% Base Load.

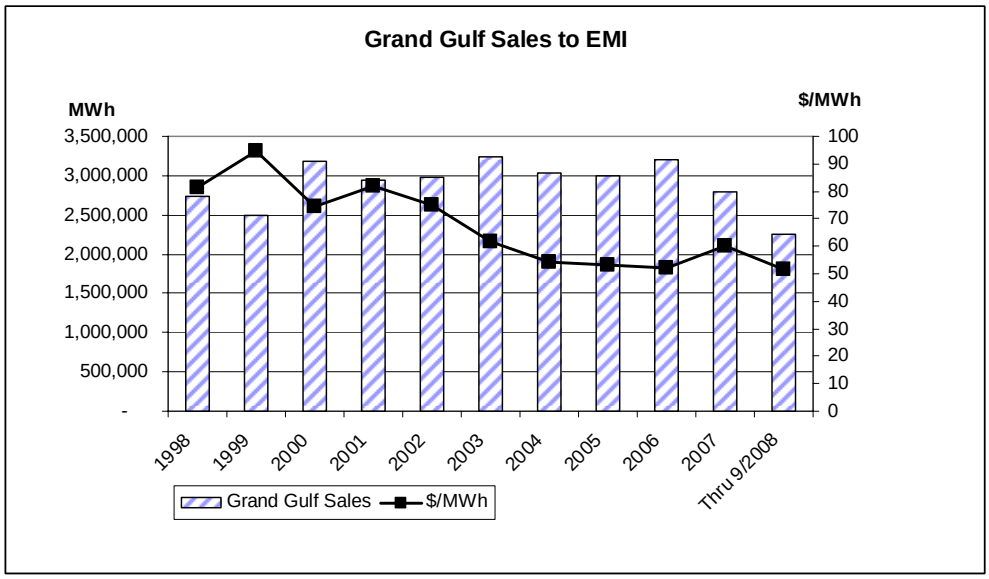
Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-3
EMI Purchased Power vs. Total Power



Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-4
Grand Gulf Sales to EMI



Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-5
EMI Fuel Revenue in Dollars

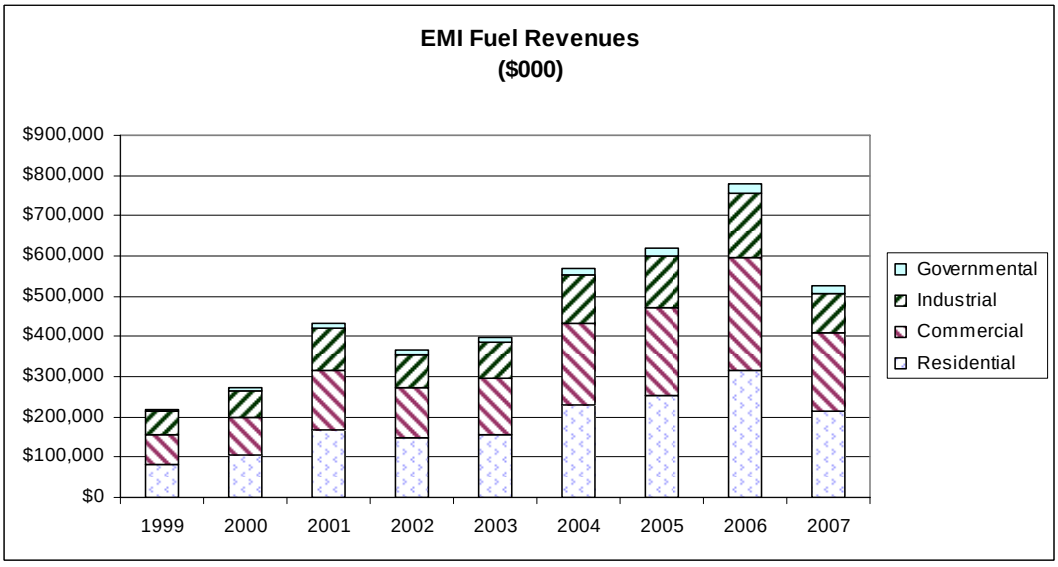
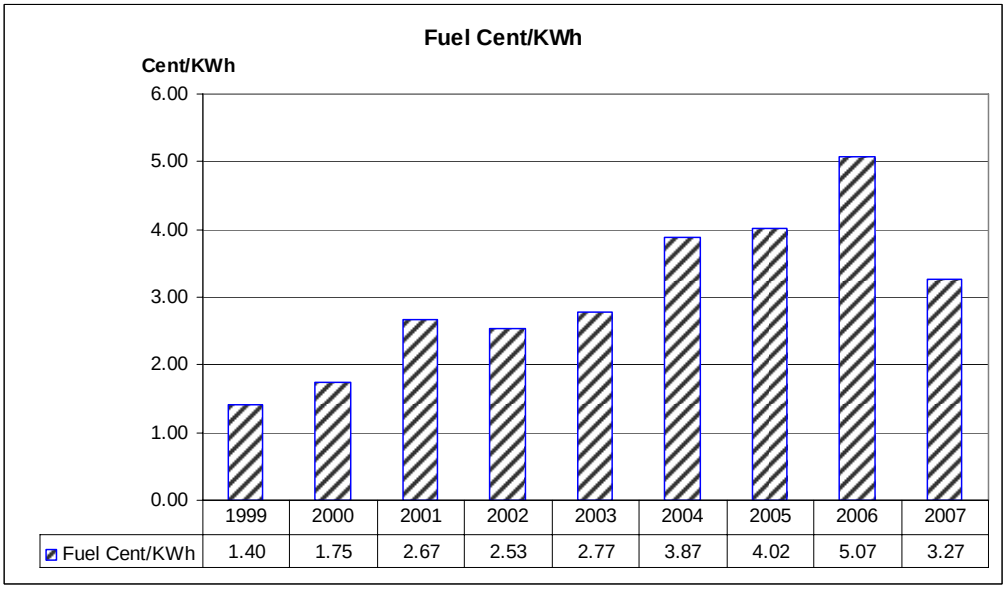


Exhibit II-6
EMI Fuel Revenue in $/KWh



C. ENTERGY MISSISSIPPI FUEL PROCUREMENT HISTORY

The following tables and graphs provide a historical perspective on energy costs for EMI. The amounts included here are those included in the calculation of monthly fuel costs and results in the adjustments of the Fuel adjustment clause (FAC)

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-7
Summary of Annual EMI Energy Costs

	ENERGY COSTS	KWH SALES	AVERAGE COST KWH
1998	**$219,399,179**	**12,324,024,630**	**0.01780**
1999	$265,932,642	12,517,187,031	0.02125
2000	$386,236,853	12,846,754,222	0.03006
2001	$372,759,940	12,620,680,089	0.02954
2002	$294,230,666	12,828,737,708	0.02294
2003	$445,540,027	12,890,999,244	0.03456
2004	$458,105,235	12,977,533,883	0.03530
2005	$757,443,848	13,340,119,825	0.05678
2006	$559,221,761	13,476,585,833	0.04150
2007	$542,127,097	13,538,031,721	0.04004
2008	$368,010,824	6,143,167,847	0.05991

Exhibit II-8
EMI Monthly Fuel Costs per kWh

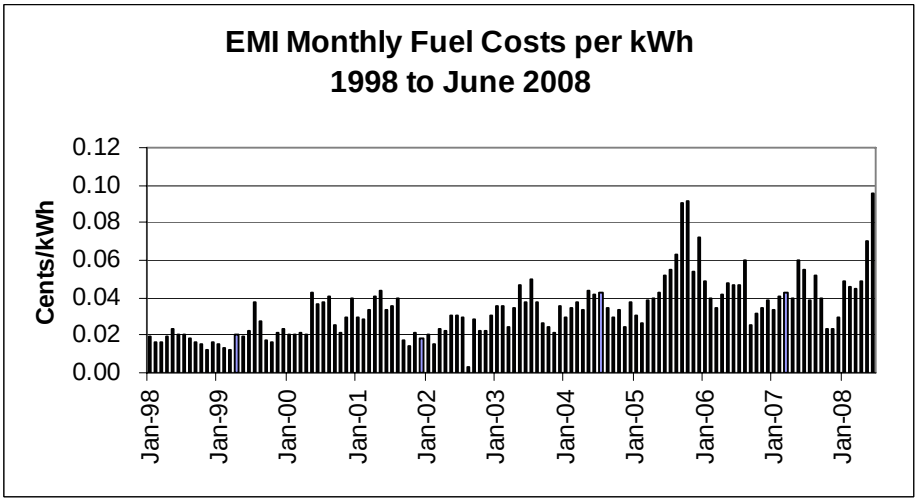
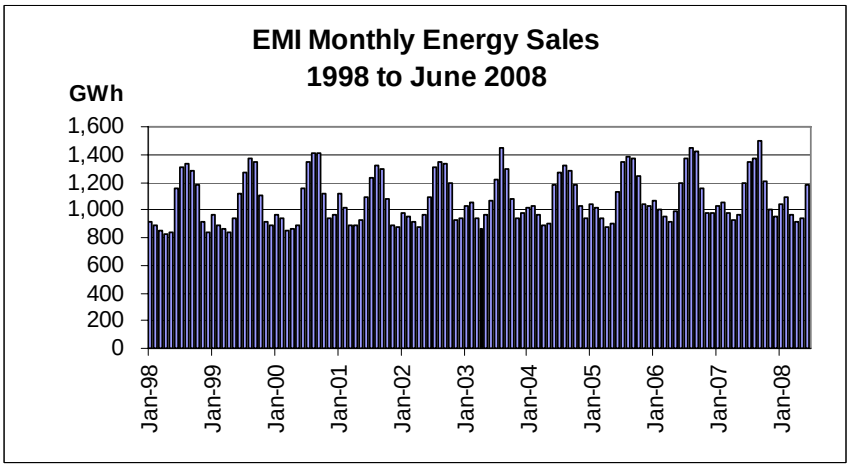
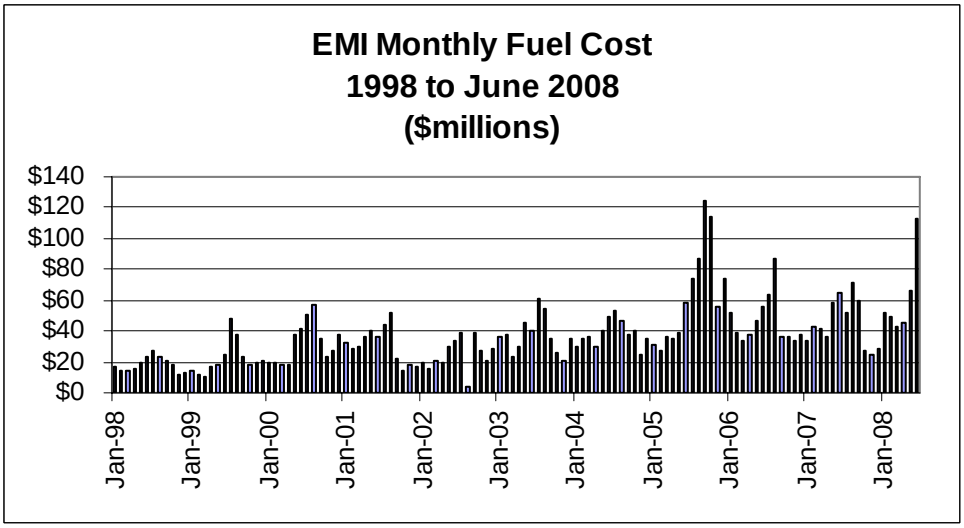


Exhibit II-9
EMI Monthly Energy Sales



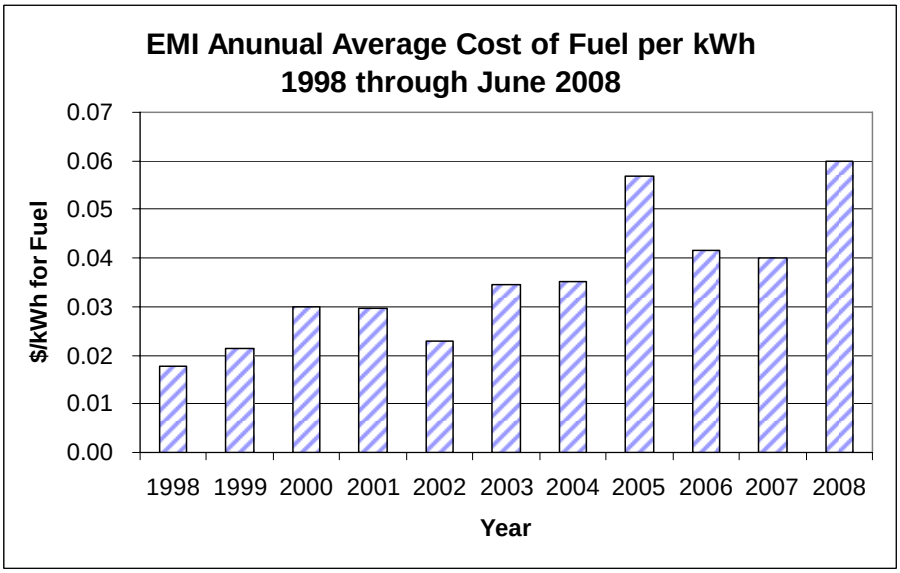
Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-10
EMI Monthly Cost



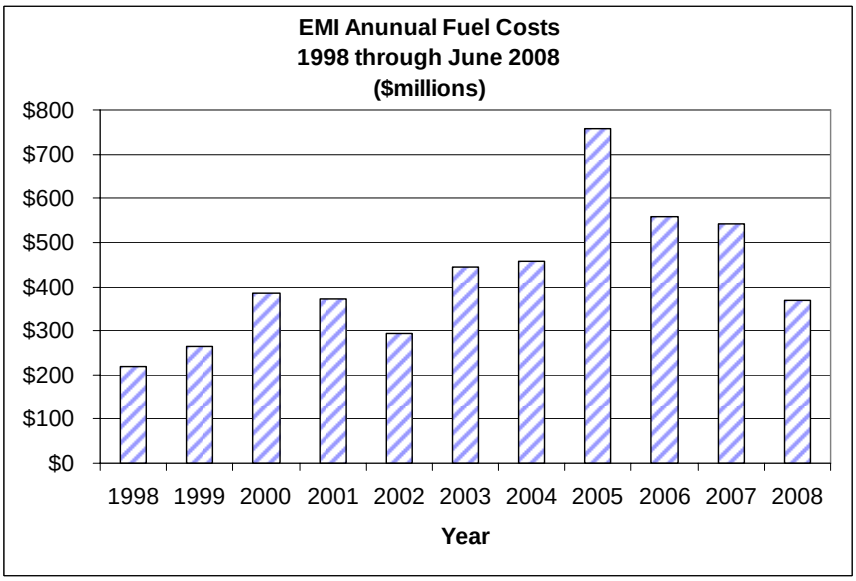
Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-11
EMI Annual Average Cost of Fuel per kWh



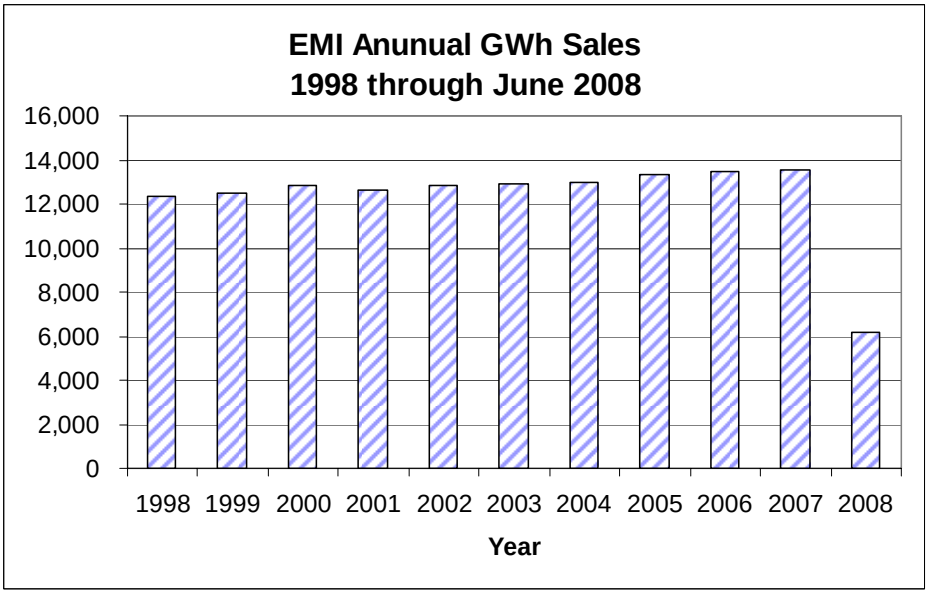
Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-12
EMI Annual Fuel Costs



Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-13
Summary of Annual EMI Energy Costs



Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-14
Entergy Mississippi Inc. Generation Portfolio

GENERATION PORTFOLIO								TOTAL PLANT – 2007	
			COMMERCIAL	OWNED & LEASED CAPABILITY			NET GENERATION	EXPENSES PER NET	TOTAL PRODUCTION EXPENSE
PLANT	UNIT	OWNERSHIP	OPERATION	(MW)*(a)*	FUEL TYPE	PURPOSE	(MWH)	MWH	($000)
Attala	1	100%	2001	455	Gas	Intermediate	2,527,549	56.34	142,405
Baxter Wilson	1	100%	1966	500	Gas/Oil	Peaking	1,699,990	88.25	150,016
	2	100%	1971	700	Gas/Oil	Peaking			
Delta	1	100%	1953	97	Gas/Oil	Peaking	(2,047)	(975.09)	1,996
	2	100%	1953	95	Gas/Oil	Peaking			
Gerald Andrus	1	100%	1975	741	Gas/Oil	Intermediate	1,349,389	87.26	117,747
Natchez	1	100%	1951	–	Gas/Oil	Reserve	(7)	(28,571.43)	200
Rex Brown	1	100%	1948	15	Gas	Inactive (b)	158,998	150.17	23,876
	3	100%	1951	70	Gas/Oil	Peaking			
	4	100%	1959	203	Gas/Oil	Intermediate			
	5	100%	1968	11	Oil	Peaking			
Independence	1	25%	1983	209	Coal	Base	3,025,675	21.73	65,744
Independence	2	25%	1984	211	Coal	Base			
Grand Gulf	1	30%	1985	380	Nuclear	Base	2,785,186		
Total				3,687			8,759,547	57.31	501,984

(a) Owned and Leased Capability is the dependable load carrying capability as demonstrated under actual operating conditions based on the primary fuel (assuming no curtailments) that each station was designed to utilize.
(b) Rex Brown status is Inactive as of 1/1/2008
(c) Grand Gulf is listed a if owned by EMI, when it is actually under contract, but considered as owned for planning purposes. Entergy owns 90% of 1,280 MW and EMI owns 33% of Energy portion.

