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BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 031033-EI

IN RE: TAMPA ELECTRIC COMPANY'S
2004-2008 WATERBORNE TRANSPORTATION
CONTRACT WITH TECO TRANSPORT
AND ASSOCIATED BENCHMARK

TESTIMONY AND EXHIBIT
OF
DR. ANATOLY HOCHSTEIN

UNREDACTED VERSION

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

DR. ANATOLY HOCHSTEIN

Q. Please state your name and business address.

A. My name is Dr. Anatoly Hochstein. My business address is 1601 North Kent St., Suite 912, Arlington, Va. 22209.

Q. By whom are you employed and in what capacity?

A. I am employed by National Ports and Waterways Institute, University of New Orleans as the Institute Director and Professor.

Q. Please describe your educational background and business experience.

A. I earned a Masters Degree with honors in hydraulic engineering in 1955 from St. Petersburg University and a Ph.D. in economics in 1963, from Moscow University, both in Russia. Since my graduation I have devoted my professional life to the water transportation industry and have participated in the development of practically all major waterway and port systems around the world.

Since coming to the U.S. in 1973 I joined consulting company CACI, which at that time was engaged by the U.S. Army Corps of Engineers to develop an Inland

Navigation System Analysis (INSA) program. For this program I designed a so-called Flotilla model to calculate the costs of barge operations. This model, although significantly modified by now, still is being utilized by U.S. Coast Guard as a principle analytical tool for inland waterway planning. In 1977 I joined Louis Berger Group, one of the largest international consulting companies with headquarters in East Orange, N.J. and three years later became Vice President in charge of water transportation programs. Among the many projects I directed in that period are a large-scale program, "U.S. National Waterway Study," prepared for the U.S. Congress, participation as an expert witness in litigation regarding the construction of the Tennessee-Tombigbee Waterway, Structural and Non-Structural methods to increase navigation capacity and a long list of ports and waterways projects in South America and Asia.

In 1982 I was recruited to become Director and Distinguished Chair Professor of the newly established Ports and Waterways Institute at Louisiana State University. Concurrently, I retain my position as a Vice President with Louis Berger Group. During my tenure as the first and current director of the Institute it has developed into the largest University based research center of maritime and intermodal research. In recognition of the Institute's role it was designated by the Federal Maritime Administration as the National Institute. Among the programs completed under my direction just within the last year are: a Market assessment for expansion of the Panama Canal; a Master Plan for the Yangshan (Shanghai) port, the World's largest port construction project ($15 billion); a Louisiana

Statewide Intermodal Plan and; an Evaluation of Shipping costs and Pricing in the Gulf of Mexico. The latter two research programs specifically included the assessment of markets for coal and other bulk commodities, existing terminal capacities and detailed information on shipping costs in the Gulf of Mexico. Shipping costs were analyzed based on actual records for a variety of origin/destinations and vessel types in the Gulf and to/from the Lower Mississippi and ports of Houston and Tampa.

I have authored or contributed to 5 books and published more than 60 articles in professional and scientific journals dealing with a broad range of water transportation issues. My latest book titled "Domestic Water Transportation-Comparative Review" is currently in print.

Q. On whose behalf are you offering this testimony?

A. On behalf of Catherine L. Claypool, Helen Fisher, William Page, Edward A. Wilson, Sue E. Strohm, Mary Jane Williamson, Betty J. Wise, Carlos Lissabet and Lesly A. Diaz , a group of residential customers of Tampa Electric represented in this case by attorney Michael B. Twomey.

Q. What is the purpose of your testimony?

A. I was retained to address the issues the Commission deferred from last year's fuel adjustment proceeding to this separate docket. The issues, 17E, 17F and 17G, are listed in Order No. PSC-03-1359-PCO-EI, which established this docket. They ask the following questions, which I address in my testimony:

Issue 17E: Is Tampa Electric's June 27, 2003, request for proposals sufficient to determine the current market price for coal transportation?

Issue 17F: Are Tampa Electric's projected coal transportation costs for 2004 through 2008 under the winning bid to its June 27, 2003, request for proposal for coal transportation reasonable for cost recovery purposes?

Issue 17G: Should the Commission modify or eliminate the waterborne coal transportation benchmark that was established for Tampa Electric by Order No. PSC-93-0443-FOF-EI, issued March 23, 1993, in Docket No. 930001-EI?

The purpose of my testimony is to address each of the questions presented above and report the conclusions I have reached.

Q. Do you have a brief summary of the conclusions you reached on the questions before the Commission here?

A. Yes, I do. First, I believe the Commission should reject the current benchmark for gauging the reasonableness of Tampa Electric's waterborne transportation costs. As I explain more fully below, using the rate per ton mile for coal transported to Florida municipal electric boilers from Appalachian fields is not a reliable means for gauging the reasonableness of the rates Tampa Electric currently pays for shipping coal by water from various Midwestern coal fields. Coal from the Midwest fields can only rationally be transported to Tampa Electric's Big Bend station by water. Thus, the reasonableness of the waterborne rates paid should properly be measured by comparing them to other, comparable waterborne rates, not by applying the rail rate per ton mile to the rail distance from the Midwestern fields to Big Bend. An analogous situation would be to question the reasonableness of Publix supermarket's ground transportation rates for shipping dry dog food by comparison to overnight air express rates. The ground rates, whether reasonable or not in their own right, would always compare favorably to the air rates. A reasonable test of Publix's rates would be by comparison to "market-based" ground rates for the same distances, if such a market existed. Consequently, the Commission should eliminate the current benchmark.

When there is a "market" for a given good or service, the most accurate way to assess the market price is by seeking competitive bids. To be successful, however, the bidding process must be fair, open and reasonable. I have concluded that Tampa Electric's 2003 RFP contained so many industry non-standard and otherwise restrictive conditions as to (1) unnecessarily limit the number of bid responses, with the result (2) that the contract was necessarily directed to Tampa Electric's affiliated company, which, in any case, had an undisclosed right of first refusal. As a consequence of this greatly flawed RFP, neither Tampa Electric nor this Commission has the benefit of true market rates for the river and terminal components by which to measure the reasonableness of Tampa Electric's current charges. In short, the June 27, 2003 RFP is not sufficient to determine the current market price for Tampa Electric's coal transportation.

I have concluded that there are clearly markets for the river transportation leg and the port terminal services. Whether there is a market for the Gulf or coastal transportation leg is questionable, but that question rests, in part, on how much foreign coal will be taken and whether the transportation is limited only from the Mississippi Delta area to Big Bend or whether vessels from foreign ports are considered. Rather than struggle with analyzing the reasonableness of the rates paid by Tampa Electric by comparison to those resulting from outdated benchmarks or complicated and confusing models, I recommend that the Commission direct Tampa Electric to reissue its RFP for coal transportation services in a form that is fair and reasonable, consistent with industry standards and likely to obtain the largest number of competent responses. The RFP must also clearly state potential bid respondents will win the contract if they have the lowest qualified bid. A new RFP should result in actual and useable market prices for at least the inland waterway and port terminal components and, perhaps, the coastal leg as well.

As to the last question, I am confident that the rates Tampa Electric proposes for fuel adjustment cost recovery as a result of awarding the coal transportation contract to TECO Transport are not reasonable. I reach this conclusion after reviewing and rejecting the supportive findings of Tampa Electric witness Dibner, while countering his rates with lower rates provided by my modeling methodology. Importantly, I note that the confidential Tampa Electric shipping rates compare very unfavorably with the rates TECO Transport is earning in the open market, particularly from its contract with JEA. In the event the Commission does not require a new RFP, or does not get responsive market rates from a new RFP, I conclude that cost-plus pricing, especially for the coastal leg, may be the best way for the Commission to ensure that Tampa Electric's customers pay fair and reasonable coal transportation rates.

Lastly, I observe that some of the high cost shipments of import coals from Davant to Big Bend could be eliminated entirely if Tampa Electric took cost-effective steps to receive the imported coal directly at Big Bend without taking it to Davant first.

<u>Research Methodology</u>

Q. What actions did you take in analyzing the issues before the Commission in this docket and in the preparation of your testimony?

A. A primary source of information I relied on was the Commission's orders in this docket and in earlier fuel adjustment dockets relating to the pricing of coal and coal transportation services. Additionally, I used the extensive discovery responses provided by the parties as well as other documents Mr. Twomey obtained through a public records request. My colleague at the National Ports and Waterways Institute and collaborator in investigating these issues, Dr. Asaf Ashar, made field visits to Big Bend and the adjacent Kinder-Morgan dry bulk terminal in the Port of Tampa. Dr. Ashar and I also conducted numerous telephone and face-to-face interviews with knowledgeable individuals from the following agencies: U.S. Department of Energy Information Administration, U.S. Army Corps of Engineers, U.S. Department of Transportation Maritime Administration, U.S. Agency for International Development; Port Authorities including Port of Tampa and Port of Mobile; and carriers, brokers and one other electric utility, including JEA, formerly the Jacksonville Electric Authority, Moran Towing, Ingram Barges, ACBL, APEX Marine, Marcon International, and the Mississippi Valley Trade and Transportation Council. We also reviewed several industry publications, including Simpson Spenser Young Energy Venture Analysis, TransCoal, US Coal Review, Western Coal Advisory, Coal Transportation Report, local media (St. Petersburg Times) and other documents issued by various companies involved in coal transportation.

Background on Tampa Electric's RFP process

Q. How do you understand that Tampa Electric went about conducting its 2003 RFP and was the result sufficient for this Commission to use the RFP to determine the current market price for coal transportation?

A. In July 2003, Tampa Electric prepared a Request for Proposals ("RFP") for waterborne deliveries of coal from Midwest suppliers to its Big Bend Station for the period January 1, 2004 through December 31, 2008. The delivery process, or the transportation chain, included 3 legs or components: inland waterways leg, port terminal services and coastal shipping leg. Bids were to be submitted for either the entire 3-leg process, or for each leg separately. Tampa Electric hired a consultant, Dibner Maritime Associates ("DMA"), to assist in the solicitation process. The RFP was sent to 24 vendors and was also published in several industry newspapers. TECO Transport, which like Tampa Electric, is a subsidiary of TECO Energy, Inc., did not participate in the bidding process and did not submit a proposal. However, TECO Transport's expiring contract with Tampa Electric included a contractual provision giving it the right of first refusal, or the ability to "meet or beat" the lowest bid resulting from a solicitation, which would be defined as the "market price." If no qualified bids were obtained, TECO Transport would have to "meet or beat" a "calculated" market price. The calculation of the market price was to be accomplished by DMA through its proprietary pricing model.

The "meet or beat" option would be available to TECO Transport even in cases where an outside vendor was granted a contract for one or more transport legs. There would be a periodic, presumably annual, review of the contractor's performance, after which TECO Transport could still meet or beat this contractor's rates and take over the provision of transport services for the remainder of the contract. The "meet or beat" provision in the Tampa Electric/TECO Transport contract was not disclosed in the RFP or otherwise revealed, and, at least in one case that I am aware of, was affirmatively denied to potential RFP respondents, at least to the extent that respondents were told that the selection was "wide-open."

The RFP was also reported to be distributed to railroads, although a CSX consultant has denied this. In any event, the rail proposals were not considered because Tampa Electric reasoned that the present Midwest coal mines supplying it were located too far from railheads, coupled with the fact that the Big Bend station has no rail handling facilities. Nevertheless, a theoretical rail cost was calculated based on historical rates and adjusted to the present situation using a special formula. The rail transport option and its calculated rate do not directly affect the water transport options and I do not address the rail issue in my testimony, except to conclude that the current rail-based benchmark should be eliminated.

Tampa Electric received only 2 proposals for waterborne transportation services in response to its RFP: (1) from ACBL for the inland river leg; and (2) from IMT for the port transfer services. No proposals for either the coastal leg or the entire integrated, 3-leg transportation route were received.

Q. How did Tampa Electric evaluate the proposals it received?

A. ACBL's proposal was rejected, based on a claim that the bidder, operating under the protection of Chapter 11, was unreliable and therefore should be disqualified. Since ACBL's proposal was considered disqualified and there were no other inland waterway bids, Tampa Electric used DMA's calculation for determining the market rate for the inland leg. IMT's proposal for port transfer was considered qualified and the rates in its proposal were determined to be the market price for that service. Since no proposal for the coastal leg was obtained, the market rate for this leg was also based on a DMA calculation.
Altogether, the final market rate assumed by Tampa Electric for the entire 3-leg transportation route was based on a single, actual proposal for the port terminal component, and 2 theoretical cost calculations by DMA for the inland and coastal legs. TECO Transport was allowed to "meet or beat" both the single, actual RFP bid and the calculated rates. Consequently, TECO Transport was awarded the contract for the entire 3-leg transportation route for the entire 5-year period from 2004 through 2008.

Q. Did Tampa Electric claim that the resulting transportation rates were "fair and reasonable" for cost recovery from its customers?

A. Yes, it did. Tampa Electric stated that the resulting overall waterborne transportation rates, which are treated as confidential in this case, to be paid to TECO Transport were lower than the rates arrived at by use of the rail-based benchmark first approved by this Commission in 1988 and then reaffirmed in 1993, which Tampa Electric said necessarily made them appropriate for recovery now.

<u>Rail Benchmark A Flawed Method To Gauge Reasonableness Of Waterborne Rates</u>

Q. Please explain why you believe the current benchmark using rail rates for coal shipped to Florida municipal electric utilities from the Appalachians is an ineffective and inefficient means for gauging the reasonableness of the waterborne rates in question here.

A. I understand the threshold issue in this case is whether the Commission should modify or eliminate the waterborne coal transportation benchmark that was established for Tampa Electric by Order No. PSC-93-0443-FOF-EI, issued March 23, 1993, in Docket No. 930001-EI. This benchmark was reaffirmed in 1993, but was originally adopted by the Commission in Order No. 20298, issued in Docket No. 870001-EI-A on November 10, 1988. According to these orders, Tampa Electric's coal transportation benchmark price is the average of the two lowest comparable publicly available rail rates for coal to other utilities in Florida. That average rail rate, stated in cents/ton-mile is then multiplied by the average rail miles from all coal sources to Tampa Electric's power plants to yield a price per ton of transportation, or the "benchmark price."

Q. Did the original 1988 order actually endorse the benchmark price described above?

A. No. While the Commission accepted the parties' stipulation agreeing to the benchmark price, the order actually had a discussion of the relative merits of cost-of-service versus market pricing that I believe is relevant to the current situation.

After recognizing that cost-of-service pricing required specialized knowledge, was complex, expensive and time consuming, the Commission made the following conclusions:

> Considering the many advantages offered by a market pricing system, we, as a policy matter, shall require its adoption for all affiliated fuel transactions for which comparable market prices may be found or constructed.
>
> In concluding, we note the following caveats: (1) from the record in this case, we are convinced that market prices can be established for the affiliated coals; (2) market prices for the transportation-related services should be established if possible, but if not, methodologies for reasonably <u>allocating</u> costs should be suggested; and (3) cost-of-service methodologies should be avoided, if possible.

As can be seen, the Commission concluded market prices for the transportation-related services should be established, if possible, but absent the use of market prices, cost allocation methodologies should be used if it was reasonable to do so. Furthermore, cost-of-service methodologies were to be avoided, if possible, but were not prohibited. These conclusions, however, were effectively superseded by the Commission's acceptance of a settlement agreement adopting the rail "benchmark price." However, if the benchmark is rejected by the Commission in this proceeding, I see the following hierarchy resulting from the 1988 investigation: (1) use of actual market prices, if they exist; (2) prices based upon the allocation of costs, but only if it is reasonable to do so; and (3) cost-of-service pricing if the first two methods aren't available.

Q. What do you see as the chief flaw in the rail benchmark price methodology?

A. Consistent with the Commission's conclusions in the 1988 case, I believe market prices for the transportation-related services should have been determined, when possible, rather than merely applying rail transportation rates from Appalachian coal fields to Florida municipal electric utilities as a proxy for waterborne transportation from Midwestern coal fields to Tampa Electric's Big Bend plant. The municipal rail rates are for the transportation of Appalachian coal that could only reasonably be transported by rail and those rates may be considered high because there is no water alternative. On the other hand, water transportation of bulk cargo, when available, is almost always less expensive than rail, so transportation of Midwestern coal, that is easily accessible by the Ohio and Mississippi River systems, by rail is not economically sound. The current benchmark price "tests" the reasonableness of the necessarily lower cost waterborne transportation by assuming the only alternative, or competition, to Tampa Electric's affiliated waterborne system is the transportation of the Midwestern coal by rail to Big Bend. I believe the preferable measure of the reasonableness of Tampa Electric's waterborne rates would be to determine actual market prices for comparable waterborne transportation services as suggested by the 1988 order, if, in fact, actual markets exist for each transportation leg or service component.

Q. How do you propose that market prices for the waterborne route could be determined?

A. Typically, as is the case with virtually all goods and services, "market prices" should be determined by a competitive bidding process. Tampa Electric did engage in a 2003 RFP process, apparently at the insistence of the Commission staff, but the RFP was so technically flawed by the inclusion of non-standard requirements that the results should not be relied upon for protecting Tampa Electric's customers from unreasonable and excessive coal transportation charges.

Q. What criticisms do you have of Tampa Electric's 2003 RFP process?

A. I have quite a few, which I will discuss below. First, however, most of my objections to the RFP result from the inclusion of mandatory requirements of the RFP being "non-standard" in the industry, which, in turn, dictate higher bid rates than are warranted.

The term "standard" as I use it here relates to requirements that are commonly used in industry freight contracts, agreements and/or bids to describe relationships between cargo owners, ship owners (carriers) and ports. Hence, "non-standard" is defined here as outside the standard industry practices, or simply uncommon.

Q. Did you find the Range of Volume required in the 2003 RFP a standard and reasonable requirement?

A. No, the range was much wider than common in long-term freight contracts. Contracting in markets for transportation services is typically conducted either on the basis of spot or long-term contracts. Prudent buyers attempt to cover their basic needs through long-term contracts, while covering their uncertain needs with spot contracts. The practice of splitting procurement contracts between long-term and spot purchases is already used by Tampa Electric for coal imports. The imported coal is to provide for the balance of demand, and therefore is only purchased on the spot market.

Tampa Electric's RFP range between the high and the low volumes was for the inland segment 54%, the terminal segment 54% and the ocean segment 38%. With the consent decree, the range was even wider: "TE may deliver 2 million tons to Big Bend in 2008 – or it may be 5.5 million tons" according to witness Dibner at page 6 of his testimony. In light of the option to purchase coal and transportation services on the spot market and the availability of several sources, normally a buyer would not attempt to cover such a wide range of volumes by a single long-term contract. Instead, a more prudent buyer would first split the volume into 2 segments, the certain and the uncertain. Then, the buyer would use a long-term contract for the first segment and spot contracts for the second.

