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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Review of Tampa Electric  
Company's 2004-2008 Waterborne  
Transportation Contract with TECO  
Transport and Associated Benchmark

) DOCKET NO. 031033-EI

) FILED: MARCH 30, 2004

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**DIRECT TESTIMONY AND EXHIBITS**

OF

**ROBERT L. SANSOM, Ph.D.**

ON BEHALF OF

**CSX TRANSPORTATION**

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**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**IN RE: REVIEW OF TAMPA ELECTRIC COMPANY'S WATERBORNE  
TRANSPORTATION CONTRACT WITH TECO TRANSPORT AND  
ASSOCIATED BENCHMARK, PSC DOCKET NO. 031033-EI**

**DIRECT TESTIMONY OF ROBERT L. SANSOM, Ph.D.**

1 **Q. Please state your name, employer, position, and business address.**

2 A. My name is Robert L. Sansom. I am President of Energy Ventures Analysis, Inc. ("EVA"),  
3 1901 North Moore Street, Suite 1200, Arlington, Virginia, 22209.

4

5 **Q. Summarize your background and work experience.**

6 A. For 29 years I have consulted with fuel buyers and producers on fuel and transport matters. I  
7 have participated in fuel procurement prudency audits for state public utility commissions,  
8 utilities, and intervenors. My company monitors fuel markets closely and forecasts fuel  
9 prices. I appear as an expert witness in administrative and courtroom litigation, including  
10 arbitrations, in cases involving issues relating to fuel supply, fuel transportation agreements,  
11 and related matters. Before my consulting career, I served as a White House fellow in  
12 National Security Affairs and on the staff of the National Security Council under Secretary  
13 Kissinger, and in the U.S. Environmental Protection Agency.

14

15 **Q. Please summarize your educational background.**

16 A. I received a Bachelor of Science degree from the United States Air Force Academy in 1964,  
17 a Master's degree in Economics from Georgetown University in 1965, a Bachelor of  
18 Philosophy degree in Economics from Oxford University in 1968, and a Doctor of

1 Philosophy degree in Economics from Oxford University in 1969. I was a Fulbright Scholar  
2 and a Rhodes Scholar. My resumé is provided as Exhibit \_\_\_\_ (RLS-1).  
3

#### 4 PURPOSE OF TESTIMONY

5 **Q. Please state the purpose of your testimony.**

6 A. I am testifying on behalf of CSX Transportation ("CSXT"), an intervenor in this proceeding.  
7 The primary purpose of my testimony is to assess the prudence of TECO's June 27, 2003  
8 solicitation for coal transportation services, including the substance and scope of that  
9 solicitation, its timing, the methods of evaluation, the relationship of this transportation  
10 procurement process to TECO's fuel supply procurements for the Big Bend and Polk  
11 Stations, and consequently the prudence of TECO's affiliate contract executed in October  
12 2003 governing shipments exclusively by the water transportation route for five years  
13 beginning January 1, 2004 through 2008. In connection with my evaluation of TECO's  
14 procurement processes, I also provide a critique of the study prepared by Sargent & Lundy  
15 for TECO in August and September of 2003 regarding the cost of installing rail delivery  
16 infrastructure at Big Bend and Polk Stations.

17 I also address the appropriateness, as a matter of regulatory policy and practice, of  
18 the coal transportation "benchmark."  
19

20 **Q. Have you previously testified before the Florida Public Service Commission?**

21 A. Yes. I submitted testimony before the Florida Public Service Commission ("Commission" or  
22 "PSC") in Docket No. 860001-EI-G Phase I and II in 1988 and 1989.  
23

1 Q. Have you previously testified before other regulatory authorities and courts?

2 A. Yes. I have testified before the Public Service Commissions of Delaware, Georgia, and  
3 Wisconsin, before the Federal Energy Regulatory Commission ("FERC"), before the Surface  
4 Transportation Board, before state courts in Florida, Texas, and Oklahoma, and before  
5 federal courts in Wyoming, Indiana, Ohio, Wisconsin, Utah, Texas, New Mexico, Colorado,  
6 and the District of Columbia.

7

8 Q. Are you sponsoring any exhibits to your direct testimony?

9 A. Yes. I am sponsoring the following exhibits:

10 Exhibit \_\_\_ (RLS-1): Experience of Dr. Robert L. Sansom, including Expert Testimony;

11 Exhibit \_\_\_ (RLS-2): Map Showing Pittsburgh 8 Mines Northern Appalachian Coal;

12 Exhibit \_\_\_ (RLS-3): CSXT's October 23, 2002 Proposal to TECO;

13 Exhibit \_\_\_ (RLS-4): Screening Analysis, Water vs. Rail Coal, October 2002;

14 Exhibit \_\_\_ (RLS-5): Project Timelines for TECO Actions vs. TECO's Inaction;

15 Exhibit \_\_\_ (RLS-6a): Evaluation of Rail vs. Water Delivery Economics for Western  
16 Kentucky Coal in 2004;

17  
18 Exhibit \_\_\_ (RLS-6b): Evaluation of Rail vs. Water Delivery Economics for Pitt 8  
19 Coal in 2004;

20

21 Exhibit \_\_\_ (RLS-6c): Evaluation of Rail vs. Water Delivery in 2004 for Indiana  
22 Coal (Sommerville Mine);

23

24 Exhibit \_\_\_ (RLS-7): Water Losses and Higher Inventory Costs for Water-Transported Coal;

25 Exhibit \_\_\_ (RLS-8): Eastern U.S. Utility Stockpiles, Days of Burn, November 2003;

26 Exhibit \_\_\_ (RLS-9a): Summary of TECO Overpayments in 2004;

27 Exhibit \_\_\_ (RLS-9b): TECO Overpayments in 2004 – Pitt 8 Coal from  
28 Northern Appalachia; and  
29

1 Exhibit \_\_\_\_ (RLS-9c): TECO Overpayments on Illinois Basin Coal, 2004.

2  
3 **SUMMARY OF TESTIMONY**

4 **Q. Please summarize your findings regarding TECO's solid fuel transportation**  
5 **solicitation.**

6 **A. I found TECO's solicitation imprudent in the following respects:**

7 1. TECO failed to prepare for and solicit alternative modes of transportation, i.e., rail  
8 and water, in a timely and thorough manner. TECO should have solicited, but did not  
9 solicit, rail and water transportation bids. TECO also should have thoroughly  
10 evaluated both modes in order to evaluate moving some tonnage by each mode in  
11 order to develop sustained inter-modal competition, rather than by adopting and  
12 implementing its "all or nothing" preference to favor its water transportation affiliate,  
13 TECO Transport. Accordingly, TECO's June 2003 Request for Proposals for coal  
14 transportation services was not sufficient to determine the current market price for  
15 those services.

16 2. TECO failed to take seriously CSXT's interest in providing rail transportation to Big  
17 Bend and Polk about which TECO was informed by CSXT in two meetings in May  
18 2002. In October 2002, CSXT offered TECO firm rail transportation rates that, when  
19 combined with least-cost rail-origin coals, would have resulted in TECO's realizing  
20 much lower delivered coal costs than TECO actually obtained by choosing  
21 waterborne deliveries via its affiliate, TECO Transport; CSXT's offers even included  
22 paying for the installation of rail receiving facilities at both Big Bend and Polk. It  
23 was imprudent in the extreme that TECO, having received a preliminary, conceptual

1 proposal from CSXT in May 2002, and having firm CSXT bids in hand by October  
2 2002, and further knowing that the existing TECO affiliate barge contract expired at  
3 the end of 2003, did not prepare for and solicit well before June 27, 2003 for rail  
4 transportation services to Big Bend in competition with the water transportation  
5 alternative.

- 6 3. TECO failed to give serious consideration to CSXT's engineering proposal of  
7 October 23, 2002, to provide relevant drawings and information, and to facilitate a  
8 CSXT bid and a thorough TECO engineering evaluation of rail upgrades of Big Bend.
- 9 4. Notwithstanding TECO's dismissal of CSXT's 2002 interest and bid, and TECO's  
10 failure to solicit a bid from CSXT in response to TECO's June 27, 2003 Request for  
11 Proposals ("RFP"), CSXT learned independently of the RFP and timely submitted  
12 proposals to TECO on July 30, 2003. Following receipt of CSXT's bids/proposals,  
13 TECO on August 27, 2003, engaged Sargent & Lundy (S&L) to undertake a three-  
14 week study of the cost of rail facilities at Big Bend and Polk dated September 18,  
15 2003. S&L's study is not a reliable basis for estimating the cost of such facilities, was  
16 not a result of a dialogue with CSXT to understand CSXT's estimate, did not take  
17 account of available least cost construction options at Big Bend, and did not consider  
18 the possible use of available facilities from the Gannon site, freed up by the closure of  
19 the Gannon coal-fired plant and already in TECO's rate base. In fact, it appears that  
20 the Sargent & Lundy study was designed to enable TECO to avoid considering  
21 CSXT's rail transportation bids rather than to provide an objective analysis of the  
22 feasibility of CSXT's proposals.

- 1           5. TECO failed to solicit coal transportation from all feasible coal supply basins by all  
2           feasible modes of transportation. In particular, TECO failed to solicit rail or barge  
3           coal from Northern Appalachia ("NAPP") and rail origin coal from the Illinois Basin.  
4           TECO's solicitation by its terms was limited to Midwestern coal, even though  
5           Northern Appalachia coal, specifically including Pittsburgh Seam 8, or "Pitt 8" coal,  
6           was a proven fuel for use at Big Bend and Polk.
- 7           6. TECO failed to synchronize the procurement of coal supplies with the procurement of  
8           coal transportation services. It is a well-established practice in the utility industry, as  
9           well as a basic prudence requirement, that coal supply and coal transportation  
10          solicitations and contracts must be coordinated so that a utility is not left with a  
11          transportation obligation that is not coupled with (when considered together) an  
12          economical coal supply source, or conversely, a coal supply source that is not coupled  
13          with (when considered together) an economical transportation method.
- 14          7. TECO failed to properly evaluate the rail versus water transportation option in an  
15          evaluation of the most economical combination of coal supplies and coal  
16          transportation by rail or barge and incorporate the "all in" cost of delivered coal via  
17          each alternative, including the in-transit losses of Btu's, higher inventory  
18          requirements, and the adverse bus bar effects of moving coal by the water  
19          transportation mode.

20

21   **Q.     Please summarize your testimony with regard to the "benchmark."**

22   **A.     The benchmark is at best outdated and totally inappropriate for use in determining what**  
23   **TECO should be allowed to recover from its customers for coal transportation services**

1 provided by an affiliate. Where, as here, the utility – i.e., TECO – has a firm bid in hand  
2 from a viable supplier – here, one of the largest railroad companies in the United States – that  
3 bid should establish the "price to beat" and the cap on the amount of coal transportation costs  
4 that the Commission should even consider allowing TECO to recover from its captive  
5 customers.

6  
7 **Q. Please summarize your testimony with regard to the Sargent & Lundy study.**

8 A. The Sargent & Lundy study (Sargent & Lundy LLC, Tampa Electric Company Big Bend and  
9 Polk Generating Stations, CSX Transportation Alternate Method of Coal Delivery, SL-  
10 008160, September 18, 2003) was prepared in a very short time frame and apparently failed  
11 to include many obvious steps that such analyses should include, such as – and this is not an  
12 exhaustive list -- evaluating permit conditions, obtaining relevant information regarding  
13 CSXT's estimates, which the Sargent & Lundy study purports to displace, and obtaining  
14 vendor quotes from suppliers of major equipment items. I found it incredible, and even  
15 somewhat humorous, that 22 of the 38 cost items identified in the Sargent & Lundy report  
16 were multiples of \$70,000! In short, I believe that this Sargent & Lundy study was prepared  
17 hurriedly, with a predetermined outcome in mind, and that it is worthless.

18  
19 **Q. Does your testimony address TECO's evaluation of alternative methods or vendors of**  
20 **waterborne transportation?**

21 A. No. However, the fact that I am not evaluating alternative methods of water transportation to  
22 TECO's sole reliance on its affiliate water carrier is done for economy of testimony (as I  
23 understand that others are addressing this subject). The absence of specific testimony

1 regarding waterborne transportation alternatives may not be construed to imply any view on  
2 my part that TECO's affiliate represents a cost-effective choice for any fuel transportation,  
3 even if there may be some coal sources that are economic choices for TECO when  
4 transported by water.

5

6 **Q. What are the consequences of these imprudent acts of TECO in the procurement of coal**  
7 **transportation services?**

8 A. As I demonstrate in detail later in my testimony, these imprudent acts will, if allowed by the  
9 Commission, impose additional costs on TECO's ratepayers of approximately \$9/ton on 2-3  
10 million tons per year ("MMTPY") which puts the annual cost in the range of \$22.5 million  
11 per year. My estimate for 2004, the start up year for rail deliveries, is \$9.39/ton on 1.249  
12 MMTPY or \$11.7 million. Effective management of rail vs. water transportation competition  
13 would also have reduced the rate for water borne transportation as well. Had this reduction  
14 been \$3/ton, a reasonable estimate in my opinion, TECO's ratepayers, assuming 2.5 MMTPY  
15 were competitive by water, would have saved \$7.5 million per year. Lower water route costs  
16 in turn reduce the "savings" of rail movements on a dollar for dollar basis (because then the  
17 difference between the rail transportation cost and the water transportation cost is reduced)—  
18 so if water transport costs had been driven down by \$3/ton, the ratepayers would benefit from  
19 reduced water route costs **and** reduced rail transportation costs, but these amounts would not  
20 be additive. Accordingly, since TECO did nothing to effectively manage competition  
21 between rail and barge transportation services, TECO's imprudent acts will cost TECO's  
22 ratepayers about \$11.7 million per year in 2004 and \$22.5 million in 2005. Accordingly,  
23 TECO's costs for coal transportation are not reasonable for cost recovery purposes.

1 **Q. Do you have any recommendations as to what the Commission should do in this case?**

2 A. Yes. The Commission should, at an absolute minimum, disallow recovery by TECO of the  
3 difference in costs between what TECO proposes to pay its affiliate barge company, TECO  
4 Transport, and the amount for which TECO could have procured the necessary coal  
5 transportation from CSXT. At a minimum, my estimates indicate that the Commission  
6 should disallow approximately \$11.7 million in cost recovery for 2004, \$22.5 million in  
7 2005, and more than that in the years 2006 through 2008. The Commission should also take  
8 the most stringent steps available under Florida law to prevent TECO from further abusing  
9 its customers by overpaying its affiliate; if the Commission has the power, it should mandate  
10 fair, open, transparent, Commission-supervised procurement processes for all future TECO  
11 coal procurement and coal transportation procurement activities. Additionally, TECO's  
12 actions have been so imprudent in this case that I believe that the Commission should  
13 consider imposing whatever additional penalties it has available under its governing  
14 authority on TECO's shareholders and management.

**TECO'S IMPRUDENT FUEL AND TRANSPORTATION FRAMEWORK**

15  
16 **Q. Please describe the prudence analysis that you conducted of TECO's coal**  
17 **transportation procurement processes and decisions and of TECO's coal supply**  
18 **procurement processes and decisions.**

19 A. First, I reviewed the least-cost coal supply regions that TECO should have considered and  
20 evaluated, and which, by virtue of their least-cost status, would have been expected to be the  
21 supply regions chosen by a prudent utility in a prudent, unbiased solicitation in 2003. I  
22 identified how other utilities in similar circumstances to TECO regularly rely on and solicit  
23 both rail and water transportation from these supply regions. Second, I examined the time

1 line of CSXT's efforts to interest TECO in rail-delivered coal, which for a prudent buyer  
2 facing the 2003 expiration of the TECO water delivery contract would have triggered a  
3 solicitation by April 1, 2003 at the latest. Third, I examined how coal from each of these  
4 regions is most efficiently moved to Big Bend and Polk given the CSXT rail transportation  
5 bid and the TECO Transport (TECO's water transportation affiliate company) bids. Fourth, I  
6 evaluated TECO's analysis of the delivered cost of rail versus waterborne coal deliveries  
7 prepared in the Fall of 2003; my evaluation shows that TECO's analysis is flawed and  
8 contains gross errors. Fifth, I examined TECO's pending procurement decision based on its  
9 December 2003 solicitation for 850,000 tons for 10 years, 2005-2014. Lastly, I analyzed  
10 TECO's procurement alternatives and the damages to TECO's ratepayers caused by TECO's  
11 imprudent behavior.