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-15
Entergy Mississippi Inc. - Operating Data

FUEL REVENUES (included in above revenues)										% Growth
	1999	2000	2001	2002	2003	2004	2005	2006	2007	Since 1999
Residential	$83,232	$106,123	$168,322	$146,191	$157,624	$229,326	$251,338	$316,861	$215,446	158.8%
Commercial	$72,926	$91,993	$148,547	$127,484	$139,087	$203,634	$220,024	$280,819	$192,289	163.7%
Industrial	$56,832	$67,980	$102,087	$82,778	$88,063	$119,811	$128,483	$157,157	$100,293	76.5%
Governmental	$6,364	$8,026	$13,001	$10,918	$11,885	$17,885	$19,440	$24,908	$16,605	160.9%
Total Retail Fuel Revenues	$219,354	$274,122	$431,957	$367,371	$396,659	$570,656	$619,285	$779,745	$524,633	139.2%
USES OF ENERGY (GWh)										
Electric Energy Sales:	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Residential	4,753	4,976	4,867	5,092	5,092	5,085	5,333	5,387	5,474	15.2%
Commercial	4,156	4,307	4,322	4,445	4,476	4,518	4,630	4,746	4,872	17.2%
Industrial	3,246	3,188	3,051	2,910	2,939	2,977	2,967	2,927	2,771	-14.6%
Governmental	363	376	381	382	384	398	411	417	421	16.0%
Total Retail	12,518	12,847	12,621	12,829	12,891	12,978	13,341	13,477	13,538	8.1%
Sales for Resale	2,200	1,589	2,017	1,320	443	698	936	900	1,493	-32.1%
Unbilled Energy	-44	160	-81	-48	45	142	-75	-15	-22	-50.0%
Total Electric Energy Sales	14,674	14,596	14,557	14,101	13,379	13,818	14,202	14,362	15,009	2.3%
Line Losses and Company Usage	951	1,052	1,597	412	943	921	1,201	1,021	1,059	11.4%
Total Uses of Energy	15,625	15,648	16,154	14,513	14,322	14,739	15,403	15,383	16,068	2.8%
AVERAGE ELECTRIC REVENUE	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Residential	6.54	6.85	8.03	7.36	8.06	9.19	9.44	10.55	9.14	39.8%
Commercial	6.04	6.39	7.58	6.96	7.64	8.78	9.08	10.21	8.78	45.4%
Industrial	4.67	5.05	6.26	5.66	5.91	6.84	7.05	8.04	6.68	43.0%
Governmental	6.48	6.81	8.02	7.47	8.44	9.61	9.88	10.90	9.60	48.1%

NUMBER OF RETAIL ELECTRIC CUSTOMERS (as of December 31)										
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	
Residential	335,221	340,125	341,126	344,637	348,019	351,274	359,538	357,564	361,725	7.9%
Commercial	53,368	54,556	55,784	57,146	59,347	60,338	60,826	62,594	63,642	19.3%
Industrial	3,021	3,048	2,970	3,036	4,767	3,915	2,739	3,014	3,109	2.9%
Governmental	3,531	3,655	3,738	3,842	3,884	4,036	3,856	4,066	4,096	16.0%
Total Retail Customers	395,141	401,384	403,618	408,661	416,017	419,563	426,959	427,238	432,572	9.5%

D. ENTERGY SYSTEM-WIDE OPERATING STATISTICS

Specific details are identified to ensure the reader understands any results or trends that may have an impact on procurement and operating decisions.

- The Entergy System consists of 38 generating plants, totaling 90 units and 22,145 megawatts.
- Fluctuations in sources of energy have been evident over the last five years. For example:
  - gas and oil consumption increased from 18,703 GWh to 24,131 GWh from 2006 to 2007;
  - purchased power amounts have fluctuated over the years;
  - nuclear fuel and coal are by far the lowest cost fuels.
- EMI in 2007 had revenues of $1.372 billion or 15.2% of the Entergy total operating revenue.
- EMI in 2007 had fuel related revenues of $524 million or 12.3% of the Entergy total fuel revenue.
- Entergy's nuclear plant production costs were $17.5/MWh versus the national average of $18.1/MWh.

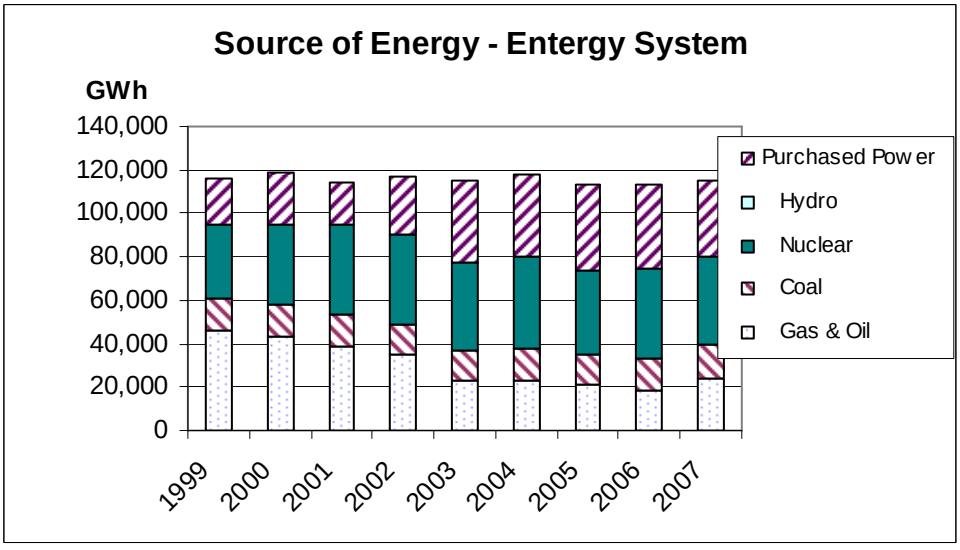
Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-16
Entergy System-Wide Energy Capability

ENTERGY TOTAL CAPABILITY					
As of December 31, 2007	OPERATED PLANTS	UNITS		OWNED & LEASED (MW)*(a)*	OPERATED (MW)
Plants that use fuel type:					
Gas/Oil	27	71		14,728	15,462
Coal	3	5		2,244	3,868
Petroleum Coke	1	2		–	200
Total Fossil	31	78		16,972	19,530
Hydro	3	7		67	147
Nuclear	4	5		5,106	5,233
Total Capability	38	90		22,145	24,910
All plants that have units with multiple fuel types are in the Gas & Oil plant count.					
(a) Owned and Leased Capability is the dependable load carrying capability as demonstrated under actual operating conditions based on the primary fuel (assuming no curtailments) that each station was designed to utilize					

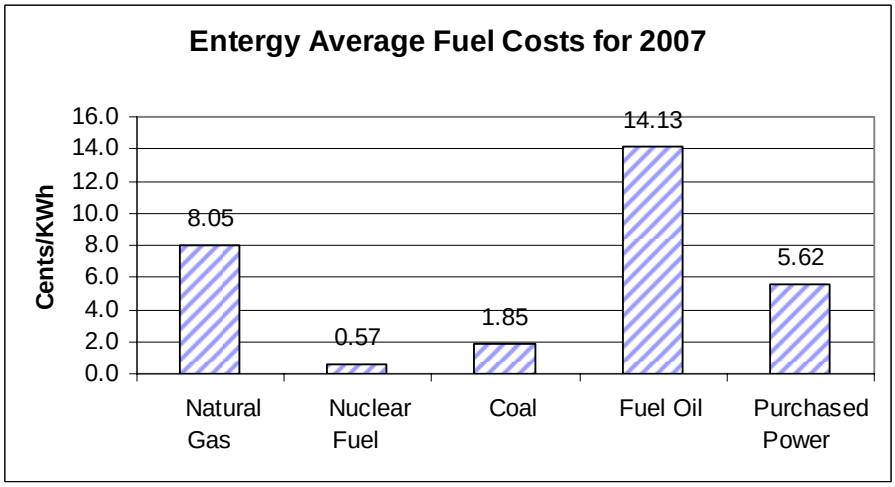
Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-17
Entergy System-Wide Sources of Energy



Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-18
Entergy System-wide Average Fuel Cost



Note: Fuel Oil generation is very small portion of sales.

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-19
Entergy System-wide Operating Data

SOURCES OF ENERGY (GWh)*(a)*	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	% Change
Net Generation:										From 1999
Gas & Oil	46,474	43,073	38,873	35,195	22,797	22,619	21,388	18,703	24,131	-48.1%
Coal	14,674	14,799	14,586	13,743	14,057	15,359	13,502	14,383	15,035	2.5%
Nuclear	33,569	37,059	41,038	40,917	40,628	41,710	38,432	41,687	40,988	22.1%
Hydro	158	133	154	164	115	151	97	74	135	-14.6%
Total Net Generation	94,875	95,064	94,651	90,019	77,597	79,839	73,419	74,847	80,289	-15.4%
Purchased Power:										
Affiliated Companies	696	843	108	11	1,027	1,545	3,501	1,428	729	4.7%
Non-affiliated Companies	20,317	23,344	19,358	27,307	36,660	36,422	36,689	36,974	33,978	67.2%
Tot. Purchased Power	21,013	24,188	19,466	27,319	37,687	37,967	40,190	38,402	34,707	65.2%
Total Sources of Energy	115,888	119,252	114,117	117,337	115,284	117,806	113,609	113,249	114,996	-0.8%
USES OF ENERGY (GWh)*(a)*										
Electric Energy Sales:	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	
Residential	30,631	31,998	31,080	32,581	32,817	32,897	31,569	31,665	33,281	8.7%
Commercial	23,775	24,657	24,706	25,354	25,863	26,468	24,401	25,079	27,408	15.3%
Industrial	43,549	43,956	41,577	41,018	38,637	40,293	37,615	38,339	38,985	-10.5%
Governmental	2,564	2,605	2,593	2,678	2,651	2,568	1,568	1,580	2,339	-8.8%
Total Retail	100,519	103,216	99,956	101,631	99,968	102,226	95,153	96,663	102,013	1.5%
Sales for Resale	9,714	9,794	8,896	9,828	9,248	8,623	11,460	10,803	6,145	-36.7%
Unbilled Energy	-226	881	-901	233	249	1,140	(823)	(167)	277	-222.6%
Total Electric Energy Sales	110,007	113,891	107,951	111,692	109,465	111,989	105,790	107,299	108,435	-1.4%
Line Losses and Company Usage	5,881	5,362	6,166	5,647	5,819	5,817	7,819	5,950	6,561	11.6%
Total Uses of Energy	115,888	119,252	114,117	117,337	115,284	117,806	113,609	113,249	114,996	-0.8%

	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Peak Demand (MW)	20,664	22,052	20,257	20,419	20,162	21,174	21,391	20,887	22,001	6.5%
Operational Summer Capacity at Peak	22,230	22,235	22,080	22,373	21,144	21,207	22,247	22,087	23,996	7.9%
Annual System Load Factor (%)	61	59	61	62	62	60	59	62	59	-3.3%
Retail Electric Sales Growth Rate (%)*(a)*	0.3	2.7	-3.2	1.7	-1.6	2.3	(1.1)	1.6	5.5	1733.3%
Retail Electric Sales Weather-Adjusted	3.1	-0.8	-0.2	2.1	1.4	2.8	(2.7)	1.9	6.0	93.5%
Regional Gross Domestic Product Rate (%)						2.5	(0.3)	2.6	3.8	
National Gross Domestic Product Rate (%)	2.75	4.9	4.62	3.88	6.53	4.4	3.6	3.3	2.2	-20.0%
Average Fuel Cost (cents/KWh)*(a)*	0.54	0.56	0.5	0.47	0.48					
Natural Gas	1.59	1.51	1.58	1.37	1.26	7.31	9.91	7.75	8.05	406.3%
Nuclear Fuel	2.06	3.9	4.33	15.78	5.04	0.49	0.49	0.51	0.57	-72.3%
Coal	0.54	0.56	0.5	0.47	0.48	1.39	1.57	1.76	1.85	242.6%
Fuel Oil	1.59	1.51	1.58	1.37	1.26	5.02	7.05	13.34	14.13	788.7%
Purchased Power	2.06	3.9	4.33	15.78	5.04	4.51	6.37	5.48	5.62	172.8%

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-20
Entergy 2007 Consolidated Utility Electric Statistical Information

2007 CONSOLIDATING UTILITY ELECTRIC STATISTICAL INFORMATION									
	EAI	**EGSL**	**ELL**	**EMI**	**ENOI**	**SERI**	**ELIMINATIONS**	**TOTAL**	**EMI % of Totals**
ELECTRIC OPERATING REVENUES ($ thousands)									
Residential	689,885	1,042,036	853,780	500,097	142,497	–	–	3,228,295	36%
Commercial	408,561	817,252	578,025	427,545	181,438	–	–	2,412,821	27%
Industrial	406,984	1,034,508	871,853	185,119	46,697	–	–	2,545,161	28%
Governmental	18,972	45,293	43,550	40,417	72,467	–	–	220,698	2%
Total Retail	1,524,402	2,939,089	2,347,208	1,153,178	443,099	–	–	8,406,975	93%
Sales for Resale	458,372	429,130	318,001	171,710	103,843	553,189	(1,641,034)	393,211	4%
Other	50,191	79,789	72,343	47,914	10,516	4	(14,642)	246,115	3%
Total	2,032,965	3,448,008	2,737,552	1,372,802	557,458	553,193	(1,655,676)	9,046,301	100%
FUEL REVENUES (included in above revenues)									
Residential	124,582	558,223	415,883	215,446	71,496	–	–	1,385,630	32%
Commercial	92,056	484,589	280,200	192,289	101,932	–	–	1,151,066	27%
Industrial	115,077	774,234	614,448	100,293	28,745	–	–	1,632,797	38%
Governmental	4,308	24,066	21,305	16,605	42,750	–	–	109,034	3%
Total Retail	336,023	1,841,112	1,331,836	524,633	244,923	–	–	4,278,527	100%
SOURCES OF ENERGY (GWh)									
Net Generation:									
Gas & Oil	89	7,669	8,784	5,734	1,855	–	–	24,131	21%
Coal	7,935	4,074	–	3,026	–	–	–	15,035	13%
Nuclear	15,486	7,188	9,893	–	–	8,421	–	40,988	36%
Hydro	135	–	–	–	–	–	–	135	0%
Total Net Generation	23,645	18,931	18,677	8,760	1,855	8,421	–	80,289	70%
Purchased Power:									
Affiliated Companies	3,636	5,514	6,025	4,602	3,428	–	(22,476)	729	1%
	EAI	**EGSL**	**ELL**	**EMI**	**ENOI**	**SERI**	**ELIMINATIONS**	**TOTAL**	**%**
Non-affiliated	5,790	17,658	7,484	2,706	340	–	–	33,978	30%