The RFP's requirement for such a wide range of demand necessarily results in unnecessary costs for providers because it would force them to keep large reserves of capacity idle. Therefore, these providers would require higher freight and handling rates in their proposals.

Q. Do you believe the Demurrage Requirement in the RFP was an industry standard requirement and reasonable?

A. No. Ports usually do not compensate ship owners for demurrage caused by their inability to accommodate ships arriving outside of the agreed upon schedule. The common requirement of ports in freight contracts is a minimum guaranteed productivity or handling rate measured in tons/day. Normally shippers, and sometimes ship agents, contact the port to coordinate a ship's arrival time and working schedule. If a vessel arrives outside of the agreed time window and handling is delayed, shippers pay demurrage to ship owners. Ports cannot cover the risk of a ship waiting due to late or early arrival, due to weather problems, congestion in other ports, etc. The ports can be liable only in the case they do not deliver minimum productivity, which is a rare occurrence.

Again, I believe this non-standard requirement would result in higher costs to the port and necessarily higher rates quoted to Tampa Electric in responses to the RFP.

Q. Was the Storage Volume Requirement in the 2003 RFP a standard requirement and reasonable?

A. No, this requirement was highly unusual and may have adversely impacted potential bidders.

The RFP required that 1.4 million tons be maintained in storage for a total annual volume to be transported ranging from 3,250,000 to 5,000,000 tons. Assuming an average annual volume of 4,125,000 tons, the storage requirement is equal to about 124 days of consumption. Such a storage reserve is much larger than the 30 to 45 days common in the industry, and may result in higher storage costs for the port.

This peculiar RFP requirement seems to be intended to severely restrict the capabilities of potential bidders who serve other port terminal customers. Only one terminal in New Orleans, IMT, or International Marine Terminal, was capable of providing storage space close to that specified by the RFP. IMT's stated storage capacity is 1.35 million tons. In fact, even IMT, which was the only bidder for the port transfer service, was formally not qualified to participate in the bidding process because its declared storage capacity is 1.35 million tons, as compared to the RFP's requirement for 1.4 million tons.

It is interesting to note, however, that using its 1.35 million-ton storage capacity, IMT handles 9 to 10 million tons annually, or more than twice that required by Tampa Electric's RFP. The requirement for 1.4 million tons therefore seems to be both uncommon and unnecessary, and should lead to substantial increases in port costs that would be reflected in RFP responses.

Q. Was the RFP Requirement for Eight, Separate Storage Piles a standard requirement and reasonable?

A. No, in my opinion it was highly unusual. Normally, coal terminals have only 3 to 4 piles.

Coal is usually stored in separate piles according to its main specifications: BTU, sulfur and ash contents, moisture, etc. Through blending, the power station attempts to optimize the effectiveness per BTU subject to the EPA's constraints regarding emission gases. In most cases, blending involves coal from 2 or 3 sources, each stored in a separate pile. For example, one would expect a coalfired power plant similar to Big Bend to blend Western, Eastern and foreign coal, sometimes also with pet coke. Hence, coal terminals would normally need to have 3-5 separate piles, not 8. The requirement for 8 separate piles seems both uncommon and unnecessary; and would necessarily increase the port costs and drive RFP responses higher.

Q. Was the RFP Requirement of Payment Schedule a standard arrangement and reasonable?

A. No. Payment to ports for the handling services of a vessel are commonly paid at the end of the services being provided to the vessel.

The Tampa Electric RFP requires that the payment for the handling services at the Mississippi port will only be made after discharge of the coal in Big Bend. Given the inventory requirement discussed earlier, inventory at the port could reach 124 days, which, in certain cases, could mean the port would have to wait that period to be paid. This unusual requirement results in higher financial costs to the port and a necessarily higher charge to Tampa Electric.

Q. Was the RFP Requirement for Weight Measurement a standard requirement and reasonable?

A. No. Weight measurement in ports is commonly done either at the discharging / loading belt or, sometimes, at the vessel, using a draft survey.

The Tampa Electric RFP requires that the basis for payment would be the weight measured upon discharge in Big Bend. Weight measurement for discharging vessels is usually done at the ship unloader and for loading vessels at the ship loader. Sometimes, when scales are not available, the measurement is based on the vessel's draft. The RFP's unusual requirement could result in greater uncertainty regarding payment for the port, which, in turn, could result in a higher financial cost and a respectively higher charge to Tampa Electric. This, too, would result in higher quoted rates in response to the RFP.

Q. The Tampa Electric RFP included a Cargo Loss Requirement. Do you consider that requirement to be an industry standard and reasonable?

A. No. Ports usually do not bear financial responsibility for cargo loss due to natural events.

Cargo loss is directly related to the size of the inventory in tons and the length of storage time measured in days. That is, the higher the volume of coal stored in the port and the longer the time it is stored, the higher the expected loss. As described above, both the volumes and storage times required in the RFP are unusually high, which could lead to higher cargo losses. Hence, this requirement would increase the uncertainty regarding the financial obligations of the port, which, in turn, should result in a higher financial cost and a respectively higher charge to Tampa Electric.

Q. Do you consider the "No-Cost Expedition of Shipment" in the RFP a standard requirement and reasonable?

A. No. Furthermore, this requirement seems to be unclear and open to a number of interpretations.

The RFP states: "TE will reserve the right to expedite solid fuel shipment at no additional cost. . . ." First, it is not clear how much expedition is required and what the penalties are for non-performance. Second, all U.S. carriers have: (a) limited fleets of dry bulk barges and ships; and (b) most of these fleets have long-term employment contracts. How could Tampa Electric expect these carriers to provide expedited transportation? Likewise, if the carriers had to set aside idle vessels for the event of expedition, it would involve additional costs, again resulting in higher rates being quoted to Tampa Electric.

Q. Were there other problems with the way Tampa Electric structured its RFP so that fewer responses could be anticipated?

A. Yes, there were quite a few more structural problems with the RFP. For example, there were no U.S. Flag vessels with the capability and capacity of responding to the full requirements of the RFP and Tampa Electric either knew this or should have been aware this was the case.

The only 2 carriers, except for TECO Transport, that have fleets of coastal barges are Dixie Fuels and Moran Towing. However, the fleets of both companies consists of a limited number of relatively small coastal barges. Hence, their overall capacity was too small to handle the entire volume as defined in the RFP. For example, if Dixie Fuels decided to devote its entire fleet of 4 x 17,000 dwt vessels, with speeds of 5 to 6 knots to Tampa Electric, it could only deliver somewhere between 20 to 25% of the total volume defined in the RFP. Moran Towing's barges have dimensions similar to Dixie Fuels' and there are a limited number of units. Hence, neither of these carriers was technically capable of responding to the RFP. This fact was clearly recognized by witness Dibner, who stated that no proposals for the coastal leg were obtained due to ". . . the extremely limited number of barges that are of sufficient size to compete with TECOT."

The lack of suitable vessels for the coastal trade is also reflected in the Jacksonville Electric Authority (JEA) testimony (Rob Johns, Sept 2002). JEA uses TECO Transport barges to bring pet coke from coastal refineries because: "They are the only option. Dixie barges are about half as big.... Dixie is not interested...." The lack of availability of vessels for coastal trades comparable with TECO Transport's can be partially explained by the fact that except for Tampa Electric, the potential employment for such large-capacity, dry bulk barges is limited. Reportedly for the last 40 years, Tampa Electric has only employed TECO Transport (TBO, July 17, 2003).

The market situation whereby only TECO Transport could respond fully to the RFP is well recognized in the industry and must be also known to Tampa Electric and its consultant, DMA. If this was the case, one could raise the question what was the point in issuing the RFP for the coastal leg? Tampa Electric obviously knew that there would be no competitive bidders for the integrated system of delivery or for the coastal leg!

Q. Were there other coastal carriers that could match TECO Transport's rates?

A. No. Due to a combination of scale economies and large fixed costs, the cost of maritime transport is inversely related to vessel size, usually measured in Dead Weight Tonnage or dwt. For example, the size of Dixie Fuels barges is about 50% of those of TECO Transport (17,000 vs. 35,000 dwt). Accordingly, their operating costs are expected to be higher than TECO Transport's by about 30%.

Q. Were There Any Unemployed US Flag Vessels available for the coastal leg?

A. Not for any practical purposes. Also, Even if other carriers had the technical capacity to handle the RFP volume or part of it, they would not be able to pursue this contract due to their prior commitments. For example, the entire Dixie Fuel's fleet has been employed for many years by Progress Energy, moving about 2 million tons annually from New Orleans to Crystal River. Progress Energy is a half owner of this fleet and its service is essential to its operations. Therefore, Tampa Electric had no basis to reasonably expect that Dixie Fuels would renege on their obligation to Progress Energy and shift significant capacity to Tampa Electric's contract.

The same employment situation existed with Moran Towing, with most of its fleet under long-term contracts mainly carrying coal and grain. Even some of the single-vessel carriers had long-term obligations, such as Matson's integrated tug/barge ("ITB") which was employed on a long-term basis, bringing sugar from Hawaii to the West Coast.

The fact that the U.S. comparable fleet was mostly under long-term commitments and, therefore, unavailable for the RFP, was also recognized by witness Dibner, who stated: "The fleet of ships and barges in the Jones Act fleet is highly utilized and does not have idle, large barges available to serve such a large market as TE's transportation needs."

This raises, again, the same question of the validity of the entire bidding process for the coastal leg. Put differently, what was point of Tampa Electric's solicitation for the coastal leg from carriers knowing that:

(a) No carrier had sufficient technical capacity to handle the required RFP volume;

(b) Even if they had the technical capacity, due to the smaller size of their barges, no carrier could reasonably offer rates equal to or lower than TECO Transport; and

(c) Even if they had the technical capacity, due to prior commitments, no carrier had significant capacity available.

Q. Do you have an opinion on whether the RFP's Requirement for "All or Nothing" excluded potential bidders?

A. Yes, I believe this provision excluded smaller carriers that could handle a portion of the total volume and at a lower cost.

It has already been argued that no single carrier had a fleet that could handle the entire RFP volume at rates competitive with TECO Transport's. Still, as witness Dibner indicated, there were several U.S. flag carriers with 1 or 2 vessels of sufficient size that could transport a portion of the total volume as defined by the RFP, if they were allowed to bid for partial volumes. For example, GATX/AmShip with a 39,000 dwt barge and International Shipholding with a 36,000 dwt ship could, at least in theory, successfully have bid for about 1 million tons annually, possibly generating substantial savings for Tampa Electric and its customers.

Q. Did barge companies operating on inland waterways have the capacity to meet the "All or nothing" requirement of that leg?

A. Yes. The inland barge market, unlike the coastal market, has several large operators and the market is very competitive. Given a fair and open RFP there should have been numerous qualified responses.

In addition to ACBL, at least 5 other companies had fleets of open hopper barges and towboats equal to or greater than TECO Transport's. The largest of these companies, Ingram, specializes in coal transportation and has a fleet of jumbo barges more than 4 times larger than TECO Transport's.

Q. If a number of barge companies had sufficient capacity to meet the RFP's inland waterway requirements, why do you believe only one of them responded?

A. I believe the structure of the RFP made it clear to the industry that the chances for selection was very low, if at all possible.

In addition to the other RFP problems addressed, none of even the largest inland barge companies could provide for integrated transportation, meaning including the port terminal services and coastal shipping, which the RFP defined as being preferred. In addition, the smaller companies could not meet the "all or nothing" requirement of the RFP. When we questioned representatives of Ingram as to why they did not respond to the RFP, the response was simple, "why bother." Even though TECO Transport's right of first refusal was not stated in the RFP, the relations between Tampa Electric and TECO Transport were well known in the industry and competing companies assumed that they had no chance of winning the bid.

Q. Do you believe additional responses from inland waterways barge companies would have resulted in lower bidding prices?

A. Yes, mainly because these companies would have considered backhaul cargoes in calculating the fronthaul rates submitted to Tampa Electric.

In accordance with statistics provided by the U.S. Army Corps of Engineers Waterborne Statistic Center, backhaul for dry bulk in the Mississippi waterway system is about 30% in tonnage and in number of barges for upstream from Baton Rouge/New Orleans to a variety of destinations on the Mississippi and the Ohio rivers, as compared to the fronthaul of the coal in this case. As far as we know it, the DMA model, used for the calculation of inland barge costs, does not include any backhaul. For non-dedicated tows, and DMA's model assumes that about half of tonnage would be transported in non-dedicated tows, backhaul may provide the ability to lower bidding rates.

Some smaller carriers in the inland system may have advantages in certain segments of the system due to ownership of docks or contracts with other cargoes providing backhaul options. The RFP requirement for bidding on all of the inland points eliminated the possibility of regional specialization.

The proposal by one of the largest barge company, ABCL, was rejected because the company operated under the protection of Chapter 11 and therefore was rated by Tampa Electric as unreliable. It is true that pursuant to the provision of a law, ACBL did restructure and/or terminate certain pre-petition freight contracts. However, after the date of its filing, ABCL has not modified, restructured or terminated any freight contracts entered into after the date of that initial filing. Accordingly, ACBL insists that it offered a bona fide proposal.

The ACBL proposal, although rejected, provides an illustration for potential savings. While the weighted average of ACBL's rates was about 5% lower than the DMA model rate, there were several segments whereby the differences reached 8.7%, as recognized by witness Dibner at page 36 of his testimony, and others where there was no difference. A savings of 8.7% on the rate of $7.12/ton would amount to $0.62 /ton, or $620,000/year for 1 million tons. It is quite possible that a better response to the RFP, by inland barge companies, may have led to even lower rates.

Q. Do you have an opinion on whether the Preference Given to Combined Inland-Port-Coastal Proposals Requirement thwarted potential single segment bidders?

A. Yes, because none of the potential bidders could provide the entire 3-leg service.

The RFP stated that Tampa Electric preferred proposals for integrated waterborne transportation services, which means that a single operator will assume the entire 3-leg transport system. Tampa Electric was aware of the fact that none of the potential bidders could provide an integrated service on its own. Moreover, even if several companies wanted to join forces, there would be no candidate for the coastal leg, especially with the requirement to accommodate the entire volume. Joint bidding for a 5-year contract would require the establishment of an additional managing and coordinating organization. This would increase efforts and costs even at the proposal stage. With a general and well-based understanding in the industry that the results of this solicitation would be predetermined, the complexity of joint proposals, obviously, further thwarted single bidders' desires to respond.

Q. According to Tampa Electric witness Wehle, Tampa Electric's previous contract with TECO Transport included a "right of first refusal" or "meet or beat" provision. Was this an industry standard or to be expected by potential respondents to the RFP?

A. No. Moreover, since the RFP did not specify TECO had this option, the bidding process probably misled the participants, who should have been able to assume that the RFP process guaranteed equal chances for them and TECO Transport. Also, Tampa Electric divulging bid results to TECO Transport could involve a breach of commercial confidentiality.

A standard solicitation process includes potential participants, all of whom should have a reasonable chances of winning. Accordingly, the Tampa Electric bidding process should have included TECO Transport and required that it submit a sealed proposal along with the other respondents.

If potential bidders knew of TECO Transport's "meet or beat" option, some, or all, would likely view the entire bidding process as biased toward TECO Transport and a wasted effort on their part. Moreover, one bidder stated during our interview that if he had known about the first-refusal clause, he would not have participated since, in this case, the bidding process was only designed to divulge proprietary information of his operations to TECO Transport.

Q. What results do you think the non-standard RFP requirements had on TECO Transport actual costs of performance? the overall RFP responses and the contract award?

A. The unusual requirements may have had a theoretical, but not a practical, impact on TECO Transport's contract with Tampa Electric, since both are subsidiaries of TECO Energy.

The RFP's requirements, as previously discussed, necessarily thwarted potential competitors and created additional and unnecessary costs for them, but not for TECO Transport, which did not have to bid. TECO Transport and Tampa Electric are affiliated companies. Both are wholly-owned subsidiaries of TECO Energy. Hence, when one affiliate charges the other for unusual services, these surcharges, for all practical purposes, are essentially transfer payments. If Tampa Electric collects a penalty from TECO Transport because it failed to comply with a contract requirement, the fine paid to Tampa Electric remains within the same overall organization, TECO Energy.

Another inherent advantage TECO Transport had due to its affiliation with Tampa Electric was the possibility of better coordination and, especially, reducing costs following actions taken specifically for this purpose by Tampa Electric. For example, it can be illustrated by impact of the requirement for 1.4 million tons of ground storage and 8 separate piles. For non-TECO Transport terminals, such as IMT, assigning storage space and conveyance equipment for 8 piles imposes considerable constrains on their ability to accommodate other customers, irrespective of whether or not this requirement would actually be enforced with TECO Transport. In the case of TECO Transport, it is reasonable to expect that if Tampa Electric found that having 8 piles in TECO Transport's own transfer terminal resulted in a loss of revenues from other customers, Tampa Electric would likely modify its storage requirements. Put differently, the guiding principle in coordinating the activities of 2 subsidiaries of the same holding company would be to assess overall total costs and revenues, in order to maximize the overall profit.

Q. In light of your conclusion that the current benchmark is inappropriate and should be replaced by actual market prices obtained through competitive bidding, what changes would you make to Tampa Electric' 2003 RFP so that it would obtain the necessary market prices?

A. First, it is important to recognize that requesting costly responses to a long-term contract of this type merely to find a bid that an affiliate company can undercut is not only unfair to prospective bidders with the result that otherwise competent vendors will not bid, but that it also does not necessarily lead to the lowest price.

Q. Why is the right of first refusal detrimental to the process and unfair to prospective bidders?

A. The unfairness to bidders ultimately is detrimental to the overall process. The preparation of a bid is not an inexpensive exercise. If potential bidders believe that their bids will merely be used as a foundation for the affiliate company to either meet their bid or undercut them marginally on price, they will see no percentage in wasting their time and money on a response. There can be no right of first refusal in a fair and open RFP because it necessarily and correctly will cause potential bidders to avoid participating.