12  
13 **Q. What is your assessment of TECO's fuel procurement and fuel transportation**  
14 **procurement practices and overall approach?**

15 A. It is fundamentally flawed. Any utility in TECO's position that can draw fuel from multiple  
16 coal sources and transport fuel by various modes should exploit all available -- here, both  
17 water and rail -- modes by pursuing bids from alternative transportation providers. No one  
18 mode should be given "all" the business. Such a bi-modal transportation approach would  
19 insure that TECO's ratepayers benefit from competitive transportation markets and are able  
20 to draw on the most economical coal supply regions.

21

22

1 Q. Was TECO's June 2003 Request for Proposals sufficient to determine the current  
2 market price for coal transportation services?

3 A. No. Both the RFP and TECO's evaluations of the bids received from CSXT were biased and  
4 flawed.

5 **Least Cost Coal Supply Regions For TECO**

6 Q. What are TECO's coal supply requirements for Big Bend and Polk?

7 A. TECO requires about 4.5 million tons per year (TPY) of coal, excluding about 500,000 TPY  
8 of petroleum coke, for its Big Bend and Polk Stations. Most of this coal is high-sulfur coal  
9 except for about 250,000 TPY of low-sulfur coal for blending down high-sulfur petroleum  
10 coke consumed at Polk to a 6 lbs. SO<sub>2</sub>/MMBtu level for all Polk fuels.

11  
12 Q. What are the supply sources and regions that can meet these requirements?

13 A. TECO requires about 4.25 MMTPY of high-sulfur coal and 250,000 TPY of low-sulfur coal.  
14 The high-sulfur coal could come from the Illinois Basin or Northern Appalachia ("NAPP").  
15 Pittsburgh Seam 8, or "Pitt 8" coal is a typical NAPP coal. South America or Central  
16 Appalachia or the Powder River Basin could supply the low sulfur coal.

17  
18 Q. Provide details on NAPP and Illinois Basin coal supplies.

19 A. These are two of the largest coal basins in the United States. In 2003, 93.2 million tons  
20 ("MMT") was produced in the Illinois Basin, down from about 140 MMT in 1990. The 2003  
21 production was the second lowest Illinois Basin production year on record. Production from  
22 Northern Appalachia in 2003 was 127 MMT. About 75 MMT of this amount was Pitt 8 coal.

23

1 **Q. How do these regions compete?**

2 A. Most NAPP and Illinois Basin coals are high-sulfur in content. The Clean Air Act  
3 Amendments of 1990 effective January 1, 2000 shrunk the market for these coals from a  
4 broad range of power plants to plants like Big Bend that are equipped with flue gas  
5 desulfurization ("FGD") systems, generally known as "scrubbers," and plants like Polk  
6 Station that are equipped with gasifiers. NAPP and Illinois Basin coals compete with each  
7 other at FGD-equipped units.

8

9 **Q. What are the likely low cost coal supply sources for TECO by rail and barge?**

10 A. Since TECO has not taken rail coal at Big Bend, it has favored Illinois Basin coal delivered  
11 by its water transport affiliate. TECO has taken Illinois Basin coal by barge from mines that  
12 originate coal by rail. These mines include Zeigler and Galatia in Illinois, Lodestar (just  
13 purchased by Peabody) and Dotiki in West Kentucky, and the Sommerville mine in Indiana.  
14 TECO has also taken Pitt 8 coal by barge from mines that originate by rail, Maple Creek in  
15 Pennsylvania, and Powhatan #6 in Ohio.

16

17 **Q. What have been the production and pricing trends for the Illinois Basin and Northern**  
18 **Appalachian coals?**

19 A. These markets were generally depressed through the summer of 2003.

20

21

1 Q. Of what significance is that fact in this case?

2 A. This is significant because, if TECO had conducted a rail origin coal supply solicitation in  
3 the first half of 2003, as a prudent approach in conjunction with a rail/water transportation  
4 solicitation, it would have found a buyer's market.

5

6 Q. How do other utilities comparatively situated to TECO in terms of alternatives buy coal  
7 from these regions?

8 A. They buy coal from rail and barge origins. Unlike TECO, they do not put less expensive rail  
9 origin coal on barges. Examples of such other utilities include Louisville Gas & Electric  
10 Company ("LG&E"), the Tennessee Valley Authority ("TVA"), and Seminole Electric  
11 Cooperative, Inc. ("Seminole"), a Florida generation-and-transmission cooperative.

12

13 Q. What is LG&E's situation and approach?

14 A. LG&E has a rail/barge-served unit at Mill Creek, a rail-served Cane Run unit, and a barge-  
15 served Trimble County plant. LG&E's procurement practices for its Mill Creek unit are  
16 cost-effective as confirmed by a recent procurement audit for the Kentucky PUC. See Final  
17 Report Focused Management Audit of The Fuel Procurement Functions of Kentucky Utilities  
18 Company and Louisville Gas and Electric Company, by The Liberty Group, February 23,  
19 2004, at III-20 (concerning rail/barge competition), and at II-3 (concerning fuel supply and  
20 transportation diversity). LG&E's 2002 and 2003 procurements demonstrate low-cost rail  
21 vs. barge acquisitions of coal as LG&E's rail carrier (the Paducah and Louisville Railroad, or  
22 "PAL") competes with barge origin coal, from different mines because least cost rail and  
23 barge origin mines usually differ.

1 Q. What is TVA's situation and approach?

2 A. TVA's plant most comparable to Big Bend is the FGD-equipped Widows Creek 7&8 which  
3 takes both rail and barge coal. Again, TVA in 2003 took rail coal from the Dotiki and  
4 Warrior mines and barge coal from barge accessible mines like Camp (WKY) and Sugar  
5 Camp (IL). Like LG&E but unlike TECO, TVA at Widows Creek does not take  
6 Dotiki/Warrior coal by barge. TECO did so in 2002 and 2003 in an effort to move coal via  
7 its affiliate, even though rail coal transportation would have been less expensive. These  
8 movements were very costly for TECO's ratepayers, but were very profitable to TECO's  
9 affiliate.

10

11 Q. What is Seminole's situation and approach?

12 A. Seminole has a rail-served plant at Palatka, Florida. In 2002 and 2003 Dotiki coal delivered  
13 by rail cost Seminole's members less than Dotiki coal delivered by barge to Big Bend. This  
14 is shown in the table below and demonstrates that CSXT's service to Palatka, which does not  
15 enjoy rail/barge competition, is more efficient and cost-effective by a wide margin for  
16 Seminole's members than TECO's water route to Big Bend is to TECO's ratepayers.

17

18

19

**Table 1.**  
**West Kentucky Coal to Big Bend and Palatka \$/Ton (¢/MMBtu)**

	2002	2003
Seminole Dotiki		
• Contract	\$44.08 (180)	\$41.93 (170)
• Spot	\$40.55 (165)	\$39.26 (161)
Big Bend Dotiki	\$51.05 <sup>1</sup>	\$52.75 <sup>2</sup>
1. \$40.44/ton to ECT (Electro-Coal Terminal, also known as Davant) plus \$10.61/ton ECT to Big Bend for a total of \$51.05/ton to Big Bend according to the September 2002 FPSC Form 423.		
2. \$40.97/ton to ECT plus \$11.78/ton ECT to Big Bend for a total of \$52.75 per ton delivered to Big Bend.		

20

1 Q. Are you saying TECO's ratepayers paid in 2002 and 2003 around \$10/ton more for the  
2 Western Kentucky rail origin coal than Seminole's ratepayers paid?

3 A. Yes. This is due to TECO's bias in favor of paying more to its affiliate to move coal  
4 inefficiently by the water route when the same coal can be more efficiently delivered by rail.  
5

6 Q. Does Seminole also buy Pitt 8 coal?

7 A. Yes, Seminole also buys Pitt 8 coal, which is delivered to Seminole's Palatka units by CSXT  
8 rail.  
9

10 Q. Can you assess how much TECO pays for Pitt 8 coal by barge versus what Seminole  
11 pays for rail deliveries?

12 A. Yes. The results follow:

13 **Table 2.**  
14 **Pitt 8 Coal to Big Bend and Seminole \$/Ton (¢/MMBtu)**

	2002	2003
Seminole	\$40.89 (157)	\$41.81 (160)
Big Bend <sup>1</sup>	N/A	\$46.87
1. \$24.75/ton FOB barge plus \$10.59 barge to ECT, plus \$11.53/ton ECT to Big Bend for a total of \$46.87/ton according to TECO's September 2003 FPSC Form 423 data for 4.65% sulfur coal.		

15  
16 Q. Are you saying that TECO paid in 2003 about \$5.00 per ton more to move Pitt 8 coal to  
17 Big Bend than Seminole pays to move the same coal?

18 A. Yes.  
19

20 Q. What, if anything, is noteworthy about this?

21 A. This is noteworthy because it demonstrates substantial cost savings via rail, even though  
22 Seminole is captive to the CSXT rail system and Big Bend could have rail/water competition.

1 Q. **Should this have been known to TECO? If so, what should TECO have done with this**  
2 **knowledge?**

3 A. Yes. Seminole had taken Pitt 8 coal in prior years and TECO, the only party privy to  
4 TECO's "secret" data, was in a position to compare its data to Seminole's public data as  
5 reported to the FERC. Acting prudently, in the best interests of its ratepayers, TECO should  
6 have used this knowledge to solicit a coal-by-rail transportation proposal from CSXT and  
7 then evaluated that proposal against the prices proposed by its affiliate, TECO Transport. At  
8 the very least, this would have been expected to produce significant downward pressure on  
9 the prices charged by TECO Transport, which would have accrued to the benefit of TECO's  
10 customers, albeit to the detriment of TECO's parent and its shareholders.

11

12 Q. **Where are the mines that produce Pitt 8 coal?**

13 A. My Exhibit \_\_\_\_ (RLS-2) shows these mines, many of which are served by the CSXT  
14 railroad.

15

16 Q. **What would a prudent utility have done in 2003?**

17 A. With CSXT's October 23, 2002 bid in hand, TECO's prudent path would have been to  
18 undertake, immediately, the engineering studies to upgrade Big Bend's rail facilities to  
19 receive coal and conduct a vigorous rail vs. water competition for transport services to Big  
20 Bend.

21

22 Q. **Did TECO do this?**

23 A. No.

1 Q. What was the FOB mine price in the NAPP Pitt 8 market from April to July 2003?

2 A. According to the trade press this price was \$21 to \$24.00/ton through early August 2003.

3 See Coal Daily, August 4, 2003 at 5 and July 7, 2003 at 5. These prices were generally  
4 available, subject to reasonable escalation factors, for long-term contracts – at least five years  
5 in length – that were entered into with suppliers in this time period.

6

7 Q. Why is this relevant?

8 A. This is relevant because a prudent procurement process, by TECO or by any other utility,  
9 would have solicited bids for high-sulfur NAPP Pitt 8 coal via rail or barge in the first half of  
10 2003. Such a prudent utility would have expected to thereby get the best available deal on an  
11 all-in delivered cost of coal.

12

13 Q. What was the FOB mine price in the Illinois Basin market from April to July 2003?

14 A. Illinois Basin high-sulfur coal was in oversupply in the first half of 2003, creating a buyer's  
15 market. In West Kentucky, Lodestar shut its Baker mine and Pyro coal preparation plant.  
16 Alliance closed its Hopkins County coal operations. Alliance Resource Partners' president  
17 stated: "Although our sales for the first quarter of 2003 have been strong, we have not been  
18 able to secure any meaningful new commitments for the balance of the year for our  
19 operations in the Illinois Basin. Unfortunately, without new sales commitments for this  
20 region, we will have to reduce production." See Platts, Coal Trader, April 4, 2003 at 3.  
21 Alliance has Illinois Basin coal mines in West Kentucky, Indiana, and Illinois.

22

1 Q. How much Illinois Basin coal moves by barge and by rail?

2 A. Most Illinois Basin coal moves initially by rail, although this varies by state. State of Illinois  
3 data, see Illinois Department of Natural Resources, 2002 Statistical Annual Report, for  
4 example, show that of the 33.4 MMT mined in Illinois in 2002, 20.3 MMT originally moved  
5 by rail and 13.1 MMT initially moved by truck, some of which was trucked to barge and rail  
6 loadouts. Overall for the three Illinois Basin states, rail-origin mines originate more tons  
7 than barge-origin mines.

8

**CSXT's Efforts to Bid and TECO's Rejection of CSXT (May 2002-June 2003)**

9

10 Q. How would you characterize CSXT's attempts to provide coal-by-rail transportation  
11 services to TECO?

12 A. Having reviewed numerous CSXT documents, including CSXT's presentation outline from  
13 May 2002, its written proposal to TECO from October 2002, its July 2003 proposal in  
14 response to TECO's RFP process, and various related documents and correspondence, I  
15 would characterize CSXT as a "determined bidder" in its efforts to provide rail transportation  
16 services to TECO.

17

18 Q. How would you characterize TECO's behavior toward CSXT in response to CSXT's  
19 efforts?

20 A. Having reviewed many documents furnished in discovery in this proceeding, I would  
21 characterize TECO's behavior toward CSXT as biased, as intended to discourage CSXT's  
22 efforts, and as intended to ensure that TECO gave all of its coal transportation business to its  
23 affiliate, without any regard to the best interests of its customers. The following specific

1 testimony highlights the shortcomings of TECO's actions, considered from the point of view  
2 of a public utility commission interested in protecting the captive customers' interests and  
3 pocketbooks.

4  
5 **Q. Did TECO conduct any preliminary analysis after it received CSXT's October 2002 bid**  
6 **to determine if the rail option was viable?**

7 A. No. TECO's documents reveal no such analysis. Yet CSXT's bid in October 2002 is one of  
8 the most important documents in this proceeding. For convenience it is attached as Exhibit  
9 \_\_\_\_ (RLS-3) to my testimony.

10  
11 **Q. If such an analysis had been conducted, what would it have shown?**

12 A. I have prepared such a preliminary analysis, which is presented as Exhibit \_\_\_\_ (RLS-4).  
13 This Exhibit shows that rail delivery to Big Bend had the potential to save \$6.29 per ton on  
14 West Kentucky coal and \$5.97 per ton on Pitt 8 coal. Given that CSXT was willing to pay  
15 for the reasonable rail infrastructure construction costs at Big Bend in addition to saving  
16 TECO \$6.00/ton in transport cost, TECO's only prudent course was to seek a CSXT bid and  
17 evaluate the rail option carefully. My Exhibit \_\_\_\_ (RLS-5) presents a time line showing the  
18 various steps that would have been encompassed in a prudent TECO approach.

19  
20 **Q. What should TECO have done?**

21 A. With CSXT's offer in hand, TECO should have begun and completed conceptual engineering  
22 studies from November 2002 through March 2003 and selected a rail engineering solution for  
23 Big Bend. That solution should then have been engineered to the point that a rail

1 construction bid package was prepared by July 1, 2003. At the same time this engineering  
2 work was being completed, TECO should have solicited for rail and water transportation  
3 services on April 1, 2003. These milestones are shown in Exhibit \_\_\_\_ (RLS-5).

4  
5 **Q. When would the rail facilities have been constructed?**

6 A. From August 2003 to March 2004.

7  
8 **Q. According to your Exhibit \_\_\_\_ (RLS-5), when would the first rail coal have been  
9 unloaded at Big Bend?**

10 A. In April 2004.

11  
12 **Q. If TECO did not follow a prudent solicitation path to develop and take advantage of  
13 rail capability for its Big Bend and Polk Stations, what did TECO do?**

14 A. TECO stalled and sought to exclude CSXT's rail bid. Beginning in October 2002, TECO  
15 asked CSXT to modify the character of CSXT's letter offer so that TECO could claim that it  
16 had not asked CSXT for the proposal. Then, even though CSXT extended the acceptance  
17 term of its offer to January 31, 2003, TECO failed to launch rail delivery engineering studies.  
18 On March 21, 2003, after over four months of inaction by TECO despite the concerted  
19 efforts of CSXT to initiate negotiations, CSXT finally obtained another meeting with TECO.  
20 Three more months of TECO inaction followed the March 21 meeting, as noted in CSXT's  
21 Mr. Bullock's June 13, 2003 letter to Ms. Wehle. Then TECO failed to solicit CSXT in its  
22 June 27, 2003 solicitation. This adds up to seven months of TECO inaction on the rail option  
23 after having received a very attractive and cost-effective offer for coal transportation

1 services. Based on trade press reports about TECO's solicitation, CSXT wrote TECO on  
2 July 16, 2003, asking to bid and finally received a bid package on July 21, 2003, due July 30,  
3 2003.