Companies									
Total Purchased Power	9,426	23,172	13,509	7,308	3,768	–	(22,476)	34,707	30%
Total Sources of Energy	33,071	42,103	32,186	16,068	5,623	8,421	(22,476)	114,996	100%
USES OF ENERGY (GWh)									
Electric Energy Sales:									
Residential	7,725	10,215	8,646	5,474	1,221	–	–	33,281	33%
Commercial	5,945	8,980	5,848	4,872	1,763	–	–	27,408	27%
Industrial	7,424	15,012	13,209	2,771	568	–	–	38,985	38%
Governmental	277	448	446	421	747	–	–	2,339	2%
Total Retail	21,371	34,655	28,149	13,538	4,299	–	–	102,013	100%
Sales for Resale	9,836	5,388	2,411	1,493	1,010	8,440	(22,433)	6,145	–
Unbilled Energy	35	125	124	(22)	15	–	–	277	–
Total Electric Energy Sales	31,242	40,168	30,684	15,009	5,324	8,440	(22,433)	108,435	–
Line Losses and Company Usage	1,829	1,935	1,502	1,059	299	(19)	(45)	6,561	–
Total Uses of Energy	33,071	42,103	32,186	16,068	5,623	8,421	(22,476)	114,996	–
AVERAGE ELECTRIC REVENUE (cents/KWh)									
Residential	8.93	10.20	9.87	9.14	11.67	–	–	9.70	–
Commercial	6.87	9.10	9.88	8.78	10.29	–	–	8.80	–
Industrial	5.48	6.89	6.60	6.68	8.22	–	–	6.53	–
Governmental	6.85	10.11	9.76	9.60	9.70	–	–	9.44	–
NUMBER OF RETAIL ELECTRIC CUSTOMERS (as of December 31, 2007) *(a)*									
Residential	576,975	661,705	568,893	361,725	115,523	–	–	2,284,821	86%
Commercial	86,532	89,712	73,012	63,642	12,211	–	–	325,109	12%
Industrial	20,040	9,254	8,374	3,109	2,765	–	–	43,542	2%
Governmental	618	3,727	5,229	4,096	1,308	–	–	14,978	1%
Total Retail Customers	684,165	764,398	655,508	432,572	131,807	–	–	2,668,450	100%

(a) Customer count data reflects estimates of customers in the hardest hit areas affected by Hurricane Katrina. Issues associated with temporary housing and resumption of service at Totals may not foot due to rounding permanent dwellings render precise counts difficult at this time

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-21
Entergy 2007 Nuclear Plant Statistical Information

INDIVIDUAL NUCLEAR PLANT INFORMATION					
	ANO UNIT 1	**ANO UNIT 2**	**GRAND GULF**	**RIVER BEND**	**WATERFORD 3**
Owner	Entergy Arkansas	Entergy Arkansas	System Energy-90% S. Mississippi Electric Power Association-10%	Entergy Gulf States Louisiana	Entergy Louisiana
Commercial Operation Date	December 74	March 80	July 85	June 86	September 85
License Expiration Date	5/20/34	7/17/38	11/1/24	8/29/25	12/18/24
Architect/Engineer	Bechtel Power	Bechtel Power	Bechtel Power	Stone & Webster	Ebasco
Reactor Manufacturer	Babcox & Wilcox	Comb. Engr	General Electric	General Electric	Combustion Engineering
Reactor Type	PWR	PWR	BWR	BWR	PWR
Turbine Generator Manufacturer	Westinghouse	Gen. Electric	Kraftwerk Union	General Electric	Westinghouse
Owned and Leased Capability (MW)*(a)*	843	995	1,141	970*(c)*	1,157
Refueling Data:					
Last Date	4/22/07-	9/19/06-	3/18/07-	4/23/06-	11/25/06-
	5/13/07	10/28/06	4/12/07	5/13/06	12/27/06
Number of Days	21	39	24	20	32
Next Scheduled Refueling	Fall 08	Spring 08	Fall 08	Winter 08	Spring 08
2007 Capability Factor (%)	94.7	90.9	89.5	88.1	91.5
($ millions as of December 31, 2007)					
Net Book Value	1,104*(b)*		1,626	1,421*(c)*	1,501
Decommissioning Trust Fund Balance	466*(b)*		316	366*(c)*	222
Decommissioning Liability	506*(b)*		369	208*(c)*	257

(a) Owned and Leased Capability is the dependable load carrying capability as demonstrated under actual operating conditions based on the primary fuel assuming no curtailments)
(b) ANO Units 1 and 2 are reported together. that each station was designed to utilize.
(c) 30% of River Bend is not subject to rate regulation by the Public Utility Commission of Texas, the Louisiana Public Service Commission, nor do various include amounts for the 30% not subject to rate regulation. municipal authorities, and is included in non-utility property on the balance sheet. The decommissioning trust fund balance and decommissioning liability

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-22
Entergy Nuclear Plant Operating Data

UTILITY STATISTICAL INFORMATION					
The following table shows plant performance for 2003 – 2007 based on 18/24 month operating cycle.					
CAPABILITY FACTOR (%)	**2003**	**2004**	**2005**	**2006**	**2007**
ANO	93.3	93.3	88.5	88.3	92.8
Grand Gulf	94.5	93.7	93.3	91.9	89.5
River Bend	92.4	90.9	85.8	90.9	88.1
Waterford 3	92.8	93.6	89	93.5	91.5
Entergy Southeast Average	93.3	92.9	89.2	90.6	90.9
Industry Average	90	89.7	90.1	90.5	91.1
The following table shows plant performance for 2007 and averages for four					
PRODUCTION COST ($/MWh)	**2001–2003**	**2002–**	**2003–**	**2004–**	**2007**
ANO	14.8	14.8	15.1	15.5	16
Grand Gulf	13.6	13.6	13.7	14.2	17.2
River Bend	16.4	17	17.9	18.8	22.4
Waterford 3	15.4	15.5	16	15.9	16.8
Entergy Southeast Average	15	15.1	15.5	15.9	17.5
Industry Average	16.3	16.1	16.5	16.9	18.1

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit II-23
Entergy Subsidiary Deferred Fuel Balances as of December 31st 2003 to 2007

COMPANY	2003	2004	2005	2006	2007	FUEL RECOVERY MECHANISM
EAI	10.6	7.4	204.2	2.2	114.8	Annual reset in April based on prior calendar year fuel and purchased power costs adjusted for nuclear refueling outages and projected sales plus any under- or over-recovered fuel balance for the prior calendar year.
ETI	116.6	78.5	203.2	(45.6)	(67.3)	Semi-annual reset of fuel factor in March and September based on the market price of natural gas plus surcharge or refund for material under- or over-recoveries based on actual costs.
EGSL*(a)*	1.9	11.6	121.2	119.5	105.8	Electric: Monthly reset based on fuel and purchased power costs from two months prior plus surcharge or credit for 1/12 of under- or over-recovered fuel balance. Gas: Monthly reset based on estimated gas costs plus surcharge or credit for 1/12 of under- or over-recovered fuel balance.
ELL	30.6	8.7	21.9	114.3	19.2	Monthly reset based on fuel and purchased power costs from two months prior plus surcharge or credit for 1/12 of under- or over-recovered fuel balance
EMI	89.1	(22.8)	114.0	(95.2)	(76.6)	Quarterly reset based on projected fuel and purchased power costs and projected sales plus
Total excluding ENOI						
	248.7	]83.4	664.4	95.2	95.9	
ENOI	(2.7)	2.6	30.6	19.0	17.3	Electric: Monthly reset based on no more than targeted fuel and purchased power costs and any difference between actual and base rate non-fuel items including Grand Gulf non-fuel costs and Resource Plan non-fuel costs paid by ENOI. A surcharge or credit is calculated on the under- or over-recovered fuel balance based on the most recent 12 months actual kWh sales. Gas: Monthly reset based on estimated gas costs plus a surcharge or credit for the under- or over-recovered fuel balance based on the most recent 12 months Mcf sales.
Total including ENOI	246	85.9	695.1	114.2	113.2	

III. FUEL-RELATED POLICY CONSIDERATIONS

A. DISCUSSION AND ANALYSIS OF EMI FUEL ADJUSTMENT CLAUSE

DESCRIPTION OF EMI'S CURRENT ENERGY COST RIDER (ECR)

Energy Cost Rider, ECR-2, is the currently effective fuel adjustment rider for EMI. ECR-2 requires quarterly filings of fuel cost information and changes to Rider ECR-2. Rider ECR-2 uses projected fuel expenses and sales to determine the fuel adjustment rate for an upcoming quarter. To ensure that EMI collects only its actual cost of fuel and purchased energy as required by Commission Rules and Mississippi Law, a provision to adjust for any over or under collection of actual expenses is included. This provision adjusts for the differences between actual and projected fuel expenses and sales for the prior second quarter. That means, for an ECR-2 filing in the 3rd quarter of the year, the over or under true-up is for the 1st quarter.

The projected fuel expenses are the output of internally generated forecasts. The forecasts take into account the sources of generation and purchased power expected in the upcoming quarter for the EMI service area. The coal forecasts are derived from the existing coal and rail contracts and known changes to the contracts. The natural gas price forecasts rely heavily on the NYMEX futures market price for natural gas at the Henry Hub. Independent third party forecasts are also considered. Since Entergy's primary fuel for both owned generation resources and third party generators is natural gas, particular attention is given to the natural gas price forecast. Although there are planned regular updates to the forecast, the forecast will be revised and updated as needed when actual prices deviate from the forecasted prices.

In an effort to help mitigate the risk of natural gas price fluctuations, Entergy is engaged in an active hedging program, as discussed later in this report. The current ECR utilized by EMI does not allow for the sharing of the net proceeds from the hedging program. Instead, the net proceeds are distributed back to EMI's customers through the Power Management Rider Schedule (PMR-4). The PMR-4 is also used to recover the ownership costs associated with the Attala Generating Facility that is not presently included in the base rates of EMI. The PMR-4 operates in a similar fashion to the over/under collection component of the ECR. That is, the net proceeds from two quarters prior to the current quarter are distributed through the PMR-4. This timing lag enables EMI to determine the actual net proceeds from the hedging program for distribution to its customers.

HISTORICAL ECR DESIGN IN MISSISSIPPI

III-F1 The design of Energy Cost Recovery rules has changed a number of times in Mississippi in order to address conflicting goals and changing fuel prices.

Until April 1997, the EMI was calculated on a monthly basis and then changed to an annual calculation starting in May 1997 until the end of 2000. Beginning in January 2001, ECR was

calculated on a quarterly basis as is currently done. The following Exhibit reflects these changes and provides the historical ECR rate.

The column titled "All Retail schedules FAC Rate" is the adjusted amount for each period that is calculated by Entergy, reviewed by the MPSC Staff and approved by the Commission. The Interim Credit Factor column of 0.03328 is the amount in the base rates that is provided for fuel costs.

Fuel Procurement Audit of Entergy Mississippi Inc.
Exhibit III-1
EMI FAC Amount per Period

Year	Period of FAC Calculation	Period Of FAC	All Retail Schedules FAC Rate ($0.00)	Interim Fuel Credit Factor ($0.00)	Total Fuel Charge ($0.00)
1996	January	Monthly	0.0169856	0.033328	0.050314
1996	February	Monthly	0.0167584	0.033328	0.050086
1996	March	Monthly	0.0157658	0.033328	0.049094
1996	April	Monthly	0.0143828	0.033328	0.047711
1996	May	Monthly	0.0159295	0.033328	0.049258
1996	June	Monthly	0.0139051	0.033328	0.047233
1996	July	Monthly	0.0126484	0.033328	0.045976
1996	August	Monthly	0.0115016	0.033328	0.044830
1996	September	Monthly	0.0113271	0.033328	0.044655
1996	October	Monthly	0.0140009	0.033328	0.047329
1996	November	Monthly	0.0120205	0.033328	0.045349
1996	December	Monthly	0.0110033	0.033328	0.044331
1997	January	Monthly	0.0100621	0.033328	0.043390
1997	February	Monthly	0.0112112	0.033328	0.044539
1997	March	Monthly	0.0179302	0.033328	0.051258
1997	April	Monthly	0.0183932	0.033328	0.051721
1997	May - December	Annual	0.0153	0.033328	0.048628
1998	January - December	Annual	0.014597	0.033328	0.047925
1999	January - December	Annual	0.015818	0.033328	0.049146
2000	January - December	Annual	0.012	0.033328	0.045328
2001	January – March	Quarterly	0.005969	0.033328	0.039297
2001	April – June	Quarterly	0.003196	0.033328	0.036524
2001	July – September	Quarterly	0.00783	0.033328	0.041158
2001	October - December	Quarterly	0.003025	0.033328	0.036353
2002	January – March	Quarterly	0.007868	0.033328	0.041196
2002	April – June	Quarterly	0.0019	0.033328	0.035228
2002	July – September	Quarterly	0.002753	0.033328	0.036081
2002	October - December	Quarterly	0.006869	0.033328	0.040197

Year	Period of FAC Calculation	Period Of FAC	All Retail Schedules FAC Rate ($0.00)	Interim Fuel Credit Factor ($0.00)	Total Fuel Charge ($0.00)
2003	January – March	Quarterly	0.006897	0.033328	0.040225
2003	April – June	Quarterly	0.001096	0.033328	0.034424
2003	July – December	Quarterly	0.00819	0.033328	0.041518
2004	January – March	Quarterly	0.003961	0.033328	0.037289
2004	April – June	Quarterly	0.010621	0.033328	0.043949
2004	July – September	Quarterly	0.017989	0.033328	0.051317
2004	October - December	Quarterly	0.012232	0.033328	0.045560
2005	January – March	Quarterly	0.004751	0.033328	0.038079
2005	April – June	Quarterly	0.009606	0.033328	0.042934
2005	July – September	Quarterly	0.010571	0.033328	0.043899
2005	October - December	Quarterly	0.030038	0.033328	0.063366
2006	January – March	Quarterly	0.051255	0.033328	0.084583
2006	April – June	Quarterly	0.042146	0.033328	0.075474
2006	July – September	Quarterly	0.014728	0.033328	0.048056
2006	October - December	Quarterly	0.000197	0.033328	0.033525
2007	January – March	Quarterly	-0.000357	0.033328	0.032971
2007	April – June	Quarterly	0.009911	0.033328	0.043239
2007	July – September	Quarterly	0.007365	0.033328	0.040693
2007	October - December	Quarterly	0.006894	0.033328	0.040222
2008	January – March	Quarterly	0.004249	0.033328	0.037577
2008	April – June	Quarterly	0.010878	0.033328	0.044206
2008	July – September	Quarterly	0.036807	0.033328	0.070135
2008	October - December	Quarterly	0.027174	0.033328	0.060502

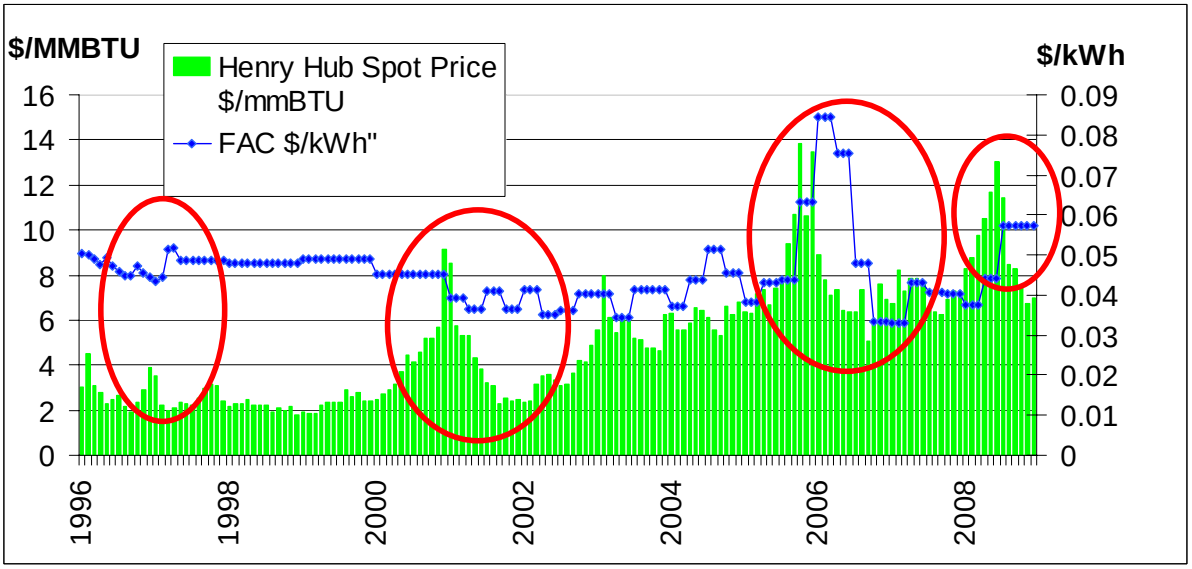
III-F2 <u>There were a number of periods when gas prices fluctuated significantly and the FAC level was out of context or displaced relative to the gas prices at the time.</u>

In an attempt to determine how well FAC levels matched current energy prices, Vantage plotted ten years of monthly FAC versus spot gas prices at the Henry Hub. In this analysis Vantage used the Henry Hub spot price as a surrogate for actual energy prices. While this ignores coal and nuclear costs, it does reflect the volatility that results in mismatches of actual fuel costs and FAC charges. (Note the FAC costs in the table and the charts that follow include actual or projected costs plus adjustments for over/under recovery form previous periods.) Some noteworthy information in this analysis includes:

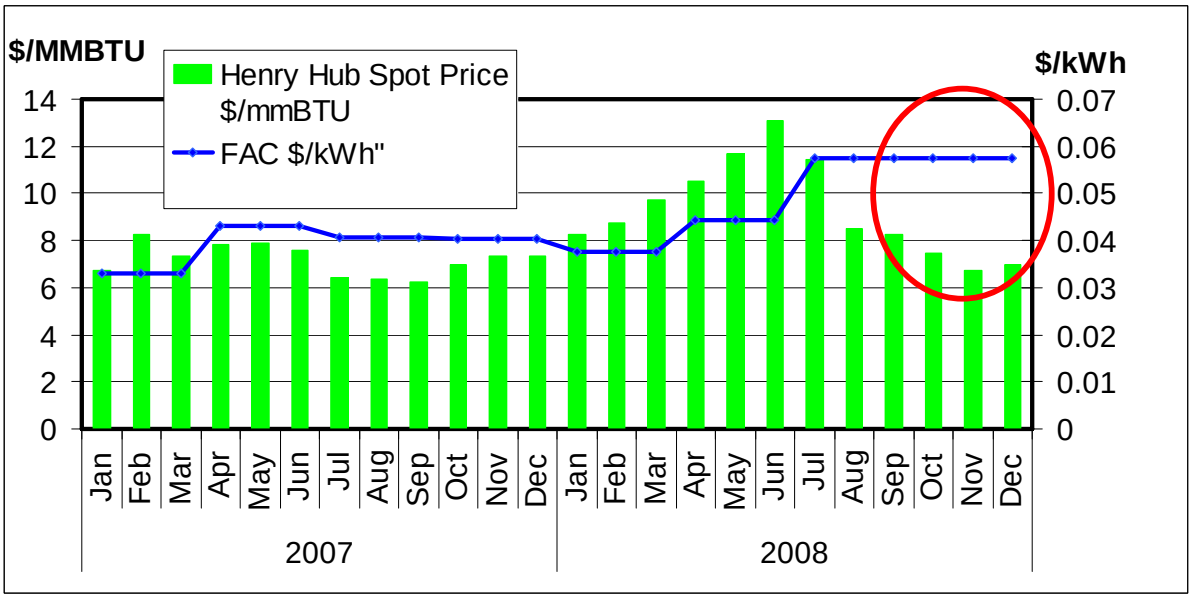
- in January – March 2007, the Fuel Rider FAC is actually negative due to adjustments from previous periods;
- there are four periods during the analysis where timing of increases in fuel prices and FAC are out of sync. These are identified by red circles on Exhibit III-2:
  - in March and April 1997 the FAC rate increased after a spike in gas prices. Shortly thereafter the FAC rules were changed from monthly to annual;

- from August 2000 to April 2001 there was a spike in gas prices. In 2001, the FAC was changed from an annual basis to quarterly calculations;
- the Katrina spike in 2005-06 had a very significant impact on natural gas prices and subsequently the quarterly FAC reacted as well;
- the spikes in early 2008 and subsequent reduction to present gas prices is also reflected in a spike in FAC levels.

Fuel Procurement Audit of Entergy Mississippi Inc.
Exhibit III-2
Gas Price vs. FAC Level 1996-2008



Fuel Procurement Audit of Entergy Mississippi Inc.
Exhibit III-3
Gas Price vs. FAC Level 2007-2008



CURRENT REGULATORY ISSUES ASSOCIATED WITH THE ECR

III-F3 The high level of volatility in the current gas market has raised questions about the appropriate method of calculating ECR.

The recent cyclicality of natural gas prices has certainly caught the attention of utility regulators. Natural gas prices have risen sharply in early 2008 and then have begun to fall in recent month. Since the first of the year, gas prices at the Henry Hub have increased 85% from $7.10 per MMBtu on January 1, 2008 to $13.10 at the end of June. By October they were down to $6.90. The resulting volatility of customers' bills has become intolerable not only for customers but also for state regulators who must deal with questions of clarity in price signals. Consequently, state regulators in Mississippi and in several other states, have been forced to give closer scrutiny to the fuel procurement efforts of the utilities.

Another point of regulatory discomfort for Mississippi regulators is the use of forecasted information that is relied upon in the calculation of the ECR. The recent volatility in the fuel markets, in particular the natural gas market, makes it difficult for regulators to rely on forecasted natural gas prices which are often wrong when implemented.

III-F4 Entergy, in the current FAC mechanism, provides Projected Sales in MWh for EMI for an entire year.

Our review of recent ECR filings shows that once an annual forecast of sales is developed, it is not modified for that year. This lack of response to potential elasticity in consumption, due to either prices or economic circumstances, can lead to some of the differences in actual versus billed amounts for later quarters during the year. However, the variation in sales is significantly smaller than that of fuel costs, and therefore is not a factor that warrants immediate attention unless there is a significant economic downturn.

III-F5 An analysis of options regarding using actual historical fuel prices instead of projected prices shows little value.

The use of actual historical fuel costs, rather than projected costs has been raised in recent hearings. While this seems like it would add clarity to the FAC, it would, in fact, build in volatility due to seasonal price differences in gas as well as the potential for large fluctutations from year to year.

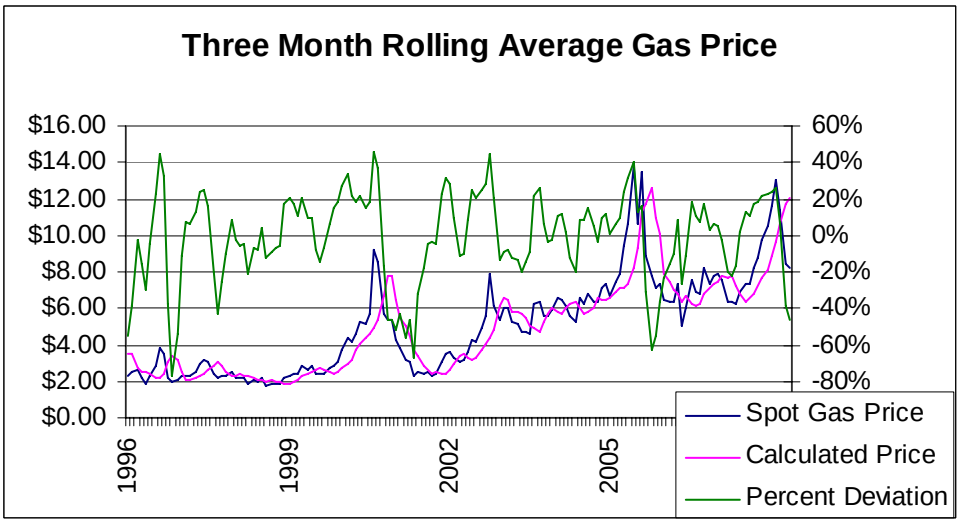
Analysis shows that although the forecasted fuel prices remain problematic, there is no advantage is moving to historical prices. Vantage tried a number of scenarios using historical prices.

In **Scenario 1 – Three Month Rolling Average**, we calculated a three-month average and then used it for the FAC one month later. By example we would average January to March and then use it in May. The one-month delay is the minimum needed for recalculation of a monthly FAC. The results are illustrated in Exhibit III-4. The absolute average differential between actual and historical gas prices was calculated to be 29%.

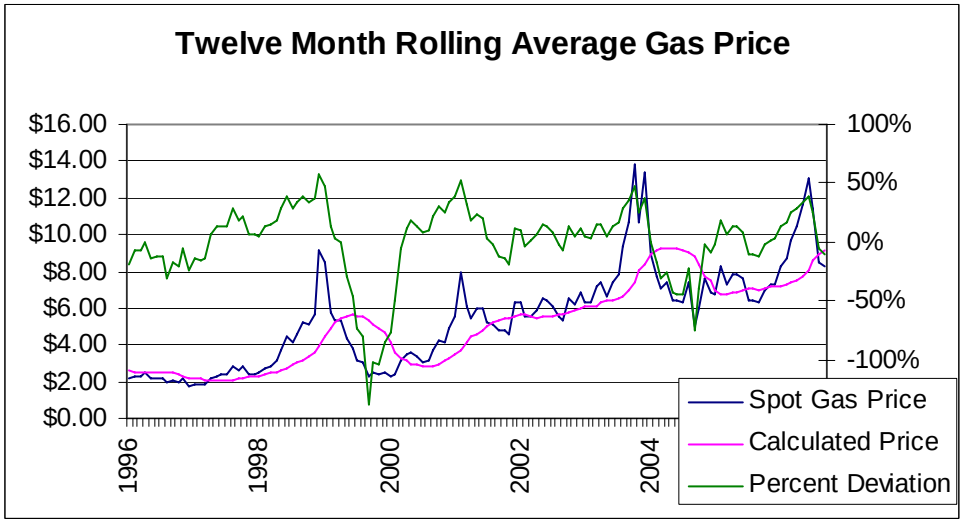
In **Scenario 2 – Twelve Month Rolling Average**, we calculated a twelve-month average and then used it for the FAC one month later. By example we would average January to December and then use it in February of the next year. The one month delay is the minimum needed for recalculation of a monthly FAC. The results are illustrated in the following Exhibit. The absolute average differential between actual and historical gas prices was calculated to be 32%.

Based on these two scenarios, the use of historical prices for future FAC calculations does not look promising.

Fuel Procurement Audit of Entergy Mississippi Inc.
Exhibit III-4
Gas Pricing Scenario – 3 Month



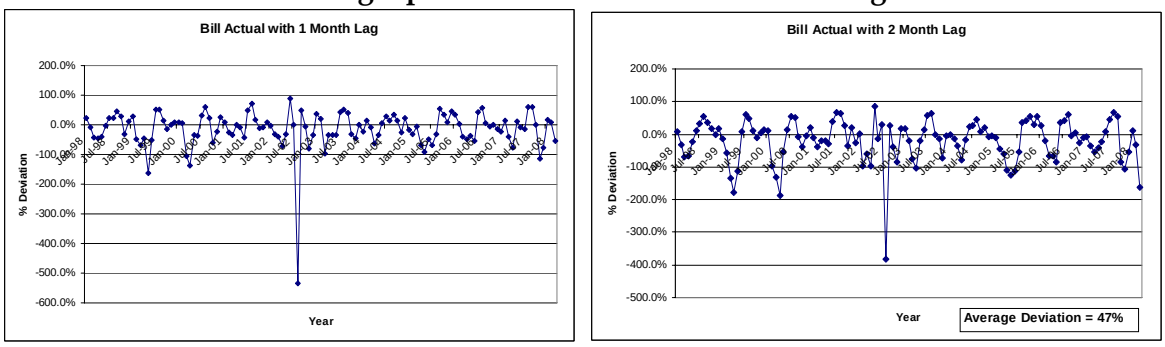
Fuel Procurement Audit of Entergy Mississippi Inc.
Exhibit III-5
Gas Pricing Scenario – 12 Month



III-F6 <u>An analysis using actual results from previous months also shows unacceptable deviation from actual fuel costs for the period.</u>

One other analysis was performed to determine if using actual fuel costs from one month billed either one or two months later would act as an acceptable surrogate for the current projected costs. The two model runs showed an average deviation of billed to actual costs of 40% for a one month lag and 47% for a two month lag. The Exhibit below illustrates the extent of this deviation.

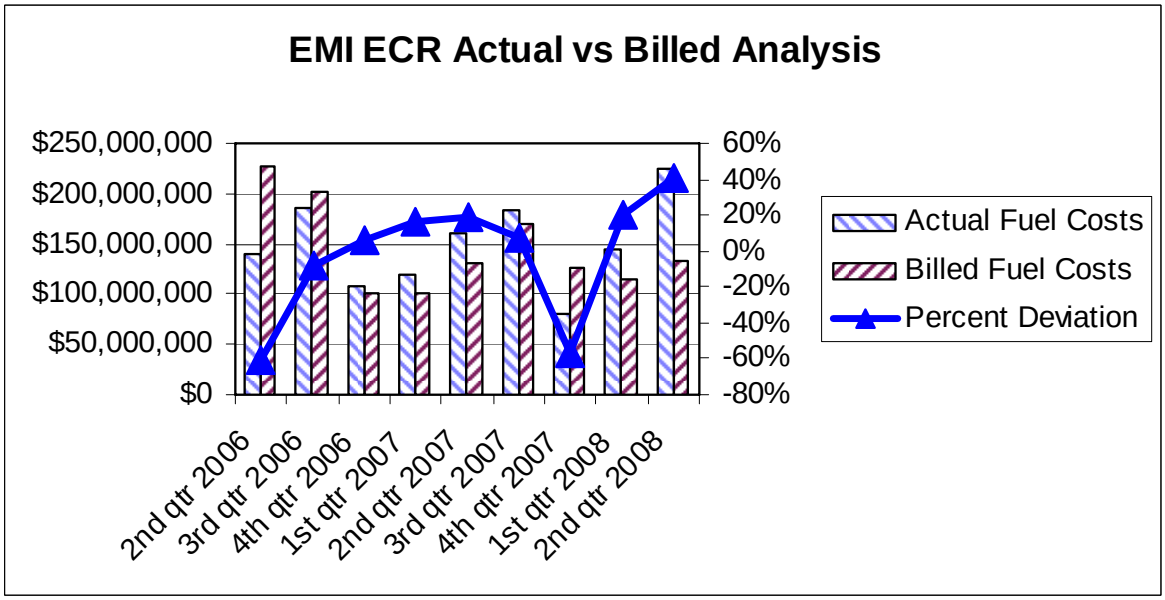
Fuel Procurement Audit of Entergy Mississippi Inc.
Exhibit III-6
Billing Option Scenario – 1 and 2 Month Lag



III-F7 A review of actual fuel costs versus fuel amounts billed for nine quarters shows deviations ranging from instances where actual fuel expenditures were 61% below the billed amount to 41% above the billed amount, for an average deviation of 28%.

The graph and table in the following Exhibit demonstrate the lack of cohesion between actual and billed fuel amounts. This is a problem because it sends the wrong signals to customers and can skew bills during peak seasons.

Fuel Procurement Audit of Entergy Mississippi Inc.
Exhibit III-7
Gas Price Actual vs. Billed Analysis



FAC Period	Actual Fuel Cost for Period	Actual Billed Fuel Revenue	Percent Difference Billed to Actual
2nd qtr 2006	$140,854,552	$226,549,586	-61%
3rd qtr 2006	$186,243,579	$201,293,528	-8%
4th qtr 2006	$107,613,337	$101,591,728	6%
1st qtr 2007	$119,431,616	$99,987,022	16%
2nd qtr 2007	$160,060,388	$130,425,010	19%

3rd qtr 2007	$182,713,460	$168,763,846	8%
4th qtr 2007	$79,921,633	$125,457,231	-57%
1st qtr 2008	$143,932,922	$115,006,475	20%
2nd qtr 2008	$224,077,902	$132,010,425	41%
Average Deviation of Actual to Billed Fuel cost			28%

III-R1 Continue to use projected fuel costs for the FAC calculations, with the option of intervening when price swings result in anomalies.

The analysis performed shows that the deviations over time that arise form using historical costs are likely to be just as significant as those from projected costs. The real key is for Entergy to develop a fuel forecast model that is as accurate and responsive as possible. Entergy is currently in the process of modifying its fuel forecast models and expects better projections. However, natural gas prices are often affected by weather, economic and international political events that cannot be anticipated in any model.

The Commission always has the opportunity to intervene and adjust the FAC in cases where fuel costs begin to change rapidly from those in the FAC projection. In fact, this is what occurred for the third quarter of 2008 when prices began to drop in July, August and September.

ALTERNATIVE FORMS OF ECR

Fuel adjustment clauses became popular and widely adopted by regulatory commissions in the late '70s and early '80s. This was a time of rapidly increasing fuel prices and oil embargos and fuel shortages were prevalent. The deficiency in supply led to various forms of rationing and significantly increased prices. Utilities could not recover the increased expense in a timely manner and deficient earnings resulted. Regulators struggled to process the expanding number of requests to increase rates and Utilities began to "pancake" requests to increase rates in an effort to get timely relief. These pressures encouraged the stakeholders to search out ways to address the crisis. It was determined that one of the largest expense items a utility incurred was fuel and it was an expense over which the utility did not have extensive control. Many regulators singled out fuel expenses for alternative regulatory treatment - something outside the constraints of a general rate case. Led by the initiatives of FERC, most state commissions implemented fuel adjustment clauses as a means to provide expedited recovery of one of the utility's largest expense categories.