Q. Why does the right of first refusal also likely preclude the lowest possible market price being revealed?

A. The short answer is that TECO Transport, if it were required to fairly compete in the bidding process, might fear the loss of the contract, really sharpen its pencil and submit a bid that is not only lower than that necessary to be the lowest outside bid, but substantially lower. It is short-sighted and incorrect to suggest that merely meeting the otherwise lowest bid will result in Tampa Electric, and its customers, receiving the lowest cost bid. Forcing a fair and open RFP process without resort to a right of first refusal by TECO Transport would cure both the problems I've discussed. For example, TECO Transport's terminal operation might have bid substantially lower than the IMT bid if it knew that it would not have a right of first refusal and would lose the business if its bid was too high. The single most important act the Commission could take in ensuring a fair and open RFP and the maximum number of responses would be to require Tampa Electric to announce that TECO Transport would not be able to exercise any right of first refusal; that TECO Transport would have to submit sealed bids like all other respondents; and, lastly, that the Commission would ensure that a third party judge would ensure that the contracts were awarded to the lowest qualified bidder.

Q. Do you believe it makes sense at this point for the Commission to give up on finding true market prices for the three components of Tampa Electric's waterborne transportation system and then merely resort to the rail-based benchmark or DMA's calculated market rates to test the reasonableness of the rates the utility is paying TECO Transport?

A. No, I do not believe that either of these alternatives is appropriate at this time. Rather, if there are actual markets for any of these three transportation legs or components, then the Commission should test the rates Tampa Electric is paying its affiliate by requiring it to properly seek competitive bids for the services through the issuance of a new, but fair and open RFP.

Q. Aside from requiring that the lowest qualified bidder would win the contract, how would you go about modifying the RFP to ensure that it would be fair?

A. I would require Tampa Electric to remove all of the non-standard provisions I have testified to already so that more potential bidders could submit lower overall bids without having to worry about factoring in higher costs and higher risks through higher than otherwise required bids.

Q. Do you believe that there are sufficient qualified vendors for all three components legs to support the determination of actual market prices through the RFP process?

A. I believe that there are clearly enough vendors on the inland waterways to support the finding of a true market price based upon a fair and open RFP. Additionally, I believe that there are likely a sufficient number of terminals to result in a true market price being established through the RFP process, especially if the onerous non-industry standard conditions related to excessive inventories, number of coal piles, damages, payment conditions and the like are removed from the new RFP. If nothing else, the terminal bidding might be exclusively between TECO Transport and IMT, which could be sufficient to produce a market price assuming legitimate bids by both parties. Clearly the coastal route from Devant to Big Bend will present the biggest challenge given my recognition that there are not many vessels of the proper size free to take the necessary volumes. One possibility could be to require Tampa Electric to remove the all or nothing provision for this leg so that the smaller, single vessels I testified to could bid for a portion of the requirement. Removal of this very restrictive provision would also greatly facilitate better response from inland waterway and port operators.

Q. If there are inadequate RFP responses to establish a true market price for the coastal leg would you be willing to resort to either the rail-based benchmark or DMA's calculated market price?

A. No. I've already testified to why I think the rail-based benchmark is inappropriate and will shortly state why I think DMA's calculated market prices are overstated and inappropriate. Absent the ability to determine a true market based rate through the RFP process for the coastal leg, I would recommend that the Commission return to the cost-plus methodology used prior to the change in 1988. Such a methodology would treat the coastal vessels like an extension of the monopoly electric plant, would have a relatively low "rate base" since all of the vessels are so old and presumably largely depreciated, plus it is a methodology that Order No. 20298 recognized as having value where the other methods fail.

Q. If the Commission was to reject requiring the issuance of a new RFP, how would you propose that it determine "reasonable costs" for each transportation element?

A. Where there is convincing evidence that an actual competitive market exists for one or more of the legs or components, I believe it would be inexplicable for the Commission to allow Tampa Electric to force the Commission and utility customers to guess as to the reasonableness of prices when the market can accomplish the task with precision.

Q. Assuming no responsive coastal leg RFP responses, what methodology would you advocate for the Commission to determine reasonableness in light of the relationship between Tampa Electric and TECO Transport?

A. I would advocate the return to cost-of-service, or essentially rate base regulation, by opening the books of TECO Transport's fleet permanently serving Tampa Electric and would treat them like an extension of the Big Bend plant. I would advocate this methodology not only for the coastal transportation leg, but for the other two components as well if the RFP is not rebid and if true market rates for those services are not revealed.

TECO Transport has been the winner of all Tampa Electric coal transport contracts for serving Big Bend and Polk in the last 40 years. Likewise, several of TECO Transport's barges have been serving, almost exclusively, Tampa Electric. Put differently, the same barges have been deployed on the route between TECO Transport's Davant, LA terminal and Big Bend for a long time. In fact, these barges have become an integrated part of the power production process, almost like the conveyors in the yard that connect the vessels to the coal piles, and the piles to the boilers. My previous discussion also demonstrates that TECO Transportation barges are likely the only reasonable way for Tampa Electric to transport coal between Davant, LA and Tampa in the future. I will also submit below, that it is also demonstrated that Tampa Electric's contract is virtually the only employment for TECO Transport's barges. These views also assume that Tampa Electric will not seek alternative coal supply options in the future, as I discuss later.

In light of the existing relationship between the two TECO Energy affiliates, the current system of an orchestrated bidding process and a theoretical calculation of a "market rates" for nonexistent markets is simply pointless. However, the fair price for TECO Transport services can be established if the rates that TECO Transport charges Tampa Electric are based on actual costs, based on TECO Transport's "books." Such a cost plus methodology could eliminate the perennial claims that TECO Energy has been artificially shifting costs between its regulated and unregulated affiliates at the expense of Tampa Electric's ratepayers. While it is true, as recognized by the 1988 Commission order, that cost-of-service regulation is complicated and requires specialized knowledge, undertaking this type of review for Tampa Electric's waterborne transportation system would not be all that difficult and the shipping volumes and the expense to Tampa Electric's customers would appear to warrant the effort.

ALTERNATIVE CALCULATION OF "MARKET RATE"

Q. After Tampa Electric rejected the lone bid proposal for inland waterway services and found it had none for the coastal leg, DMA's expert witness Dibner calculated "market rates" using his proprietary model, which rates were then used to support the reasonableness of the rates paid do TECO Transport. Do you accept DMA's and witness Dibner's methodology for calculating "Market Rates" as being reasonable for ratemaking purposes?

A. No, I do not.

Witness Dibner, at page 63 of his testimony, calculated the market price, or rate, for coastal shipping by assuming it would be the average between operational costs, replacement based costs, and potential earnings in preference trades. The market price relates to the daily time-charter equivalent. Later, witness Dibner develops a cost model, which was not provided in his filed testimony, in which the daily rate is translated into voyage costs, or a cost per ton for the Davant, LA – Tampa, FL roundtrip.

Witness Dibner's methodology apparently assumes that replacement cost, or the cost based on construction of a new TECO Transport fleet and other similar dry bulk vessels, approximates the supply side, while the potential earnings approximates the demand side for this fleet. In a well functioning market, the market price, or rate, is determined by the intersection of the demand and supply curves, as in the classical quantity/price panel of Marshal's model. Since, as also observed by witness Dibner, there is no such market for ocean-going barges, he assumes that the market price will be settled at the mid-point between the calculated replacement cost and potential earnings. It should be noted, however, that no values for replacement costs and no indication of a possible source for these costs are provided in witness Dibner's report.

Q. Is replacement costs accurately defined by witness Dibner?

A. No. Defining replacement cost for TECO Transport's barges is very difficult.

In a well functioning market, there is a little interest in the replacement cost, since market price is determined by the interaction of supply and demand. Moreover, the cost that determines price is always the "opportunity cost" and not a theoretical replacement cost. Still, the replacement cost, which is also defined as the recoverable cost, could provide an indication of the minimum and maximum rates. Its variable, or avoidable, component, which is usually the voyage cost, as I describe below, could serve as the minimum short-term rate, below which the vessel owner would be better off laying up his vessel. The entire cost, including both the fixed and variable components, could serve as the maximum, long-term rate, since if the market rate is higher than that, additional capacity, as in new vessels, would be introduced. Unfortunately, there is a wide margin between these two boundaries of the market price and their usefulness for the "calculated market rate" is, therefore, limited.

There are also many other problems in defining the replacement cost, especially in the case of TECO Transport. TECO Transport's fleet is old. The tug/barge combinations have a unique design and dimensions. To my best knowledge, and as also indicated in witness Dibner's report, no vessels of similar design and capacity have been built in the U.S. in recent years. Still, if witness Dibner would like to use replacement costs, the process of obtaining information on these costs would be quite arduous. One common way for obtaining replacement cost is by sending the design documents to several shipyards for estimates. This would be a long and expensive process due to the unusual shape of the deep notch tug/barge configuration of TECO Transport's fleet. There is no indication in witness Dibner's report that such a process was undertaken.

Moreover, it is quite unlikely to expect that any U.S. ship owner would build a similar type of barges any time in the future. The market for the coastal trades is dwindling, especially due to the trend by East Coast utilities to substitute import coal for domestic coal and the overall reduction in the demand for coal transport following the extensive conversion to gas, including Tampa Electric's power plant at Gannon. The decline in demand is also recognized by witness Dibner at page 54 of his testimony, where he characterizes the market for new tug/barge combinations as "declining and uncertain." Alternative employment opportunities in the preference trades is limited and favors the faster and more seaworthy ships. Additionally, market rates in preference trades are dictated by old-vintage, "historical" vessels, with fully depreciated costs, resulting in rates far too low for new ships and/or tug/barge combinations to compete.

Q. Did you find any relationship between witness Dibner's model's costs and Tampa Electric's actual operating and capital Costs?

A. No, witness Dibner's cost model is purely theoretical.

Previously, it was argued that replacement cost is difficult to define due to the absence of available information, because no such vessels have been constructed in recent years, or are contemplated in the near future. The only possibility for defining actual replacement cost is to obtain historical cost data from TECO Transport's books. There is no indication that witness Dibner used this source.

Witness Dibner, in Appendix C to his testimony at page 5, lists 5 separate sources for obtaining cost data for TECO Transport's barges: (a) Depreciated replacement value; (b) Earning Potential; (c) Actual investments in "reconstruction" of vessels; (d) Acquisition cost; and (e) Sale and leaseback terms of 4 barges and 3 tugs. There is no indication in witness Dibner's testimony that any of these sources was used. Depreciated cost directly relates to replacement cost. The problems in obtaining reliable replacement costs were already discussed above. Earnings potential does not relate to actual cash costs but to opportunity cost and will be discussed below. Hence, one would expect at least to see, in witness Dibner's data, or elsewhere, data on acquisition and sale costs (d) & (e). Witness Dibner's report, however, has no information relative to the acquisition and sale costs, although the report states: "All aspects of this analysis were performed based on publicly available information" (DMA II, p. 77). The only information provided on fixed costs is that it constitutes 35% in the first analysis (DMA-I, p. 65), and 48.6% in the second one (DMA-II, p.65). Likewise, not only is that input not provided, the calculation method and the way these costs are incorporated are unclear. It is also noteworthy that the listing of 5 sources for costs is a misconception, since they relate to both the demand, or opportunity cost, and the supply side, or production cost.

Q. Is there another methodology you could use to for comparison purposes to establish a market rate based on replacement costs?

A. Yes, For instance U.S. Flag dry bulk ships of the similar 35,000 dwt capacity can be used for a purpose of comparison. In such case I have calculated that the required freight rate would be $5.12/ton

Q. How do you arrive at this rate?

A. Witness Dibner indicates that the freight rate for a new tug/barge combination would be $10.50 per ton. But since witness Dibner has provided no cost information, there is no way to verify these cost figures. As noted earlier, no information on replacement and operating costs of TECO barges is provided by witness Dibner. I also noted that since these barges are of a unique design and dimensions, the only way to obtain such replacement costs is by soliciting quotations from shipyards, a lengthy and costly process that has not been undertaken.

Some indication for the replacement-based costs can be obtained from developing a simple cost model based on the U.S. Army Corps of Engineers guidelines for dry bulk ships. Before reverting to the results, it should be emphasized that U.S.

Army Corps of Engineers cost data are related to self-propelled ships, which have different characteristics than TECO Transport's tug/barge combination.

The U.S. Army Corps of Engineers,' as well as witness Dibner's analysis at page 65 of his testimony, breaks down ships' costs into three components:

Capital Costs – commonly calculated based on depreciation of initial and additional investments in capital equipment (the ship itself) over the economic (useful) lifetime, less salvage (terminal) value;

Operating Costs – for crew, stores, supply, maintenance and administration; and

Voyage Costs – for fuel, both at sea and port, pilotage and tuggage.

Additionally, the voyage costs includes harbor and channel dues as well as ship-related port costs such as dockage, line handling, etc. Accordingly, the definition of "required freight rate" refers to the rate needed for recovering the entire capital, operating and voyage costs. The time charter equivalent of the "replacement cost" would be roughly equal to the summation of the capital and operating costs. In our case, as recognized by witness Dibner, voyage cost excludes the port cost in New Orleans, which is part of the transfer cost segment, while in Tampa these voyage costs also exclude the port cost at the Big Bend facility.

The cost model I have used calculates comparable vessel costs to those defined in the bid documents. The main assumptions are:

- Vessels are dedicated to sailing roundtrips between New Orleans and Tampa, a distance of 465 nm at service speed equal to 90% of their design speed;

- Port time, including some delays, is between 3 and 4 days for both ends, depending on ship size;

- Vessels are fully loaded ; and

- Vessels have no backhaul cargo.

Exhibit___ (AH-1) presents the results of the calculation for 6 ships of sizes between 25,000 and 80,000 dwt. As seen in this table, in the case of 35,000 dwt, the required freight rate is $5.12/ton. This rate is based on replacement cost, recovering all fixed and variable costs, and by ships that presumably are more expensive to operate than barges. This rate is much lower than witness Dibner's calculated rate of $7.98/ton.

Q. Witness Dibner's testimony also addresses the alternative employment opportunities for TECO Transport's barges presently serving Big Bend. What is your view on the alternative employment opportunities for these vessels?

A. I believe these alternatives are very limited. TECO Transport's barges could mostly be employed in coastal and preference trades, but markets for both are quite small.

TECO Ocean Shipping, which is part of TECO Transport, is the largest U.S. Flag carrier of this type with a fleet of 12 vessels, including 9 oceangoing tug/barge units and 3 self-propelled ships. The 9 oceangoing barges include 7 defined by witness Dibner as "core" and 2 defined as "inactive in class." TECO Transport barges have been almost exclusively employed by Tampa Electric for the last 40 years. TECO Transport barges may lose their employment with Tampa Electric if the utility were to decide that Big Bend Station, like other Florida utilities, would be better off receiving domestic coal by rail and foreign coal by direct shipping to Tampa. In such a case, TECO Ocean barges would have to seek alternative employment. The "core" TECO Transport barges could pursue 2 types of Jones Act employment options:

Preference Trades – mainly grain shipped under the PL-480 Food for Peace program; project cargo financed by the Export-Import Bank; or grain supplied under special bilateral agreements; and

Coastal Trades -- mainly coke from Texas refineries and domestic coal to East Coast utilities; import coal from coal terminals to East Coast utilities; and local movements of limestone, phosphates and fertilizers.

Both of the above options would provide very limited employment for TECO Transport barges. An indication for the lack of such alternative employment is the fact that TECO Transport, according to witness Dibner at page 59 of his testimony, already has 2 barges, the Louisa Kirkpatrick, 19,200 dwt, and the Diana Ludwig, 22,900 dwt, defined as "inactive." Apparently, neither barge could find remunerative employment.

Q. If the Commission finds it necessary to calculate the coastal transportation rates on a cost-plus methodology, should backhaul opportunities be considered in calculating the approved rates?

A. Yes. Ship owners usually consider both front and backhaul legs in determining freight rates.

The common practice of ship owners, and any transportation service provider for that matter, is to incorporate all revenue generating possibilities in calculating their required rates. This practice is also described in the response of Bruce Richards of Moran Towing, who responded to us when asked about how they figure out rates: "The backhaul situation also makes a difference in cost."

Exhibit ___ (AH-2) presents a sample of voyages of TECO Transport vessels during September 2003, as initially provided to the Office of Public Counsel by the Port of Tampa. As seen in this table, all TECO Transport vessels in all voyages left Tampa fully loaded, mainly with phosphate and rock. No information was provided on the backhaul rates. In a well-functioning market, the rate for each leg is a function of the price elasticity of the delivered cargo, which is unknown in our case. For the purpose of illustration, equal elasticity can be assumed here, since both cargoes are (a) of low value, and (b) have the same theoretical alternative transport option via rail. In this case, both should be charged equal freight rates. This, in turn, could result in a considerable reduction in the rate for coal, of about 30%.

Of course, the inclusion of backhaul revenues would be consistent with the rate base treatment of these vessels on a cost-plus pricing methodology in which all expenses and all revenues would be considered.

Q. What is the size and regularity of the preference trade market?

A. The preference trade is small, especially for dry bulk cargos where TECO Transport vessels can be employed. Witness Dibner, at page 54 of his testimony, estimated the size of this market, most of which is the export of U.S. grain, as 2 to 4 million tons per year. The wide range suggests that the market is also highly variable. Due to the nature of the cargo, the market is also highly seasonal.

Q. Are there other limitations on the employment possibilities of TECO Transport tug/barge combinations in the preference trades?

A. Yes. Only integrated tug/barge ("ITB") combinations are allowed by the Maritime Administration to serve cross-ocean trades. The non-integrated tug/barge combinations can serve only short-sea trades, typically to Caribbean/Central America countries.

The tug/barge combinations are generally divided into pull or towed systems and push systems. In the push systems, the connection between the tug and the barge can either be articulated or rigid, as with integrated systems. According to TECO Transport publications, of their 7 barges, 2 are articulated, using the Artubar system (the Maria Flood and the Pat Cantrell) and 1 is integrated, using the Bludworth system (the Doris Guenther). However, TECO Transport publications, as well as U.S. AID, defined these 3 barges as "integrated."

If TECO Transport lost its contract with Tampa Electric, only 3 of its 7 barges could fully participate in the preference trades. The rest, or the majority, would be confined to the shorter and less lucrative trade routes. This limited employment possibility is also documented by witness Dibner, who showed at page 59 of his testimony, that only 2 TECO Transport barges actually took part in preference trades in the past.

Q. Are TECO Transport's ITBs fully competitive with ships in the preference trades?

A. No, TECO Transport's ITBs are inherently inferior to ships. If TECO Transport's 3 ITB units have to compete in the market for the preference trades, they will compete with self-propelled vessels, or ships, which presently handle most of this trade. In fact, as documented by witness Dibner at page59 of his testimony, the competition will also include the 2 ships owned by TECO Transport.