4

5 **Q. Is there an irony here?**

6 A. Indeed there is. TECO, having refused to respond to CSXT's October 2002 bid and having  
7 failed to solicit a 2003 CSXT bid, claimed in testimony before this Commission that its bid  
8 package, which had been criticized by this Commission's staff, was so good it resulted in two  
9 unsolicited rail bids, both by CSXT! See Joann T. Wehle's October 30, 2003 testimony at  
10 12.

**CSXT's Bid**

11

12 **Q. Please review CSXT's bid and the coal sources with rail access.**

13 A. CSXT's bid was comprehensive. TECO's solicitation was for water route transport. CSXT  
14 bid to provide rail transportation. TECO's bid sought only transportation for Midwestern  
15 coal. CSXT provided rates for Midwestern and NAPP (Pitt 8) coal mines. CSXT provided  
16 bids for a comprehensive list of mine origins based on a study of TECO's coal purchases.  
17 CSXT offered two different volume options, one for 1 to 2 MMTPY and the other for 2 to  
18 5.5 MMTPY. CSXT arranged inter-line hauls with the Union Pacific, Illinois Central (now  
19 owned by Canadian National), and Indiana Southern Railroad to ensure that all TECO coal  
20 origins were covered. As I've already noted, much of TECO's water route coal starts at the  
21 mine in a rail car, which transports the coal to a river dock.

22

23

1 **Q. What was CSXT's pricing?**

2 A. CSXT bid about \$16.00 per ton for a single line haul and \$18 to \$19 per ton or less for two  
3 line hauls. CSXT also offered a significant -- \$2 per ton -- volume discount on all coal  
4 volumes above 1 MMTPY that CSXT delivered from CSXT rail-direct mines. CSXT also  
5 bid to rail coal to Polk directly or from Big Bend to Polk by a shuttle train. A fuel surcharge  
6 of about \$0.58/ton applies under current oil prices.  
7

8 **Q. Was CSXT willing to fund construction at Big Bend?**

9 A. Yes. CSX was willing to fund up to 120% of \$13.2 million in improvements for the 2-5.5  
10 MMTPY option, including \$3.7 million for transloading facilities at Big Bend to  
11 accommodate coal deliveries to Polk and \$2.4 million at Polk to receive shuttle trains from  
12 Big Bend and remove approximately 25,000 truck trips per year from the roadways of  
13 Hillsborough and Polk Counties. According to CSXT's 2.0-5.5 MMTPY bid, the 2.0 MMT  
14 tonnage level did not need to be reached until 2005 for TECO and its customers to benefit  
15 from the pricing thereunder.  
16

17 **Q. Why would CSXT pay for rail facilities at Big Bend?**

18 A. CSXT was willing to pay for rail delivery facilities at Big Bend to accommodate TECO's  
19 tenuous financial situation, given that TECO had indicated that it did not have sufficient  
20 capital funds available to pay for the needed capital infrastructure itself, and because CSXT  
21 viewed this offer as a prudent business decision on its part in light of the business opportunity  
22 that it would thereby create for CSXT. It is very rare for a utility to ask a railroad or  
23 transportation vendor to pay for facilities to be built at the power plant. I cannot recall a

1 similar circumstance to what has occurred here. Apparently CSXT was told that TECO had  
2 no money to fund rail delivery upgrades even if the ratepayers benefited. It is quite  
3 remarkable that TECO claims it cannot afford to undertake cost-effective solutions for the  
4 ratepayers at the same time TECO recovers from its ratepayers a return on rate base to pay  
5 for debt and equity.  
6

**Analysis of CSXT's Bid Moving Least-Cost Rail-Origin Coals**

7  
8 **Q. Have you prepared, using CSXT's bid and FOB rail and barge prices a comparison of  
9 TECO's alternatives in mid-2003?**

10 A. Yes. My Exhibits \_\_\_\_\_ through \_\_\_\_\_ (RLS-6a, 6b, and 6c) show such an analysis.  
11

12 **Q. What does your Exhibit \_\_\_\_\_(RLS-6a) show?**

13 A. My Exhibit \_\_\_\_\_(RLS-6a) shows that, even for barge accessible coal, such as coal from the  
14 Dekoven mine, TECO could have saved money in 2004 by transporting such coals by rail.  
15 More significantly, however, for least-cost rail origins in West Kentucky, TECO could have  
16 saved at least \$4.87 per ton if it had moved coal under CSXT's rail bid.  
17

18 **Q. What about Pitt 8 coals?**

19 A. As I show in Exhibit \_\_\_\_\_(RLS-6b), movement of Pitt 8 coal by rail would have saved  
20 TECO \$5.03 to \$7.03 per ton had CSXT origin coal been solicited.  
21

1 **Q. What about Indiana coal?**

2 A. Exhibit \_\_\_\_ (RLW-6c) shows that the savings for rail coal from Indiana versus water route  
3 transport via TECO's affiliate would be \$5.00 to \$7.00 per ton depending on whether the  
4 losses and inefficiency of the water route are added.

5

6 **Q. You're saying TECO's ratepayers are paying millions of dollars each year for more  
7 costly water route transport?**

8 A. Yes. TECO's ratepayers are overpaying by a minimum of \$5.00/ton or \$12.5 million per  
9 year, assuming that 2.5 MMTPY are moved by rail. The overpayments could be as much as  
10 \$7.00/ton or \$17.5 million per year. However, if TECO had undertaken to cultivate and  
11 encourage bona fide rail vs. barge competition, that competition would have reduced water  
12 delivered coal costs, even for those coals that were or are truly more economically delivered  
13 by water. This would have saved TECO's ratepayers even more money, although the results  
14 are not additive. If more than 2.5 million tons per year were to be moved by rail, the savings  
15 realized for TECO's customers would be even greater.

16

1

**TECO's Evaluations**

2

3 **Q. Did TECO evaluate the CSXT July 2003 rail bid versus the award it made to its water**  
4 **transportation affiliate?**

5 A. It appears that TECO did perform some analysis of CSXT's rail bid, but it is not at all clear  
6 when TECO did such analysis or who did it. But TECO's witness Wehle, in Document No. 2  
7 of her October 2003 testimony, re-submitted in January 2004, presents such an analysis.

8

9 **Q. Is Ms. Wehle's analysis correct?**

10 A. No. She takes as TECO's water route transportation cost the cost of affiliate transport from  
11 the barge delivery point to Big Bend not the total transportation cost from the mine to Big  
12 Bend which I present in RLS Exhibits \_\_\_\_ - \_\_\_\_ (RLS-6a, 6b, and 6c). She has not done a  
13 correct or complete analysis of the total transportation cost of coal moved by the water route.  
14 Her analysis ignores about \$3.00 to \$5.00/ton in transportation cost incurred to get TECO's  
15 coal to a dock. A correct analysis must start at the mine because mines bid coal FOB rail,  
16 barge, or truck at the mine; therefore, loading trains at the mine avoids the haul cost to the  
17 barge and a river dock transloading fee. Ms. Wehle ignores this, which is a fatal mistake.

18

19 **Q. Do TECO's documents reveal any other TECO evaluation?**

20 A. Yes. In response to the Florida Industrial Power Users Group's ("FIPUG") 1st request for  
21 production of documents, TECO supplied undated documents stamped as pages 275 to 279.

22

23

1 Q. **What did TECO's fall 2003 analysis show?**

2 A. The unidentified analyst (any credible evaluation should be initialed) assumes that to move  
3 coal by rail, TECO's coal purchased from Dodge Hill in West Kentucky and Illinois Fuels in  
4 Southern Illinois would move as usual to the same docks, then the coal would be transported  
5 by barge to the GRT terminal on the Tennessee-Cumberland Rivers, then the coal would be  
6 transloaded to rail at GRT, and then, finally, the coal would be transported on the CSXT rail  
7 system to Big Bend.

8  
9 Q. **What's wrong with TECO's analysis?**

10 A. The analysis in these pages is, to put it mildly, biased and clearly erroneous. TECO contracts  
11 for FOB barge coal, but it could just as well contract on an FOB mine basis with a distinct  
12 rail or truck haul and dock transloading charge. This would give TECO the option of  
13 directing the coal to a rail loadout. Of course TECO does not want to do this because it  
14 doesn't want to expose all of its transportation cost to regulatory examination. The oldest  
15 TECO contract, the Zeigler contract, does show separate rail and transloading charges. A  
16 prudent utility would instead truck Dekoven coal to a rail loadout near Wheatcroft, Kentucky  
17 (a 13 mile distance) and load directly on rail as I show in Exhibit RLS-6a. This would avoid  
18 a truck to barge transportation charge, a transloading charge, a barge to GRT charge, and a  
19 GRT transloading charge. Instead, Dekoven coal would bear a 13-mile truck and a rail tipple  
20 charge to load on rail near Wheatcroft.

21

22

23

1 **Q. What about coal supplied by Illinois Fuels?**

2 A. This coal is a by-barge origin coal that is trucked some distance to the Ohio River. Until the  
3 coal contract expires at the end of 2004, it should move by water until it can be evaluated  
4 against other coal-supply-and-transportation options and, if indicated, replaced by less  
5 expensive rail-originated coal or continued, if it were demonstrated to remain an economical  
6 by-water-route coal.

7

8 **Q. What about Galatia coal?**

9 A. This same TECO analysis assumes that 1,000,000 tons of Galatia coal are purchased in 2004  
10 for Big Bend. Yet TECO had the right to terminate and should have terminated the Galatia  
11 contract, which was for Gannon, when Gannon closed. A document produced by TECO in  
12 response to the same FIPUG Document Request cited above, projects that 490,700 tons of  
13 Galatia coal are to be purchased by TECO in 2004 and this is 490,700 tons too much.  
14 TECO's response to OPC's Second Set of Interrogatories No. 25 has only 153,000 tons of  
15 (apparently) Galatia coal moving to the Cook terminal. Apparently the balance of Galatia  
16 coal had been shifted to American Coal's Powhatan No. 6 origin via the NS railroad to an  
17 upper Ohio River terminal. What TECO should have done in early 2003 was to terminate  
18 Galatia altogether for 2004 and solicit Pitt 8 coal by rail origin and all-rail transport to Big  
19 Bend. TECO should not have bought Galatia coal in 2004 when it could have purchased less  
20 expensive rail-origin coal via a Second Quarter 2003 solicitation.

21

22

23

1 Q. What is your opinion regarding this fall 2003 analysis by TECO?

2 A. It appears to be, like Wehle's, an ex-post rationalization and is also erroneous. Moreover, no  
3 TECO documents show any evaluation either in late 2002 or in the first half of 2003 based  
4 on CSXT's October 2002 bid, nor any evaluation after CSXT's July 30, 2003 bid before the  
5 decision to contract with TECO's affiliate and move all Big Bend/Polk coal by the water  
6 route.

7

**TECO's Coal Contract Flexibility To Bid Rail Origin Coal**

8

9 Q. What contractual flexibility did TECO have to take rail coal in 2004?

10 A. TECO's 2004 coal burn for Big Bend and Polk is projected to be 5 MMT. Without  
11 petroleum coke, the coal burn is about 4.5 MMT. As of December 31, 2003, TECO had  
12 639,274 tons in inventory (shown as a 47 day inventory). TECO always has a large amount  
13 of coal in transit. TECO's response to OPC's 1st POD request (p. 778) shows TECO keeps  
14 200,000 tons afloat in river barges, 30,000 tons in ocean barges, and up to 1.576 MMT at  
15 Electro-Coal Terminal (ECT). To simplify, I assume TECO buys 4.5 MMT of coal in 2004.

16

17

1 Q. What are TECO's contractual commitments for 2004?

2 A. Excluding Galatia, which should have been terminated, TECO has the following  
3 commitments for 2004:

4 **Table 3.**  
5 **TECO 2004 Coal Commitments**  
6

	<b>Tons</b>
Zeigler	850,000-1,050,000
Illinois Fuel	1,000,000
Peabody Patriot	250,000
Dodge Hill	450,000
Dodge Hill Put	300,000
	<b>2,850,000-3,050,000</b>

7

8 Although I have not seen TECO's contract correspondence, from the documents that I have  
9 been able to review, including portions of selected coal contracts, it appears likely that TECO  
10 could have solicited and purchased 1.0 to 1.5 MMT of rail origin coal in 2004 but for its  
11 newly executed water transport contract which requires that 4.0 MMTPY move in TECO  
12 ocean barges and its failure to terminate the Galatia contract and solicit rail origin coal prior  
13 to August 1, 2003. TECO's response to Interrogatory No. 25 to the Office of Public  
14 Counsel's 2nd Set of Interrogatories states that as of February 2, 2004, TECO had 570,000  
15 tons of uncommitted coal in 2004.

16

17 Q. If TECO had followed the path identified in your prudent time line, how much coal  
18 could TECO have obtained from rail-origin mines and transported by rail to its plants?  
19 What effect would this have had on TECO's ratepayers?

20 A. If TECO had followed the prudent course of action outlined in my time line, Exhibit  
21 \_\_\_\_ (RLS-5), it could have obtained and transported a minimum of 1.0 to 1.5 MMT of coal

1 by rail in 2004, and a minimum of 2.0 MMT by rail in 2005. As shown in Exhibit \_\_\_\_  
2 (RLS-9a), my best estimate is that TECO would have thus saved TECO ratepayers \$11.7  
3 million in 2004 and approximately twice that amount in 2005 and in succeeding years.  
4

**TECO's December 2003 Solicitation Threatens To Lock TECO Into More  
Uneconomical Coal And Reveals Cost-Effective Rail-Origin Bids**

5  
6 **Q. Please describe TECO's December 2003 coal supply solicitation.**

7 A. In December 2003, TECO solicited for 850,000 TPY of coal, on an FOB barge basis, for the  
8 years 2005 through 2014.  
9

10 **Q. Why did TECO solicit for more coal via the water route?**

11 A. Absent additional discovery I can only give a limited response, but I believe this solicitation  
12 appears to be designed to further foreclose rail-origin coals from TECO's supply portfolio in  
13 order to further enhance TECO Transport's position as TECO's sole supplier of coal  
14 transportation services.  
15

16 **Q. What has been revealed?**

17 A. TECO in December 2003 asked for water borne bids for 850,000 TPY for 2005 to 2014.  
18 Apparently these bids are intended to meet the terms of the Zeigler (Old Ben/Horizon)  
19 contract option for a right of first refusal ("ROFR") on 850,000 tons of high sulfur coal to  
20 follow the 12/31/04 expiration of its long term coal supply agreement with TECO.  
21  
22

1 Q. **What are the terms of Zeigler's ROFR?**

2 A. They are complex, but Zeigler has the right to match the bid on a "fully delivered cost per  
3 million Btus."

4

5 Q. **In your opinion, could TECO select a rail origin bid as its least-cost bid and ask Zeigler  
6 to match the rail bid?**

7 A. Yes. Zeigler loads by rail. Zeigler can compete by rail.

8

9 Q. **Did TECO solicit coal-by-rail bids in its December 2003 solicitation?**

10 A. No. TECO's December 2004 solicitation seeks only bids FOB barge.

11

12 Q. **When are ROFR negotiations to begin with Zeigler?**

13 A. April 1, 2004.

14

15 Q. **Does TECO have another solicitation outstanding?**

16 A. Yes. TECO solicited in November 2003 for 500,000 tons in 2004.

17

18 Q. **What did the responses to TECO's 2005-2014 bids reveal?**

19 A. TECO received a bid from Solar Sources FOB CSXT in Indiana. The bid was \$24.50 per ton  
20 FOB rail.

21

22

23

- 1 Q. Evaluate this coal on a delivered price basis to Big Bend via rail and via the water route.
- 2 A. First TECO's evaluation (at Bates #35 in TECO's response to Staff's First Request for POD
- 3 No. 13 filed March 3, 2004) follows:

**Table 4.**  
**Delivered Cost of Solar Sources Indiana Coal As Analyzed By TECO**  
**(\$/Ton)**

	<b>Wheatland (Solar Sources)</b>
F.O.B. Mine Bid	\$24.50
Rail or Truck Rate to River	\$3.60
Loaded @ Dock	\$28.10
River Barge	\$7.04
ECT and Ocean Barge	\$10.43
<b>Total</b>	<b>\$45.57</b>
Delivered to Big Bend	(203.438 ¢/MMBtu)

- 5
- 6 Q. Now evaluate this Indiana coal delivered to Big Bend by CSXT rail.
- 7 A. The results follow:

**Table 5.**  
**Delivered Cost of Solar Sources Indiana Coal by CSXT Rail (\$/Ton)**

	<b>Wheatland (Solar Sources) (\$/Ton)</b>
F.O.B. Mine Bid	\$24.50
Rail Rate From CSX Bid	\$16.73
Fuel Surcharge	\$0.58
<b>Total</b>	<b>\$41.81</b>
Delivered to Bid Bend	(186.65 ¢/MMBtu)

- 10
- 11 Q. How much less expensive by rail?
- 12 A. For these supply-and-transportation options, the by-rail option is \$3.76 per ton less expensive
- 13 than the by-barge option, not including the additional costs resulting from handling and

1 moisture losses incurred with waterborne transport, and not including the additional carrying  
2 costs associated with longer transit times.