Although there are numerous variations among the fuel adjustment clauses used by regulators, there are also some common features. Typically, a utility's fuel costs are reported on a regular basis in filings at the state commission.[i] The filings document the variations in the current fuel costs from a fuel base cost per kilowatt-hour that is included in the utility's rate. This difference in current costs and the component of fuel costs already

[i]/ Currently, in Mississippi, EMI FAC filings are with the Mississippi Public Service Commission with review by Utility Staff, a separate State Agency.

included in base rates is the fuel adjustment that the utility is allowed to recover from its customers after a review by the regulators. In order to expedite the review process, regulators often specify a detailed format to report the information to the commission. Usually these reviews are accomplished within a one month period. The goal is to allow the utility to recover its actual fuel costs on a timely basis. The quid pro quo for the expedited review is that the regulators reserve the right to conduct a more thorough review at a later date. In some instances, the more thorough reviews have evolved into prudency audits of the utility's fuel procurement policies and procedures.

The fuel information reported to the regulators can take various forms. In many jurisdictions, the fuel costs reported to the commission are only actual fuel costs incurred over a recent period. In some states, projected fuel costs are provided as the basis for the fuel adjustment calculation. However, a common component of all fuel adjustment riders is a true-up or over/under calculation to limit the recovery of fuel costs to actual expense levels. The fuel adjustment filings in many jurisdictions are monthly but some commissions use quarterly or even annual periods for their review.

In order to gain a better understanding of the advantages and disadvantages of alternative forms of fuel adjustment clauses or ECRs, four of those alternatives are discussed and considered below.

Historical Monthly FAC

Under this arrangement, the utility makes monthly filings of its fuel expenses for a recent month. Sometimes there is a time lag of a month or two so that actual fuel costs and kWh usages can be determined and reported. A calculation is made to determine the fuel costs per kWh for the period and the value is compared to the fuel cost per kWh currently included in base rates. Because usage can vary from month to month, an over/under collection value is calculated so that the utility only recovers its actual fuel expenses. When fuel costs and usage is increasing, the impact or change in the FAC or ECR is minimal. When fuel costs are decreasing and usage is constant or decreasing, the change in the adjustment factor is again minimal. However, when fuel costs and usage are moving in opposite directions, the adjustment factor can be significant. Depending on the timing of the fuel increases and the season of the year, the change in the adjustment factor can be perverse and send the wrong price signal to the consumer. For instance, suppose fuel costs are increasing during the late Winter months, usage is beginning to decline and there is an under-recovery of fuel costs. The combined impact of the increased fuel costs and the increase to recover the previous under-recovery leads to a significant increase in the fuel adjustment factor as the seasonal Spring trough period begins. The price signal communicated to the consumer would encourage reducing consumption at a time when the cost to generate electricity is low. On the positive side though, the utility is receiving timely recovery of its fuel expenditures. Another positive feature is that the fuel expenses and kWh usage values can be readily verified.

Historical Quarterly FAC

Under this arrangement, the utility reports its fuel expenditures and kWh usages on a quarterly basis. For the quarterly calculations, the lag between the actual incurrence of the

fuel expense and the recovery of that expense is longer than under a monthly filing regimen. The price signal communicated to the consumer becomes more muted due to the lag.

Forecasted Monthly FAC

Under a forecasted monthly FAC, the utility's filing is based on projected fuel expenses and kWh usages for the forecasted month. However, the over/under component of the FAC calculation is based on actual costs and usage values from at least two months ago. This arrangement provides timely recovery of fuel expenses. This advantage though, comes at the expense of the regulator that must now give an expedited review to a much more involved and complicated calculation of the projected fuel expense and kWh usage. It takes considerably more effort to verify the projected calculations as compared to calculations based on historical information.

Forecasted Quarterly FAC

A FAC based on quarterly forecasted information possesses many of the same advantages and disadvantages as the forecasted monthly FAC. However, the lag associated with the over/under calculation is longer and can have a potentially more significant impact on the FAC calculation.

CRITERIA FOR EVALUATION

To determine the preferred form of FAC/ECR, one needs to establish criteria for evaluating various alternatives based on the objectives to be accomplished through the implementation of an FAC/ECR. The following evaluative criteria are suggested for consideration.

Timely Recovery of Volatile Expense

Clearly, the primary objective to be accomplished through a FAC is providing a mechanism to provide for the timely recovery of fuel expenses. This is especially true during periods where fuel prices are experiencing significant swings.

Promote Efficiency – Transparency of Prices

A preferred FAC mechanism should provide current and relevant price information to consumers. The efficient use of electricity can only occur when the user receives timely, accurate prices.

Easily Verifiable Data for Expedient Regulatory Oversight

A robust FAC/ECR must be based on information that is easily verified. The easier it is to verify the information, the quicker the regulator can complete its review and approve the FAC/ECR calculations.

Equitable to Stakeholders

The process to implement the FAC/ECR must provide equitable treatment to all stakeholders to the process. The utility and its investors are entitled to the timely recovery

of prudently incurred fuel costs. Consumers are likewise entitled to fair treatment and consideration under the FAC. The process should not allow the utility to hold onto the consumers' money without providing a reasonable return. Nor should the process tolerate the potential for excess or imprudently incurred fuel costs to be passed through the FAC/ECR.

Incentive Considerations

The primary goal of an FAC is to allow for the expedient recovery of fuel expenses. It is important that the process be carefully monitored so the utility does not abuse the system. The system should have sufficient incentives for the utility to make appropriate economic and efficient decisions. For example, a utility may be incented to forego O&M expenses that would increase the efficient operation of a generating plant and instead run the unit less efficiently while burning more fuel because the fuel can be more easily recovered through the FAC/ECR than the recovery of the O&M expenses in a general rate case. Instead, the FAC/ECR should provide adequate incentives for the utility to make the appropriate decision.

III-F8 Without expedited billing for fuel and energy to suppliers and minimal review of proposed changes, it is unlikely that the ECR can be changed with less than a two month lag.

The amount of data collected, confirmed and analyzed in order to develop a ECR for consideration by the MPSC and Staff is large. All fuel consumed along with costs for all power plants I the Entergy system, all off system and contract purchases and sales, all emergency energy purchases and other related ancillary service purchases and sales must be accounted for. Therefore, it is unlikely that any ECR process can be efficiently performed without a two month delay.

III-R2 Change to a monthly FAC, with recovery of over or under collections over twelve months.

The analysis in the audit suggests careful consideration be given to the following changes to the FAC/ECR.

- The current quarterly FAC should be replaced with a monthly FAC/ECR.
- For example, the FAC charge should be calculated for January based on the energy forecast for that month and projected natural gas prices.
- In February, when actual fuel costs are received, a over/under calculation should be performed in a manner similar to the current method. In March the proposed change would be reviewed and approved by the MPSC.
- In April, the projected fuel cost should be adjusted and one-twelfth of any over/under amount should be applied.
- The over/under charges will be phased in over a twelve month period, permitting a smoothing of any large fluctuations.
- Interest payments for over/under should be applied monthly, either through the current method or a modified formula that provides balance.

- Adjustments for hedging and Attala costs should also be adjusted monthly as well.

This change is likely to result in reduced volatility that has occurred with the current ECR. By adjusting every month, the impact of inaccurate fuel projections is minimized and the current three month lag is eliminated. By amortizing the over/under adjustment over twelve months, sharp changes in ECR costs are mitigated. Volatility can also be reduced by an expanded hedging program which is addressed later in this report. The issue of interest payments is also addressed later in the report.

B. INTEGRATED RESOURCE PLANNING CONSIDERATIONS

Vantage provides our perspective on the use of a formal Integrated Resource Plan (IRP) as a fuel-related planning tool in Mississippi. In considering the options for long term planning, we take into consideration the current System Strategic Supply Resource Plan (SSRP) plan prepared annually by Entergy, the need for regular formal energy planning in Mississippi, as well as the cost and administrative difficulty in doing annual IRP process.

III-F9 Entergy currently develops and updates on an annual basis, a System Strategic Supply Resource Plan, which is a long-term, system-wide planning document that contains many of the elements of an Integrated Resource Plan.

III-F10 The current System Strategic Supply Resource Plan (SSRP), does not involve any real input from key stakeholders.

The SSRP is an annual planning framework that consists of four broad processes. They are: 1. Define Objectives; 2. Identify Drivers; 3. Identify Alternatives; and 4. Develop Target Portfolio Plan. The result is a long-term strategy for Entergy to meet the needs of its Operating Companies' customers at the lowest reasonable cost. It is also important to note what the SSRP is not. It is not a fixed plan for rigid adherence over the planning horizon of 2008 – 2017. The SSRP should be thought of more as a set of principles to guide Entergy in its generation planning and resource allocation decisions throughout the planning period.

Unlike a traditional IRP, the SSRP is prepared without input from other stakeholders or the approval by any regulatory body. It is clear from the recent hearings that there is a level of frustration on the part of some stakeholders that they are excluded from the planning process until a formal application for new resources is requested. Then they must interact in a formal regulatory process instead of a workshop environment where alternatives can be considered without the formality of a regulatory environment. A formal, regular IRP process assures that all stakeholders have input in an informal setting, where ideas can be discussed by technical experts without the formability of hearings.

There are benefits to the SSRP however. Despite the lack of outside input, the long-term perspective provided by the SSRP is very important for Entergy due to the nature of the problems and concerns that have arisen over the last 10 years or so. During this period, Entergy has become increasingly dependent upon power purchased from independent third party producers. According to the testimony of Entergy recently, power purchases on the

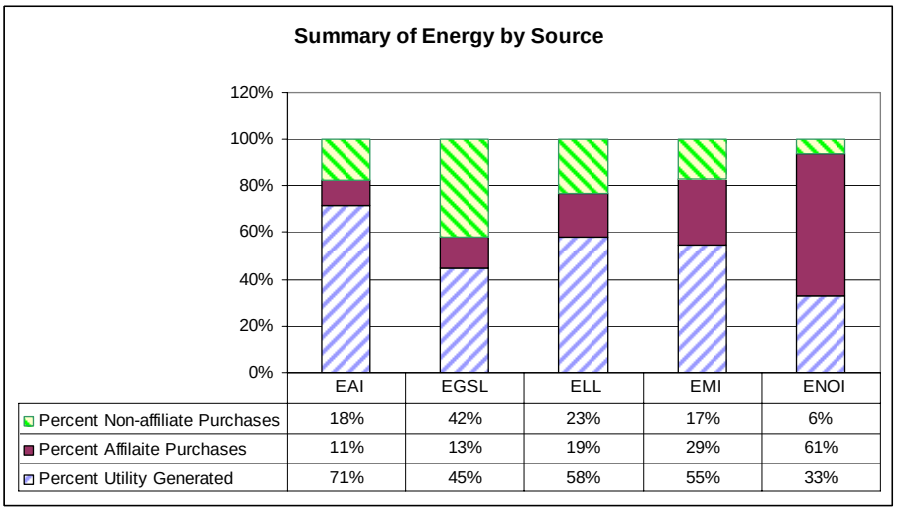
Entergy system have increased by approximately 45 percent during the period 1999 - 2007. At the same time, generation from the older gas and oil fired Entergy-owned units has decreased by 58 percent. Typically, this purchased power is provided in blocks for usage during specified periods. Our own analysis supports this argument to some extent and is provided in the Exhibits that follow. The following Exhibits for Entergy generation, by fuel source type, provide detail on how energy is supplied to Entergy has changed over time. The data used is monthly and therefore, provides a glimpse of the seasonal changes in sources as well as the annual trend.

Some key observations follow.

- Entergy wide system purchased power levels have increased dramatically over the last ten years.
- Entergy wide system oil and gas sourced generation has decreased over the last ten years, but still is very seasonal in nature.
- Coal and nuclear generation has remained relatively level for the last ten years.

Fuel Procurement Audit of Entergy Mississippi Inc.

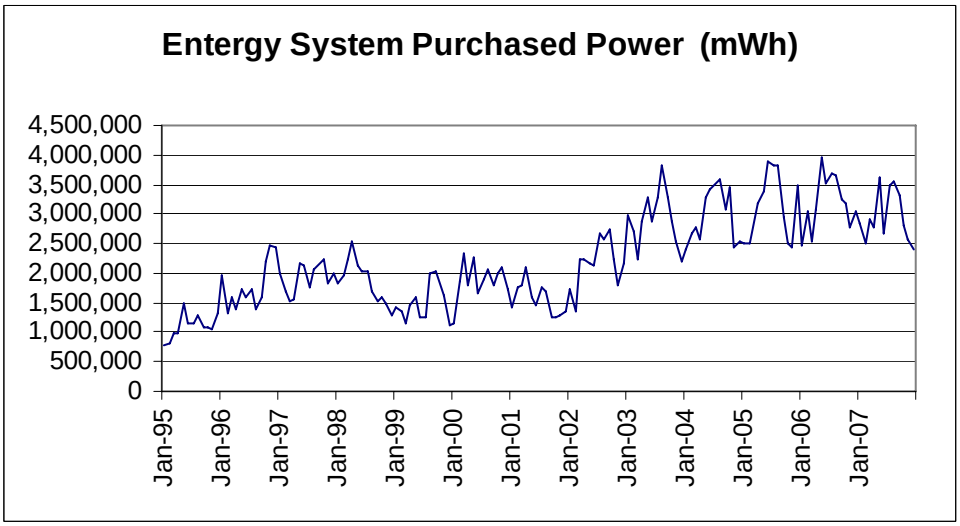
Exhibit III-8
Percent Purchased Power by Utility for 2007



	EAI	EGSL	ELL	EMI	ENOI
Percent Non-affiliate Purchases	18%	42%	23%	17%	6%
Percent Affilaite Purchases	11%	13%	19%	29%	61%
Percent Utility Generated	71%	45%	58%	55%	33%

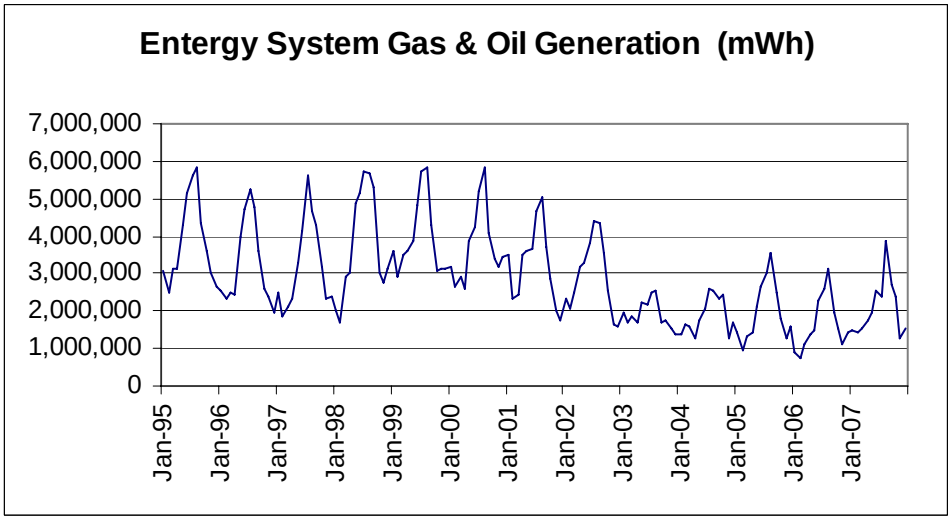
Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit III-9
Entergy System – Purchased Power History



Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit III-10
Entergy System – Gas & Oil History



Fuel Procurement Audit of Entergy Mississippi Inc.
Exhibit III-11
Entergy System – Coal Generation History

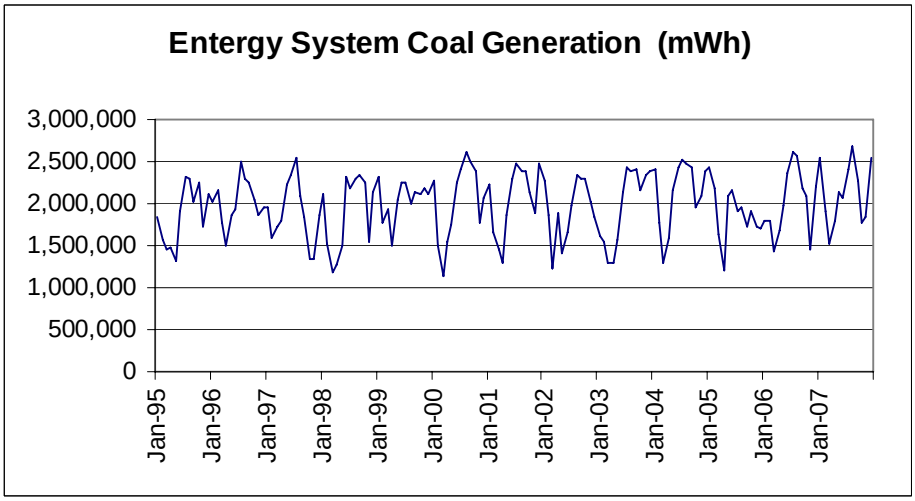


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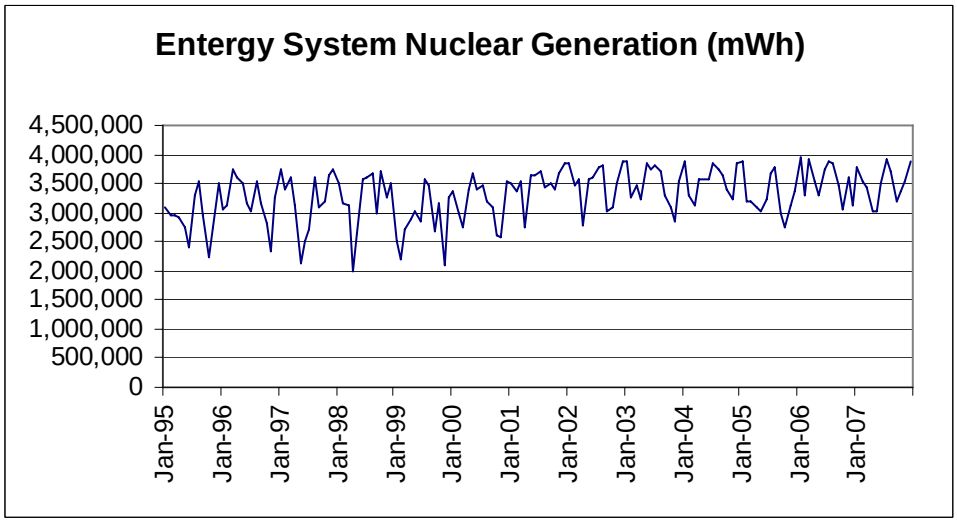
Exhibit III-12
Entergy System – Nuclear Generation History