TECO Transport's ITB units would have difficulty in competing against ships in cross-ocean trades mainly because of their considerably lower speed. According to U.S. AID, an ITBs' typical sailing speed is about 9 to 10 knots, compared with 12 to 14 knots for the ships. Hence, the ITBs' travel times would be 30 to 50% longer than the ships. The slower speeds could disqualify ITBs from bidding on shipments in cases where there is a requirement for short delivery times and, especially, for emergency shipments. Also, ITBs have lower seaworthiness than ships, which could be problematic during wintertime. Because of their inferior characteristics, ITBs will have to resort to lower freight rates than ships.

In this respect it should be mentioned that the entire concept of ITBs are as a "regulation beater," a way to circumvent the U.S. Coast Guard (USCG) manning requirements. Although the barge and tug of ITBs are integrated, USCG recognizes ITBs as dual mode, allowing a crew size much smaller than ships of the same capacity. ITBs have higher construction costs and inferior performance relative to ships with the same capacity. Generally, the tug/barge combination is designed for short distances and operations, whereby the tug is detached from the barge, which is not the case with Tampa Electric barges.

Q. Are spot-based rates for the preference trades comparable to long-term contracts?

A. No, usually spot rates are higher since the vessel is not provided with full-time employment.

Witness Dibner claims that the alternative employment of TECO Transport's vessels currently serving Tampa Electric is in the preference trades. Hence, their demand-based opportunity costs, or potential earnings, are what they can earn in these trades. Witness Dibner, however, acknowledges that the employment in preference trades is "seasonal … and varies in activity each year." The preference market is entirely spot, whereby freight is purchased for a single, one-way voyage, and not necessarily matched with the full capacity of a particular ship. In addition, the voyage may have restrictions regarding dates and ports of loading/discharge; there are often problems in cargo availability; and there are seldom backhaul opportunities. Ship owners participating in these trades take into consideration these risk factors and demand rates commensurate to compensate them for the time that their vessels could be without remunerative employment.

For example, in July 1997, TECO Transport's Judy Litrico was reported docking at the port of Nampo near Pyongyang in North Korea, with a cargo of 24,953 metric tons of donated cereals. After it completed off-loading 16,953 tons, it sailed to Chongjin to deliver the remaining 8,000 tons. It is hard to see any commercial cargo moving back from North Korea to the U.S. although some backhaul freight may be generated for part of the return voyage. Likewise, even the front haul has a partially empty leg, between the two Asian ports.

Ship owners, in bidding on a single voyage like that of Judy Litrico, would require much higher rates than for the Tampa Electric contract. Unlike the single voyage contract of Judy Litrico, the Tampa Electric coal contract is for 5-years of continuous employment, involves a short all-U.S. route, and provides for an almost 100% backhaul option.

The difference between the Tampa Electric contract and the alternative employment in preference trade is also recognized by witness Dibner at page 17 of Tampa Electric interrogatory response No. 8: "Sharp differences between spot rates and long-term contract rates exist. Spot rates reflect short-term cash flow maximization under a wide range of returns on assets. In the worst of times, these rates provide minimal and sometimes negative returns on assets, sometimes in desperate attempts to avoid laying off personnel and de-activating equipment."

Exhibit ___ (AH-3) presents a sample of time charter equivalent rates of TECO Transport barges and ships, compared with those based on U.S. Army Corps of Engineers data for the same size US-flag and foreign-flag ships. As seen in this table, TECO Transport ATBs barges' daily earnings from employment in the preference trades were $17,208, while TECO Transport ships' earned $21,732. The difference in earnings stems from the better qualifications of ships to handle the preference trades. U.S. Army Corps of Engineers replacement, or full recovery, costs for US-flag ships is $27,333, with an operating cost of $13,990. The Corps has no separate data for barges. TECO Transport's ATBs' earnings in the preference trades are substantially below the full daily cost of 35,000-dwt US-flag dry bulk ships , but above their operating, or variable, cost. The general conclusion from this comparison is in line with my earlier observation that replacement-based costs could only be used as an upper bound (maximum).

Q. Could TECO Transport barges find alternative employment in U.S. coastal trades?

A. Such employment, if any, would be very limited for these vessels.

According to witness Dibner at page 64 of his testimony, while 4.67 barges are required to ship 5.5 million tons annually to Big Bend, 7 barges have to be assigned to this contract. Assuming that the Tampa Electric contract is not available for TECO Transport barges, some of them would be looking for alternative employment in the coastal trades. The 7 core barges have a total capacity of 211,849 dwt. According to witness Dibner's calculations at page 58 of his testimony, the market, which is served by a total fleet capacity of 805,975 dwt, is well balanced, which means demand is roughly equal to supply. The elimination of Tampa Electric's contract would be the equivalent of reducing employment opportunities by 211,849 dwt, which, when compared to the remaining 594,126 dwt, would result in a large overcapacity of 35.6% (211,849 / 594,126). An overcapacity of this magnitude is likely to result in a sharp decline in rates.

Moreover, it is unclear whether the current backhauls of TECO Transport, which are mainly phosphates, would still be relevant if the coal is not providing the fronthaul. It appears that the backhaul tonnage is roughly equal to the fronthaul in volume. Let assume that and that current rates for the backhaul is about 60% of the fronthaul rate of about $8/ton, or $5/ton. If coal is not available for the fronthaul, phosphates may have to bear the entire roundtrip cost of $13/ton in order to generate for TECOT the same revenues. Increasing the transport cost of phosphates to $13/ton may price out the use of TECO Transport vessels or any US-flag vessels to move Tampa-based fertilizers to the Lower Mississippi points. This, in turn, will further reduce the coastal market.

Additionally, TECO Transport's ITBs have some limitations relative to several coastal trades. For example, they are too big to serve Crystal River and the majority of other coastal movements that usually involve smaller shipment and/or ports. Likewise, many coastal trades are propriety by nature and are not open for outside vessels, as was also observed by witness Dibner.

In summary, it appears that the 7 TECO Transport barges would have very limited employment possibilities in both the preference and domestic trades. Facing limited employment possibilities, these barges should be willing to accept any rate above their variable, or operating costs. This rate, as calculated in Exhibit ___ (AH-1) for U.S.-flag dry bulk ships of similar capacity, is $2.82/ton (0.38 + 0.04 + 2.40).

Q. Did witness Dibner use comparable rate information on coastal services being provided by TECO Transport for other electric utilities?

A. No he did not, although some comparable cost or rate information was available.

Witness Dibner did not attempt to review and analyze data on the employment of TECO Transport barges with other Florida utilities, particularly JEA. For example, JEA used TECO Transport barges to bring pet coke and coal from Texas and Lower Mississippi refineries to its North Side Generating Station in Jacksonville. The Doris Guenther, an integrated tug/barge with 25,000 dwt provided the first shipment. JEA has its own dock with a depth alongside of 38 ft. The rates reportedly paid by JEA to TECO Transport were $9/ton for Texas and $8/ton for Lower Mississippi cargos. The distances to JEA from these origin ports is twice as long as compared to the voyages TECO Transport makes to Big Bend. This difference in distance is particularly instructive when you compare the relative rates TECO Transport charges Tampa Electric and its customers, which is a confidential number in these hearings to what the open market apparently allows it to charge unaffiliated utilities.

Exhibit ___(AH- 4) presents the theoretical cost calculation for this route using U.S. Army Corps of Engineers data for the New Orleans to Jacksonville route, which is 1,063 nautical miles versus 493 nautical miles for the New Orleans to Tampa route. As seen in this figure, the full recovery, or replacement, rate for the longer Jacksonville route would be $11.59 for a 25,000 dwt ship, assuming no backhaul.

For the route Davant, LA to Jacksonville, TECO Transport's reported rate was below the calculated full recovery rate ($8 vs. 11.59), although there was no backhaul cargo. For the route to Tampa, where TECO Transport had backhaul cargo, it charged above the calculated rate, or $7.98 versus $5.12 per tons. This difference presumably reflects the fact that on the Tampa route TECO Transport does not face competition.

Q. What do you calculate TECO Transport's freight rates would be based on its barges' earnings in the preference trades?

A. Assuming TECO Transport rates are based on its past earnings in the preference trades, its required freight rate for the Davant, LA to Tampa, FL route would be \$3.67/ton without backhaul and \$2.30/ton with backhaul.

According to witness Dibner, TECO Transport uses a core of 7 ships for Tampa Electric's contract, of which 5 are fully dedicated. TECO Transport's fleet includes 3 barges which are considered as integrated, or ITBs, providing them with potential employment in both the long and short preference trades. The rest of the fleet are non-ITBs, which limits their potential employment to the short preference trades. The short trades are already highly competitive because of competition from Moran barges and other, smaller operators. Another potential U.S. employment, in the coastal trades, is both limited and also highly competitive. Altogether, U.S. employment either in the preference or coastal trades could only provide TECO Transport with partial utilization.

Losing the Tampa Electric contract, TECO Transport would face 2 options for barges that cannot find employment in the US trades: (1) keep unemployed barges idle and save on operating costs; or (2) employ them in foreign trades. In the second option, TECO Transport would be competing with foreign-flag ships, most probably in the market for carrying import coal to coastal utilities. For example, TECO Transport could bid on the shipping of South American coal to either the Kinder-Morgan or the Drummond terminals in Tampa for Lakeland

Electric. Reportedly, Lakeland Electric intends to bring up to 1,000,000 tons of imported coal through Tampa annually.

Exhibit ___ (AH-5) provides a comparative calculation of required freight rates for the Davant, LA to Tampa, FL route for 4 types of vessels and employments: (1) US ship with no backhaul; (2) foreign ship with no backhaul; (c) TECO Transport barge with no backhaul; and (d) TECO Transport barge with backhaul. The data for U.S. and foreign ships, both of 35,000 dwt, are based on U.S. Army Corps of Engineers references. Since no cost data are provided for TECO Transport barges, their daily cost is assumed to be equal to the time-charter equivalent earning in the preference trade, as calculated by witness Dibner and presented in Figure 3, or $17,208/day. TECO Transport barges' daily costs are further broken down to capital and operating costs. The operating cost is assumed at 35% of a U.S. ship of the same tonnage, to reflect the fact that the barge crew size is 8 versus 30 for the ship. The assumed ratio is higher than the crew ratio (8 / 30 = 26.6%) to also reflect the higher proportion of enlisted members in the smaller barge crew. The speed is estimated at about 90% of the design speed of 11 knots. As seen in Figure 5, if TECO Transport barges are able to command daily earning similar to those in the preference trades, their required freight rate would be $3.67/ton without backhauls and $2.30/ton with backhauls.

Q. What do you calculate TECO Transport's freight rates would be based on foreign competition?

A. If TECO Transport has to compete with foreign ships on foreign to US routes , I calculate the equivalent freight rate that TECO Transport could command at is \$2.15/ton.

As I already noted, the employment opportunities in U.S. preference and domestic trades are limited. TECO Transport may have to deploy its barges in foreign trades such as the importation of coal. Exhibit ____ (AH-5) presents the equivalent required freight rate that TECO Transport could expect in this case. As seen in this table, this rate would be \$2.15/ton. This rate is still above TECO Transport's operating costs as calculated in AH-5 at \$1.27/ton (0.96 + 0.04 + 0.27). Earning such a low rate would be a better alternative for TECO Transport than laying up its barges. As a reminder, it should be noted that witness Dibner calculated the required freight rates at \$7.98/ton.

ALTERNATIVE OPTIONS FOR COAL SUPPLY AND RESPECTIVE COST SAVINGS

Q. Do you believe Tampa Electric has made a reasonable effort to diversify its fuel sources and transportation options? If so, do you believe that failure has a cost in both the underlying coal and coal transportation costs Tampa Electric's customers are expected to pay?

A. No. Unlike other utilities, Tampa Electric's Big Bend station has been using almost exclusively domestic coal and coke for fuel and exclusively used TECO Transport barges for transportation of this fuel.

Diversification of supply is a risk reduction strategy practiced by almost all industrial corporations. In the case of coal supply, the diversification should include both the supply sources, including coal mines and oil refineries, and transport means, especially since transportation of coal accounts for almost 50% of the delivered cost. Hence, a prudent supply strategy for Tampa Electric should be to develop: (1) additional sources of coal, such as imports; and (2) additional transportation options for both the domestic coal, such as a rail option, and imported coal, such as through direct delivery to Tampa Bay.

Tampa Electric, instead, has chose to rely on one mode of transportation and a single transportation provider, namely TECO Transport. This practice seems to me to be neither reliable nor cost effective. In contrast, other utilities use several sources of coal and transportation options. It is difficult to find an explanation for Tampa Electric's practice other than the fact that Tampa Electric and TECO Transport are affiliated companies.

Q. To what extent does Tampa Electric use imported coal at its Big Bend Station?

A. Tampa Electric's use of imported coal at Big Bend is very limited, especially in contrast to other Florida utilities.

As I stated earlier, there has been a trend by U.S. utilities to divert their coal deliveries from domestic to international sources, especially following the development of large coal mines in Venezuela and Colombia. This shift came especially at the expense of the Mississippi route, as documented by witness Dibner, who stated at page 52 of his testimony, "in recent years, eastbound coal movements from the Mississippi River to utility plants east of New Orleans have virtually ceased." Imported coal has also been widely used by East Coast utilities as a complementary source to domestic coal, which is delivered by rail, reaching about 25 million tons per year in recent years.

The main source for imported coal has been Colombia. Recently, Drummond stated its intention of investing $1 billion to increase its current Colombian exports from 12.8 to 20 million tons over 5 years (source: CoalTrans, March/April 2003).

Exhibit ___ (AH-9) presents coal shipments for several Florida utilities in 2003, based on the data from the Federal Energy Regulatory Commission. As seen in this Exhibit, Tampa Electric's 2003 data on coal deliveries includes 4.34 million tons of domestic coal versus 0.34 million tons of imports, or only 7.2% of the total. By contrast, as reported in AH-6, deliveries for Gulf Power's , headquartered in Pensacola, included 2.17 million tons, all of which were imports

(100%); Jacksonville Electric 1.32 million tons domestic and 1.98 million tons imports (60%).

It is also interesting to note that the average price of domestic coal at $38.37/ton and $1.58/mBTU was almost equal to that of $39.51/ton and $1.53/mBTU for imports. Both prices relate to the transfer terminal in Davant, LA. This means that Tampa Electric may receive coal at Big Bend at the same price as at Davant, LA. Thus, direct delivery of imported coal to Tampa could save the voyage along the Gulf Coast, resulting in savings of more than $10.00/ton.

The apparent irrational practice of Tampa Electric with regards to direct delivery of foreign coal to Tampa seems to stem from the desire to employ TECO Transport's inland barges, terminal and oceangoing barges. This, in turn, corresponds well with the limited alternative employment options of TECO Transport's companies if they did not have Tampa Electric's business, as discussed earlier.

Q. Does Big Bend have "sufficient" storage capacity to take imported coal directly and thereby avoid the unnecessary trip to Davant and back?

A. Yes. Big Bend's apparent storage capacity of 866,000 tons is equal to 77 days of consumption, or well beyond the 30 to 60 days, which is the common practice in the industry.

One reason given by Tampa Electric for avoiding imports, especially direct delivery by Handysize ships directly to Big Bend, was the lack of storage space there. Hence, presumably, all shipments to Big Bend should be first sent to Davant, LA terminal, which could provide "much needed storage, helps with quality control issues and allows for custom coal blending."

According to documentation in Docket 030001-E1, Big Bend station has a 20-acre yard, with storage capacity of 866,000 tons. Assuming that for 2004 the total projected tonnage is 4,100,000 tons, the average daily consumption at Big Bend would be about 11,200 tons (4,100,000 / 365), and the on-site storage would be equivalent to 77 days (866,000/11,200). In contrast, the RFP stipulates a storage requirement of 1.4 million tons for the transfer terminal, based on 120 days.

The U.S. Department of Energy Information Administration (EIA) publication in the "US Coal Supply and Demand: 2002 Review" indicates that Electric Power Plants have consumed 981.9 million tons while having an average stock of 143.0 million tons, or the equivalent of about 50 days. In the latest monthly statistics, September 2003, consumption was 84 million tons and inventory 123 million tons, or roughly equal to 45 days of consumption. These inventory figures were also confirmed in our discussions with the industry and with EIA staff, proving that utilities usually hold inventory for 30 to 60 days of consumption. This inventory relates to the entire supply of coal for U.S. utilities, either from domestic or foreign sources.

Presumably, the uncertainty of supply is greater with foreign coal, hence utilities relying mainly on this source should keep larger inventories or at least try to assure their supply through long-term contracting. In reality, most foreign coal is bought on the spot market. This is also the case with Tampa Electric, which does not have a long-term contract for purchases and transportation of foreign coal, with both being purchased on the spot market. This indicates that foreign coal is perceived as readily available and reliable.

Another example, illustrating the unusual nature of the 120-day storage requirement by Tampa Electric, is the response to discovery questions Docket 030001-E1, by Gulf Power, whereby a representative states the Smith power plant carries inventory equal to 35 days of consumption (130,000 tons), while the Crist plant carries 22 days of consumption in inventory (240,000 tons).

Q. If Tampa Electric needed to expand its storage capability at its Big Bend Station in order to take advantage of both coal and transportation cost savings, how could it?

A. It could do so by either converting slag ponds within the existing yard, or by developing an additional coal yard across the adjacent road.

In response to a question from my colleague Dr. Ashar about creating a larger coal storage and blending site at Big Bend, Tampa Electric's representative told him: "We have not conducted a study of that nature.... we said in the past that Big Bend does have the capability of blending for its own needs..." but, presumably not for Polk Station. Polk requires intensive blending of about two-thirds of its coal originating on the river. Also, "... Polk Station is not permitted to store coal on the ground. It is only permitted to store coal in the two silos that currently exist." (Florida Public Service Commission Docket 030001-E1 of October 20, 2003 , p. 107). It seems that Tampa Electric admits that Big Bend's capability is sufficient and that the problem is with serving the needs of Polk Station .

Still, it seems that, if needed, the storage capability at Big Bend could be substantially expanded. Based on a site visit by my colleague Asaf Ashar and a review of Big Bend's layout, it seems that there are two principal expansion options for the coal handling there:

(a) Inside the Peninsula – By conversion of the slag ponds into coal piles and adding an additional row of storage piles to the existing 3, which may result in about an additional 390,000 tons; and

(b) Outside the Peninsula – Across Wyandotta Road or in the adjacent peninsula, nearby Tampa Electric's present storage of gypsum, whereby Tampa Electric has vast land reserves.

The estimate of the capacity of the added yard in the first option is based on the assumption that it would have capacity similar to that of the south yard, which is estimated in Docket No. 03000-E1 at 390,000 tons.

