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May 23, 1997

HAND DELIVERED

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Determination of appropriate cost allocation and regulatory treatment of total revenues associated with wholesale sales to Florida Municipal Power Agency and City of Lakeland by Tampa Electric Company; FPSC Docket No. 970171-EU

Dear Ms. Bayo:

Enclosed for filing in the above docket, on behalf of Tampa Electric Company, are the original and fifteen (15) copies of each of the following:

1. Rebuttal Testimony of Douglas R. Bohi.

2. Rebuttal Testimony and Exhibit (JBR-1) of John B. Ramil.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning same to this writer.

Thank you for your assistance in connection with this matter.

Sincerely,

James D. Beasley

JDB/pp
Enclosures

cc: All Parties of Record (w/enc.)

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing Rebuttal Testimony of Douglas R. Bohi and John B. Ramil, filed on behalf of Tampa Electric Company, has been furnished by U. S. Mail or hand delivery (*) on this 23rd day of May, 1997 to the following:

Ms. Leslie Paugh*
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ATTORNEY

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TAMPA ELECTRIC COMPANY
DOCKET NO. 970171-EU
SUBMITTED FOR FILING 5/23/97

BEFORE THE PUBLIC SERVICE COMMISSION

PREPARED REBUTTAL TESTIMONY

OF

DOUGLAS R. BOHI

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business Address.

A. My name is Douglas R. Bohi. My business address is Charles River Associates Incorporated, 1001 Pennsylvania Avenue, N.W., Suite 750 North, Washington, D.C. 20004.

Q. Are you the same Douglas R. Bohi who submitted Testimony in this proceeding on April 25, 1997?

A. Yes. My educational background and work experience are described in that testimony.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of Tampa Electric.

II. PURPOSE AND SUMMARY OF TESTIMONY

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Q. What is the purpose of your testimony?

A. The purpose of my testimony is to explain why the testimony of Mr. Hugh Larkin, Jr. and Mr. Jeffrey Pollock reflects a serious misunderstanding of basic economic principles and, therefore, should not be the basis for a Commission decision in this proceeding.

Q. Please summarize your testimony.

A. My testimony responds to three erroneous arguments presented by Mr. Larkin and Mr. Pollock that, through repeated assertion in various ways, forms the basis of their direct testimony. First, they assert that firms (regulated or unregulated) should not make sales decisions on the basis of incremental costs of production. However, in any line of business where the firm is free to choose to make a sale, the firm should base that sales decision on whether incremental revenues exceed incremental costs. In contrast to service provided to retail customers, decisions to make wholesale sales are at the discretion of Tampa Electric. In making these decisions on the basis of incremental costs, the company is following sound economic principles.

Their second erroneous argument is that Tampa Electric's proposal to credit retail customers according to incremental fuel costs represents a cross-subsidy from retail customers to wholesale customers. This argument ignores the fact that Tampa Electric's proposal to credit retail customers an amount equal to system incremental fuel costs will cover fuel costs incurred to serve wholesale sales.

The third erroneous argument is that Tampa Electric does not require an incentive to make wholesale sales. I show why Tampa Electric requires an incentive to engage in discretionary wholesale sales, and that proposals aimed at reducing this incentive run the risk of reducing both the amount of wholesale sales and the amount of benefits that flow to retail customers. For this reason I conclude that the arguments put forth by representatives of retail customers to reduce Tampa Elecric's incentives are not in the best interest of those customers.

III. SHOULD INCREMENTAL COSTS BE USED TO MAKE SALES DECISIONS?

Q. What is Mr. Larkin's argument regarding the decision to make sales on the basis of incremental costs?

A. Mr. Larkin (p. 3 lines 8-9) argues that sales decisions made on the basis of whether incremental revenues cover incremental costs would not "be applied by any business in completing sales to its customers." He makes two observations to support this contention. The first is that if this theory were followed, every customer of Tampa Electric which entered the system after the establishment of base rates would pay only the incremental costs associated with that customer's addition to the system. The second is that, in a competitive business or one that is an oligopoly such as the automobile industry, prices of products are not established in this manner. He claims that automobile manufacturers, as do all manufactures, establish a price and generally maintain that price for all customers.