Initially, these purchases provided a significant economic benefit to Entergy, its Operating Companies and their customers. The situation has now evolved to the point where Entergy is concerned that it is going to have problems meeting its native load in a cost-effective manner because the constraints on the use of the third party generated power does not

allow Entergy to economically follow the load on its system. This raises not only economic concerns but also reliability concerns. A closely related concern is the fact that practically all of the third party-generated electricity is generated with natural gas. Thus, Entergy has become more dependent on a source of electricity that does not provide the desired operational flexibility and relies more on a fuel source whose price has fluctuated significantly in the recent past couple of years. Certainly, these facts have created a significant planning challenge for Entergy. This is a challenge that cannot be resolved quickly or easily but requires a lot of resolve to obtain reasonable resolution. It requires the long-term perspective of the SSRP or an IRP. Entergy's argument is more clearly stated on page 23 of the *Summary of 2008 -2017 SSRP Update.*

> "Consistent with the SSRP, the System is pursuing a long-term supply strategy, sometimes referred to as the 'Portfolio Transformation Strategy,' that seeks to upgrade the generation supply and power supply resources of the Entergy Operating Companies to develop a more diverse, modern, and efficient portfolio of generation supply resources to meet customer needs. The resulting portfolio will achieve the planning objectives in a balanced manner by producing reliable, cost effective, and more stable-priced power, while providing the operational flexibility to follow load and to respond to operating constraints and supply contingencies."

This long-term commitment by Entergy, if properly implemented, should produce a more balanced and cost-effective approach to resolve some significant energy issues that have arisen.

Based on our involvement and observation of integrated resource planning in other state jurisdictions, we must rely on an old adage and advise the MPSC to "be careful what you ask for." We mean this in the best of ways. The SSRP approach utilized by Entergy is a critical ingredient for dealing with the energy problems that have arisen. However, to fully understand and appreciate the SSRP there are numerous assumptions, data and computer models to digest. There is a vast amount of technical information that must be exchanged between Entergy, the Commission and other interested parties. It is our experience that the hearing room is not the best place to exchange this information, yet, it is important that this information be exchanged. It is Vantage's suggestion that the Commission considers adopting a collaborative approach that allows the parties to meet to discuss and exchange the necessary information. The agenda could also include topics such as conservation, demand-side planning, renewable resources, etc., that may be of keen interest to the Commission and other parties. A report on the meetings, including suggestions for future enhancements to the SSRP, should be prepared and submitted to the Commission for its review. We believe this collaborative process will allow for the informal presentation and discussion of issues; a better and more effective exchange of information; and a mutual understanding of the goals to be accomplished.

An alternative to using the SSRP for collaborative needs would be to develop an IRP process that is not a regulatory burden. Perhaps development of an IRP on a five year basis would be adequate, with the SSRP process in the other years.

III-F11 The makeup of EMI's generation by load type appears to have a very low component of base load generation.

One of the major outputs of a IRP process is an assessment of the types of generation needed for optimum system reliability and lowest cost. The breakdown of base load, intermediate and peaking generation decisions are very important. Base load units are generally large, efficient, and cost effective sources, but they often do not have great flexibility in startup and large load following swings. Nuclear plants such as Grand Gulf have every low incremental operating costs but are ideally operated as close to full load at all times. Coal fired units such as Independence have low fuel costs and can be used for some load following, but are ideally operated at the top portion of their output range. These units cannot be started and stopped without significant time requirements and costs

Combined cycle gas units are often used for cycling. They efficient, can change load quickly and can be started and stopped easier than coal or nuclear. The use of natural gas however makes them more expensive.

Simple cycle combustion turbines and older gas and oil fires steam units are often used for peaking. They are inefficient and expensive to operate, but because of the low number of hours of operation, the cost of fuel is not a major consideration. Older steam units are often largely depreciated and therefore have a relatively low bus bar cost.

A typical utility system is designed to have base load generation that meets the bulk of its minimum daily need. The exhibits below shows the Entergy System load shape for every day in July 2008 as well as the actual EMI ownership of generation by type. First we look at the Entergy System Exhibit. Using a rough approximation, a solid blue line has been placed at about 15,000 MW, a dashed red line at about 21,000 MW and a green line at 24,000 MW. While a much more detailed analysis is needed to determine actual requirements, a course approximation would suggest that there be 15,000 MW of base load, 6,000 MW of intermediate load and 4,000 MW of peaking for this scenario. We then look at the EMI Exhibit. Here we have two pie charts, one with and one without Grand Gulf's contribution of base load. A table follows showing the disparity in what we estimate the breakdown of load types should be versus what it is for EMI. The data shows that base load percentage is almost a third of the desired level while intermediate load is about fifty percent too high and peaking is almost three time too high.

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Exhibit III-13
Entergy System Daily Load Shapes for July 2008

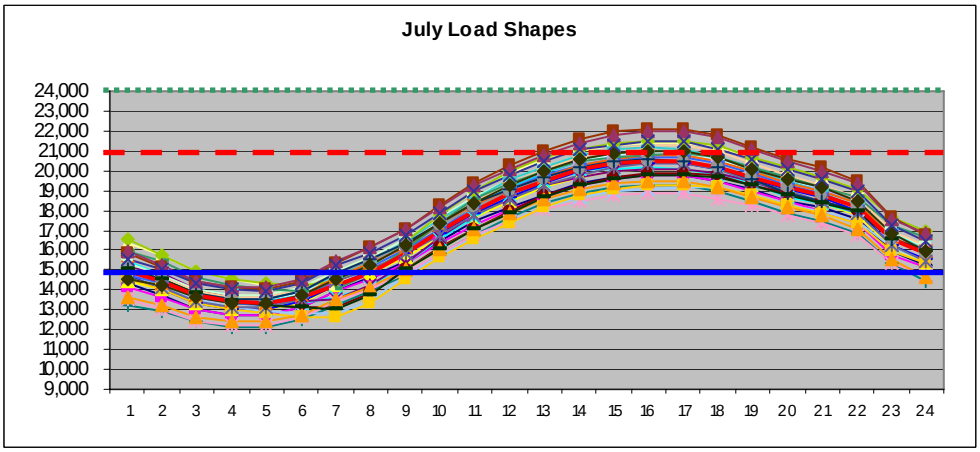

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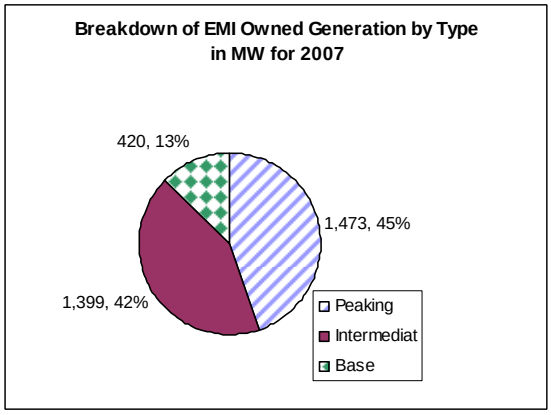
Exhibit III-14
EMI Breakdown of Generation by Load Type



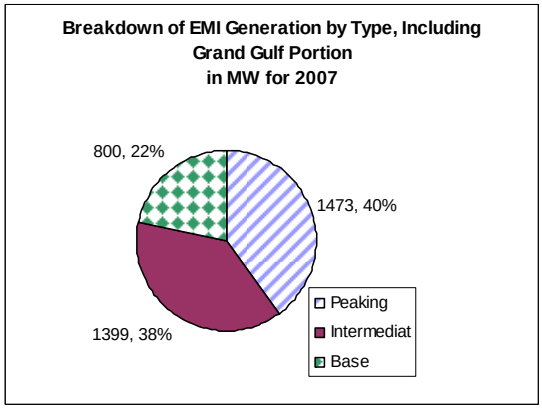


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Exhibit III-15
Projected versus Actual EMI Generation Type

Type of Generation	Entergy System Example for July 2008	EMI Actual Makeup Based on Actual Owned Plants
Base	62.5%	22%
Intermediate	25%	38%
Peaking	12.5%	40%

III-R3 Implement a combination of IRP and SSRP plans in order to achieve the level of planning needed, input form all stakeholders and clear decisions, while minimizing overall costs and regulatory intervention.

Our recommendation on this issue is intended to suggest that this decision to implement an IRP should be taken in the context of providing necessary guidance, with stakeholder input on a periodic basis. It is our understanding that statewide energy planning is required every five years. We would therefore suggest that a full IRP be developed every five years and that in the interim the current SSRP be continued..

C. INTEREST PAYMENTS FOR OVER AND UNDER COLLECTION

Another issue related to the ECR that Mississippi regulators must deal with is the lack of explicit inclusion of an interest charge for the over/under collection and true-up to actual prices provision of the ECR. Currently, EMI does not incorporate an interest expense/return on the amount of the under/over collection of the ECR relative to actual expenditures. EMI contends that due to the inter-working of the ECR and its Formula Rate Plan (FRP) its customers are already realizing the benefit of the interest payment. EMI then concludes there is no need to incorporate an explicit interest payment on the over-collected amount in its ECR. However, regulators typically prefer to make these interest payments explicit and more readily apparent to customers and may want to consider including an interest calculation in the filed ECR tariff if Mississippi State law permits.

Vantage provides a description of how we believe it is being addressed under current rate structure and proposes some ideas on determining the extent of cross payments.

BACKGROUND

According to information we received, we understand the following.

- Over and under recovery of FAC charges are not addressed through the FAC. This might violate State law associated with the FAC which only allows recovery of actual energy related costs and not interest payments.
- Any over/under recovery provisions of the ECR Rider are addressed in the Company's Formula Rate Plan (FRP).
- The adjustment in the FRP essentially applies the Company's cost of capital to 50% of any over/under recovery. In the example provided in recent testimony, he provided the following two tables to illustrate this. Vantage provides the third table to estimate the interest EMI earned on it's over collection.

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Exhibit III-16
2007 Formula Rate Plan – Weighted Cost of Capital

Cost of Capital Component	Weighted Cost
Equity	5.87%
Preferred Stock	0.20%
Debt	1.85%
Total	7.92%
	Income Tax
4.91%	
Total Weighted Cost of Capital	**12.83%**

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit III-17
2007 Customer Benefits from ECR Over-Recovery

Pre tax Weighted Average Cost of Capital	12.83%
FRP Adjustment	50%
Carrying Cost Credit to Customers	6.42%
Average Over Collected Balance in 2007	$30,016,353
Value Returned to Customers in 2007	$2,311,144

III-F12 Entergy Mississippi, Inc., earns market rates for any over-collections that are received, therefore the interest rate can vary.

In the Exhibit below, EMI's imputed interest rate is 5.5% which is below the 6.42% rate customers receive. However, this is only an imputed rate based upon various returns for that period. EMI's actual return on short term cash is based on market condition and can vary.

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit III-18
2007 EMI Short-term Earnings on Over Collection

Average Over Collected Balance in 2007	$30,016,353
Amount EMI Claimed Was Earned	$1,990,000
Imputed Interest Earned	5.5%

While this simple analysis shows a slight benefit to the customer, without a more in-depth analysis, it is impossible to determine the real fairness of this methodology.

III-R4 Entergy should be asked to provide an analysis using ten years of data that shows the actual results of over and under collections calculation as required in the FRP.

This should be an annual analysis that calculates the actual adjustment to each side, as well as what the amount would have been if the collection had been reversed.

IV. PROCUREMENT SYSTEMS AND POLICIES

A. PROMOD SIMULATION MODEL

IV-F1 The of PROMOD for forecasting gives Entergy valuable, but limited, information for use in fuel use forecasting and other related issues.

PROMOD, as described below, is a powerful tool used throughout the industry for forecasting energy requirements on given systems. From these forecasts, Entergy projects fuel consumption by type over time, energy production by facility and requirements from wholesale markets.

While PROMOD is a powerful tool, it is only as good as the information in it. This creates a dilemma for Entergy. Since it is increasingly dependent on suppliers from the wholesale market, it must make assumptions on many key inputs.

The following is a description of PROMOD as implemented by ESI.

PROMOD DESCRIPTION

PROMOD is a commercially available computer program licensed by NewEnergy Associates, L.L.C., a Siemens Westinghouse Company, which simulates the production cost (that is, fuel and purchased power costs), of an electric utility generating system using principles of economic dispatch. PROMOD is widely used throughout the electric utility industry for resource and operational planning, production cost forecasting, regulatory filings, and other related purposes.

PROMOD simulates the operation of an electric utility generating system by determining the economic operating point of each of that system's generating resources. PROMOD relies on a broad range of inputs including:

- fuel costs;
- wholesale transactions; and
- operating constraints such as:
  - system reliability requirements;
  - transmission;
  - fossil unit characteristics;
  - planned outages and forced outage rates; and
  - sales and demand.

Use of PROMOD in Electric Industry

NewEnergy Associates, L.L.C. has indicated that approximately 80 companies have a license for PROMOD. These include both domestic and international companies, and include investor-owned utilities, electric cooperatives, municipal electric providers, consulting companies, and power marketers.

IV-F2 The version of PROMOD used by ESI contains a special accounting module developed by the program's vendor to incorporate specific features related to the Entergy System Agreement and associated Service Schedules MSS-3 Exchange of Electric Energy Among the Companies (MSS-3) and MSS-5 Distribution of Revenue from Sales Made for the Joint Account of All Companies (MSS-5).

PROMOD recognizes the effect of generating unit forced outages on a utility system's operating costs. PROMOD outputs include expected generation by unit, fuel consumption and fuel costs both by unit and by fuel contract, and purchases and sales of energy and the associated costs and revenues. The version of PROMOD used by ESI contains a special accounting module developed by the program's vendor to incorporate specific features related to the Entergy System Agreement and associated Service Schedules MSS-3 Exchange of Electric Energy Among the Companies (MSS-3) and MSS-5 Distribution of Revenue from Sales Made for the Joint Account of All Companies (MSS-5). The special ESI accounting module simulates pool transactions and allocations of energy and costs in accordance with the System Agreement. Except for this special accounting module, ESI's version of PROMOD functions identically to commercially-available versions.

MSS-3 establishes how energy produced by the generating units owned by each Operating Company or purchased from the wholesale power market is allocated among the Operating Companies, and at what cost that energy is shared. All of the Operating Companies' capacity is dispatched and operated by the SPO in order to meet the load requirements of all of the Operating Companies' customers at the lowest practicable cost within the constraints of maintaining the proper daily operating reserves, voltage control, stability, and proper loading of facilities. The special PROMOD accounting module simulates the allocation of the energy that is used by the Operating Companies or sold off-System pursuant to MSS-3 and MSS-5. MSS-5 establishes how the net balance from sales to other than the Operating Companies is distributed among the Operating Companies.

PROMOD OUTPUTS

Standard PROMOD output reports include projected generation by unit, fuel consumption and fuel cost both by unit and by fuel contract, and purchases and sales of energy and the associated costs and revenues as well as total net production costs by Operating Company.

INPUT DATA USED IN DEVELOPING THE PROMOD STUDIES.

IV-F3 A key to the success of PROMOD is the accuracy of its input data.

The PROMOD database contains information necessary to model the load requirements and power supply capabilities of the Operating Companies. Each of the various types of data inputs, which were obtained from the functional areas within ESI responsible for the operation of the Entergy Electric System, is discussed below.

Load and Energy Forecasts

The load and energy forecast was developed by the SPO's Price Forecasting and Analysis Section on an hourly basis for each geographic area modeled in PROMOD.