Q. Do you believe Big Bend's facilities could provide for on-site blending?

A. Yes, as was evident during Dr. Ashar's tour of Big Bend, as well as shown in the reviewed documents. The plant was actually performing blending for its own fuel as well as for the Polk Station.

The blending capability is also described in Docket 030001-E1, indicating that Big Bend station has 3 yards: (a) the north yard with 2 piles; (b) the middle yard with 2 piles; and (c) the south yard with 3 piles, or altogether 7 piles. The Docket also mentions that "Big Bend Station mixes different types of coal and pet coke in 5 blending bins. . . ." The Big Bend dock is served by 2 separate ship unloaders and 2 separate conveyors, connecting the shore equipment to the storage yard. The yard is served by several stackers and reclaimers that have the capability to perform blending. A schematic illustration of the blending process in Big Bend is also provided in this docket.

The performance of blending in Big Bend is also documented in Docket No. 03000-E1, in Interrogatory No. 70, which states: "Big Bend Station blends the pet coke with coal prior to burning it." This is also evidenced by the fact that a considerable volume of coke is brought by TECO Transport vessels from Texas directly to Big Bend, bypassing the Davant, LA terminal.

Q. Have you attempted to calculate what savings Tampa Electric might realize by taking direct delivery of foreign coal at Big Bend's existing terminal using foreign Handysize ships?

A. Yes. I believe direct delivery of foreign coal to Big Bend could generate savings of about $9.35/ton in the case of Colombian imports.

I just discussed how I believe Big Bend can handle the direct shipment of coal in terms of storage space and blending capability. According to Docket No. 030001-E1, Interrogatory No. 72, the dimensions of the largest vessel that can be handled in Big Bend are 650 x 100 x 34 ft. Accordingly, Big Bend can handle Handysize bulkers with 30 - 35,000 dwt, similar to the current size of TECO Transport barges, which range 550 – 650 x 75 – 85 x 32 – 35 ft. The option of handling Handysize vessels at Big Bend was also extensively assessed in U.S. Army Corps of Engineers and Tampa Electric studies.

Exhibit __ (AH- 6) illustrates the various transport options to Big Bend. Exhibit ___ (AH-7) presents a comparative calculation of the required freight rates by foreign flag ships of various sizes from Colombia to New Orleans and Tampa. The present transport cost, using transfer in Davant, LA are:

- Colombia to Davant, LA by Panamax of 60,000 dwt	$3.37/ton
- Transfer from Panamax to TECOT Barge	$2.45/ton
- Davant, LA to Big Bend by TECOT Barge	$7.98/ton
Total	$13.80/ton
- Colombia to Tampa, Fl by Handysize of 35,000 dwt	$4.45/ton
- Transportation savings	$9.35/ton

Similar savings would be generated if the foreign source of coal is Venezuela. This means, that if Tampa Electric intends to import 1 million tons, annual savings on transportation will amount to $9.35 million. It should be noted that Colombian coal is either equivalent to or better than domestic coal, with a high caloric value (11,700 – 12,000 BTU) and low sulfur (0.4 – 0.7%).

A confirmation for the transportation savings of direct imports from foreign ports by Panamax through a New Orleans terminal is provided by the documents of: (a) Tampa Electric, 2001, stating that "When Tampa Electric receives offshore coal, they receive it at their Louisiana transfer station, which increases the cost by about $10/ton relative to the Muni cost" (offshore means foreign; Muni stands for municipal); and (b) Florida Power Corporation in 2001 stating "...when FPC receives offshore coal, they receive it at their Louisiana transfer station, which increases the cost by about $10/ton relative to utilities that receive coal directly".

Q. What are the present options for direct import by Panamax vessels to Port Tampa's terminals?

A. There are 2 possible options, using either a Tampa deep-water shore terminal or a deep-water midstream terminal, along with transfer to Big Bend by inland barges.

Presently, there is one terminal in Tampa belonging to Drummond that can handle Panamax vessels. In the near future, it is reported that another terminal with such capability will be added by Kinder Morgan. Both terminals are about 12 miles away from Big Bend. These operations could either involve grounding the coal at these terminals or direct transfer to river barges of 1,500 dwt capacity. Another option is to use trucks or trains for the transport between terminals. The possibility of using the two terminals was also mentioned in Florida Public Service Commission Docket 030001-E1 of October 20, 2003. (p. 115), but no study was conducted to assess its feasibility. Also, based on our interviews with Kinder Morgan, it was reported that Tampa Electric knew about this terminal's intention to deepen the access channel to allow for handling Panamax vessels.

Additionally, midstream transfer from Panamax vessels to inland barges can take place anywhere in the channel or alongside one of the terminals. Midstream transfer is usually less expensive than terminal transfer. TECO Transport's terminal has already been involved in extensive midstream operations in New Orleans.

Q. What savings do you believe Tampa Electric could realize from the direct import of coal to Big Bend Terminal using foreign Panamax vessels?

A. The calculation is similar to the one above, except for the cost of Panamax for the Colombia to Tampa, FL leg at \$3.07/ton. The savings would amount to \$10.73/ton (13.80 - 3.07).

Again, confirmation for the transportation savings of direct imports of foreign ports by Panamax vessels through a New Orleans terminal is provided by the documentation of: (a) Tampa Electric, 2001, stating that "When Tampa Electric receives offshore coal, they receive it at their Louisiana transfer station, which increases the cost by about \$10/ton relative to the Muni cost" (offshore means foreign; Muni stands for municipal); and (b) Florida Power Corporation in 2001 provides stating "...when FPC receives offshore coal, they receive it at their Louisiana transfer station, which increases the cost by about \$10/ton relative to utilities that receive coal directly".

Q. Is improving Big Bend to directly handle Panamax vessels possible, and, if so, is it an economically feasible project?

A. Yes, I believe it would be both possible and economically feasible. According to the U.S. Army Corps of Engineers, the total Tampa Electric investment would be about \$12.68 million. I have calculated that the annual volume of direct delivery required to recover this level of investment is 104,127 tons.

The possibility of improving Big Bend to handle Panamax has been extensively analyzed by Tampa Electric, the Port of Tampa and the U.S. Army Corps of

Engineers and certainly is not a "new" concept. There are numerous documents produced by these parties assessing the feasibility of this project. The latest document available and quoted here is a memorandum by Beth Green of Tampa Electric included in the discovery materials provided in this case.

The necessary improvements include the deepening of the access channel, the turning basin and the berth alongside the Big Bend dock. Most of the deepening costs would be covered by the U.S. Army Corps of Engineers and only about 25% by local users, among them the Port of Tampa, Cargill and Tampa Electric. The maintenance of the future channel would be fully covered by the U.S. Army Corps of Engineers, which, in turn, will save the maintenance cost of the existing channel currently paid by Tampa Electric. The deeper channel and handling of larger ships will require Tampa Electric's rehabilitation of the present dock structure and either rehabilitation of the existing ship unloaders or purchase of new ones. Exhibit ___ (AH-8) presents the summary analysis of the proposed project, based on U.S. Army Corps of Engineers information. As seen in this chart, the total Tampa Electric investment would amount to $12.68 million, or the annualized equivalent of $1.17 million. Tampa Electric savings, as already calculated, would amount to $10.73/ton. Hence, the breakeven volume, which would justify this project would be as little 104,127 tons of imported coal per year. Tampa Electric has stated that it expects to use about 1 million tons per year of imports. Moreover, if Tampa Electric practices a different and more justified, in our opinion, supply policy it could increase its imports similar to other Florida utilities resulting in even more significant savings.

Q. What is the latest update regarding the deepening of Big Bend Channel Project?

A. We have been advised that the U.S. Army Corps of Engineers and Port of Tampa are actively pursuing this project

According to our interview with Tim Murphy, U.S. Army Corps of Engineers project manager, and Steven Fidler, Director of Operations of the Tampa Port Authority, this project will definitely be implemented. The project was halted in 1997 due to a moratorium imposed on U.S. Army Corps of Engineers projects, but was allowed to proceed in October 2002.

The Port of Tampa, which is the local sponsor, is committed to this project because the channel also serves the Port's own terminal at Port Redex. The port expects active participation from Cargill, which purchased the IMC terminal, another terminal served by this channel. Moreover, the Port intends to pursue the project even if Tampa Electric refuses to participate in it. In this case, deepening of the channel will be extended all the way to Big Bend, except for the last stretch into the Tampa Electric's terminal.

Q. Do you have a conclusion on the reasonableness of Tampa Electric's current coal transportation charges?

A. Yes. For the several reasons I have testified to above, I conclude that Tampa Electric's current charges being passed on to its customers are not reasonable. There is a wide range of feasible options for Tampa Electric to significantly reduce transportation costs. Assuming 4 million tons of annual coal consumption, at a minimum, with even the existing pattern of waterborne delivery, total savings may come close to $11.5 million ($7.98-5.12) on the coastal leg alone if there is a more reasonable proxy calculation for the market rates; if the entire pattern of transportation is modified in favor of direct delivery of foreign coal, the savings may be as high as $40 million ($7.98 + $2.5).

Exhibit ____ (AH-1): Davant, LA - Tampa, FL Required Freight Rates for US Flag Vessels

DWT	25,000	35,000	40,000	50,000	60,000	80,000
LOA	549	608	632	676	715	779
Beam	81	90	93	100	105	114
Draft	32	35	37	40	42	46
Speed	14	14	14	14	14	14

Replacement Cost	47,845,214	52,250,153	54,452,622	58,857,561	63,262,499	75,113,255
per DWT	1,914	1,493	1,361	1,177	1,054	939
Annualized (6.125%, 20 yrs)	4,215,163	4,603,238	4,797,276	5,185,351	5,573,426	6,617,478
Daily (345 days)	**12,218**	**13,343**	**13,905**	**15,030**	**16,155**	**19,181**

Daily Costs ($/Day):

Daily Capital	12,218	13,343	13,905	15,030	16,155	19,181
Operating Daily	13,600	13,990	14,186	14,576	14,966	15,931
Capital + Operating	25,818	27,333	28,091	29,606	31,121	35,112
per DWT	1.03	0.78	0.70	0.59	0.52	0.44
Fuel at Sea	4,203	4,455	4,581	4,938	5,317	5,947
Fuel at Port	421	421	421	526	526	526
Total at Sea	30,021	31,788	32,672	34,544	36,438	41,059
Total at Port	26,239	27,754	28,512	30,132	31,647	35,638
per DWT	1.05	0.79	0.71	0.60	0.53	0.45

Voyage Time, RT (days):

Service Speed	12.60	12.60	12.60	12.60	12.60	12.60
Days at Sea	3.02	3.02	3.02	3.02	3.02	3.02
Days at Port / Slack	3.00	3.00	3.50	4.00	4.00	4.00
Total Days	6.02	6.02	6.52	7.02	7.02	7.02

Voyage Cost ($/RT):

Fuel at Sea	12,676	13,436	13,816	14,892	16,035	17,935
Fuel at Port	1,263	1,263	1,474	2,104	2,104	2,104
Capital	73,501	80,268	90,604	105,449	113,340	134,572
Operating	81,817	84,164	92,433	102,263	105,001	111,769
Total	**169,257**	**179,131**	**198,327**	**224,708**	**236,480**	**266,381**

Freight Cost ($/ton):

Fuel at Sea	0.51	0.38	0.35	0.30	0.27	0.22
Fuel at Port	0.05	0.04	0.04	0.04	0.04	0.03
Capital	2.94	2.29	2.27	2.11	1.89	1.68
Operating	3.27	2.40	2.31	2.05	1.75	1.40
Total	**6.77**	**5.12**	**4.96**	**4.49**	**3.94**	**3.33**

One-way distance 456

Source: US Army Corps of Engineers (2002).

Exhibit ___ (AH- 2): TECOT Schedule in Tampa, FL (September 2003)

Vessel Name	Schedule Number	Activity Date	Commodity Description	Tons	Imp / Exp	Load/ Unload	Berth	Destination	Origin
BARBARA VAUGHT	32764	9/4/2003	GRAINS, NOS, BULK	9,464	I	U	256	TPA	LA
BARBARA VAUGHT	32764	9/6/2003	COAL	8,613	I	U	4101	TPA	LA
BARBARA VAUGHT	32764	9/10/2003	PHOSPHAT CHEMICAL, BULK	17,600	E	L	4146	LA	TPA
DIANA T	32821	9/15/2003	COAL	15,695	I	U	4144	TPA	LA
DIANA T	32821	9/16/2003	PHOSPHATE, ROCK, BULK	28,594	E	L	4103	LA	TPA
DIANA T	32904	9/23/2003	COAL	15,713	I	U	4144	TPA	LA
DIANA T	32090	9/24/2003	PHOSPHATE, ROCK, BULK	28,252	E	L	4103	LA	TPA
DORIS GUENTHER	32830	9/16/2003	COAL	22,013	I	U	4144	TPA	LA
DORIS GUENTHER	32830	9/17/2003	PHOSPHAT CHEMICAL, BULK	22,503	E	L	204	LA	TPA
GAYLE EUSTACE	32794	9/11/2003	COAL	14,828	I	U	4101	TPA	LA
GAYLE EUSTACE	32794	9/12/2003	COAL	16,355	I	U	4144	TPA	LA
GAYLE EUSTACE	32794	9/13/2003	PHOSPHATE, ROCK,BULK	31,853	E	L	4103	LA	TPA
GAYLE EUSTACE	32899	9/21/2003	COAL	10,460	I	U	4101	TPA	LA
GAYLE EUSTACE	32899	9/22/2003	COAL	19,012	I	U	4144	TPA	LA
GAYLE EUSTACE	32899	9/25/2003	PHOSPHATE, ROCK, BULK	32,320	E	L	4103	LA	TPA
JUDY LITRICO	32857	9/18/2003	COAL	29,019	I	U	4101	TPA	LA
JUDY LITRICO	32857	9/19/2003	PHOSPHAT CHEMICAL, BULK	28,827	E	L	4146	LA	TPA
MARY TURNER	32745	9/6/2003	COAL	27,678	I	U	4101	TPA	LA
MARY TURNER	32745	9/8/2003	PHOSPHATE, ROCK,BULK	37,616	E	L	4103	LA	TPA
MARY TURNER	32832	9/16/2003	COAL	27,404	I	U	4101	TPA	LA
MARY TURNER	32832	9/17/2003	PHOSPHATE, ROCK, BULK	38,105	E	L	4103	LA	TPA
MARY TURNER	32918	9/25/2003	SEAWATER, BULK	1,063	I	U	271	TPA	LA
MARY TURNER	32918	9/26/2003	COAL	27,936	I	U	4101	TPA	LA
MARY TURNER	32918	9/27/2003	PHOSPHATE, ROCK, BULK	39,459	E	L	4103	LA	TPA
PAT CANTRELL	32932	9/26/2003	PHOSPHAT CHEMICAL, BULK	34,448	E	L	204	LA	TPA
PEGGY PALMER	32806	9/9/2003	COAL	34,494	I	U	4101	TPA	LA
PEGGY PALMER	32806	9/12/2003	PHOSPHAT CHEMICAL, BULK	6,005	E	L	4148	LA	TPA
PEGGY PALMER	32806	9/13/2003	PHOSPHAT CHEMICAL, BULK	21,012	E	L	4110	LA	TPA
PEGGY PALMER	32906	9/23/2003	COAL	33,474	I	U	4101	TPA	LA
PEGGY PALMER	32906	9/25/2003	PHOSPHAT CHEMICAL, BULK	4,509	E	L	4103	LA	TPA
PEGGY PALMER	32906	9/26/2003	PHOSPHAT CHEMICAL, BULK	19,501	E	L	4110	LA	TPA

D 760 /12

Exhibit ___ (AH- 3): Daily Time Charter Rates based on Preference Trades and US Army Corps of Engineers

Name	Type	$/Day	dwt	$/dwt-Day	Employment	Comments
TECOT Barges						
Diana Lugwig	ATB	11,979	22,944	0.52	TE	Incative In-Class
Gayle Eustace	ATB	13,793	36,659	0.38	TE	
Maria Flood	ATB	23,091	37,768	0.61	Preference	
Pat Cantrell	ATB	19,453	36,906	0.53	Pet Coke	
Peggy Palmer	ATB	15,887	37,700	0.42	TE	
Average	**ATB**	**16,841**	**34,395**	**0.49**		
Adjusted Average		**17,208**	**35,000**			
TECOT Ships						
Cynthia Fagan	Ship	22,914	40,853	0.56	Pet Coke & Preference	
Judy Litrico	Ship	21,859	32,100	0.68	Pet Coke & Preference	
Average	Ship	**22,387**	**36,477**	**0.62**		
Adjusted Average		**21,732**	**35,000**			
COE Ships						
US Replacement	**Ship**	**27,333**	**35,000**			**7-yr old Ship**
US Operating	**Ship**	**13,990**	**35,000**			**7-yr old Ship**
Foreign Replacement	Ship	5,337	35,000			7-yr old Ship
Foreign Operating	Ship	4,725	35,000			7-yr old Ship

All data related to time charter rate, covering capital, crewing, maintenance, supply and administration.

Sources:

- Preference Trade data from DMA final report, manipulated by AH & AA
- US Army Corps of Engineers Guidelines for Ship Cost, FY 2002

Exhibit ___ (AH- 4): Texas - Jacksonville, FL Required Freight Rates for US Flag Vessels

DWT	25,000	35,000	40,000	50,000	60,000	80,000
LOA	549	608	632	676	715	779
Beam	81	90	93	100	105	114
Draft	32	35	37	40	42	46
Speed	14	14	14	14	14	14

Replacement Cost	47,845,214	52,250,153	54,452,622	58,857,561	63,262,499	75,113,255
per DWT	1,914	1,493	1,361	1,177	1,054	939
Annualized (6.125%, 20 yrs)	4,215,163	4,603,238	4,797,276	5,185,351	5,573,426	6,617,478
Daily (345 days)	**12,218**	**13,343**	**13,905**	**15,030**	**16,155**	**19,181**

Daily Costs ($/Day):

Daily Capital	12,218	13,343	13,905	15,030	16,155	19,181
Operating Daily	13,600	13,990	14,186	14,576	14,966	15,931
Capital + Operating	25,818	27,333	28,091	29,606	31,121	35,112
per DWT	1.03	0.78	0.70	0.59	0.52	0.44
Fuel at Sea	4,203	4,455	4581	4938	5317	5317
Fuel at Port	421	421	421	526	526	526
Total at Sea	30,021	31,788	32,672	34,544	36,438	40,429
Total at Port	26,239	27,754	28,512	30,132	31,647	35,638
per DWT	1.05	0.79	0.71	0.60	0.53	0.45

Voyage Time, RT (days):

Service Speed	12.60	12.60	12.60	12.60	12.60	12.60
Days at Sea	7.03	7.03	7.03	7.03	7.03	7.03
Days at Port / Slack	3.00	3.00	3.50	4.00	4.00	4.00
Total Days	10.03	10.03	10.53	11.03	11.03	11.03

Voyage Cost ($/RT):

Fuel at Sea	29,549	31,321	32,206	34,716	37,381	37,381
Fuel at Port	1,263	1,263	1,474	2,104	2,104	2,104
Capital	122,550	133,833	146,427	165,787	178,195	211,576
Operating	136,415	140,328	149,383	160,779	165,083	175,725
Total	**289,777**	**306,745**	**329,490**	**363,387**	**382,763**	**426,785**

Freight Cost ($/ton):

Fuel at Sea	1.18	0.89	0.81	0.69	0.62	0.47
Fuel at Port	0.05	0.04	0.04	0.04	0.04	0.03
Capital	4.90	3.82	3.66	3.32	2.97	2.64
Operating	5.46	4.01	3.73	3.22	2.75	2.20
Total	**11.59**	**8.76**	**8.24**	**7.27**	**6.38**	**5.33**

One-way distance 1063

Source: US Army Corps of Engineers (2002).