3

4 **Q. Did TECO disqualify Solar Sources bid?**

5 A. Yes. Solar Sources' bid was disqualified as a by-rail bid.

6

7 **Q. What is the significance of this? What impacts is it likely to have on TECO's**  
8 **customers?**

9 A. This is significant because TECO has again failed to solicit by-rail coal. Had it done so,  
10 some of its by-barge bidders would have likely been less expensive than Solar Sources, had  
11 they bid FOB rail. One of these by-barge bidders that could load by-rail is Peabody's  
12 Sommerville mine in Indiana. Another is Alliance's mine(s) in West Kentucky.

13

14 **Q. Do these recent solicitations indicate any other imprudent practices on TECO's part?**

15 A. Yes. Particularly considered in light of TECO's other actions with regard to favoring its  
16 barge-company affiliate, these solicitations highlight the fact that TECO does not  
17 synchronize its coal supply procurement and coal transportation procurement actions, leading  
18 to temporal mis-matches between coal supply contracts and coal transportation contracts.  
19 This leaves TECO in the position of claiming that it has to continue barge-origin coal  
20 supplies because it has another X years to run on its barge contract and also claiming that it  
21 has to continue its barge contract with its affiliate because it has another Y years to run on its  
22 coal supply contracts for barge-origin coals.

23

1 Q. Is this sort of non-synchronized coal supply and coal transportation procurement  
2 typical in the electric utility industry?

3 A. No. It is virtually unheard of, because it is obviously imprudent and contrary to the best  
4 interests of utility customers.

5

### LOSSES AND INEFFICIENCIES OF WATER-TRANSPORTED COAL

6

7 Q. Have you investigated the losses of Btus due to the multiple handling of coal that moves  
8 to New Orleans by barge?

9 A. Yes.

10

11 Q. Why do these losses occur?

12 A. Because coal is handled multiple times on the water route and subject to heavy rainfall on  
13 the river and at ECT (Davant) near New Orleans Coal is loaded in a truck or rail car and  
14 moved to a river dock where it is put in a pile, then loaded on to barges. At ECT it is  
15 unloaded, stored and re-loaded. Each time coal is "handled," i.e., unloaded from one vessel  
16 or rail car to another, some coal is lost due to incomplete trans-loading and some is lost as  
17 dust. Additionally, coal absorbs some moisture when it is exposed to rain or other humid  
18 conditions, resulting in less Btu per net ton. In studies by Ashland Coal and Southern  
19 Company, Ashland quantified the losses on coal via New Orleans as 300 Btu/lb or 2 to 2.5%.  
20 Southern Company uses 1% for coal not transloaded but barged direct. Therefore, these  
21 studies are consistent with a 2% Btu loss for coal that is transloaded for barge shipment.

22

23

1 Q. **At New Orleans, are there other costs associated with this moisture?**

2 A. Yes, the additional moisture consumes Btu's when the coal is combusted at Big Bend.  
3 Southern Company estimated the additional cost at 25 cents/ton.

4

5 Q. **Are other extra costs associated with the water route?**

6 A. Yes. Rail and barge served U.S. utilities carry inventories of 45 to 60 days. TECO  
7 maintains a 120-day inventory when coal at ECT, in transit on the river and in transit by  
8 ocean barge is considered. (See TECO's response to OPC's 1st Request for POD, Bates  
9 #778.)

10

11 Q. **Don't rail-served utilities have coal in transit too?**

12 A. Yes, but typically for only 7 days, not 44 days.

13

14 Q. **Do you have an exhibit that summarizes the additional costs of water route  
15 transportation and provides the back up documents?**

16 A. Yes. This information is presented in my Exhibit \_\_\_\_ (RLS-7).

17

18 Q. **What is your estimate of the higher cost of waterborne coal movements to Big Bend vs.  
19 by-rail movements?**

20 A. My estimate is an added \$2.00 per ton, composed of about half for water route Btu losses and  
21 related combustion costs and half for the extra inventory required to maintain water  
22 deliveries in the manner that TECO's affiliate operates.

23

1 **DAMAGES TO TECO'S RATEPAYERS**

2  
3 **Q. Taking all of the foregoing cost factors into account, have you prepared an estimate of**  
4 **the damages, in terms of excess costs, that TECO's captive customers are suffering and**  
5 **will suffer as a result of TECO's imprudent practices?**

6 A. Yes. I estimate TECO's excess fuel cost as follows. With a rail system operating as of April  
7 1, 2004, capable of receiving coal at a 2.5 MMTPY rate, I estimate that TECO could have  
8 received 1.243 MMTPY of coal delivered by rail in 2004. I assume that this coal was  
9 purchased in the first half of 2003 when TECO, acting prudently, should have solicited for  
10 coal by rail and by water. For 2005, coal-by-rail receipts would be 2.5 MMTPY.

11 For 2004, TECO could have purchased 700,000 tons from a CSXT Pitt 8 coal origin,  
12 429,291 tons from a West Kentucky supplier such as Alliance mines; and 120,000 tons from  
13 Indiana and/or Illinois mines (Solar Sources at CSXT's Wheatland origin, Black Beauty at  
14 Sommerville via the ISRR/CSXT haul bid by CSXT, or Alliance's Pattiki mine in Illinois on  
15 the CSXT).

16 The barge-delivered coal backed out (see TECO's 2/2/04 response to OPC's 2nd set  
17 of interrogatories No. 25) by these purchases would be:

18 153,000 tons of Galatia coal via Cook

19 570,000 tons of uncommitted coal (assumed to come 300,000 tons from Powhatan #6  
20 and 270,000 tons from W. Kentucky)

21 400,000 tons of Powhatan #6 coal (already planned)

22 120,000 tons of Indiana coal (already planned)

23 1,243,000 tons

24 The following table summarizes the savings from this 2004 rail/water procurement strategy.

25

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**Table 6.**  
**SUMMARY - ESTIMATED TECO OVER-PAYMENTS IN 2004**

(1)	Pitt 8 Coal 700,000 tons (see Exhibit 9b)		
	TECO Water Route Cost	\$34,380,274	
	By CSXT Rail Cost	<u>\$27,076,644</u>	
	Total Pitt 8 Savings	\$ 7,303,630	
	Per Ton Savings	\$ <u>10.43</u>	
(2)	Illinois Basin 549,291 tons (see Exhibit 9c)		
	TECO Water Route Cost	\$24,899,900	
	By CSXT Rail Cost	<u>\$20,972,116</u>	
	Total Ill. Basin Savings	\$ 3,927,784	
	Per Ton Savings	\$ <u>7.15</u>	
(3)	CSXT Rail Discount Savings		
	\$2.00/ton times (1,249,091 – 1,000,000 tons) or \$2 x 249,291 or \$498,582		
(4)	Total 2004 Rail Route Savings	\$11,729,996	
	Total \$/Ton Savings	\$ <u>9.39</u>	

**BIG BEND'S CAPABILITY TO STORE AND BLEND COAL  
FOR BIG BEND & POLK STATIONS**

- 26
- 27
- 28
- 29 **Q. Do you have experience assessing and testifying on utility coal yard operations, blending**
- 30 **and coal handling?**
- 31 **A. Yes.** I have reviewed coal yard and blending operations at many power plants and have
- 32 testified on rail and barge receiving, coal blending, coal yard handling and reclaim costs and
- 33 on utility inventory policies in administrative and courtroom litigation in numerous
- 34 jurisdictions. Power plants that I have examined in this regard include: Powerton (IL),
- 35 Bailey (IL), Michigan City (IL), Mitchell (IL), Belle River (MI), St. Clair (MI), King (MN),
- 36 Fayette (TX), Limestone (TX), Crystal River (FL), Scherer (GA), St. John's Power Park

1 (FL), Cedar Bay (FL), Jeffrey (KS), Centralia (WA), Independence (AR), White Bluff (AR),  
2 Jim Bridger (WY), and Dave Johnston (WY).  
3

4 **Q. Have you visited Big Bend Station?**

5 A. No. Time did not permit me to visit Big Bend, but John Stamberg, P.E., Vice President of  
6 EVA, visited Big Bend and he has reviewed with me, using photographs and layout  
7 drawings, Big Bend's coal handling facilities, and rail and barge facilities.  
8

9 **Q. Briefly describe these facilities.**

10 A. Big Bend receives about 5 MMTPY by barge. Big Bend has two stacker reclaimers,  
11 advanced blending and silo storage facilities, a coal yard capable of storing 60 days of  
12 inventory for Big Bend/Polk, and at one time had a rail receiving facility to receive limestone  
13 for FGD operations. Big Bend has an air permit for a coal/rail load out to transport coal to  
14 Polk. Presently Polk coal is loaded in trucks at Big Bend for transport to Polk.  
15

16 **Q. What coal inventories has TECO maintained at Big Bend in the past?**

17 A. Until December 1998, TECO reported its inventories at Big Bend to the U.S. Energy  
18 Information Administration ("EIA") on EIA Form 759. For many months in the 1990-1998  
19 period stocks at Big Bend exceeded 600,000 tons. In November 1998, Big Bend inventories  
20 rose to 721,344 tons and in December 1998, EIA reported TECO has reported its Big Bend  
21 inventory as 919,882 tons. The highest inventory ever reported at Big Bend was 1,041,730  
22 tons in April 1999.  
23

1 Q. How many tons were stored at Big Bend on January 31, 2004?

2 A. 600,000 tons.

3

4 Q. What are the average high burn rates at Big Bend?

5 A. The monthly burns for June/July/August 1996, 1997, and 1998 for Big Bend averaged  
6 430,000 tons per month.

7

8 Q. What is the maximum burn rate for Polk Station?

9 A. TECO reports that Polk's maximum monthly burn is 66,000 tons and that 5,000 tons is stored  
10 on site.

11

12 Q. What are typical eastern U.S. utility inventories?

13 A. Usually 45 to 60 days. I have provided public data on eastern utility inventories in average  
14 days of burn at Exhibit \_\_\_\_ (RLS-8).

15

16 Q. Would having rail and barge delivery capability reduce the risk of supply disruptions?

17 A. Yes.

18

19 Q. What would be the fuel storage (coal and pet coke) requirement at Big Bend for Big  
20 Bend and Polk inventories, assuming that 45 days of inventory is the target?

21 A. 736,500 tons.

22

23

1 Q. **What about 60 days?**

2 A. 982,000 tons.

3

4 Q. **Is the Big Bend site capable of storing 736,500 tons or 45 days of Big Bend and Polk**  
5 **burn?**

6 A. Yes. This has been demonstrated.

7

8 Q. **Could it store 60 days of burn or 982,000 tons?**

9 A. Yes. The site has stored 1,041,730 tons. Storing 982,000 tons should not present a problem,  
10 especially since all four Big Bend units can burn the same fuel, which was not the case  
11 before Big Bend 1&2 had FGDs installed in 1999.

12

13 Q. **Does TECO have sufficient blending capability at Big Bend to handle the blending**  
14 **requirements for Big Bend and Polk Stations?**

15 A. Yes. My partner John Stamberg addresses in detail Big Bend's blending capabilities in his  
16 testimony. At Big Bend, silos and belts to the truck (or rail) load out to Polk are capable of  
17 blending pet coke and coal for Polk.

18

19 Q. **How much coal is ECT expected to blend in 2004?**

20 A. According to TECO, ECT will be blending only 14 percent, or 714,000 tons, of total TECO  
21 throughput in 2004. See response to Public Counsel's Interrogatory No. 24, February 2,  
22 2004.

23

1 Q. Does TECO use ECT for coal storage?

2 A. Yes, but the storage is not necessary to make Big Bend reliable or to achieve 45-60 days of  
3 storage at Big Bend. It is obvious the storage is not at Big Bend and is no more accessible  
4 than the Illinois Basin or Appalachian coal mines that could be accessible to Big Bend by  
5 CSXT rail.

6

7 Q. Why have it?

8 A. Storage at ECT is for barge transloading. It is maintained for the convenience of TECO's  
9 affiliate. Storage of fuel at ECT should be viewed as an extra cost of water route  
10 transportation.

11

12 Q. What conclusions do you draw concerning TECO's coal storage and blending  
13 capabilities?

14 A. The foregoing discussion demonstrates that TECO has ample storage capacity at Big Bend  
15 and ample blending capability at Big Bend to handle all of its requirements for both  
16 generating plants. Accordingly, TECO does not need ECT (Davant) for any of these  
17 purposes.

18

19

## SARGENT & LUNDY STUDY

20

21 Q. Have you reviewed the Sargent and Lundy ("S&L") study?

22 A. Yes. I reviewed the study dated September 18, 2003 and a draft dated September 6, 2003.

23

24

1 **Q. What is your assessment of the study?**

2 A. It was prepared hastily and does not appear to benefit from knowledge of the site or site visits  
3 directed to estimating the cost of upgrading Big Bend's rail facilities. S&L's engagement for  
4 this task began August 27, 2003 and S&L's first draft is dated September 6, 2003. It does  
5 not examine the potential transfer and use at Big Bend of the idled Gannon rail unloading  
6 equipment. Nor did it consider the obvious option of upgrading for coal unloading the  
7 existing rail facilities installed to receive limestone.

8

9 **Q. Is there any evidence that S&L obtained vendor quotes?**

10 A. No.

11

12 **Q. Did TECO or S&L contact CSXT or request any information from CSXT in an effort  
13 to understand CSXT's estimates?**

14 A. No.

15

16 **Q. Have you in the past worked with engineers to estimate the cost of construction of  
17 conveyors and other materials handling equipment?**

18 A. Yes.

19

20 **Q. How is this done?**

21 A. In my experience, the client asks the engineer to review the site, obtain as-built drawings of  
22 existing facilities, examine soil conditions, prepare a conceptual plan, obtain preliminary  
23 vendor quotations for large items, and obtain unit cost estimates, e.g., for concrete in dollars

1 per cubic yard, steel in cents per pound or other appropriate units, and for labor in dollars per  
2 hour for each type of employee needed for the job.

3  
4 **Q. What else would an engineer do in arriving at such an estimate?**

5 A. The engineer will typically go to documents that have "factored" unit prices for the region  
6 (here, Florida) where the project is located. The engineers should, and typically do, visit or  
7 contact environmental permitting authorities and local government construction permitting  
8 authorities to determine regulatory requirements.

9  
10 **Q. Did S&L do this?**

11 A. I have seen no evidence they did. The e-mail record does show that S&L obtained tax,  
12 insurance, and salary information from TECO.

13  
14 **Q. Did you notice anything else peculiar about S&L's cost estimates?**

15 A. Yes. I noticed that 22 of the 38 cost items identified and estimated in S&L's study were  
16 multiples of \$70,000. The probability of actual, engineering-based estimates exhibiting such  
17 an arithmetic relationship is so very, very small as to be considered impossible. Thus, this  
18 casts further doubt on the accuracy of the S&L study and the legitimacy of S&L's  
19 methodology, whatever it was.

20  
21 **Q. Would you give any weight to S&L's estimate?**

22 A. No. A reliable engineering estimate for the type of facilities at issue here must be built from  
23 the ground up because there are existing facilities, a prior rail unloading point, and other

1 physical features that must be taken into account in preparing any estimate of the costs to  
2 install new or upgraded rail delivery infrastructure. A reliable engineering estimate should  
3 also incorporate vendor quotes for the key items and be transparent with regard to unit costs  
4 and loading factors. S&L's estimate does not meet these tests.

5  
6 **Q. Did you ask Mr. Stamberg to visit Big Bend and Polk and the Hillsborough County**  
7 **permitting authorities?**

8 A. Yes. He made three visits to the Tampa area as part of his assignment. His visits included  
9 not only "drive-by" or "outside-the-fence" inspections of TECO's Big Bend, Polk, and  
10 Gannon (Bayside) Generating Stations, but also "inside-the-fence" inspections of all three of  
11 these power plants. His visits also included review of the permitting records for both the Big  
12 Bend and Gannon Stations.

13  
14 **Q. Did he meet with CSXT's personnel who prepared CSXT's estimate?**

15 A. Yes. Mr. Stamberg met with Mr. White and Mr. Schumann, the two individuals who had  
16 primary responsibility for developing CSXT's cost estimates for the capital improvements  
17 needed to accommodate rail delivery, handling, and trans-loading facilities for serving Big  
18 Bend and Polk.