Q. What is wrong with the first assertion?

A. It assumes that the seller is setting the sales price on the basis of incremental costs, and that the seller may offer different prices to different customers because the seller's incremental costs will differ. This view lacks understanding of the basic economic principles involved. To begin with the seller does not set the price. In the regulated electric retail market in Florida the Commission sets the price and the company has no choice but to serve all customers at that price. In a competitive market such as the wholesale market in Florida, the seller likewise does not set the price. The market sets the price and the company has a choice whether to sell or not. Buyers have several alternative sources of supply and will choose the cheapest alternative. This has the effect of limiting the price that any seller can receive. Accordingly, a competitor may choose to beat the that price and make the sale, or choose to forego the sale.

The question at this point is the criterion the seller should use to decide whether to make the sale or forego it. Established economic principles are clear on this point and may be verified in any introductory economics textbook; the seller should not make the sale unless incremental revenues are larger than incremental costs. If incremental revenues are larger than incremental costs, the sale is profitable and the seller must decide whether the risks and other disincentives are large enough to discourage making the sale.

The rule does not say that the seller should sell at a price equal to incremental costs, nor does the rule say that the seller should sell at different prices to different customers because the incremental cost of serving different customers will vary. The price is determined by the market and, in a competitive market, the seller should sell at whatever the price the market will bear. If, for example, market demand rises and causes the price to increase, the seller should sell at the higher price. Conversely, if demand falls and causes the price to fall, the seller will be forced to sell at a lower price, unless the seller chooses not to sell at all.

Under no circumstances should the seller sell at a price below incremental costs. As long as the price is above incremental costs, then the costs incurred in making the sale are covered and a net return is earned that will either help pay for fixed costs or add to net profits. The main point is that the costs incurred are covered.

Q. What is wrong with the second observation put forth by Mr. Larkin that, in a competitive business or one that is an oligopoly such as the automobile industry, prices of products are not established in this manner?

A. This argument reveals a serious misunderstanding about the way manufacturers behave with regard to prices and incremental costs. Manufacturers commonly establish list prices for their products, and may determine those prices on the basis of average costs of production, including a margin for profit, and the expected level of demand. Nevertheless, the actual selling price at any time will be determined by the level of demand for the product at the time and the prices at which competitors are willing to sell. If demand is strong and competition is weak, a manufacturer may unilaterally increase its list price. If, on the other hand, demand is weak and competition is strong, the manufacturer may decide to sell at a discount from the list prices.

This type of behavior is particularly common in the automobile sector, as anyone who has shopped for an automobile under different market conditions can attest. Manufacturers increase the prices they charge dealers for popular models and dealers add on special charges to customers. When manufacturer and dealer inventories rise because of a weak market, however, manufacturers are willing to offer special incentives to dealers, and dealers are willing to offer discounts to customers. Actual selling prices will vary with different customers, different locations, and different times. The seller will try to obtain the highest price possible, and will be acutely aware of the minimum price necessary to make the sale profitable. The minimum price will be determined by incremental costs of productio

I have personal experience with the way manufacturers make sales decisions from my earlier employment with Caterpillar Tractor Company. As in the case of auto manufacturers, Caterpillar sells its products through a worldwide network of dealers. Suggested list prices are published, which are subject to change, and discounts from the price list are common depending on market conditions and the size of inventories. In cases involving large sales and the offer of a significant discount, dealers would ask the company to review the offer and decide whether the discount is acceptable. In making the decision, the company is acutely aware of its incremental costs. These costs establish the price floor. How far the price has to be above incremental costs to make the sale depends on market conditions, as discussed above.

Q. Mr. Pollock (p.14, lines 4-23) argues that it is inappropriate to measure efficiency solely on the basis of incremental cost. Do you agree with his argument?

A. No. Mr Pollock argues that a firm that has low incremental costs may have high capital costs and is not necessarily "more efficient than another firm that chose instead to minimize overall costs." Earlier (p. 13, line 19 to p. 14, line 3), Mr. Pollock states that it is "an erroneous assumption that a utility having low incremental costs is more efficient than a competing supplier that may have higher operating costs but lower total costs."

These arguments are wrong. The most efficient firm for producing a given increment of output is the firm that can produce that increment at the lowest cost. The firm that can produce the increment at the lowest cost can also accept the lowest price to sell the product.

Q. Mr. Pollock is concerned about how capital costs fit into the determination of the most efficient firm. What is your response?