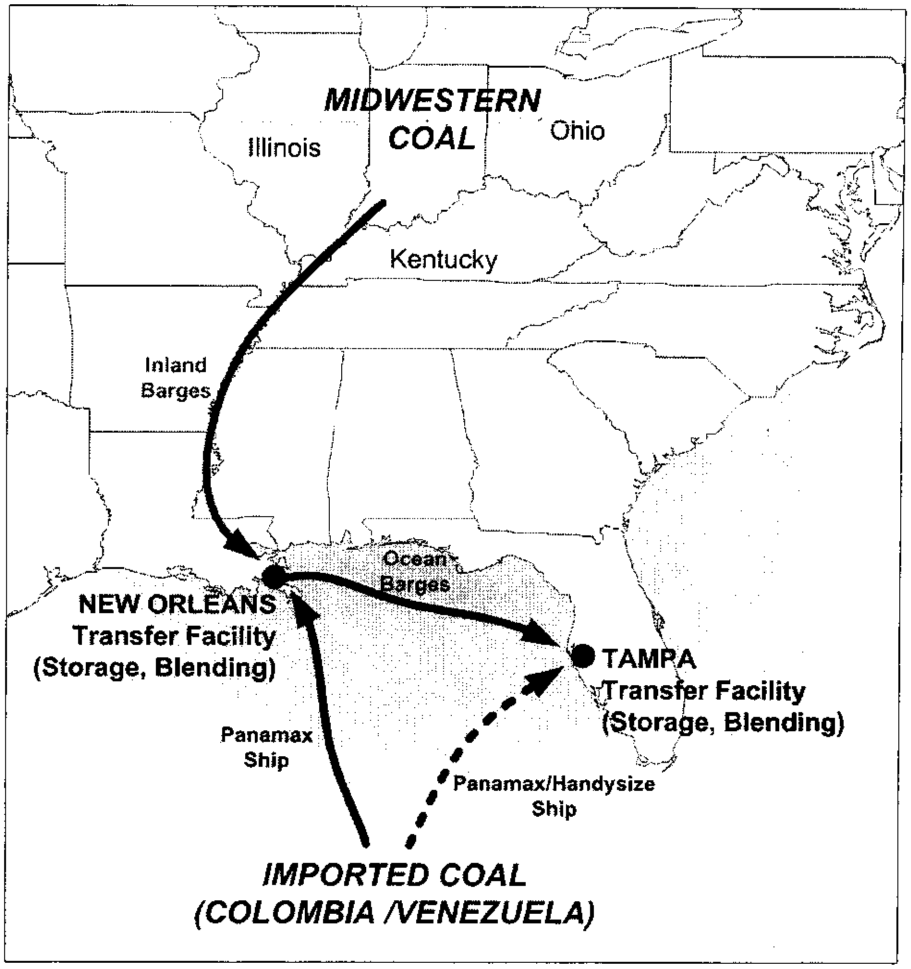
Exhibit ___ (AH- 5): Davant, LA - Tampa, FL Required Freight Rates for US and Foreign Ships

		TECOT Barge		
	US COE	No Backhaul	With Backhaul	Foreign
DWT	35,000	35,000	35,000	35,000
LOA	608			608
Beam	90			90
Draft	35			35
Speed	14	11	11	14
Replacement Cost	52,250,153			20,900,061
per DWT	1,493			597
Annualized (6.125%, 20 yrs)	4,603,238			1,841,295
Daily (345 days)	**13,343**			**5,337**
Daily Costs ($/Day):				
Daily Capital	13,343	12,311	12,311	5,337
Operating Daily	13,990	4,897	4,897	4,725
Capital + Operating	27,333	17,208	17,208	10,062
per DWT	0.78	0.49	0.49	0.29
Fuel at Sea	4,455	4,455	4,455	4,455
Fuel at Port	421	421	421	421
Total at Sea	31,788	21,663	21,663	14,517
Total at Port	27,754	17,629	17,629	10,483
per DWT	0.79	0.50	0.50	0.30
Voyage Time, RT (days):				
Service Speed	12.60	9.90	9.90	12.60
Days at Sea	3.02	3.84	3.84	3.02
Days at Port / Slack	3.00	3.00	5.00	3.00
Total Days	6.02	6.84	8.84	6.02
Voyage Cost ($/RT):				
Fuel at Sea	13,436	17,100	17,100	13,436
Fuel at Port	1,263	1,263	2,105	1,263
Capital	80,268	84,188	108,810	32,107
Operating	84,164	33,485	43,278	28,424
Total	**179,131**	**136,036**	**171,293**	**75,230**
Freight Cost ($/ton):				
Fuel at Sea	0.38	0.27	0.19	0.38
Fuel at Port	0.04	0.04	0.06	0.04
Capital	2.29	2.41	3.11	0.92
Operating	2.40	0.96	1.24	0.81
Total	**5.12**	**3.67**	**4.59**	**2.15**
Total Fronthaul			**2.30**	

TECOT Capital + Operating cost is based on Figure 2 (Preference Trade).

Operating cost for TECOT barges is assumed as 30% of same-size ships.

Exhibit ___ (AH- 6): Present and Future Transport Options



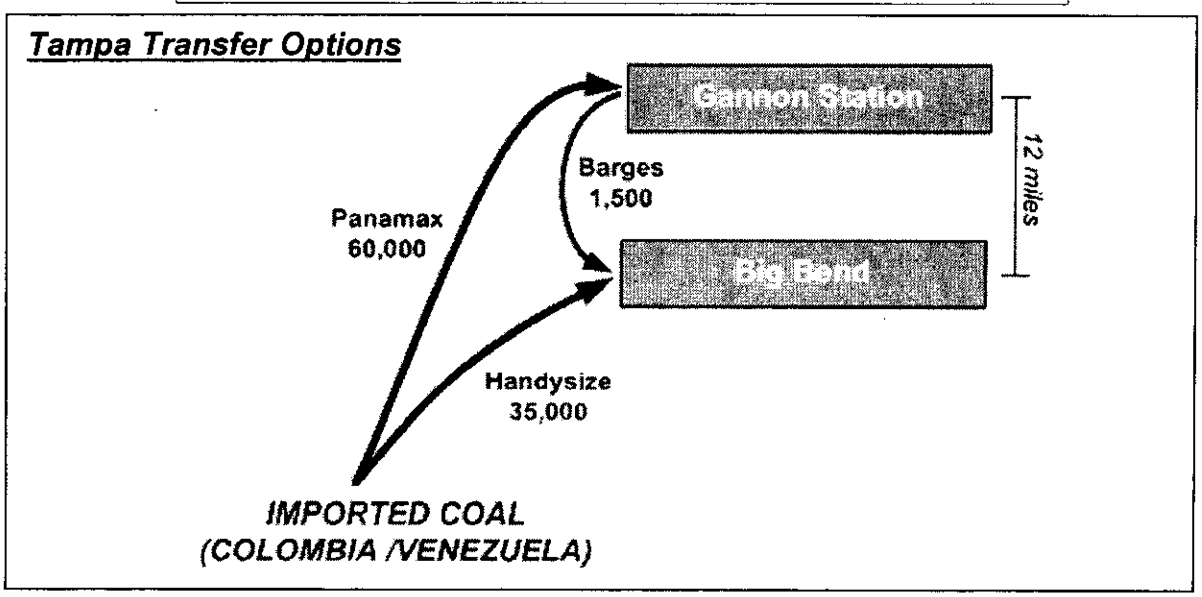


Exhibit ___ (AH- 7): Colombia - Tampa, FL and New Orleans Required Freight Rates for Foreign Ships

	Tampa, FL			New Orleans, LA		
DWT	35,000	50,000	60,000	35,000	50,000	60,000
LOA	608	676	715	608	676	715
Beam	90	100	105	90	100	105
Draft	35	40	42	35	40	42
Speed	14	14	14	14	14	14
Replacement Cost	20,900,061	23,543,024	25,305,000	20,900,061	23,543,024	25,305,000
per DWT	597	471	422	597	471	422
Annualized (6.125%, 20 yrs)	1,841,295	2,074,140	2,229,371	1,841,295	2,074,140	2,229,371
Daily (345 days)	**5,337**	6,012	6,462	**5,337**	6,012	6,462

Daily Costs ($/Day):

Daily Capital	5,337	6,012	6,462	5,337	6,012	6,462
Operating Daily	4,725	5,017	5,211	4,725	5,017	5,211
Capital + Operating	10,062	11,029	11,673	10,062	11,029	11,673
per DWT	0.29	0.22	0.19	0.29	0.22	0.19
Fuel at Sea	4,455	4,938	5,317	4,455	4,938	5,317
Fuel at Port	421	526	526	421	526	526
Total at Sea	14,517	15,967	16,990	14,517	15,967	16,990
Total at Port	10,483	11,555	12,199	10,483	11,555	12,199
per DWT	0.30	0.23	0.20	0.30	0.23	0.20

Voyage Time, RT (days):

Service Speed	12.60	12.60	12.60	12.60	12.60	12.60
Days at Sea	8.56	8.56	8.56	9.71	9.71	9.71
Days at Port / Slack	3.00	4.00	4.00	3.00	4.00	4.00
Total Days	11.56	12.56	12.56	12.71	13.71	13.71

Voyage Cost ($/RT):

Fuel at Sea	38,156	42,293	45,539	43,254	47,943	51,623
Fuel at Port	1,263	2,104	2,104	1,263	2,104	2,104
Capital	61,722	75,540	81,193	67,829	82,418	88,587
Operating	54,643	63,038	65,476	60,049	68,778	71,438
Total	**155,784**	**182,974**	**194,312**	**172,394**	**201,244**	**213,752**

Freight Cost ($/ton):

Fuel at Sea	1.09	0.85	0.59	1.24	0.96	0.67
Fuel at Port	0.04	0.04	0.04	0.04	0.04	0.04
Capital	1.76	1.51	1.35	1.94	1.65	1.48
Operating	1.56	1.26	1.09	1.72	1.38	1.19
Total	**4.45**	**3.66**	**3.07**	**4.93**	**4.02**	**3.37**

US Preference is based on DMA earning report for TECOT barges

Operating cost for TECOT barges is assumed as 30% of same-size ships

US Army Corps of Engineers Data (2002)

One-way Distance from Colombia

Tampa	1,295
New Orleans	1,468

Exhibit ___ (AH- 8): Big Bend Channel Improvement Analysis

Investment:

Item	Cost	Explanation
TE Dredging	1,770,000	25% of total cost estimated by COE at $7,454,000
New Unloader	7,454,000	COE estimate
Dock Upgrade	3,458,000	COE estimate
Total TE Investment	**12,682,000**	

Breakdown Volume:

Annualized Investment	1,117,284	Recovery of investgments based on 20 years and 6.125%
Transport Saving ($/ton)	10.73	See text
Breakeven Volume (tons/year)	104,127	

Comments:

1. COE taking responsibility of the channel would save TE on maintenance of existing channel $1,000,000 every 5 years.
2. TE cost estimate for a new unloader is $5,500,000 and for dock upgrade $2,400,000.

Exhibit ___ (AH-9)

Florida Utilities Coal Shipments for 2003

This exhibit summarizes information available at the Federal Energy Regulatory Commission. This commission collects data on cost and quality of fuels for electric plants (Form 423 - Monthly Report of Cost and Quality of Fuels for Electric Plants Data) to be used in the determination of electric rates. The following tables list shipments of 2003 domestic and imported bituminous coal for the following electric plants:

- Tampa Electric Company
- Gulf Power
- Florida Power
- Jacksonville Electric Authority

Tampa Electric Co. (TECO) - 2003 Coal Movements

Source: Federal Energy Regulatory Commission (Form 423 - Monthly Report of Cost and Quality of Fuels for Electric Plants Data)

DOMESTIC SHIPMENTS

State	Month	Plant	Source	Tons (000)	BTU Content	Cost (¢/mBtu)	$/Short Ton
IL	01	Transfer Facility	BIG RIDGE MINE	17.81	12,278	170.10	41.77
IL	01	Transfer Facility	GALATIA	128.66	12,162	145.50	35.39
IL	01	Transfer Facility	GALLATIN	9.76	12,369	137.80	34.09
IL	01	Transfer Facility	I-1	11.22	12,494	151.30	37.81
IL	01	Transfer Facility	I-1	58.20	12,494	143.30	35.81
IL	01	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	19.54	12,104	121.70	29.46
IL	01	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	45.67	12,333	142.00	35.03
IL	01	Transfer Facility	ZEIGLER	84.27	10,983	189.40	41.60
IL	02	Transfer Facility	BIG RIDGE MINE	3.39	12,159	170.10	41.36
IL	02	Transfer Facility	EAGLE VALLEY/ WILDCAT	9.39	12,436	147.30	36.64
IL	02	Transfer Facility	GALATIA	136.50	12,186	145.50	35.46
IL	02	Transfer Facility	I-1	62.69	12,408	146.90	36.45
IL	02	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	45.26	12,091	138.50	33.49
IL	02	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	60.55	12,210	113.10	27.62
IL	02	Transfer Facility	ZEIGLER	74.51	10,989	189.40	41.63
IL	03	Transfer Facility	BIG RIDGE MINE	17.33	12,222	170.10	41.58
IL	03	Transfer Facility	EAGLE VALLEY/ WILDCAT	18.86	12,388	147.30	36.50
IL	03	Transfer Facility	GALATIA	112.71	12,045	145.50	35.05
IL	03	Transfer Facility	I-1	76.54	12,428	146.90	36.51
IL	03	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	50.30	12,087	138.50	33.48
IL	03	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	54.20	12,234	114.90	28.11
IL	03	Transfer Facility	ZEIGLER	106.98	11,031	223.10	49.22
IL	04	Transfer Facility	BIG RIDGE MINE	26.88	12,207	174.30	42.55
IL	04	Transfer Facility	GALATIA	216.10	11,929	148.00	35.31
IL	04	Transfer Facility	I-1	68.58	12,478	150.10	37.46
IL	04	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	20.40	12,287	151.60	37.25
IL	04	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	53.81	12,277	134.10	32.93
IL	04	Transfer Facility	ZEIGLER	91.33	11,044	227.10	50.16
IL	05	Transfer Facility	BIG RIDGE MINE	21.38	12,204	174.30	42.54
IL	05	Transfer Facility	EAGLE VALLEY/ WILDCAT	9.91	12,305	150.80	37.11
IL	05	Transfer Facility	GALATIA	129.20	11,997	148.00	35.51
IL	05	Transfer Facility	I-1	67.13	12,478	150.10	37.46
IL	05	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	16.19	12,124	141.70	34.36
IL	05	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	54.35	12,289	143.40	35.24
IL	05	Transfer Facility	ZEIGLER	95.51	10,961	227.10	49.78
IL	06	Transfer Facility	BIG RIDGE MINE	31.56	12,250	174.30	42.70
IL	06	Transfer Facility	GALATIA	95.02	12,062	148.00	35.70
IL	06	Transfer Facility	I-1	47.45	12,595	150.10	37.81
IL	06	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	74.10	12,224	143.40	35.06
IL	06	Transfer Facility	ZEIGLER	89.39	10,975	226.40	49.69
IL	07	Transfer Facility	BIG RIDGE MINE	18.03	12,256	170.90	41.89
IL	07	Transfer Facility	GALATIA	108.15	12,028	145.20	34.93
IL	07	Transfer Facility	I-1	7.19	12,517	146.40	36.65
IL	07	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	76.06	12,321	139.40	34.35
IL	07	Transfer Facility	ZEIGLER	86.95	11,036	222.90	49.20
IL	08	Transfer Facility	BIG RIDGE MINE	23.97	12,142	170.90	41.50
IL	08	Transfer Facility	GALATIA	40.62	12,042	145.20	34.97
IL	08	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	70.38	12,227	139.40	34.09
IL	08	Transfer Facility	ZEIGLER	86.58	10,985	222.90	48.97
IL	09	Transfer Facility	BIG RIDGE MINE	28.78	12,207	170.90	41.72
IL	09	Transfer Facility	GALATIA	13.74	12,070	145.20	35.05
IL	09	Transfer Facility	WILLOW LAKE/ COTTAGE GROVE	81.34	12,228	139.40	34.09
IL	09	Transfer Facility	ZEIGLER	32.62	11,027	222.90	49.16
IL	09	Transfer Facility	ZEIGLER	51.56	11,027	210.90	46.51
IL	10	Transfer Facility	BIG RIDGE MINE	18.53	12,098	172.40	41.71
IL	10	Transfer Facility	GALATIA MINE	5.76	11,942	145.80	34.82
IL	10	Transfer Facility	I-1	15.50	11,947	137.10	32.76
IL	10	Transfer Facility	WILLOW LAKE/COTTAGE GROVE	77.17	12,198	140.20	34.20
IL	10	Transfer Facility	ZEIGLER	81.91	11,048	210.40	46.49
IL	11	Transfer Facility	WILLOW LAKE/COTTAGE GROVE	107.31	12,192	140.20	34.19
IL	11	Transfer Facility	ZEIGLER	86.17	10,942	210.40	46.04
IL	12	Transfer Facility	WILLOW LAKE/COTTAGE GROVE	53.08	12,151	145.00	35.24
IL	12	Transfer Facility	ZEIGLER	75.38	11,014	211.30	46.55
IL Total (Average)				**3,661.41**	**754,462**	**160.90**	**38.36**

Tampa Electric Co. (TECO) - 2003 Coal Movements (continued)