19  
20 **Q. Did you review Mr. Stamberg's estimates?**

21 A. Yes. I found Mr. Stamberg's estimates to be reasonably thorough and complete.

22

1 Q. Did you review the permit information and TECO's engineering information requested  
2 by CSXT?

3 A. Yes.

4

5 Q. Do Mr. Stamberg's analysis and estimates satisfy the criteria that you articulated above  
6 regarding the characteristics of a sound engineering estimate for coal receiving and  
7 handling installations?

8 A. Yes. Accordingly, it is my opinion that his analyses are far more reliable and credible than  
9 anything that is contained in the Sargent & Lundy report.

10

### THE TRANSPORTATION BENCHMARK

11

12 Q. Are you familiar with the Commission's transportation benchmark established in 1988?

13 A. Yes. And I reviewed TECO's benchmark calculations attached as Document 1 to Ms.  
14 Wehle's September 12, 2003 testimony.

15

16 Q. What is your assessment of the benchmark?

17 A. It has no analytical value, and therefore no policy value or regulatory validity.

18

19 Q. Why?

20 A. I contacted the Commission staff and sought the underlying data from the four utilities  
21 surveyed. I was told that the back-up data from Lakeland is not publicly available. Lakeland  
22 is one of the two "low cost" respondents for 2002. The other low cost data point was  
23 Gainesville. Gainesville's volume was 728,847 tons which, even if the data were good,

1           which cannot be determined without an audit of invoices and Gainesville's rail contract,  
2           would tell me little about a potential 2.0-5.0 MMTPY rate to Big Bend.

3

4   **Q.    What else did you discover?**

5    A.    The back-up data for the St. John's River Power Park rail cents-per-ton-mile submittal given  
6           to me by staff shows under a bold double blocked heading: "Non-Discounted Contract Rail  
7           Rates – 2002". That caveat is sufficient to reject the SJRPP data as not representing SJRPP's  
8           actual rail rate.

9

10 **Q.    What about Ms. Wehle's calculation?**

11   A.    In the first instance, I note that because the underlying data is bad, which I've shown above,  
12           her calculation is invalid. I also note that she employed an average haul distance of 1,146  
13           miles, testifying this is the rail haul distance "from all Tampa Electric waterborne coal  
14           supplies to plants". With no back-up, this statement is difficult to evaluate, and as I testify to  
15           at length in this testimony, the most economical rail origin will usually not be the most  
16           economical barge origin (not that TECO necessarily buys from the most economical barge  
17           origin).

18

19 **Q.    Did you calculate the rail mileage from an economical rail origin to TECO's Big Bend  
20           plant?**

21   A.    Yes. My calculation showed the rail mileage from Big Bend to the Webster County and  
22           Hopkins County West Kentucky load outs, which are used by LG&E and TVA and which are  
23           also available to TECO, was 961 miles.

1 Q. What is the percentage difference between your 961 miles and Ms. Wehle's 1,146 miles?

2 A. By her method of calculation on mileage alone, her rate is overstated by  $(1,146 - 961 = 185)$   
3 divided by 961, or 19.3% if her result seeks to represent to the Commission what TECO  
4 would pay for coal transportation from a rail transportation efficient coal mine to Big Bend.

5

6 Q. Is mileage the whole story?

7 A. No. I've testified earlier that high-sulfur Pitt 8 coal is a likely economical rail source coal for  
8 Big Bend. It is over 1,100 miles by rail to these mines, but because CSXT offers lower rates  
9 per ton mile for transportation from Northern Appalachia and because Pitt 8 coal has a  
10 higher Btu/lb value, Pitt 8 coal, depending on market conditions, could be the preferred rail  
11 source for TECO, just as it often is for Seminole.

12

13 Q. Do you have any other problems with the benchmark?

14 A. Yes. If you have a bona fide rail bid as TECO did in October 2002, that should be the  
15 "benchmark" not some calculation using inaccurate data from an invalid origin.

16

## CONCLUSIONS AND RECOMMENDATIONS

17

18 Q. Please summarize the major conclusions of your testimony.

19 A. TECO's coal procurement and coal transportation procurement practices were and are  
20 imprudent. TECO's efforts to suppress and avoid rail vs. barge competition, both for coal  
21 supply and for coal transportation, are costing TECO's customers millions of dollars per year.  
22 As explained in my testimony, TECO's projected costs for coal transportation under its  
23 contract with TECO Transport are unreasonable and imprudent. Even generously evaluating

1           TECO's behavior in light of what the Commission now knows that TECO knew in the **fall of**  
2           **2002**, the Commission must recognize that TECO's behavior has been imprudent and that  
3           TECO's actions are costing and will cost TECO's ratepayers far more than they should.  
4           Accordingly, the Commission should disallow, at a minimum, for cost recovery purposes, the  
5           difference between the cost of rail-origin-and-delivered coal and barge-origin-and-delivered  
6           coal on 1.5 MM tons for 2004, which I estimate to be approximately \$11.7 Million, and the  
7           corresponding amount on 2.0 MM tons for 2005, which I estimate to be approximately \$22.5  
8           Million, and even more, probably on the order of 3.0 MM tons, for 2006 through 2008.

9           Additionally, the Commission should take all actions within its power to ensure that  
10          TECO's customers are not further abused and harmed by these imprudent practices by  
11          TECO. If the Commission has the power, it should mandate fair, open, transparent,  
12          Commission-supervised procurement processes for all future TECO coal procurement and  
13          coal transportation procurement activities. If not, it should seek the power from the Florida  
14          Legislature; other state utility commissions have and exercise this power.

15          Additionally, TECO's actions have been so imprudent in this case that I believe that  
16          the Commission should consider imposing whatever additional penalties it has available  
17          under its governing authority on TECO's shareholders and management.

18  
19       **Q. Does this conclude your direct testimony?**

20       **A. Yes, it does.**

21

**EXPERIENCE OF  
DR. ROBERT L. SANSOM**

**Education**

- ★ Robert Sansom graduated (B.S.) from U.S. Air Force Academy in 1964.
- ★ In 1965, Dr. Sansom received a Masters degree in economics from Georgetown University.
- ★ In 1968/69, he received a B. Phil and D. Phil in economics from Oxford University.

**Honors**

- ★ Dr. Sansom was a Fulbright Scholar, Rhodes Scholar, and White House Fellow.

**Experience**

- ★ From 1968 to 1969, Dr. Sansom was a White House Fellow assigned to Assistant to the President for National Security Affairs.
- ★ From 1969 to 1971, he was on Dr. Henry Kissinger's National Security Council staff.
- ★ From 1971 to 1972, he was Deputy Assistant Administrator for Planning and Evaluation for the Environmental Protection Agency.
- ★ From 1972 to 1974, he was Assistant Administrator for Air and Water Programs at the Environmental Protection Agency.
- ★ From 1974 to 1980, Dr. Sansom was President of Energy and Environmental Analysis, Inc.
- ★ From 1981 to the Present, Dr. Sansom has been President of Energy Ventures Analysis, Inc.

Sansom has been active in energy and environmental consulting since 1974 and throughout the period has focused on the coal, natural gas and electric utilities industries and on related environmental issues.

- ★ coal, gas, and oil production, markets and prices,
- ★ coal and gas contracts and procurement,
- ★ coal suitability and the environmental effects of coal combustion,
- ★ electric power markets and projects, and
- ★ coal transportation.

**Electric Power Markets**

Dr. Sansom analyzes and testifies on electric power markets and prices. In several cases (PEPCO, PP&L, NIPSCO, Entergy, Sierra Pacific, AEPCO, Bonneville Power Administration, for example), Sansom has examined power pricing and power transactions. EVA's analysis employs public and proprietary data and models at the NERC or NERC subregion level and develops forward pricing curves. Sansom presented testimony before FERC in 1996 on Order 888A: promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services.

**Coal Markets and Coal Property Transactions**

Coal market studies by EVA's coal group cover all the major coal producing and using regions of the United States. Clients include the major U.S. coal companies, major U.S. utilities, and groups such as EPRI and the National Mining Association.

EVA maintains large data bases on all U.S. mines and utility coal users. For clients it utilizes its proprietary coal production cost models and tracks and forecasts demand and prices for U.S. steam and metallurgical coals.

The U.S. coal market is regionalized with the reach of a particular coal mine limited by its transportation costs to various markets, its competition as well as the quality of its coal and its production cost. EVA addresses these issues in its market studies on a regional and international basis with analyses sold to clients on a job-specific basis or through its COALCAST subscription coal service.

In coal property and coal company valuations for buyers and sellers, EVA employs its market, cost of mining, and coal contract expertise using discounted cash flow and comparable transactions methods.

#### **Coal and Transportation Contracts**

Major U.S. coal transactions occur pursuant to coal and rail transportation contracts between buyers and sellers. Sansom has reviewed over 300 long-term coal contracts and many coal transportation contracts. He has advised utilities and coal companies on coal and rail transportation contract terms and conditions. His expertise is frequently sought and utilized in contract disputes.

#### **Electric Utility Audits**

EVA is frequently hired by Public Utility Commissions to conduct prudence audits of utility coal procurement practices and wholesale power transactions. Sansom has participated in such utility audits in Ohio, Delaware, Florida, Utah, Wyoming, California, Oregon, and Washington, and before FERC.

#### **Natural Gas And Oil Markets**

Dr. Sansom has been engaged in analysis of natural gas markets. He has examined U.S. and Canadian natural gas production. Other work has addressed world oil markets and OPEC's role therein. Dr. Sansom has examined the role of natural gas combined cycle technology as a source of base load generating capacity.

#### **Coal Suitability and the Environmental Effects of Coal Use**

Sansom's original involvement in the coal industry was in response to the adverse environmental effects of coal use. He has been active in studies on sulfur dioxide, nitrous oxides, particulates, air toxins, and CO<sub>2</sub> emissions. EVA has estimated the cost of specific environmental control technologies at plant sites and the cost of national environmental programs for clients such as the U.S. Environmental Protection Agency, EPRI, and the Department of Energy. It has advised electric utilities on how to comply with acid rain legislation. Coal suitability involves how a particular coal burns in a particular boiler and how that coal's emissions are treated before discharge to the atmosphere. EVA's studies have included examination of the performance of most U.S. coals used in a broad range of U.S. boilers.

### International Coal and Utility Experience

Sansom has been active in international coal since the mid-1970's, analyzing overseas coal markets and inter-fuel competition. In 1989 Sansom testified in an international arbitration involving a large Canadian coal producer and the Japanese steel industry. In 1998 Sansom testified in an international arbitration involving an independent power project in the Phillipines.

### Western Coal, Utility, and Transportation Experience

EVA has broad experience in the western U.S. Sansom's western coal and coal transportation expertise is the basis for his testimony on the Powder River Basin, the fastest growing producing region in the United States.

### Expert Testimony

Sansom's expert testimony most often addresses coal contracts, coal markets, coal transportation and the prudence of coal procurements. Since 1995, Sansom has testified in the following court and arbitration cases:

	<u>On Behalf of</u>	<u>Other Party</u>	<u>Year</u>	<u>Court or Regulatory Body</u>
C	Louisville G&E	Various Plaintiffs	1995	State Court Kentucky
C	Island Creek Corp <u>et al</u> Defendants	Holland <u>et al</u> Plaintiffs	1995	U.S. District Court District of Columbia
A	Westmoreland Res, Inc.	Wisconsin P&L/Dairyland	1996	Chicago, IL
A	CMS Energy	Luzon Power	1998	Hong Kong, China
A	Otter Tail Power/Minnkota Pwr Coop/NW Pub Svc	Knife River Coal Company	1998	Chicago, IL
C	Cedar Bay Generating	Florida Power & Light	1999	Jacksonville, FL
A	Seminole Electric Coop, Inc.	Mt. Vernon Transfer Terminal	2000	Washington, D.C.
A	CMS Energy	Adams Affiliates, Inc. & Cottonwood Partnership	2001	Chicago, IL

A Arbitration  
C Court

Sansom has testified in the following Surface Transportation Board cases:

<u>STB Docket No.</u>	<u>On Behalf of</u>	<u>Other Party</u>	<u>Date</u>
41191	West Texas Utilities	Burlington Northern Railroad	8/10/95
32760	Union Pacific (Control/Merger)	Southern Pacific Rail	Rebuttal 4/29/96
41242	Assn of American Railroads (Competitive Forces on Rail Rates in 1980's and 1990's)		10/15/96
41989	CSX Transportation	Potomac Electric Power	5/05/97 Rebuttal 8/11/97
41295	Conrail, CSX and Norfolk Southern	Pennsylvania Power & Light	6/11/97
33388	CSX and Norfolk Southern (Acquisition)	Conrail	6/1997
42012	Union Pacific	Sierra Pacific Power/Idaho Power	5/26/98
Ex Parte 627	Assn of American Railroads (Market Dominance Determinations: Product and Geographic Competition)		Comment 5/29/98 Reply 6/29/98

EXHIBIT NO. \_\_\_\_\_ (RLS-1)  
ROBERT L. SANSOM - CSXT  
DOCKET NO. 031033-EI  
PAGE 3 OF 6

**Publications**

"Looking Past California: The Emerging Shape of the Generation Sector", Public Utilities Fortnightly, June 1, 2001, pp. 44-50.

"Gas Turbine Mania: The Merchant Power Plant Stakeout", Public Utilities Fortnightly, June 15, 2002.

EXHIBIT NO. \_\_\_\_\_ (RLS-1)  
ROBERT L. SANSOM - CSXT  
DOCKET NO. 031033-EI  
PAGE 4 OF 6

## Expert Testimony

Sansom's expert testimony most often addresses coal contracts, coal markets, coal transportation and the prudence of coal procurements. Sansom has testified in the following cases:

<u>Client (State)</u>	<u>Other Party (State)</u>	<u>Year</u>	<u>Court or Regulatory Body</u>
Black Butte (WY)	Commonwealth Edison (IL)	1985	WY Federal Court
Carbon County (WY)	NIPSCO (IN)	1985	IN Federal Court
Gulf & Western (VA)	Coal Resources (VA)	1981- 1986	OH Federal Court
Big Horn (WY) and Black Butte (WY)	Commonwealth Edison (IL)	1986	WY Federal Court
Amax (WY)	Dairyland (WI)	1986	WI Federal Court
Wisconsin PSC (WI)	Mapco (KY)	1987	Arbitration
U.S. Fuels (UT)	Nevada Power (NV)	1987	UT Federal Court
Decker (MT)	LCRA (TX)	1988	TX Federal Court
Texas Utilities (TX)	Santa Fe Pacific (IL)	1989	NM Federal Court
Quintette (CAN)	Japanese Steel Industry	1989	Arbitration
Coastal Coal (UT)	Sierra Pacific Power (NV)	1990	Arbitration
Minnesota Power (MN)	Peabody Coal Company	1990	Arbitration
NE Oklahoma Electric (OK)	GRDA	1991	OK State Court
AEPCO	Berkley	1992	Arbitration
Northwestern Res/HL&P	International Screening	1992	TX State Court
Commonwealth Edison	Peabody Coal Company	1993	Arbitration
First Boston/Touche Ross Jacobs Group	KSC Recovery	1993	CO Federal Court
Central Power & Light	Colowyo	1994	Arbitration
Lauhoff Grain	Babcock & Wilcox	1994	Arbitration
Northwestern Res/HL&P	TCA Bldg Inc.	1994	TX Federal Court
Evergreen Coal	UMWA Employee Benefits Plans	1994	U.S. District Court
Virginia Power	Birchwood/SEI	1994	Arbitration
Louisville G&E	Various Plaintiffs	1995	State Court Kentucky
Island Creek Corp <u>et al</u> Defendants	Holland <u>et al</u> Plaintiffs	1995	U.S. District Court District of Columbia
Westmoreland Res, Inc.	Wisconsin P&L/Dairyland	1996	Arbitration
CMS Energy	Luzon Power	1998	Arbitration
Otter Tail Power/Minnkota Pwr Coop/NW Pub Svc	Knife River Coal Company	1998	Arbitration
Cedar Bay Generating	Florida Power & Light	1999	FL State Court
Seminole Electric Coop, Inc.	Mt. Vernon Transfer Terminal	2000	Arbitration
CMS Energy	Adams Affiliates, Inc. & Cottonwood Partnership	2001	Arbitration
Government of Turkey	PSE&G Global	2004	Arbitration
Peabody Coal Co/Indianapolis P&L	John Wasson	2004	IN Federal Court

Sansom's testimony on the prudence of coal procurements as well as coal markets and transportation were the focus of his testimony in the following proceedings:

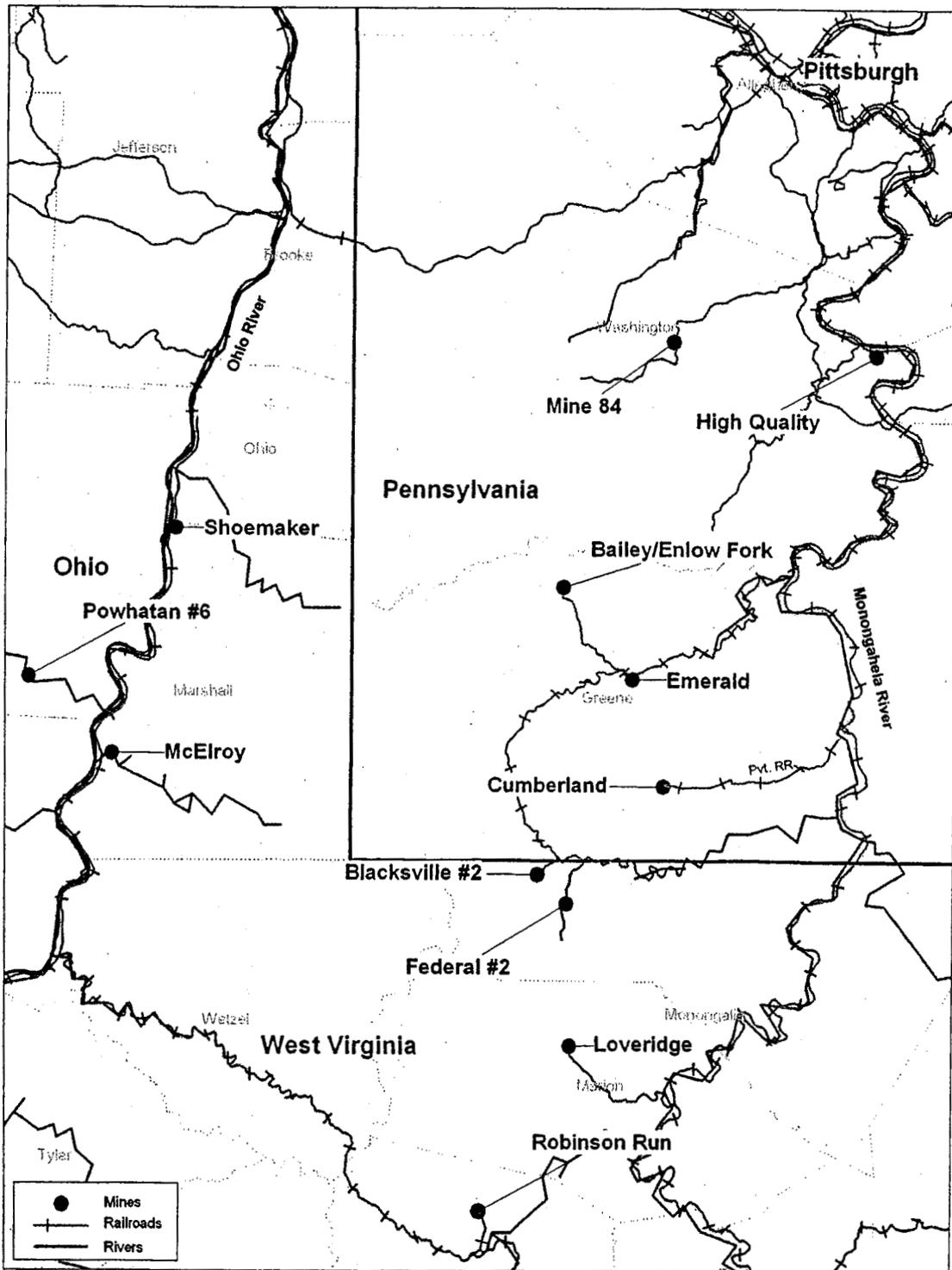
<u>Client</u>	<u>Other Party</u>	<u>Year</u>	<u>Regulatory Body</u>
DE Public Advocate	Delmarva P&L	1981	DE PSC
KY Municipals	Kentucky Utilities	1985-1986	FERC
Wisconsin PSC	Wisconsin PSC Staff	1986	WI PUC
Oxy Chemical	Florida Power	1988	FL PSC
Georgia Power	Georgia PSU Staff	1988	GA PSC

In addition, in 1998 Sansom testified in a Florida power plant Siting Board proceeding involving the burning of Orimulsion at Florida Power & Light's Manatee plant. He presented testimony before FERC in 1996 on Order 888A: Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services. He also testified in the following Surface Transportation Board cases:

STB			
<u>Docket No.</u>	<u>On Behalf of</u>	<u>Other Party</u>	<u>Date</u>
41191	West Texas Utilities	Burlington Northern Railroad	8/10/95
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41989	CSX Transportation	Potomac Electric Power	5/05/97
41295	Conrail, CSX and Norfolk Southern	Pennsylvania Power & Light	Rebuttal 8/11/97 6/11/97
33388	CSX and Norfolk Southern (Acquisition)	Conrail	6/1997
42012	Union Pacific	Sierra Pacific Power/Idaho Power	5/26/98
Ex Parte 627	Assn of American Railroads (Market Dominance Determinations: Product and Geographic Competition)		Comment 5/29/98 Reply 6/29/98
42069	Norfolk Southern	Duke Energy Corporation	2003
42072	Norfolk Southern	Carolina Power & Light	2003

EXHIBIT NO. \_\_\_\_\_ (RLS-1)  
 ROBERT L. SANSOM - CSXT  
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**RLS Exhibit 2  
PITTSBURGH 8 MINES NORTHERN APPALACHIAN COAL**



RLS Exhibit 3  
CSX OCTOBER 2002 BID

October 23, 2002

JoAnn T. Wehle  
Director - Fuels Department  
Tampa Electric Company  
P. O. Box 111  
Tampa, FL 33601-0111

Dear JoAnn,

This letter proposal is in response to our discussions regarding direct CSXT rail deliveries to Tampa Electric's - Polk Plant in Brewster, Florida and Big Bend in Tampa, Florida. CSXT has developed this proposal consistent with your request: 1) for CSXT to provide capital required for infrastructure improvements to serve the plants directly 2) the option of interim truck deliveries 3) realistic volume requirements that represent less than half of total consumption and 4) term consistent with TECO's requirements. Based on this understanding, this proposal will serve as the framework for further discussions to achieve a definitive agreement between TECO and CSXT.

As outlined in our package, we are excited about the possibility of working with TECO on this opportunity and have taken a great deal of time to understand TECO's logistical and competitive issues. This proposal shows our willingness to be aggressive to regain a segment of TECO's business and to ensure that TECO has competitive alternatives in the future.

I will personally follow-up with you in the next several days to see if you have any additional questions and would like to set-up a meeting for the first week in November to discuss this proposal in further detail.

Best regards,



Michael C. Bullock  
Director Utility South

Cc: V. L. Saunier  
M. C. Duff  
M. P. Sullivan  
G. W. Davis  
R. F. White

EXHIBIT NO. \_\_\_\_\_ (RLS-3)  
ROBERT L. SANSOM - CSXT  
DOCKET NO. 031033-EI  
PAGE 1 OF 9

## Appendix I

**Commodity:** Coal, STCC 11-212 90 and  
Synfuel, STCC 29-911-91 for consumption at destination

**Origin:** CSXT Direct Served Coal Origins

**Destination:** TECO – Big Bend Plant, Tampa, FL  
TECO – Polk Plant, Brewster, FL

**Route:** CSXT Direct

**Rates:** See Attachment I

**Rate Adjustment:** Quarterly 100% RCAF (U), beginning April 1, 2003

**Payment:** ACH Credit, within 15 days of freight bill date

**Term:** 6 Years; January 1, 2003 – December 31, 2008

**Equipment:** Carrier (Owned or Leased); Open Top Hoppers

**Annual Volume:**

	<u>Requirement</u>
Minimum:	1,800,000 Net tons
Maximum:	2,400,000 Net tons

**Liquidated Damages:** \$6.00 per Net ton for each ton below the minimum annual volume requirement.

**Capital Improvements:** CSXT will provide funding for capital enhancements that will  
(Attachment II) enable TECO to receive unit trains of coal at the Big Bend and Polk Plants subject to CSXT Board approval.

Big Bend- improvements to include upgrade to the existing railcar dumping system, construction of a new truck dump for limestone, additional trackage, additional conveyance system and a radial stacker.

Polk- improvements to include a rail loop track, dumping system, additional covered storage and required conveyance systems. CSXT has the right to withdraw our proposal if funding and or the specified timeframe exceeds the agreed upon terms. The total capital required to complete the enhancements to both plants is estimated to not exceed \$10.0 MM.

**Contingency Period:** During the construction at Big Bend and Polk Plants, CSXT will utilize Conrad-Yelvington's Distribution Facility for the Rail-to-Truck transfer for final delivery to both plants. See Attachment I.

**Other Provisions:** This proposal does not consider the costs associated with the actual unloading of the rail equipment while at destination.

**Timeline:** Within 90 days after acceptance of this proposal, TECO and CSXT will mutually agree on a construction period that will not exceed one-year in duration.

**Confidentially:** The provisions of this agreement are considered confidential and may not be disclosed to a third party.

**Offer Expiration:** November 30, 2002

Attachment I

Rate District	Big Bend Plant	Polk Plant
MGA	\$ 16.72	\$ 17.72
West Kentucky	\$ 15.62	\$ 16.62
Big Sandy	\$ 15.47	\$ 16.47
*see note below for synfuel shipments		

During the Contingency Period CSXT will deliver coal by truck from the Conrad-Yelvington Distribution Facility for \$2.30 per net ton in addition to rates above.

RATES ARE SHOWN ON A PER NET TON BASIS

\*RATES FOR SYNFUEL SHIPMENTS ARE \$.25/ NET TON ABOVE THE RATES SHOWN ABOVE

RATES SHOWN ABOVE ARE NINETY (90) CAR SYSTEM CAR RATES

RATES ARE SUBJECT TO THE ADJUSTMENT PROVISIONS CONTAINED PER THE OFFER SHEET

RATES APPLY TO SHIPMENTS LOADED AT CARRIER APPROVED FOUR (4) HOUR LOADING FACILITIES

WHEN SHIPMENTS ARE LOADED AT TWENTY-FOUR (24) HOUR FACILITIES THE FOLLOWING ADDITIONAL AMOUNTS SHALL APPLY:

<u>INCREASE</u>	<u>RATE DISTRICT</u>
\$0.40 PER TON	WEST KENTUCKY
\$0.25 PER TON	BIG SANDY

## Attachment 2 -A

### TECO Polk Station

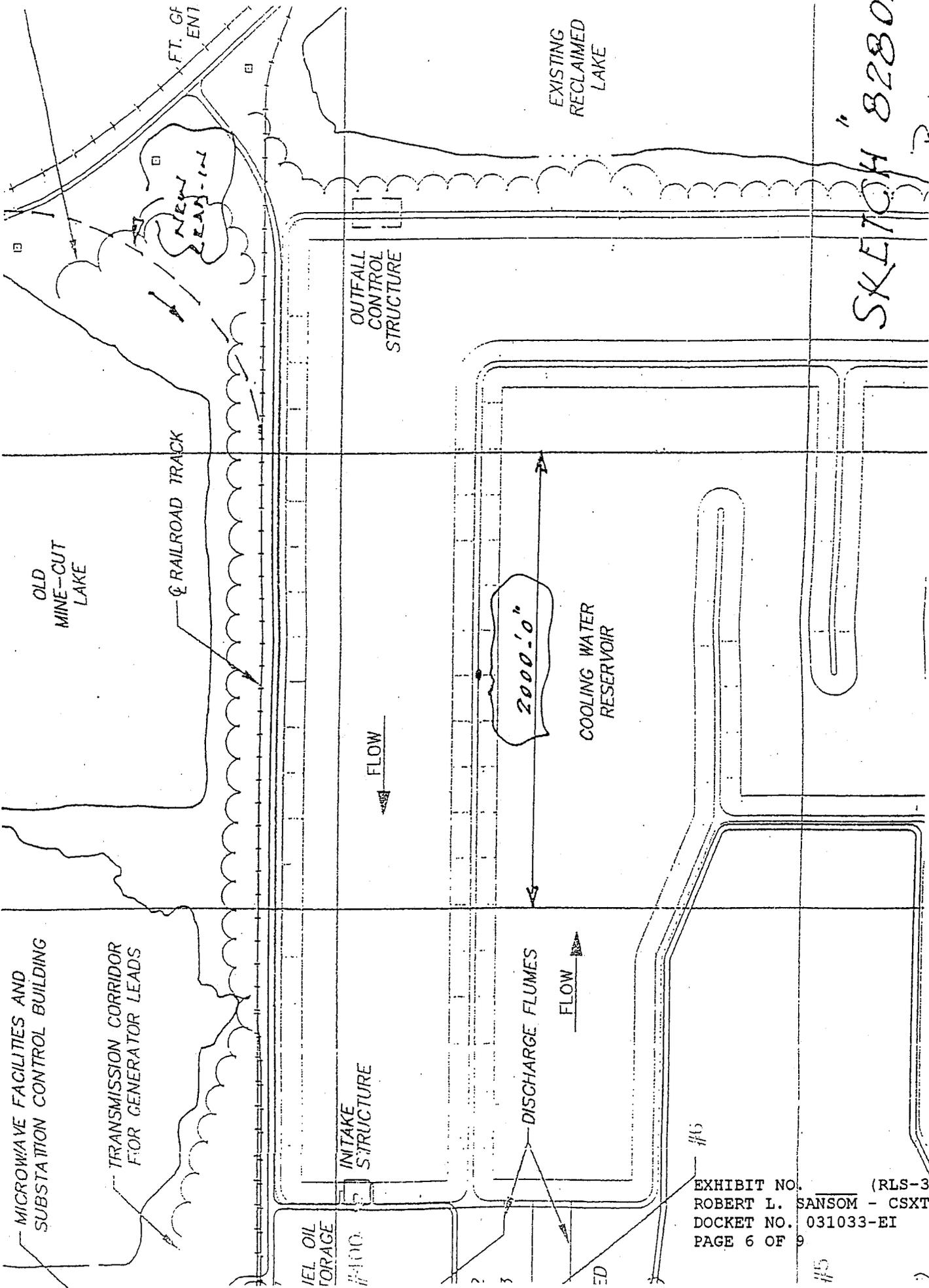
Subject to Board approval CSXT will provide the capital to design and construct a system capable of unloading unit trains of coal and conveying the product to new and/or existing covered storage.

This new system may include:

- New lead track into plant so that southbound trains can pull into the station
- Rail loop track
- Railcar dumping system
- Conveyor system to move product to covered storage (rated capacity 2,500 TPH)
- New covered storage unit with a capacity of 15,000 tons
- Conveyor from new covered storage to existing silos

When the system is completed CSXT crews will bring unit trains of coal to the station. These crews will progress the cars through the railcar unloader until the entire train has been unloaded and the coal has been conveyed to the covered storage area. This process should take 5 hours or less. The empty train will be pulled from the plant and dispatched back to the coalfields to be reloaded.