Generating Unit Characteristics

Fossil unit characteristics modeled in PROMOD include minimum and maximum capacities, minimum up and down times, heat rate curves, unit availability rates, and other unit operating constraints. This data was developed on a unit-by-unit basis. Maintenance schedules were input into PROMOD to ensure that generating units on planned outages during certain times of the year would be modeled as not available for dispatch at those times. The heat rate information for each fossil unit was developed from that unit's input-output (I/O) curve. This information was input into PROMOD as a polynomial equation, except for Big Cajun 2 Unit 3, for which an incremental heat rate was used because an I/O curve was not available. The I/O curves were developed from heat rate tests that were performed at each generating unit. The resulting I/O equation represents the relationship between the fuel burn rate (MMBtu/hr) and the net generator output (MW) across the load range of the unit.

Fossil Generating Unit Availability Data

The unit availability rates used in PROMOD were developed based on the historical performance of the Operating Companies' generating units. Personnel at each generating station record events in the Generation Availability Data Reporting System that derate the generating capability of a unit and/or require a generating unit to be shut down. Outage data for the period July 2003 through June 2005 was used to prepare the availability data used in the PROMOD study.

Nuclear Unit Operating Assumptions

Entergy Operations, Inc., (the entity responsible for operating the nuclear units owned by the Operating Companies), provided the nuclear assumptions included in the PROMOD database. The assumptions related to nuclear plant operations include the nuclear refueling outage schedule, along with the capability and projected availability data, heat rate information, and fuel price data.

Fuel Information

The fuel forecast information input for the fossil generation modeled in PROMOD includes heat content per unit volume and fuel prices. The natural gas price forecast was based on the futures market price of natural gas, and reflects the Henry Hub forward prices for the period of July 2006 through June 2007 of $8.90 per MMBtu.

Operating Constraints

The operating constraints modeled in PROMOD include such items as generating unit minimum up and down times, transmission constraints, and operating reserves.

Operating reserves are the generating capability above the peak load, which are carried for reliability purposes.

Operating Reserve Requirements

The level of operating reserves was modeled in PROMOD and is shown in the following Table.

Months	Operating Reserves
January, February, May, June, July, August, September, December	1,600 MW
March, April, October, November	1,200 MW

At least 50 percent of these operating reserves must be from spinning reserves. In actual operations, the System's operating reserve requirements are determined on a daily basis using a formula specified by the Southwest Power Pool (SPO). SPO's Operations Planning staff recommended the use of the MW levels above based on current operating eight practices.

Purchased Power Transactions

There are four categories of purchased power transactions. The first category is off-system economy transactions. These are economy transactions that involve parties other than the Operating Companies. The second category is internal economy interchanges and is the MSS-3 transactions among the Operating Companies. The third category is Company-specific transactions; the fourth is merchant plant transactions. The method used to forecast or capture each of these transactions is described below.

Off-System Economy Transactions

PROMOD models off-system economy transactions based on the cost of the economy energy versus the cost of meeting load with owned generation and the ability to import or export economy energy across transmission interfaces or given other constraints. The hourly market price curve that was assumed for modeling purposes was developed by Price Forecasting & Analysis using the MIDAS model. The off-system market price curves were developed based on a depth-of-market approach. PROMOD modeled a maximum of 2,000 MW that could be purchased from the Southern Company, an adjoining utility system. This was modeled with four 500 MW purchase transactions with the price for each additional 500 MW increasing. In other words, PROMOD models an upwardly-sloping supply curve, so that as the quantity of economy purchases made by the Operating Companies increases, so does the average cost. The same method is used for purchases from Tennessee Valley Authority, another adjoining utility system. Off-system economy purchases are allocated to the Operating Companies in proportion to their Load Responsibility Ratio, in accordance with Section 4.03 of the System Agreement.

Internal Economy Interchanges

Internal economy interchanges (e.g., intra-System exchanges of energy pursuant to Service Schedule MSS-3) are forecasted using PROMOD. The customized accounting logic included in ESI's version of PROMOD forecasts the exchange of energy among the Operating Companies in accordance with the terms of MSS-3.

Company Specific Transactions

Transactions tied to a specific Operating Company are explicitly modeled in PROMOD in accordance with the terms of each contract. These transactions include contracts resulting from several Requests For Proposals as well as required purchases from Qualified Facilities pursuant to the Public Utilities Regulatory Policies Act.

Merchant Plant Transactions

The starting point for determining how much and which merchant plants to model in PROMOD was to analyze the actual purchases ESI made on behalf of the Operating Companies from merchant plants during the 12 month period ending May 2005. Based on this analysis, 4,500 MW of merchant resources were modeled in PROMOD. The merchant plants were modeled as 150 MW units with a minimum of 100 MW, which is consistent with how the Operating Companies purchased energy from these facilities. Also, a minimum run-time of 8, 12, or 16 hours along with a minimum down-time of 6 hours was used which is reflective of actual purchases from these facilities. A market heat rate was used for these merchant plants. A summer (June-September) and non-summer (October-May) heat rate was developed based on price curves developed using the MIDAS model. A minimum heat rate and a slope were developed from 100 MW to 4,500 MW of the assumed purchases, and the merchant units were randomly assigned a heat rate. In other words, the first 100 MW from merchant plants has a certain heat rate and each additional 150 MW merchant plant has an increasing heat rate.

Merchant purchases are allocated to the Operating Companies in proportion to their Load Responsibility Ratio, in accordance with Section 4.03 of the System Agreement. For 2006, it is assumed that ENOI does not participate in these purchases, and therefore a Load Responsibility Ratio is used based upon the other four Operating Companies.

SYSTEM TRANSMISSION OPERATIONS

The Transmission Analysis Module (TAM) in PROMOD begins with a case from the PSS/E transmission load-flow model that was posted on the Entergy Transmission OASIS internet website. A summer load flow scenario is utilized in this analysis. In order to properly implement the TAM, certain adjustments are required to the PSS/E case, such as to:

- map each generator and transaction to specific generator busses;
- map each transmission bus to a PROMOD area;
- input non-conforming load at each load bus. Non-conforming load is a constant load at a load bus and typically is representative of industrial load; and

- add the approved transmission upgrades for years beyond 2005. PROMOD takes the current total Operating Companies' loads (less the non-conforming load) and allocates the load to each bus using the percentage of PSS/E load at each bus (less any non-conforming load at that bus) to total Operating Company load. The result of this effort is a direct current load flow representation of the Entergy Transmission System.

SUMMARY OF DATA COMPILATION

Once the data was input to PROMOD, the program executed an hour-by-hour analysis to determine the economic operation of each of the Operating Companies' current or proposed generating resources in order to serve the Operating Companies' load including off-System sales. The PROMOD analysis was performed for the study period. PROMOD economically dispatched the resources available to meet load and sales consistent with the constraints input into the model. The generation was dispatched from lowest to highest cost subject to constraints, and off-System economy purchases were scheduled to minimize costs. The PROMOD program computed estimated values for the energy produced at each of the Operating Company's generating units (MWh), the amount of fuel burned by each generating unit (MMBtu), and the cost of that fuel. PROMOD also computed the amount of economy energy taken by each Operating Company and the cost of that energy. In addition to calculating the unit dispatch and production costs for the Operating Companies' generating units, as discussed earlier, ESI's version of PROMOD also includes logic that simulates the energy accounting and billing per the terms of the System Agreement. The production costs that are calculated for EAI, summarized in the previous Table, are an input to the assessment of the effects of the resource plan on EAI's total production costs.

IV-F4 The dependence on PROMOD for key forecasts is somewhat flawed because of the high level of purchased power where exact details on performance parameters may not always be accurate.

Entergy uses PROMOD for a number of key data sets as described above. It is certainly a key model and is widely used throughout the industry. However, there are a number of concerns we would raise when it comes to depending on a model such as this.

The quality of this model is dependent to a large degree on the quality and timeliness of the data in it. This means, each unit that contributes to the overall Entergy supply must be accurately modeled and accounted for. However, as we have seen in previous statistics, almost half of Entergy's energy comes from wholesale power providers. These are sources that are not owned or managed by Entergy. Consequently, the availability of data such as heat rate, ramp rates, outage schedules, forced outage statistics and other key data are either estimated or often at best dated.

IV-R1 Entergy should be required to provide a detailed analysis as to any weakness or inaccuracy that PROMOD has, along with plans to improve its capability.

PROMOD, since it is used for many purposes, should be tested to determine its accuracy and current value. This test should use retrospective testing as well as an assessment of

which input parameters are perhaps vulnerable to inaccuracies. Entergy should provide this analysis to the Commission for evaluation and follow-up questions.

IV-R2 Mississippi PSC, Public Utilities Staff and other stakeholders, with a need, should receive a detailed view of how the revised PROMOD and fuel procurement models work and an explanation as to why it is the optimum means of performing these projections.

These models are key to both cost effective procurement decisions as well as accurate design of a FAC going forward. It is imperative that key stakeholders understand and feel confident with the techniques used.

B. EMI HEDGING RESULTS

IV-F5 The hedging program implemented for EMI has had varying results that mirror the expectations one would have in a fluctuating markets.

IV-F6 The hedging program used by Entergy is relatively simplistic and does not use any advanced methods of reducing volatility.

EMI has implemented a hedging program to help mitigate natural gas price volatility. The program is dictated by Commission guidelines and is one-dimensional in nature. There are both Summer and Winter hedges and are generally 33% to 50% of projected purchases and are entered into six months in advance. There is no hedging in Arkansas or Texas.

The purpose of hedging programs is to mitigate short-term volatility in natural gas procurement. The large percentage of natural gas used by Entergy power plants as well as purchases from wholesale producers invites the potential for significant short term swings in pricing. A hedging program helps to flatten these fluctuations, providing some level of stability for rate payers. The Entergy hedging program is somewhat simple and does not use any sophisticated tools of financial instruments.

The results in the following graphs illustrate what one would expect in a market that has been somewhat volatile over recent years.

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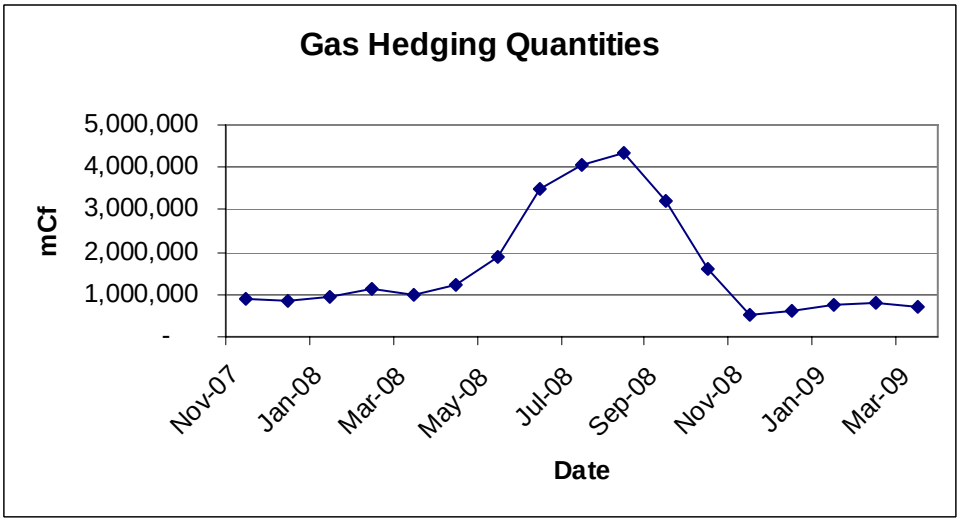
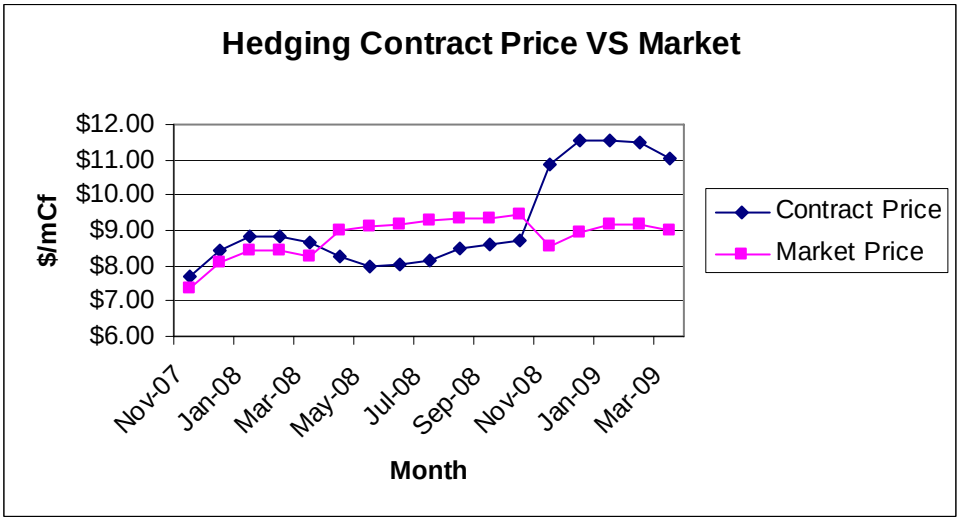
Exhibit IV-1
EMI Gas Hedging Quantities September 2008



Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit IV-2
EMI Gas Hedging Contract Price Versus Market



IV-F7 Actual mark to market gains or losses are dependent on both the difference between market and purchase price and volume of hedge contracts procured.

The graph below is the product of the two previous graphs which provided quantities and mark to market spreads.

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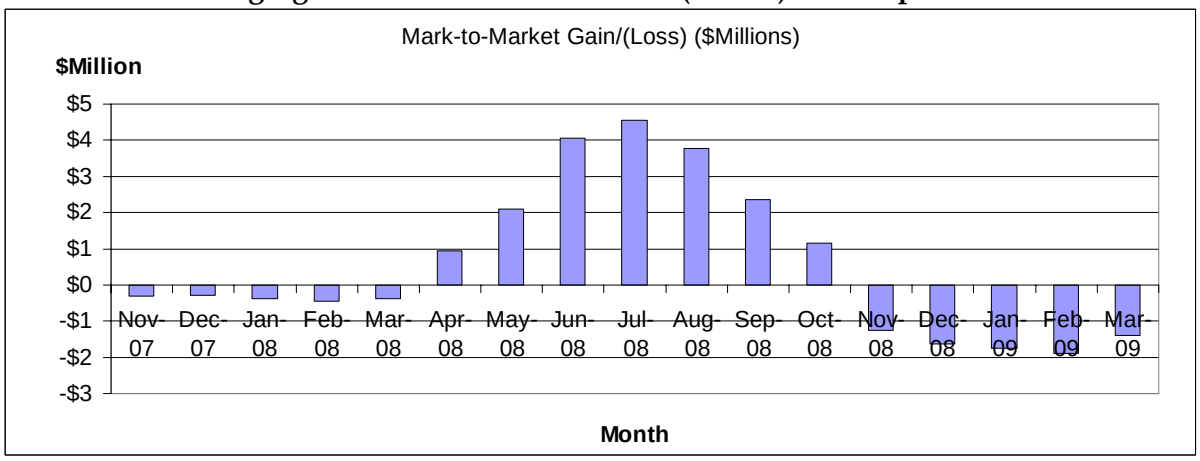
Exhibit IV-3
EMI Hedging Mark to Market Gains and (Losses) as of September 2008



IV-R3 Open a dialogue, with Entergy and other stakeholders to determine if a more robust risk management program, that includes more advanced hedging opportunities, makes sense given the growing volatility in today's energy markets.

Techniques for reducing risk volatility are becoming much more sophisticated. They include formal hedging programs with both programmatic and opportunistic elements, timing of initial hedges that are spread over longer periods, calculations of mark-to-market to give real time assessments of risk management success, and the use of financial instruments to reduce out of market results.

This activity requires significant effort and a detailed understanding of how risk management tools can work in the energy procurement market. The recent turmoil in the financial markets has raised questions about uses of many of these same techniques when not associated with parties taking actual delivery. As our financial markets settle, it may be appropriate to ask how EMI can best be served through an examination of the current hedging program.

C. POWER PLANT PERFORMANCE INDICES

IV-F8 An evaluation of power plant operating statistics indicates that there is no obvious deterioration in efficiency, reliability or availability of EMI-owned facilities.

There are a number of measures used to track the effectiveness of power plant performance. These measures are important in considerations of fuel and energy procurement because they go to the heart of how useful and efficient each unit is. Our historical analysis supports the conclusion that Entergy's units are not showing significant degradation over the last ten

years. It is important to note that while many of Entergy's units are old and inefficient, they are not without value. Many of these units are completely depreciated and are only operated for peaking purposes on rare occasions. Therefore, since they are paid for and are operated for only a few hours per year, the cost of fuel and their heat rates are not critical. It is of utmost importance to understand however, that an IRP, if properly prepared, will determine whether these units should be replaced with either new generation of purchases from other sources.

HEAT RATE

Definition

A measure of generating unit's thermal efficiency, generally expressed in Btu per kilowatt hour. It is computed by dividing the total Btu content of fuel burned for electric generation by the resulting kilowatt hours of generation. A higher number indicates a less efficient operation. Typical heat rates for various types of units are as follows.