Source: Federal Energy Regulatory Commission (Form 423 - Monthly Report of Cost and Quality of Fuels for Electric Plants Data)

DOMESTIC SHIPMENTS

State	Month	Plant	Source	Tons (000)	BTU Content	Cost (¢/mBtu)	$/Short Ton
KY	01	Transfer Facility	DEKOVEN	33.32	12,662	157.10	39.78
KY	01	Transfer Facility	DOTITKI	16.81	12,374	165.20	40.88
KY	01	Transfer Facility	KNOB LICK #9	14.74	12,059	151.10	36.44
KY	02	Transfer Facility	DEKOVEN	3.00	12,551	158.00	39.66
KY	02	Transfer Facility	DEKOVEN	22.14	12,642	158.30	40.02
KY	02	Transfer Facility	DEKOVEN	3.80	12,836	150.60	38.66
KY	02	Transfer Facility	DOTITKI	15.81	12,390	165.20	40.94
KY	02	Transfer Facility	KNOB LICK #9	3.17	12,047	151.10	36.41
KY	03	Transfer Facility	DEKOVEN	16.70	12,856	152.70	39.26
KY	03	Transfer Facility	DEKOVEN	19.23	12,835	150.80	38.71
KY	03	Transfer Facility	DOTITKI	16.38	12,383	165.20	40.91
KY	04	Transfer Facility	DEKOVEN	18.00	12,777	155.00	39.61
KY	04	Transfer Facility	DEKOVEN	14.00	12,778	153.70	39.28
KY	04	Transfer Facility	DOTITKI	15.68	12,355	165.20	40.82
KY	05	Transfer Facility	DEKOVEN	18.08	12,475	150.50	37.55
KY	05	Transfer Facility	DEKOVEN	12.67	12,543	149.50	37.50
KY	05	Transfer Facility	DOTITKI	14.26	12,381	168.40	41.70
KY	05	Transfer Facility	PATRIOT	11.03	11,114	114.80	25.52
KY	06	Transfer Facility	DEKOVEN	18.62	12,674	154.60	39.19
KY	06	Transfer Facility	DEKOVEN	12.34	12,723	153.10	38.96
KY	06	Transfer Facility	DOTITKI	22.39	12,338	168.40	41.55
KY	06	Transfer Facility	PATRIOT	11.03	11,284	130.70	29.50
KY	07	Transfer Facility	DEKOVEN	17.54	12,771	151.90	38.80
KY	07	Transfer Facility	DEKOVEN	6.82	12,798	149.90	38.37
KY	08	Transfer Facility	DEKOVEN	15.70	12,796	152.20	38.95
KY	08	Transfer Facility	DEKOVEN	8.24	12,791	143.40	36.68
KY	09	Transfer Facility	DEKOVEN	31.16	12,670	151.10	38.29
KY	09	Transfer Facility	DEKOVEN	22.66	12,652	149.00	37.70
KY	10	Transfer Facility	DEVOKEN	24.96	12,642	151.20	38.23
KY	10	Transfer Facility	DEVOKEN	20.07	12,619	149.30	37.68
KY	11	Transfer Facility	DEVOKEN	25.02	12,547	166.90	41.88
KY	11	Transfer Facility	DEVOKEN	22.77	12,541	156.70	39.30
KY	12	Transfer Facility	DEKOVEN	23.54	12,547	165.30	41.48
KY	12	Transfer Facility	DEKOVEN	11.98	12,571	152.40	38.32
KY Total (Average)				**563.66**	**425,022**	**153.94**	**38.56**
OH	09	Transfer Facility	POWHATTAN	34.92	12,634	143.70	36.31
OH	10	Transfer Facility	POWHATTAN	35.15	12,708	143.70	36.52
OH	11	Transfer Facility	POWHATTAN	34.78	12,654	143.70	36.37
OH	12	Transfer Facility	POWHATTAN	17.41	12,740	153.70	39.16
OH Total (Average)				**122.26**	**50,736**	**146.21**	**37.09**
DOMESTIC Total (Average)				**4,347.33**	**1,230,220**	**157.89**	**38.37**

IMPORTED SHIPMENTS

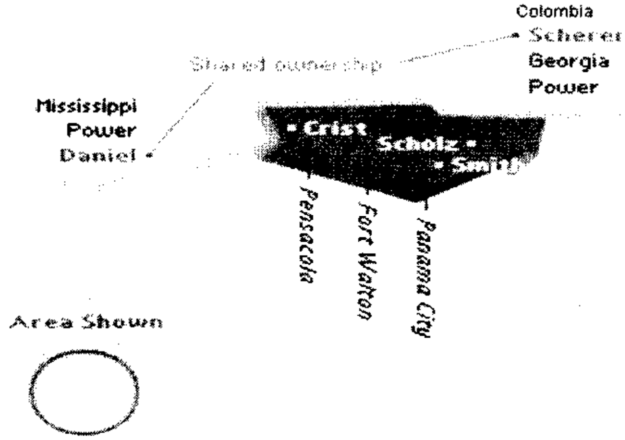
State	Month	Plant	Source	Tons (000)	BTU Content	Cost (¢/mBtu)	$/Short Ton
IM	01	Transfer Facility	PASA DIABLO (VENEZUELA)	38.30	13,165	157.40	41.44
IM	04	Transfer Facility	COLOMBIA	73.25	12,407	151.30	37.54
IM	05	Transfer Facility	VENEZUELA	59.32	13,033	152.30	39.70
IM	06	Transfer Facility	VENEZUELA	54.01	12,997	151.90	39.48
IM	07	Transfer Facility	VENEZUELA	56.41	12,989	151.80	39.43
IM	12	Transfer Facility	PASA DIABLO (VENEZUELA)	56.66	12,792	153.70	39.32
IMPORTED Total (Average)				**337.95**	**77,383**	**153.09**	**39.51**

Gulf Power, Pensacola - 2003 Coal Movements

Source: Federal Energy Regulatory Commission (Form 423 - Monthly Report of Cost and Quality of Fuels for Electric Plants Data)

IMPORTED SHIPMENTS

State	Month	Plant	Source	Tons (000)	BTU Content	Cost (¢/mBtu)	$/Short Ton
IM	01	Crist	PEABODY COAL SALES (Australia)	6.00	12,173	159.60	38.86
IM	01	Crist	PEABODY COAL SALES (Colombia)	25.00	11,824	152.00	35.94
IM	01	Crist	PEABODY COAL SALES (Colombia)	57.00	11,710	152.30	35.67
IM	01	Crist	PEABODY COAL SALES (Colombia)	8.00	11,752	157.60	37.04
IM	01	Smith	PEABODY COAL SALES (Australia)	25.00	12,173	164.70	40.10
IM	01	Smith	PEABODY COAL SALES (Colombia)	15.00	11,710	157.50	36.89
IM	02	Crist	PEABODY COALSALES (Australia)	4.00	12,173	159.60	38.86
IM	02	Crist	PEABODY COALSALES (Colombia)	44.00	11,824	152.00	35.94
IM	02	Crist	PEABODY COALTRADE (Colombia)	8.00	11,710	152.30	35.67
IM	02	Crist	PEABODY COALSALES (Colombia)	139.00	11,730	157.60	36.97
IM	02	Smith	PEABODY COALSALES (Australia)	36.00	12,173	164.70	40.10
IM	03	Crist	PEABODY COALSALES (Australia)	5.00	12,173	159.60	38.86
IM	03	Crist	PEABODY COALSALES (Colombia)	74.00	11,730	152.00	35.66
IM	03	Crist	PEABODY COALSALES (Colombia)	55.00	11,715	157.60	36.93
IM	03	Smith	PEABODY COALSALES (Australia)	30.00	12,173	164.70	40.10
IM	04	Crist	PEABODY COALSALES (Colombia)	91.00	11,730	152.50	35.78
IM	04	Crist	PEABODY COALSALES (Colombia)	90.00	11,879	157.90	37.51
IM	04	Smith	PEABODY COALSALES (Australia)	1.00	12,173	165.30	40.24
IM	05	Crist	PEABODY COALSALES (Colombia)	62.00	11,760	158.00	37.16
IM	05	Crist	INTEROCEAN COAL SALES (Colombi	162.00	11,804	152.60	36.03
IM	06	Crist	PEABODY COAL SALES (Colombia)	65.00	11,760	158.00	37.16
IM	06	Crist	INTEROCEAN COAL SALES (Colombi	146.00	11,768	152.60	35.92
IM	07	Crist	PEABODY COALSALES (Colombia)	102.00	11,803	157.60	37.20
IM	07	Crist	INTEROCEAN COAL SALES (Colombi	12.00	11,726	152.40	35.74
IM	08	Crist	PEABODY COALSALES (Colombia)	67.00	11,796	153.30	36.17
IM	08	Crist	PEABODY COALSALES (Colombia)	43.00	11,703	157.70	36.91
IM	08	Crist	INTEROCEAN COAL SALES (Colombi	126.00	11,726	152.40	35.74
IM	09	Crist	PEABODY COALSALES (Colombia)	7.00	11,796	153.30	36.17
IM	09	Crist	PEABODY COALSALES (Colombia)	13.00	11,730	157.70	37.00
IM	09	Crist	INTEROCEAN COAL SALES (Colombi	233.00	11,712	152.40	35.70
IM	09	Smith	PEABODY COALSALES (Colombia)	0.40	11,730	163.00	38.24
IM	10	Crist	PEABODY COALSALES (Colombia)	37.00	11,771	155.10	36.51
IM	10	Crist	INTEROCEAN COAL SALES (Colombi	68.00	11,696	153.60	35.93
IM	10	Crist	INTEROCEAN COAL SALES (Colombi	4.00	11,599	152.80	35.45
IM	10	Crist	INTEROCEAN COAL SALES (Colombi	11.00	11,664	180.30	42.06
IM	10	Smith	INTEROCEAN COAL SALES (Colombi	52.00	11,696	157.90	36.94
IM	10	Smith	INTEROCEAN COAL SALES (Colombi	13.00	11,599	158.20	36.70
IM	10	Smith	PEABODY COALSALES (Colombia)	4.00	11,771	159.40	37.53
IM	11	Crist	INTEROCEAN COAL SALES (Colombi	62.00	11,767	153.50	36.12
IM	11	Crist	INTEROCEAN COALSALES (Colombia	6.00	11,664	180.30	42.06
IM	11	Smith	INTEROCEAN COAL SALES (Colombi	5.00	11,767	157.80	37.14
IM	11	Smith	INTEROCEAN COAL SALES (Colombi	39.00	11,599	158.20	36.70
IM	12	Crist	INTEROCEAN COAL SALES (Colombi	118.00	11,767	153.50	36.12
IMPORTED Total (Average)				**2,170.40**	**507,699**	**157.72**	**37.26**
			Australia	107.00	85,211	162.60	39.59
			Colombia	2,063.40	422,488	156.74	36.79



Florida Power - 2003 Coal Movements

Source: Federal Energy Regulatory Commission (Form 423 - Monthly Report of Cost and Quality of Fuels for Electric Plants Data)

DOMESTIC SHIPMENTS

State	Month	Plant	Source	Tons (000)	BTU Content	Cost (¢/mBtu)	$/Short Ton
KY	01	Crystal River	Rapid Loader	39.15	12,836	221.13	56.77
KY	01	Crystal River	Scott's Branch	9.97	12,853	194.44	49.98
KY	01	Crystal River	Scott's Branch	19.65	12,837	219.44	56.34
KY	01	Crystal River	Sidewinder	9.70	12,424	213.04	52.94
KY	01	Crystal River	Sidewinder	22.46	12,572	217.44	54.67
KY	01	Crystal River	Sidewinder	35.45	12,643	229.44	58.02
KY	01	Crystal River	Sidney (Goff)	28.65	12,588	226.44	57.01
KY	02	Crystal River	Rapid Loader	57.85	12,852	221.95	57.05
KY	02	Crystal River	Scott's Branch	9.64	12,817	195.28	50.06
KY	02	Crystal River	Scott's Branch	29.97	12,784	220.28	56.32
KY	02	Crystal River	Sidewinder	20.39	12,990	213.88	55.57
KY	02	Crystal River	Sidewinder	29.56	12,634	218.28	55.15
KY	02	Crystal River	Sidewinder	10.59	12,775	198.28	50.66
KY	02	Crystal River	Sidney (Goff)	37.60	12,583	227.28	57.20
KY	03	Crystal River	Rapid Loader	76.92	12,902	222.15	57.32
KY	03	Crystal River	Scott's Branch	9.18	12,755	195.44	49.86
KY	03	Crystal River	Scott's Branch	10.09	12,700	220.44	55.99
KY	03	Crystal River	Sidewinder	29.63	12,649	214.08	54.16
KY	03	Crystal River	Sidewinder	40.17	12,525	218.44	54.72
KY	03	Crystal River	Sidewinder	9.93	12,861	198.44	51.04
KY	03	Crystal River	Sidney (Goff)	46.64	12,601	227.48	57.33
KY	04	Crystal River	Apex 2 Dock	9.65	13,416	198.88	53.36
KY	04	Crystal River	Rapid Loader	58.12	12,887	222.07	57.24
KY	04	Crystal River	Scott's Branch	30.22	12,808	220.40	56.46
KY	04	Crystal River	Scott's Branch	9.30	12,819	193.55	49.62
KY	04	Crystal River	Sidewinder	19.43	12,597	214.00	53.92
KY	04	Crystal River	Sidewinder	38.37	12,535	218.40	54.75
KY	04	Crystal River	Sidewinder	8.06	12,893	198.40	51.16
KY	04	Crystal River	Sidney (Goff)	64.95	12,506	227.40	56.88
KY	05	Crystal River	Rapid Loader	68.54	12,641	222.23	56.18
KY	05	Crystal River	Scott's Branch	29.67	12,833	220.56	56.61
KY	05	Crystal River	Scott's Branch	9.44	12,815	195.56	50.12
KY	05	Crystal River	Sidewinder	9.66	12,721	198.56	50.52
KY	05	Crystal River	Sidewinder	67.76	12,596	214.16	53.95
KY	05	Crystal River	Sidewinder	18.61	12,440	218.56	54.38
KY	05	Crystal River	Sidney (Goff)	38.42	12,564	227.56	57.18
KY	06	Crystal River	Rapid Loader	86.59	12,697	221.37	56.21
KY	06	Crystal River	Scott's Branch	19.91	12,762	219.64	56.06
KY	06	Crystal River	Scott's Branch	9.96	12,748	194.64	49.63
KY	06	Crystal River	Sidewinder	38.19	12,464	213.28	53.17
KY	06	Crystal River	Sidewinder	28.97	12,579	217.64	54.75
KY	06	Crystal River	Sidewinder	9.65	12,867	197.64	50.86
KY	06	Crystal River	Sidney (Goff)	48.32	12,487	226.68	56.61
KY	07	Crystal River	Rapid Loader	68.04	12,786	224.14	57.32
KY	07	Crystal River	Scott's Branch	9.91	12,844	222.52	57.16
KY	07	Crystal River	Scott's Branch	10.00	12,658	197.52	50.00
KY	07	Crystal River	Sidewinder	47.43	12,655	216.12	54.70
KY	07	Crystal River	Sidewinder	38.14	12,615	220.52	55.64
KY	07	Crystal River	Sidewinder	9.78	12,864	195.47	50.29
KY	07	Crystal River	Sidewinder	17.98	12,961	209.54	54.32
KY	07	Crystal River	Sidney (Goff)	48.07	12,480	229.52	57.29
KY	07	Crystal River	Sidney (Goff)	9.64	12,180	214.22	52.18
KY	08	Crystal River	Yellow Creek	17.95	12,910	215.31	55.59
KY	08	Crystal River	Rapid Loader	57.28	12,985	221.84	57.61
KY	08	Crystal River	Scott's Branch	9.81	12,905	220.16	56.82
KY	08	Crystal River	Scott's Branch	9.90	12,872	195.16	50.24
KY	08	Crystal River	Sidewinder	38.86	12,562	213.76	53.71
KY	08	Crystal River	Sidewinder	38.40	12,723	218.16	55.51
KY	08	Crystal River	Sidewinder	9.66	12,894	198.16	51.10
KY	08	Crystal River	Sidewinder	9.41	13,095	207.27	54.28
KY	08	Crystal River	Sidney (Goff)	47.14	12,324	227.16	55.99
KY	09	Crystal River	Yellow Creek	28.08	12,908	213.83	55.20
KY	09	Crystal River	Rapid Loader	67.37	12,785	220.35	56.34
KY	09	Crystal River	Rapid Loader	18.89	12,640	202.77	51.26
KY	09	Crystal River	Scott's Branch	19.54	12,766	218.64	55.82
KY	09	Crystal River	Scott's Branch	9.22	12,731	193.64	49.30
KY	09	Crystal River	Sidewinder	39.29	12,525	212.24	53.17
KY	09	Crystal River	Sidewinder	48.03	12,473	216.64	54.04
KY	09	Crystal River	Sidewinder	10.39	12,778	192.17	49.11
KY	09	Crystal River	Sidewinder	27.85	12,909	205.81	53.14
KY	09	Crystal River	Sidney (Goff)	48.31	12,561	225.64	56.69
KY	10	Crystal River	RAPID LOADER	147.49	12,795	201.64	51.60
KY	10	Crystal River	SCOTT'S BRANCH	27.44	12,796	217.48	55.66
KY	10	Crystal River	SCOTT'S BRANCH	9.93	12,828	192.48	49.38
KY	10	Crystal River	SIDEWINDER	40.07	12,513	211.06	52.82
KY	10	Crystal River	SIDEWINDER	0.12	12,677	215.48	54.63
KY	10	Crystal River	SIDEWINDER	30.11	12,590	215.48	54.26
KY	10	Crystal River	SIDEWINDER	9.00	12,792	195.48	50.01
KY	10	Crystal River	SIDEWINDER	19.69	12,948	204.69	53.01
KY	10	Crystal River	SIDNEY (GOFF)	9.99	12,410	224.48	55.72
KY	10	Crystal River	SIDNEY (GOFF)	19.32	12,549	206.88	51.92

Florida Power - 2003 Coal Movements (continued)

Source: Federal Energy Regulatory Commission (Form 423 - Monthly Report of Cost and Quality of Fuels for Electric Plants Data)