1005



SKETCH " 82802  
P. 14

EXHIBIT NO. (RLS-3)  
 ROBERT L. SANSOM - CSXT  
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D

#5

#5

INLET OIL STORAGE  
 #100

INTAKE STRUCTURE

DISCHARGE FLUMES

FLOW

FLOW

2000'0"

COOLING WATER RESERVOIR

OUTFALL CONTROL STRUCTURE

EXISTING RECLAIMED LAKE

OLD MINE-CUT LAKE

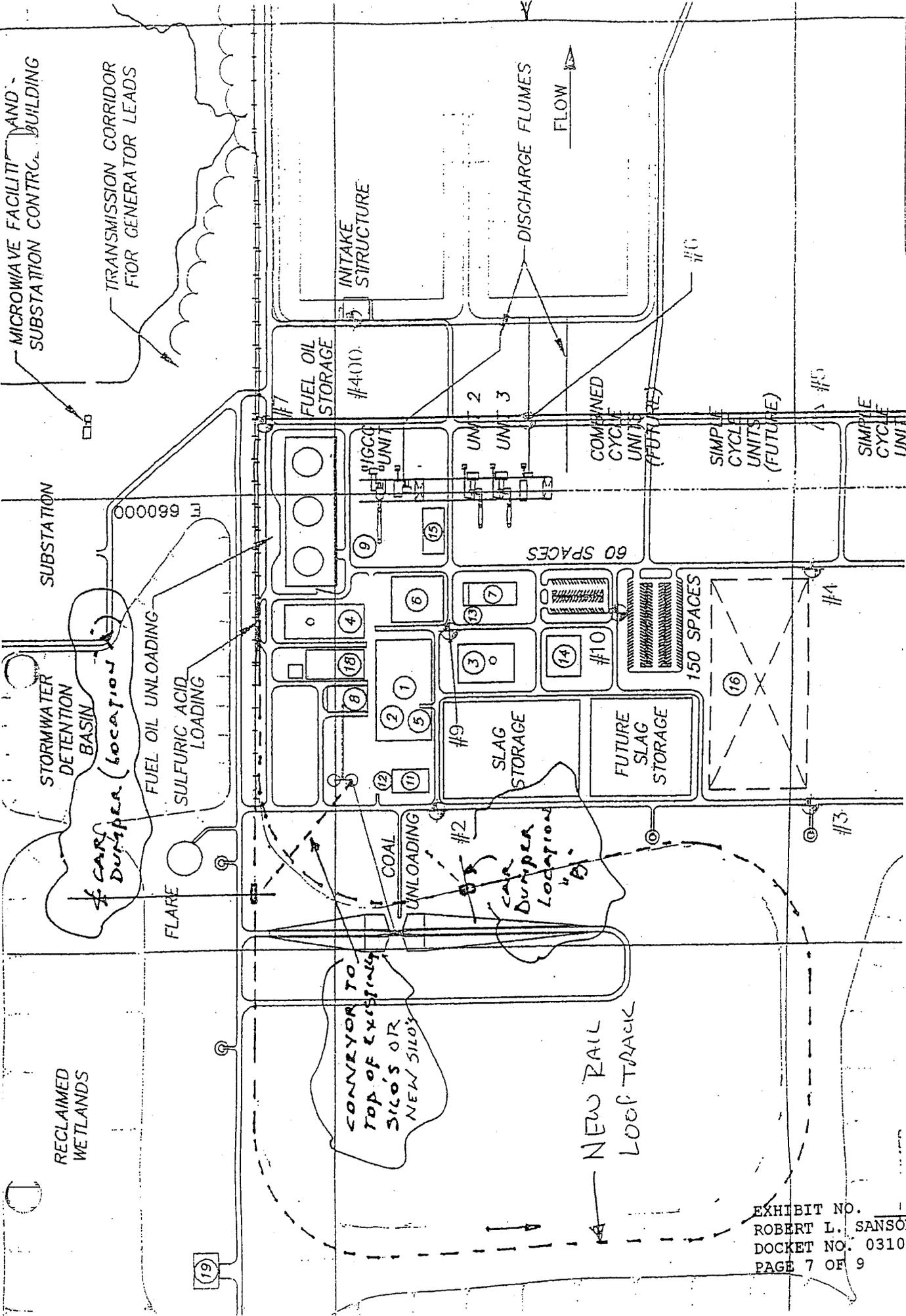
RAILROAD TRACK

FT. OF ENT

NEW MINE-CUT LAKE

MICROWAVE FACILITIES AND SUBSTATION CONTROL BUILDING

TRANSMISSION CORRIDOR FOR GENERATOR LEADS



Folk

## Attachment 2 - B

### TECO Big Bend

Subject to Board approval CSXT will provide the capital to design and construct a system capable of unloading unit trains of coal and conveying the product to the existing ground storage area.

This new system may include:

- New lead track into plant
- Two tracks below unloading pit capable of chambering 45 cars each
- Modification of existing rail car unloading pit
- New truck dump with conveyor to limestone storage area
- Conveyor to ground storage area
- 200 foot Radial stacker

When the system is completed CSXT crews will deliver unit trains of coal to the Big Bend Station. The railcars will be placed in the two 45 car tracks below the unloading pit. Plant employees will then be responsible to unload the railcars. After all of the railcars are empty the Plant will notify the local CSXT office. CSXT will then arrange for the empty equipment to be pulled from the Plant and dispatched back to the coalfields.

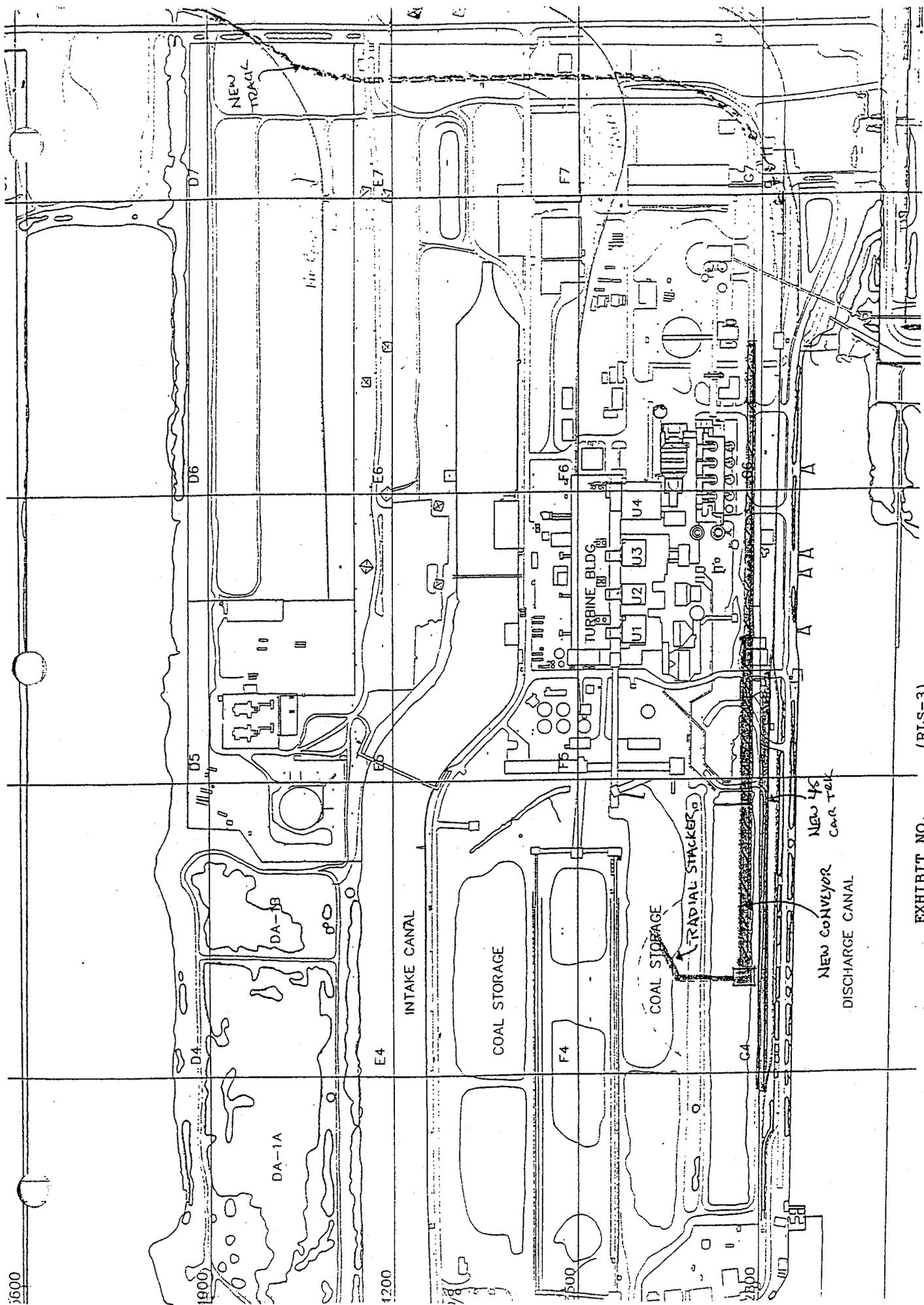


EXHIBIT NO. (RLS-3)  
 ROBERT L. SANSOM - CSXT  
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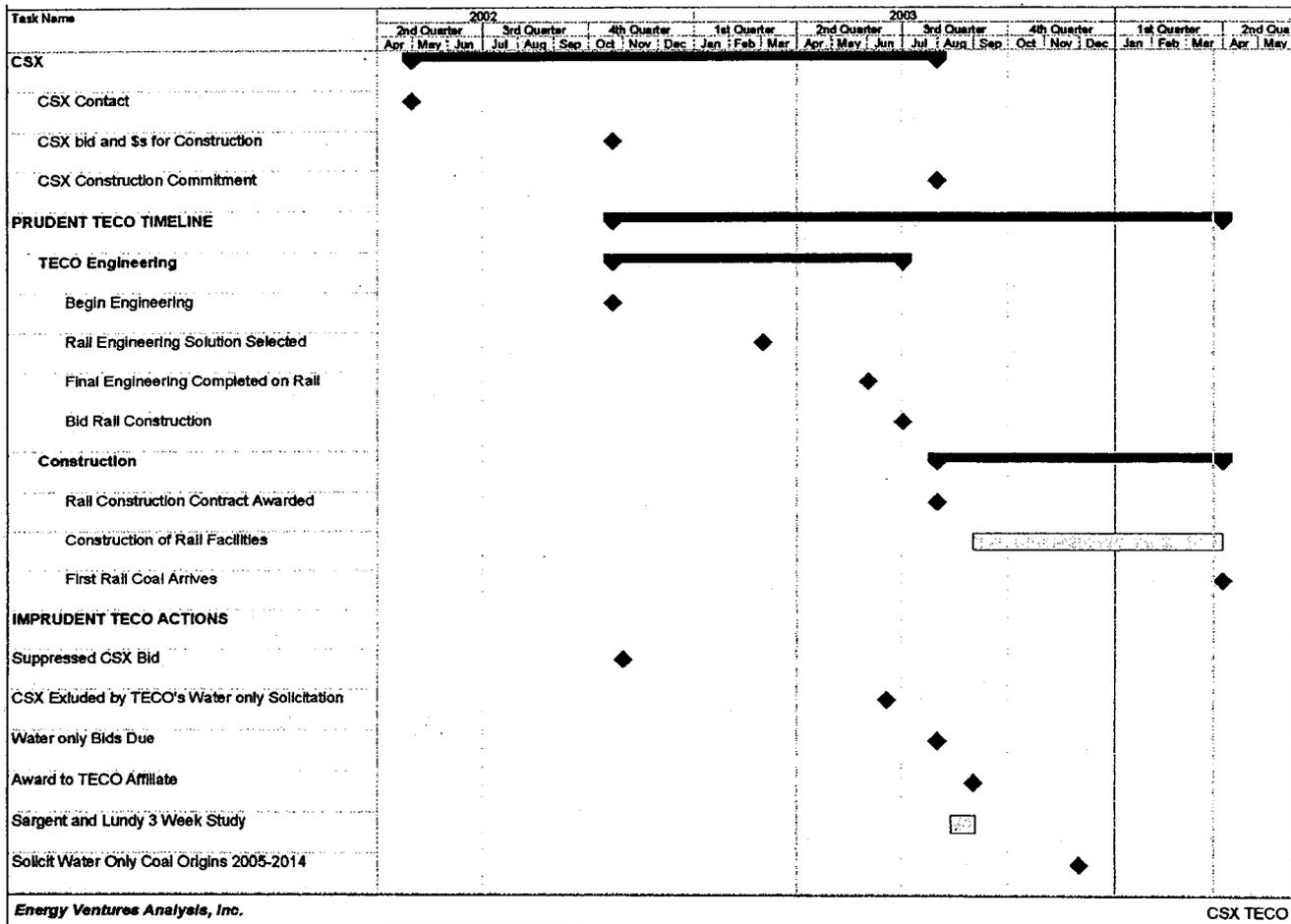
BIG BEND

**RLS Exhibit 4  
SCREENING ANALYSIS ON WATER vs. RAIL COAL OCTOBER 2002  
(\$/Ton)**

	Webster County Coal (WKY)		Pitt 8 Coal	
	By TECO Barge	By Rail	By TECO Barge	By Rail
Rail to River Dock	2.00 <sup>3</sup>	-	1.00 <sup>3</sup>	
Transload	1.25 <sup>3</sup>	-	0.75 <sup>3</sup>	
River Barge	7.97 <sup>2</sup>	-	10.25 <sup>1</sup>	
ECT	10.69 <sup>2</sup>	-	10.69 <sup>2</sup>	
Ocean Barge		-		
Subtotal	21.91	15.62 <sup>1</sup>	22.69	16.72 <sup>1</sup>
Adj for Water Route Losses	Not Calculated	NA	Not Calculated	NA
<b>Total</b>	<b>21.91</b>	<b>15.62</b>	<b>22.69</b>	<b>16.72</b>
Savings By Rail	6.29		5.97	
1. See CSX's October 23, 2002 proposal to TECO. 2. FPSC Form 423 January 2003. 3. Estimated.				

EXHIBIT NO. \_\_\_\_\_ (RLS-4)  
 ROBERT L. SANSOM - CSXT  
 DOCKET NO. 031033-EI  
 PAGE 1 OF 1

## RLS Exhibit 5 PROJECT TIMELINE'S FOR TECO ACTIONS VS. TECO'S INACTION



Energy Ventures Analysis, Inc.

CSX TECO

**Exhibit \_\_\_\_ (RLS-6a)**  
**EVALUATION OF RAIL vs. WATER DELIVERY ECONOMICS**  
**FOR WESTERN KENTUCKY COAL IN 2004**  
**(\$/Ton)**

	<b>Water</b>	<b>Rail</b>	<b>Rail</b>
<b>Company</b>	<b>Dekoven</b>	<b>Dekoven</b>	<b>Alliance</b>
<b>Mine</b>	<b>Union County</b>	<b>Union County</b>	<b>Webster County<sup>9</sup></b>
FOB Mine	27.42 <sup>2</sup>	27.42 <sup>2</sup>	27.42 <sup>2</sup>
FOB Barge	30.42 <sup>1</sup>		
FOB Rail		31.99 <sup>3</sup>	27.42 <sup>2</sup>
River Barge	6.75 <sup>4</sup>	-	-
ECT	2.45 <sup>4</sup>	-	-
Ocean Barge	7.98 <sup>4</sup>	-	-
Fuel Charge	-	0.58 <sup>5</sup>	0.58 <sup>5</sup>
Extra Water Route Costs	2.00 <sup>7</sup>		
Rail Rate	-	16.73 <sup>5</sup>	16.73 <sup>5</sup>
Total Transportation	22.18	21.88 <sup>6</sup>	17.31
Rail Overall Savings		0.30 to 4.87 <sup>8</sup>	

1. FPSC Form 423.
2. Estimated by subtracting truck and barge loading cost from Dekoven FOB barge prices.
3. Estimated as 13 mile haul at 90 cents plus 0.9 cents/ton mile or \$2.07/ton plus \$1.00 to WKRR and a \$1.50/ton rail tipple fee at a Wheatcroft area tipple.
4. New TECO affiliate contract of October 2003 effective 1/1/04 as disclosed by TECO for 2004 in response to OPC's Information Request No. 25.
5. CSX's 7/03 bid at <1 MMT level.
6. \$31.99 minus \$27.42 or \$4.57 plus \$16.73 plus \$0.58.
7. See Exhibit \_\_\_\_ (RLS-7).
8. Another \$1.00/ton on tons above 1 MMTPY would be added as a rail savings due to CSX's volume discount.
9. This calculation assumes the Webster County price is the same as the estimated Dekoven price FOB mine and shows the rail transportation advantage of an efficient West Kentucky rail origin. Actually if TECO had solicited coal as efficiently as TVA did in 2003 for its Widows Creek 7&8 plants, or as LG&E did for the Mill Creek and Cane Run plants, the FOB rail Alliance coal price (Dotiki or Warrior) would have been \$22/ton FOB mine for 11,600 Btu/# coal, not the \$27.42 per ton used in this example.

?