Typical Metrics

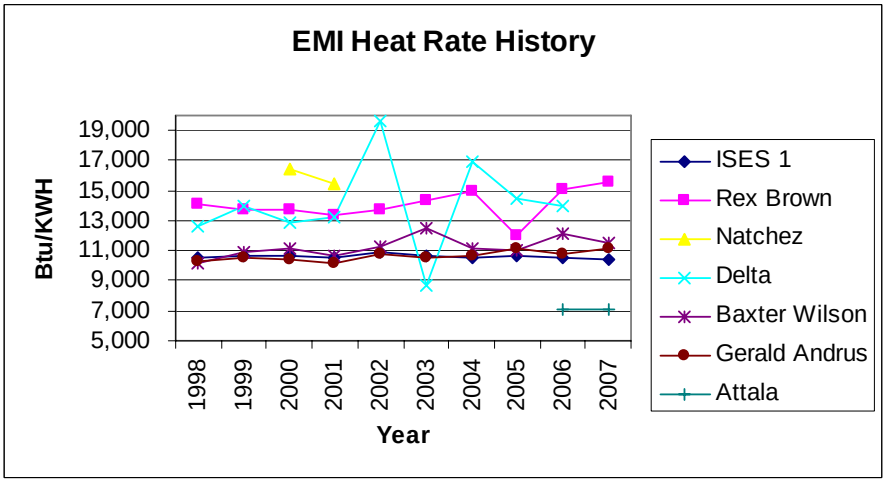
Unit Type	Typical Heat Rate
Rankin Cycle Units	10,300 BTU/KWH
Simple Cycle GT	15,000 BTU/KWH
Combine Cycle	68,80 BTU/KWH

Info is per NERC descriptions and average levels.

IV-F9 The heat rates shown in the following exhibit indicate that there has been little degradation over the last ten years of EMI units.

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit IV-4
EMI Heat Power Plant Rates



CAPACITY FACTOR

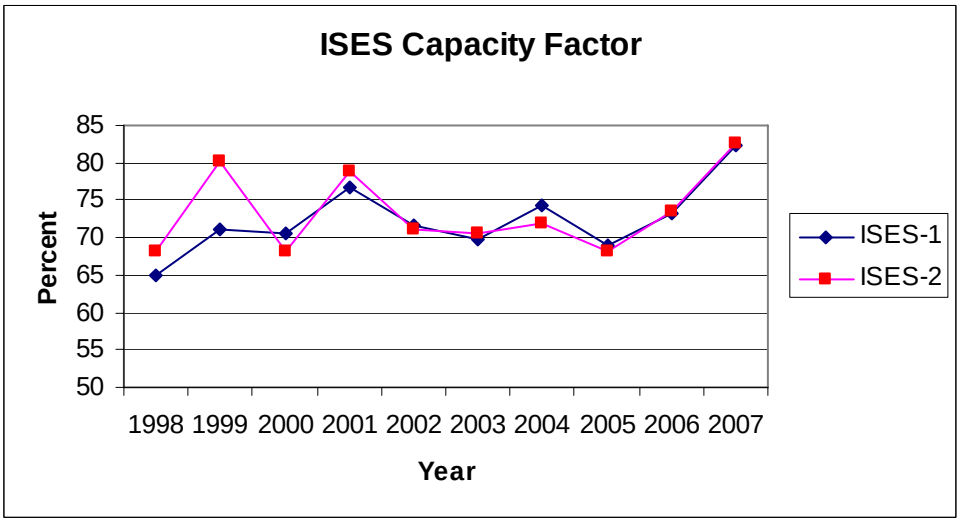
Definition

The capacity factor of a power plant is the ratio of the actual output of a power plant over a period of time and its output if it had operated at full nameplate capacity the entire time. To calculate the capacity factor, total the electricity produced in kilowatt hours by plant produced during a period of time and divide it by the electricity in kilowatt hours that the plant would have produced at full capacity. This measure is only meaningful for base load units.

Typical Metrics

Capacity factors vary greatly depending on the type of fuel that is used, the design of the plant, overall efficiency and the plant's position in the dispatch order. The Capacity Factor for the Independence Coal Fired Power Plant is above 80% for 2007, which is the best level in a number of years.

Exhibit IV-5
ISES Capacity Factor History



FORCED OUTAGE RATE

Definition

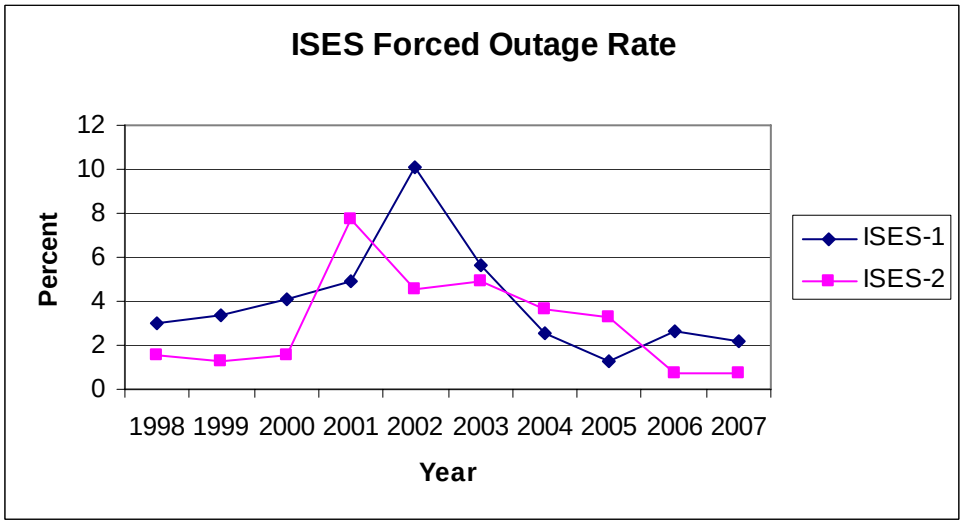
The percentage of time a unit is unavailable to meet system load. It is expressed as the number of hours the unit is forced out of service (FOH) divided by the sum of the number of hours the unit is connected to the system (SH) plus the total number of hours the unit is forced out of service (FOH). [Forced Outage Rate = FOH / (FOH+SH) x 100%].

Typical Metrics

- Rankin Cycle Units = 3.86%
- Simple Cycle GT = 27.37%
- Combine Cycle = 8.63%

The forced outage rate for the Independence Units has dropped over the past five years.

Exhibit IV-6
ISES Forced Outage Rate History



EQUIVALENT AVAILABILITY

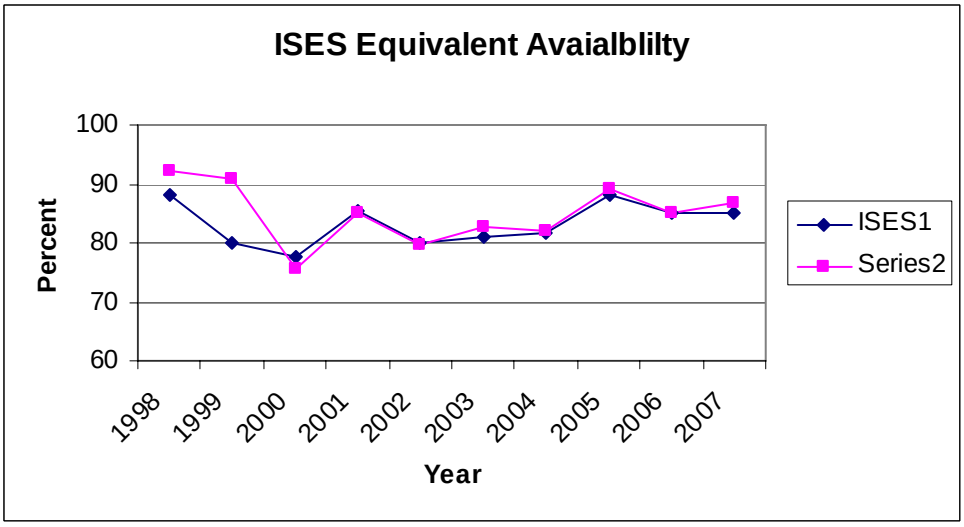
Definition

The percentage of time a unit is available (AH) minus any forced, maintenance or planned outage hours divided by the available hours (AH). [Equivalent Availability = AH – (Forced Outage Hours + Maintenance Outage Hours + Planned Outage Hours)/AH x 100%].

Typical Metrics

- Rankin Cycle Units = 88.23%
- Simple Cycle GT = 93.95%
- Combine Cycle = 89.51%

Exhibit IV-7
ISES Equivalent Availability History



D. COAL INVENTORY ASSESSMENT

IV-F10 Entergy has surpassed its minimum inventory levels throughout a four-year period reviewed.

Vantage reviewed coal inventory information for the period of 2005 through June 2008. We limited our review to this period because it included the period of major upsets such as Hurricane Katrina and more recent volatility and transportation problems within the industry.

Inventory issues must be considered with a historical perspective. Decades ago, many utilities had up to three or four months of inventory on hand. In the 1980's and beyond, inventory policy was changed to reduce storage levels significantly. The reason was twofold. First, the interest cost to sustain large inventory and second, a trend to lower prices for coal often resulting in claims that prices of coal were above market. While these policies made sense when the potential for fuel delivery was small, in recent years many utilities have recognized the need to be more conservative in their policies. Essentially, utility management now recognizes that the risk of brown outs, due to inadequate fuel, far outweighs the savings of reduced inventory.

The following table and graph show that the Independence Coal Plan in Mississippi has had inventories well above the minimum required by policy.

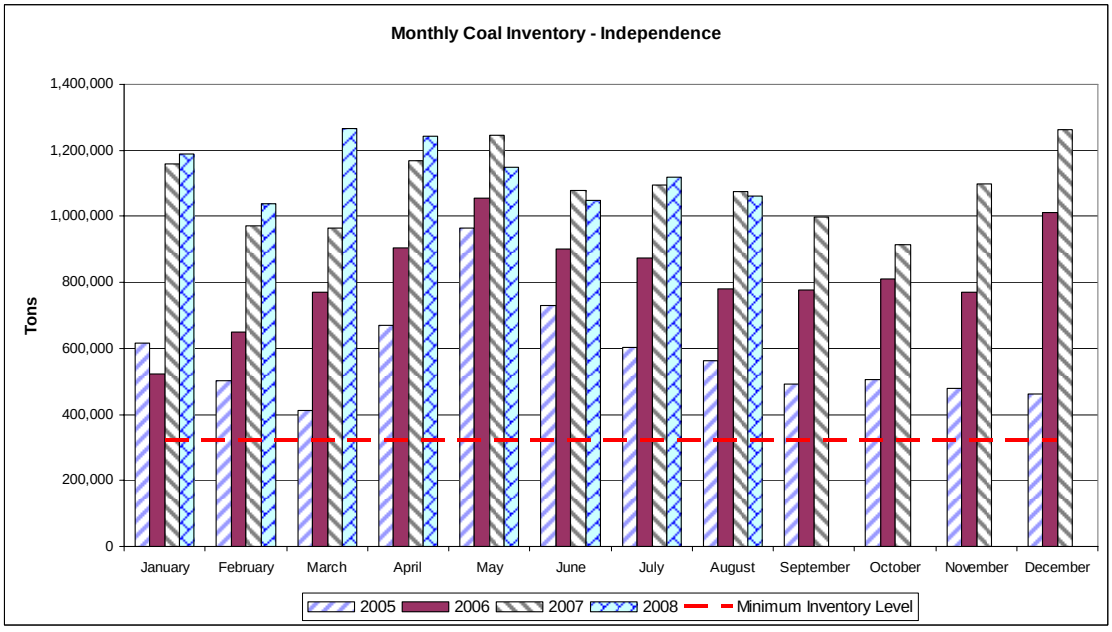
Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit IV-8
Independence Plant Inventory Summary

	2005	2006	2007	2008	Minimum Inventory Level
January	616,931	522,532	1,157,494	1,188,146	320,000
February	503,106	650,490	971,776	1,038,878	320,000
March	410,914	768,730	964,844	1,266,097	320,000
April	668,769	905,489	1,170,445	1,244,163	320,000
May	963,469	1,055,314	1,246,116	1,150,099	320,000
June	731,660	901,060	1,078,267	1,049,347	320,000
July	603,681	874,830	1,095,748	1,117,050	320,000
August	562,172	779,418	1,074,572	1,063,378	320,000
September	491,589	778,466	998,289		320,000
October	506,294	811,750	912,700		320,000
November	478,893	771,221	1,099,847		320,000
December	461,859	1,010,397	1,263,278		320,000

Fuel Procurement Audit of Entergy Mississippi Inc.

Exhibit IV-9
Graphical Representation of Independence Plant Inventory



E. FUEL RELATED AUDIT ACTIVITIES

Our final section of this Report addresses audits and reviews performed by other entities that were reviewed and used in our assessment. Entergy is a very large company that has utilities in five separate jurisdiction areas which all review many aspects of fuel and operational performance. In Mississippi, the Mississippi Public Utilities Staff, a separate State Agency, has responsibility for reviewing the quarterly FAC filings. We met with the personnel responsible for these Staff audits and reviewed some of the information they are given for their quarterly review. Entergy also conducts its own internal and financial audits.

IV-F11 The information provided by EMI each quarter allows the Mississippi Public Utilities Staff to conduct an adequate review needed to confirm the accuracy of the data in the calculation.

The Staff receives the quarterly filing which has all calculations and data inputs needed for confirming the FAC calculation. In addition, they receive other backup data that provides a foundation for the filing. On occasion, the Staff meets with EMI representatives or visits their facilities to get a better foundation of fuel and energy procurement.

The monthly filing includes details such as the following.

- Factor Formula Update which includes the actual formula calculations.
- Projected fuel and energy source data.
- Spreadsheet with Fuel Expense, Excluded Fuel Expense and Purchased Power Expense data.
- System sales revenue.
- ECR revenue.
- Projected sales.
- Schedule of prior adjustments.
- FRED forecasts.
- Confidential Henry Hub price forecasts.
- Accounting pivot tables.
- EMI ECR Revenue summary.

In addition to the actual filing, Vantage reviewed one month (July 2007) of data from the Entergy billing system. Key EMI portions of this data included the following.

- System Summary of net receivables for all companies.
- EMI Summary of purchases and sales of both associated and non-associated companies.
- Service schedules.
- Joint account deliveries.
- Coincidental peaks.
- Joint account delivery sources.
- Unit power purchases.

- Energy purchased from exchange.
- Energy sold to exchange.
- Joint account purchases in KWh.
- KWh Summary by utility.
- KWh log sheet reconciliation.

IV-F12 Entergy has conducted a limited number of internal audits of fuel related activities.

Vantage requested and received copies of four internal audits related to fuel procurement since 2004. We summarize the four audits below, but must comment that, given the size and dollars associated with fuel procurement, this is a relatively small effort.

- **October 2004 Peabody Coal Quality Audit** – This audit addressed quality of coal provided by Peabody and the results were adequate.

- **May 2005 EMO Internal Controls Audit** – The objective of this audit was to determine if the issues identified by Arthur Andersen , LLP., in conjunction with Risk Management in the audit entitled EMO Internal Controls Profile dated 12/14/2000 were adequately resolved. The audit showed adequate completion.

- **2006 2nd Qtr ISB Applications Controls Audit** – This audit addressed whether key controls over the new Intra-System Billing (ISB) application and infrastructure are adequate and working as intended. The conclusion was that the controls are adequate.

- **2008 3rd Qtr Peabody Coal Quality Audit** – This audit addressed coal quality and determined quality was adequate.

Vantage was rather disappointed at the number of audits conducted internally by Entergy. Fuel is one of the largest expenditures made by the company and deserves focused internal attention. While outside auditors representing State regulatory agencies perform occasional audits, they do not have the access to information and personnel that an inside audit group has.

IV-R4 The Mississippi PSC should order, or at least encourage, Entergy to increase the number and scope of internal audits that address fuel procurement policies, systems contracts, operational effectiveness and quality.

Vantage is not certain that the Mississippi PSC has the authority to order Entergy to increase the number and scope of internal audits, but believe the Company and all of its stakeholders would be well served if Entergy Company responded affirmatively. We recommend that Entergy consider addressing the following key, but not all inclusive, areas.

- **Fuel Commodity Price Modeling and Forecasts** – This audit should review the sources and accuracy of fuel forecasts. This is clearly a key source of problems with FAC calculations and needs to be addressed by a group external to the fuel department.

- **Energy and Transmission Modeling** – Entergy uses and upgrades its models on an as needed basis. An audit to determine if they are in fact functioning as intended and providing accurate timely information should be conducted.

- **Off-System Purchase Decision Models and Policies –** This area is of great concern by regulators and potential suppliers. A comprehensive audit that addresses the decision and contracting process would be worthwhile.

- **Facility Continuation Audit –** Entergy has a large number of aged units with poor heat rates and potential long term costs. While the SSRP addresses these concerns to some degree, it would be appropriate to have an outside auditor or engineering firm provide an independent assessment of the long-term costs, reliability and efficiency.

- **Fuel Quality and Transportation Audit** – While Entergy has looked at the Peabody coal quality contract requirements, it should also look at long-term transportation issues and coal source issues.