DOMESTIC SHIPMENTS

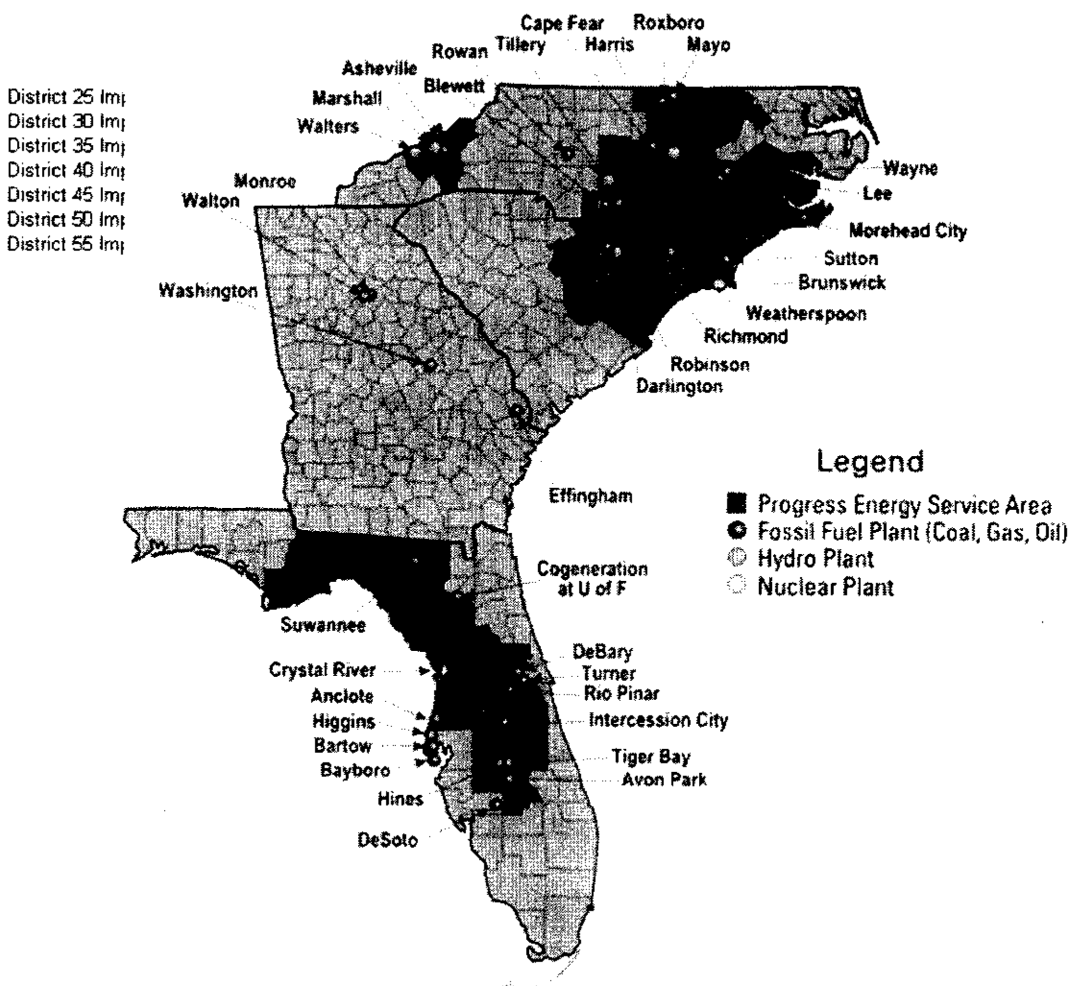
State	Month	Plant	Source	Tons (000)	BTU Content	Cost (¢/mBtu)	$/Short Ton
KY	11	Crystal River	Rapid Loader	128.29	12,790	203.09	51.95
KY	11	Crystal River	Scott's Branch	28.55	12,870	218.96	56.36
KY	11	Crystal River	Scott's Branch	9.49	12,805	193.96	49.67
KY	11	Crystal River	Sidewinder	28.90	12,563	212.56	53.41
KY	11	Crystal River	Sidewinder	38.38	12,574	216.96	54.56
KY	11	Crystal River	Sidewinder	9.59	12,731	217.96	55.50
KY	11	Crystal River	Sidewinder	0.22	12,956	192.34	49.84
KY	11	Crystal River	Sidewinder	9.15	12,956	192.34	49.84
KY	11	Crystal River	Sidewinder	19.08	12,934	206.12	53.32
KY	11	Crystal River	Sidney (Goff)	9.66	12,021	208.36	50.09
KY Total (Average)				**2,713.77**	**1,157,343**	**211.91**	**53.90**
WV	01	Crystal River	Fola	19.00	12,804	239.08	61.22
WV	01	Crystal River	Hutchinson	8.99	12,120	240.79	58.37
WV	01	Crystal River	Hutchinson	38.46	12,452	240.79	59.97
WV	01	Intern'l Marine TF	Kanawha River Terminal	3.27	12,395	203.28	50.39
WV	01	Intern'l Marine TF	Kanawha River Terminal	14.68	12,810	203.28	52.08
WV	01	Intern'l Marine TF	Kanawha River Terminal	23.98	12,712	203.28	51.68
WV	01	Intern'l Marine TF	Kanawha River Terminal	7.89	12,665	229.28	58.08
WV	01	Intern'l Marine TF	Kanawha River Terminal	13.93	12,897	237.28	61.20
WV	01	Intern'l Marine TF	Marmet Synfuel, LLC	35.46	13,177	231.33	60.96
WV	01	Intern'l Marine TF	Massey Coal Sales Co., Inc.	12.99	12,661	237.28	60.08
WV	01	Intern'l Marine TF	Massey Coal Sales Co., Inc.	9.40	12,682	237.28	60.18
WV	01	Intern'l Marine TF	Massey Coal Sales Co., Inc.	9.07	13,449	237.28	63.82
WV	01	Intern'l Marine TF	Massey Coal Sales Co., Inc.	8.23	12,081	237.28	57.33
WV	02	Crystal River	Fola	18.37	12,518	239.92	60.07
WV	02	Crystal River	Hutchinson	57.11	12,286	241.65	59.38
WV	02	Intern'l Marine TF	Kanawha River Terminal	16.12	12,642	202.44	51.18
WV	02	Intern'l Marine TF	Kanawha River Terminal	1.65	12,545	202.44	50.79
WV	02	Intern'l Marine TF	Marmet Synfuel, LLC	46.54	13,177	230.53	60.75
WV	02	Intern'l Marine TF	Massey Coal Sales Co., Inc.	7.10	12,427	236.44	58.76
WV	02	Intern'l Marine TF	Massey Coal Sales Co., Inc.	13.88	12,469	236.44	58.96
WV	02	Intern'l Marine TF	Massey Coal Sales Co., Inc.	14.36	12,701	236.44	60.06
WV	03	Crystal River	Fola	16.99	12,760	240.08	61.27
WV	03	Crystal River	Hutchinson	46.38	12,550	241.82	60.70
WV	03	Intern'l Marine TF	Kanawha River Terminal	5.69	12,557	202.44	50.84
WV	03	Intern'l Marine TF	Kanawha River Terminal	29.76	12,587	202.44	50.96
WV	03	Intern'l Marine TF	Kanawha River Terminal	52.68	12,571	202.44	50.90
WV	03	Intern'l Marine TF	Marmet Synfuel, LLC	3.37	13,210	230.53	60.91
WV	03	Intern'l Marine TF	Marmet Synfuel, LLC	18.48	13,091	230.53	60.36
WV	03	Intern'l Marine TF	Massey Coal Sales Co., Inc.	47.29	12,383	236.44	58.56
WV	03	Intern'l Marine TF	Riverside Synfuel, LLC	10.02	12,448	228.44	56.87
WV	04	Crystal River	Fola	19.13	12,730	240.08	61.12
WV	04	Crystal River	Hutchinson	48.17	12,400	241.82	59.97
WV	04	Intern'l Marine TF	Kanawha River Terminal	1.93	12,571	202.44	50.90
WV	04	Intern'l Marine TF	Kanawha River Terminal	11.24	12,510	202.44	50.65
WV	04	Intern'l Marine TF	Kanawha River Terminal	3.48	12,491	202.44	50.57
WV	04	Intern'l Marine TF	Marmet Synfuel, LLC	9.73	13,129	230.53	60.53
WV	04	Intern'l Marine TF	Marmet Synfuel, LLC	23.20	12,989	230.53	59.89
WV	04	Intern'l Marine TF	Massey Coal Sales Co., Inc.	53.51	12,372	236.44	58.50
WV	04	Intern'l Marine TF	Riverside Synfuel, LLC	10.21	12,389	228.44	56.60
WV	05	Crystal River	Fola	9.43	12,586	240.24	60.47
WV	05	Crystal River	Hutchinson	47.94	12,543	241.98	60.70
WV	05	Intern'l Marine TF	Marmet Synfuel, LLC	38.32	13,026	230.53	60.06
WV	05	Intern'l Marine TF	Massey Coal Sales Co., Inc.	55.24	12,260	236.44	57.98
WV	06	Crystal River	Fola	17.94	12,565	239.32	60.09
WV	06	Crystal River	Hutchinson	75.78	12,447	241.03	60.00
WV	06	Intern'l Marine TF	Kanawha River Terminal	56.40	12,310	236.44	58.21
WV	06	Intern'l Marine TF	Marmet Synfuel, LLC	34.25	13,060	230.53	60.21
WV	07	Crystal River	Fola	18.58	12,573	242.08	60.87
WV	07	Crystal River	Hutchinson	9.48	12,023	215.77	51.88
WV	07	Crystal River	Hutchinson	46.57	12,187	243.88	59.44
WV	07	Intern'l Marine TF	Kanawha River Terminal	43.07	12,416	236.44	58.71
WV	07	Intern'l Marine TF	Marmet Synfuel, LLC	10.91	12,901	230.53	59.48
WV	07	Intern'l Marine TF	Marmet Synfuel, LLC	23.06	13,002	230.53	59.95
WV	08	Crystal River	Fola	18.04	12,741	239.72	61.09
WV	08	Crystal River	Hutchinson	46.69	12,195	241.45	58.89
WV	08	Intern'l Marine TF	Kanawha River Terminal	53.05	12,265	236.44	58.00
WV	08	Intern'l Marine TF	Marmet Synfuel, LLC	33.80	12,893	230.53	59.44
WV	09	Crystal River	Fola	18.35	12,659	238.20	60.31
WV	09	Crystal River	Hutchinson	19.79	12,825	239.88	61.53
WV	09	Intern'l Marine TF	Kanawha River Terminal	26.65	12,345	236.44	58.38
WV	09	Intern'l Marine TF	Kanawha River Terminal	32.83	12,406	228.44	56.68
WV	09	Intern'l Marine TF	Marmet Synfuel, LLC	33.92	13,025	230.53	60.05
WV	10	Crystal River	FOLA	19.21	12,677	236.96	60.08
WV	10	Crystal River	HUTCHINSON	9.74	13,039	238.60	62.22
WV	10	Crystal River	HUTCHINSON	9.29	13,010	212.46	55.28
WV	10	Intern'l Marine TF	KANAWHA RIVER TERMINAL	53.26	12,288	227.35	55.87
WV	10	Intern'l Marine TF	MARMET SYNFUEL, LLC	33.09	12,973	243.44	63.16
WV	11	Crystal River	Fola	18.58	12,558	238.44	59.89
WV	11	Crystal River	Hutchinson	2.18	12,543	240.12	60.24
WV	11	Crystal River	Hutchinson	25.73	12,532	216.08	54.16
WV	11	Intern'l Marine TF	Kanawha River Terminal	1.71	12,109	227.35	55.06
WV	11	Intern'l Marine TF	Marmet Synfuel, LLC	25.05	12,776	243.44	62.20
WV Total (Average)				**1,759.67**	**909,156**	**230.22**	**58.17**
DOMESTIC Total (Average)				**4,473.44**	**2,066,499**	**219.97**	**55.78**

Florida Power - 2003 Coal Movements (continued)

Source: Federal Energy Regulatory Commission (Form 423 - Monthly Report of Cost and Quality of Fuels for Electric Plants Data)

IMPORTED SHIPMENTS

State	Month	Plant	Source	Tons (000)	BTU Content	Cost (¢/mBtu)	$/Short Ton
IM	02	Intern'l Marine TF	Weglokoks (Poland)	7.76	12,801	150.38	38.50
IM	03	Intern'l Marine TF	Drummond (Colombia)	1.49	11,541	130.33	30.08
IM	03	Intern'l Marine TF	Weglokoks (Poland)	21.46	12,855	150.38	38.66
IM	04	Intern'l Marine TF	UL. Mickiewicza 29 (Poland)	6.41	12,925	150.38	38.87
IM	05	Intern'l Marine TF	Santa Marta (Colombia)	22.05	12,305	150.21	36.97
IM	05	Intern'l Marine TF	UL. Mickiewicza 29 (Poland)	15.33	12,983	150.78	39.15
IM	06	Intern'l Marine TF	Maracaibo (Venezuela)	51.49	12,971	172.73	44.81
IM	07	Intern'l Marine TF	Maracaibo (Venezuela)	43.28	13,566	172.42	46.78
IM	08	Intern'l Marine TF	Drummond (Colombia)	33.25	11,948	150.21	35.89
IM	08	Intern'l Marine TF	Mickiewicza 29 (Poland)	28.13	12,794	150.78	38.58
IM	08	Intern'l Marine TF	Paso Diablo (Venezuela)	51.55	13,153	170.27	44.79
IM	09	Intern'l Marine TF	Drummond (Colombia)	31.65	11,939	150.21	35.87
IM	09	Intern'l Marine TF	Mickiewicza 29 (Poland)	12.80	13,060	150.78	39.38
IM	09	Intern'l Marine TF	Paso Diablo (Venezuela)	43.96	13,193	171.50	45.25
IM	10	Intern'l Marine TF	DRUMMOND	32.40	12,483	164.96	41.18
IM	10	Intern'l Marine TF	PASO DIABLO (Venezuela)	43.29	13,097	206.20	54.01
IM	11	Intern'l Marine TF	Drummond	11.99	12,791	164.96	42.20
IMPORTED Total (Average)				**458.29**	**216,405**	**159.65**	**40.81**



JEA (Jacksonville Electric Authority) - 2003 Coal Movements

Source: Federal Energy Regulatory Commission (Form 423 - Monthly Report of Cost and Quality of Fuels for Electric Plants Data)

DOMESTIC SHIPMENTS

State	Month	Plant	Source	Tons (000)	BTU Content	Cost (¢/mBtu)	$/Short Ton
KY	01	St Johns River	APEX MINE	9.57	12,571	173.20	43.55
KY	01	St Johns River	CLOVER DTE	128.92	12,596	157.40	39.65
KY	02	St Johns River	CLOVER DTE	106.49	12,567	157.80	39.66
KY	03	St Johns River	CLOVER DTE	96.28	12,613	157.20	39.66
KY	04	St Johns River	CLOVER DTE	85.12	12,555	157.90	39.65
KY	05	St Johns River	CLOVER DTE	95.65	12,572	160.80	40.43
KY	06	St Johns River	CLOVER DTE	62.80	12,545	162.00	40.65
KY	07	St Johns River	CLOVER DTE	73.30	12,514	162.40	40.65
KY	08	St Johns River	CLOVER DTE	73.30	12,667	160.60	40.65
KY	09	St Johns River	CLOVER DTE	104.66	12,684	160.20	40.64
KY	10	St Johns River	CLOVER DTE	83.16	12,645	160.70	40.64
KY	11	St Johns River	CLOVER DTE	62.00	12,641	160.80	40.65
KY	12	St Johns River	CLOVER DTE	72.14	12,643	156.40	39.55
KY Total (Average)				**1,053.59**	**163,803**	**160.57**	**40.46**
PA	01	Northside	EMERALD RESOURCES	32.10	13,064	150.40	39.30
PA	03	Northside	EMERALD RESOURCES	14.70	12,778	145.80	37.26
PA	05	Northside	RAG	16.10	13,134	145.80	38.30
PA	05	Northside	RAG	14.60	13,142	145.80	38.32
PA	06	Northside	RAG	13.60	13,002	143.80	37.39
PA	06	Northside	RAG	15.50	13,099	141.70	37.12
PA	07	Northside	RAG	13.80	13,064	144.30	37.70
PA	07	Northside	RAG	13.80	13,040	146.60	38.29
PA	08	Northside	RAG	14.70	13,240	145.20	38.45
PA	08	Northside	RAG	14.70	12,896	145.40	37.50
PA	09	Northside	RAG	14.70	12,889	139.40	35.93
PA	10	Northside	RAG	13.70	13,030	145.30	37.87
PA	10	Northside	RAG	13.80	12,913	145.40	37.55
PA	11	Northside	RAG	13.80	12,988	145.80	37.87
PA	12	Northside	RAG	13.50	12,905	145.50	37.55
PA	12	Northside	RAG	14.00	12,802	182.30	46.68
PA	12	Northside	RAG	20.20	13,017	182.50	47.51
PA Total (Average)				**267.30**	**221,003**	**149.45**	**38.85**
DOMESTIC Total (Average)				**1,320.89**	**384,806**	**154.18**	**39.54**

IMPORTED SHIPMENTS

State	Month	Plant	Source	Tons (000)	BTU Content	Cost (¢/mBtu)	$/Short Ton
IM	01	St Johns River	EL CERREJON (COLOMBIA)	205.68	11,818	148.40	35.08
IM	02	St Johns River	EL CERREJON (COLOMBIA)	158.39	11,828	148.20	35.06
IM	04	St Johns River	EL CERREJON (COLOMBIA)	145.15	11,835	149.30	35.34
IM	05	St Johns River	EL CERREJON (COLOMBIA)	192.62	11,857	151.40	35.90
IM	06	St Johns River	EL CERREJON (COLOMBIA)	94.17	11,810	152.00	35.90
IM	06	St Johns River	GUASARE (COLOMBIA)	58.70	13,065	139.60	36.48
IM	07	St Johns River	EL CERREJON (COLOMBIA)	234.89	11,830	149.90	35.47
IM	08	St Johns River	EL CERREJON (COLOMBIA)	191.77	11,816	148.90	35.19
IM	09	St Johns River	CERREJON NORTE (COLOMBIA)	12.60	11,875	178.90	42.49
IM	09	St Johns River	EL CERREJON (COLOMBIA)	190.26	11,807	149.00	35.18
IM	10	St Johns River	EL CERREJON (COLOMBIA)	97.17	11,866	148.70	35.30
IM	11	St Johns River	EL CERREJON (COLOMBIA)	194.40	11,854	149.20	35.37
IM	11	St Johns River	GUASARE (COLOMBIA)	59.81	12,870	139.20	35.83
IM	12	St Johns River	EL CERREJON (COLOMBIA)	144.22	11,717	151.00	35.39
IMPORTED Total (Average)				**1,979.83**	**167,850**	**150.12**	**36.00**