**Exhibit \_\_\_\_ (RLS-6b)**  
**EVALUATION OF RAIL vs. WATER DELIVERY ECONOMICS**  
**FOR PITT 8 COAL IN 2004**  
**(\$/Ton)**

	Powhatan 6		New High Sulfur Pitt 8 First Half 2003 Solicitation CSX Origin
	Water Route	NS/CSX Rail Route	
FOB Mine	23.50 <sup>2</sup>		
FOB Dock	24.75 <sup>1</sup>		
FOB Rail NS		23.50 <sup>2</sup>	
NS to CSX		3.00 <sup>3</sup>	
FOB CSX		26.50 <sup>3</sup>	23.50 <sup>4</sup>
Barge to ECT	10.65 <sup>8</sup>		
ECT	2.45 <sup>8</sup>		
Ocean Barge	7.98 <sup>8</sup>		
Extra Water Route Costs	2.00		
Fuel Surcharge		0.58	0.58 <sup>7</sup>
Volume Incentive		Note 5	
Rail Rate		16.72 <sup>7</sup>	16.72 <sup>7</sup>
Total Transportation Cost & Losses	24.33		
Total Transportation Cost Without Losses	22.33	20.30	17.30
Rail Savings		2.03 to 4.03 <sup>6</sup>	5.03 to 7.03 <sup>6</sup>

1. October 2003 FPSC Form 423.
2. Powhatan 6 price includes a short NS rail haul and a dock expense which I am estimating at \$1.25/ton.
3. Estimated.
4. Assuming TECO had solicited for rail origin coal with bids due by July 30, 2003 or earlier. LG&E on 1/1/03 obtained a price of \$23.50/ton for 12,200 Btu/lb high sulfur Pitt 8 coal for both 2003 and 2004. Coal Daily reported FOB mine prices for high sulfur Pitt 8 coal in January 2003 were \$21.25/ton at the mine. By May 2003 Coal Daily had increased its price to \$22.50 per ton and by late June 2003 to \$23.50 per ton.
5. Not applied but would be \$2.00/ton on tons above 1 MMTPY for the 2.0-5.5 MMTPY CSX proposal.
6. Higher savings reflect avoidance of water route losses. See Exhibit \_\_\_\_ (RLS-7).
7. CSX bid.
8. 2004 TECO affiliate contract for water transportation rates as disclosed by TECO's response to OPC Information Request No. 25.

**Exhibit \_\_\_\_ (RLS-6c)**  
**EVALUATION OF RAIL vs. WATER DELIVERY IN 2004**  
**FOR INDIANA COAL (Sommerville Mine)**  
**(\$/Ton)**

	<b>Water Route</b>	<b>Rail Route</b>
FOB Mine	21.25 <sup>1</sup>	
FOB Barge	25.25 <sup>1</sup>	
Rail to Barge & Load on Ohio	4.00	
FOB Rail		21.25 <sup>1</sup>
Barge to ECT	7.21 <sup>2</sup>	
ECT	2.45 <sup>2</sup>	
Ocean Transportation	7.98 <sup>2</sup>	
Extra Water Route Costs	2.00 <sup>3</sup>	
Rail Rail		16.06 <sup>4</sup>
Rail Fuel Surcharge		0.58 <sup>4</sup>
Rail Volume Incentive		Note 5
<b>Total Transportation</b>	<b>23.64</b>	<b>16.64</b>
Rail Savings w/Est Water Route Losses		7.00
Rail Savings w/o Est Water Route Losses		5.00
<ol style="list-style-type: none"> <li>1. Based on LG&amp;E procurement results as reported in <u>Coal Trader</u> dated December 12, 2003, p. 4.</li> <li>2. TECO response to IR No. 25 of OPC re 2004 rates under new affiliate contract.</li> <li>3. See Exhibit ____ (RLS-7) to this testimony.</li> <li>4. CSX 7/03 bid.</li> <li>5. CSX volume incentive of \$2.00/ton on tons above 1 MMT is not applied but would add to rail route savings.</li> </ol>		

**RLS Exhibit 7**  
**WATER LOSSES AND HIGHER INVENTORY COSTS**

(1) Extra cost of water route movement caused by BTU loss due to oxidation, moisture and extra handling, is 2%. Assuming the delivered cost is \$45/ton (a non-confidential placeholder), the loss is (.02) (45) = 90 cents/ton. On 5 MMTpy this is \$4.5 million/year.

(2) Extra working capital caused by longer transit time via water route:

River Barge Transit	6 days
Unload at Electro Coal	2 days
On Ground at ECT	30 days
Cross Gulf & Unload	<u>6 days</u>
Subtotal	44 days
vs. Rail	7 days
 Net Additional Time	 37 days

(5 MMTpy) (37 days / 365) (\$45/ton) (10% per year Charge) = \$2,280,822 in capital cost per year.

(3) Added cost of extra inventory at Electro Coal, and Big Bend vs. a typical all rail delivery utility inventory of 45 to 60 days. If the rough burn rate is 450,000 tpm for Big Bend and Polk, an extra 60 days of inventory minus the 30 days already included in (2) above results in the following additional inventory carrying charge of:

(450,000 tons) (\$45/ton) (10%) = \$2,025,000 per year.

(4) Added costs of evaporating moisture at the boiler @ \$0.25/ton times 5 MMTpy = \$1,250,000.

(5) Total extra cost of water route per year.

	<u>Dollars</u>
Losses	4,500,000
Working Capital	2,280,822
Additional Inventory	2,025,000
Evaporation losses in boiler	<u>1,250,000</u>
<b>Total</b>	<b>10,055,822</b>

Divided by 5 MMTpy = \$2.011/ton.

MOSITURE LOSSES ON  
COAL MOVEMENT BY WATER  
THROUGH NEW ORLEANS

Ashland Coal

Conclusion 300 Btu / 2 to 2 1/2% / \$1.20 ton

Discussion 5/4/88  
Rick J. Fiesher  
Manager, Technical Services  
(304) 526-3631

Said on water route to N.O. can count on moisture loss of 2 to 2 1/2% or 300 Btu in uncovered river barge movements. They have carefully collected data on export movements to Italy. He estimates this cost at \$1.20/ton losing 300 Btu. During dry spell can be as low as 1% but that is minimum; you can count on 2 to 2 1/2%.

Two years ago went to covered river barges @ 15 cents/ton cost now only 0.2% to 0.3% loss.

Experience no significant losses from bottom dump hoppers thru leakage.

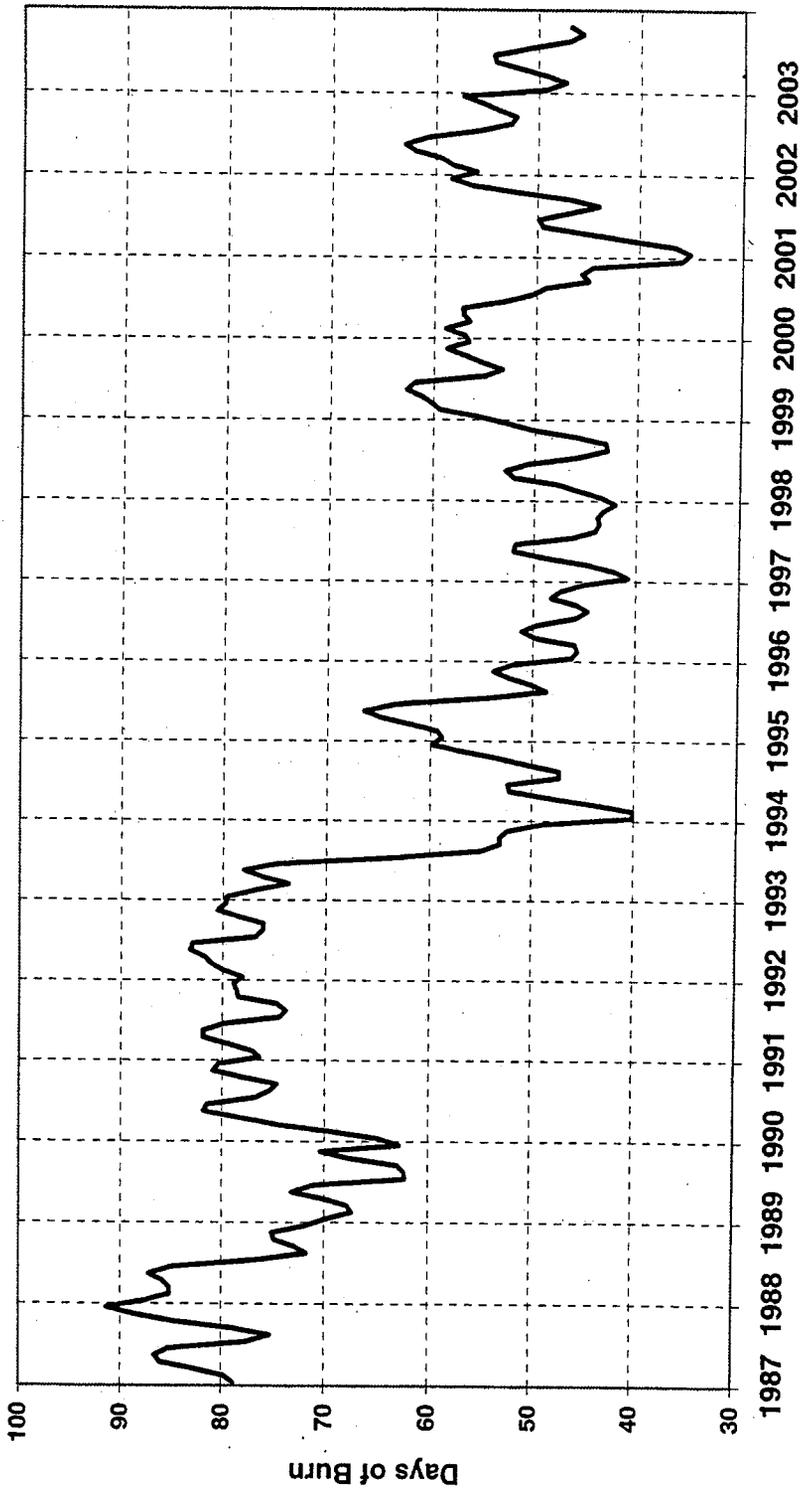
Southern Company Services (5/3/88)

Note used penalty of \$1.00/ton per % moisture in Daniel solicit.

Talked to Mr. Henshaw

1. Southern Company studied wind losses on Bit. Coal from Utah/Colorado to Daniel, MS. Sprayed every other car and tested carefully. Found no losses from wind even if untreated. Coal vibrates down quickly.
2. Moisture losses via water to Watson. Have been studied this carefully. Result 1% or 150 Btu/lb is the best # to use and this is for all barge to Watson Illinois Basin Coal w/o transloading at New Orleans, which would add to moisture addition.
3. Also you must evaporate the moisture in boiler - affects Heat Rate. Their estimate 25 cent/ton penalty for added moisture.
4. Are there losses from bottom dump cars? ANS No. There is no leakage. Had a few cars with bad doors, used wrong metal on Aluminum cars. These were replaced.
5. No oxidation of bit coals in movement.
6. Time in transit big factor in moisture addition.
7. Would you know if losses from bottom dump? ANS Yes. I would know. "It is not a factor."

**RLS Exhibit 8**  
**EASTERN U.S. UTILITY STOCKPILES DAYS OF BURN - NOVEMBER 2003**



Note: 1999 Data includes NUGS  
 Source: FERC and EIA

Exhibit \_\_\_\_ (RLS-9a)  
SUMMARY OF TECO OVERPAYMENTS IN 2004

- (1) Pitt 8 Coal 700,000 tons (see Exhibit 9b)

TECO Water Route Cost	\$34,380,274
By CSX Rail Cost	<u>\$27,076,644</u>
Total Pitt 8 Savings	\$ 7,303,630
Per Ton Savings	\$ 10.43

- (2) Illinois Basin 549,291 tons (see Exhibit 9c)

TECO Water Route Cost	\$24,899,900
By CSX Rail Cost	<u>\$20,972,116</u>
Total Pitt 8 Savings	\$ 3,927,784
Per Ton Savings	\$ 7.15

- (3) CSX Rail Discount Savings

\$2.00/ton times (1,249,091 – 1,00,000 tons) or 2 x 249,291 or \$498,582

- (4) Total Savings \$11,729,996  
Total \$/Ton Savings \$ 9.39

Exhibit \_\_\_\_ (RLS-9b)  
**TECO OVERPAYMENTS IN 2004 - PITT 8 COAL FROM NORTHERN APPALACHIA**

	<b>Projected TECO Water Route Coal Delivered Costs Pitt 8 Powhatan</b>	<b>Substitute Rail Robinson Run Pitt 8 Coal via CSX</b>	
FOB Mine	\$24.75 <sup>1</sup>	\$23.50 <sup>3</sup>	<b>Total Savings</b> (1) 700,000 tons of Powhatan #6 @ 1.93 \$/MMBtu (700,000 tons) (25.37 MMBtu/ton) = 17,761,800 MMBtu x \$1.93/MMBtu = \$34,380,274 minus rail coal at \$1.58/MMBtu x 17,761,800 MMBtu (677,983 tons) or \$28,063,644.
Barge To ECT	\$10.65 <sup>1</sup>	\$17.22 Rail <sup>4</sup>	
ECT to Big Bend	\$11.45 <sup>1</sup>	\$0.58 Fuel <sup>4</sup>	
<b>Subtotal</b>	<b>\$46.86</b>	<b>\$41.30</b>	
Water Route Losses	\$2.00 <sup>5</sup>	N/A	
<b>Total</b>	<b>\$48.86</b>	<b>\$41.30</b>	(2) Sulfur savings in avoided FGD reagent cost estimated at \$1.00/% sulfur/ton \$1.00 (4.55 - 3.14) \$1.00 (1.41) or \$1.41/ton times 700,000 tons = \$987,000.
Btu/lb	12,687 <sup>1</sup>	13,099 <sup>2</sup>	
\$/MMBtu	1.93	1.58	
Sulfur %	4.55	3.14 <sup>2</sup>	
			<b>Total Savings \$7,303,630 or \$10.93/ton</b>
1. TECO January 2004 FPSC Form 423. 2. Seminole's Robinson Run Btu/lb and sulfur quality in 2003 (Jan-Nov) from FERC Form 423. 3. See Robert L. Sansom's testimony, p. 11. 4. CSX July 2003 bid. 5. See Exhibit 7 to this testimony.			

**Exhibit \_\_\_ (RLS-9c)  
TECO OVERPAYMENTS ON ILLINOIS BASIN COAL, 2004**

Source	Tons	FOB Dock	Barge to ECT	Water Route Losses <sup>11</sup>	ECT to Big Bend	% Sulfur	Btu/lb	\$/Ton	\$/MMBtu	Total \$
Galatia	153,000	29.56 <sup>1</sup>	5.98 <sup>1</sup>	2.00	11.457 <sup>1</sup>	1.21 <sup>1</sup>	12,129 <sup>1</sup>	49.00	2.02	7,497,000
Indiana	120,000	24.40 <sup>2</sup>	7.21 <sup>2</sup>	2.00	11.457 <sup>1</sup>	3.55 <sup>2</sup>	11,350 <sup>2</sup>	45.07	1.99	5,408,400
W. Kentucky	270,000	25.25 <sup>3</sup>	7.04 <sup>2</sup>	2.00	11.457 <sup>1</sup>	3.49 <sup>4</sup>	11,650 <sup>4</sup>	45.75	1.96	12,352,500
<b>Subtotal</b>	<b>543,000</b>									<b>25,257,900</b>
Minus Sulfur Savings On Galatia vs. West Kentucky \$1/% (3.55 - 1.21) or \$2.34/ton x 153,000 tons										(358,000)
										<b>24,899,900</b>

**REPLACEMENT COAL BY RAIL**

Source	Tons	FOB Dock	Rail Rate To Big Bend	% Sulfur	Btu/lb	\$/Ton	\$/MMBtu	Total \$	
W. Kentucky	429,291 <sup>5</sup>	22.00 <sup>6</sup>	15.62	3.49 <sup>4</sup>	11,650	38.20	1.64	16,398,916	
			0.58 <sup>8</sup>						
			16.20						
Indiana	120,000	20.80 <sup>9</sup>	16.73 <sup>10</sup>	3.55	11,350	38.11	1.64	4,573,200	
			0.58 <sup>8</sup>						
			17.31						
	<b>549,291</b>							<b>20,972,116</b>	
								Rail Savings	3,927,784
								\$/Rail Ton Savings	\$7.15

1. FPSC Form 423.
2. 12/03 bid evaluation by TECO (Sommerville).
3. See Exhibit 6a, footnote 9 and Exhibit 4.
4. Warrior quality to TVA Jan-Nov 2003 in FERC Form 423.
5. To replace Btu's in water route W. Kentucky and Galatia coal.
6. \$25.25/ton minus \$2.00/rail ton and \$1.25/ton dock.
7. CSX July 2003 bid.
8. Fuel surcharge.
9. \$24.40 minus \$3.60 per TECO 12/03 evaluation (Bates #34).
10. Loaded @ Wheatland.
11. See Exhibit 7 to this testimony.

EXHIBIT NO. \_\_\_\_\_ (RLS-9c)  
 ROBERT L. SANSON - CSXT  
 DOCKET NO. 031033-EI  
 PAGE 1 OF 1