A. The magnitude of capital costs does not change the rule that sales decisions should be made on the basis of incremental costs, not on average costs. However, as I explained in my Direct Testimony, in some cases capital costs should be included in incremental costs and in other cases they should not. If capital costs are variable to a production decision, they should be included in incremental costs; if capital costs are fixed with regard to a production decision, they should not be include din incremental costs.

The situation where capital costs are variable in the production decision arises in the case of the sale of peaking power to the City of Lakeland. As indicated in the Direct Testimony of Ms. Karen Branick, the analysis of the Lakeland sale found that the sale would not necessarily increase capital requirements. To be conservative, however, the sale is treated as if additional capital were required. Accordingly, the incremental cost of the sale includes a component to cover these additional capital costs as well as the cost of fuel and O&M.

In the case of the sale of power to FMPA, the production decision does not require additional capital investment and capital costs are fixed. In this case, incremental costs do not include capital costs; rather, incremental costs include only the additional costs incurred in making the sale. Capital costs must be paid whether the sale is made or not and, as a result, they become irrelevant to the decision to make the sale. The decision to sell is determined by whether incremental revenues are larger than incremental costs. By selling at a price above incremental costs, at least some amount is earned to help pay for capital costs. If the sale is not made, capital costs must still be paid, but there is less revenue to make the payment, and the firm is worse off. Again, incremental costs is the appropriate basis for making the decision to sell.

Q. Mr. Pollock's example (p. 13, line 19 to p. 14, line 23) compares two electric utilities that choose different investment approaches: one has high capital costs and low operating costs and the other has low capital costs and high operating costs. Which one is the most efficient?

A. The decision rule based on incremental costs still applies. For any increment of output, the firm with the lowest incremental costs is the most efficient for producing that output. If all such decisions are made in the context of fixed capital costs, then capital costs are irrelevant to the determination of which firm is the most efficient for producing a given increment of output.

I can illustrate my argument by returning to Mr. Pollock's example. Suppose Utility A has high capital costs and low operating costs while utility B has low capital costs and high operating costs. Further suppose that the two utilities are competing for sales in the wholesale market.

If the market price were greater than utiltiy A's incremental costs and lower than utility B's incremental costs, it would make sense for utility A to make the sale but not utility B. Utility A would make a profit on the sale that would help pay for its (high) capital costs, while utiltiy B would take a loss on the sale, which would make it more difficult for utility B to pay for its (low) capital costs. Utility A is clearly more efficient than utility B in making this sale.

Indeed, if we extend the example to suppose that utility A has lower incremental costs than utility B for every increment of output they can produce, and that the two are in direct competition for all sales, then utility A would be able to make every sale at a lower price than utilty B. Having lower capital costs will not help utility B compete with utility A.

Q. What happens in the last example if utiltiy A captures all of the business and still does not cover all of its fixed costs?

A. The simple answer is that the market does not value this product enough to cover the cost of producing it and, thus, production should cease. The more involved answer depends on how fixed costs are financed. For capital that is financed with debt instruments, debt payments must be made or creditors will force the firm into bankruptcy. Since in our example the revenues to utiltiy A were covering at least part of its fixed costs, debt payments may be covered. For capital financed by equity investment, a shortfall of revenues would lower dividends below the market rate of return.

IV. **DOES THE TAMPA PROPOSAL IMPLY A SUBSIDY TO WHOLESALE SALES?**

Q. Mr. Larkin, Mr. Pollock, and staff witness David P. Wheeler argue that Tampa Electric's proposal means that retail customers are subsidizing wholesale customers. What does it mean to say that one customer is subsidizing another?

A. Retail customers may be said to be subsidizing wholesale customers if retail customers are paying some of the costs incurred in supplying electricity to wholesale customers.

Q. Why do Mr. Larkin, Mr. Pollock, and Mr. Wheeler believe that retail customers will be subsiding wholesale customers?

A. Their testimony incorrectly argues that a subsidy occurs because Tampa Electric's proposal would credit retail customers through the fuel adjustment clause an amount equal to actual system incremental fuel costs rather than system average fuel costs.

Q. Does the difference between actual system incremental and system average fuel costs constitute a subsidy from retail to wholesale customers?

A. No, The amount that should be credited to retail customers to ensure that they are not adversely affected by wholesale sales is the increase in total fuel costs caused by the wholesale sales. Average fuel costs do not measure the increase in total fuel costs caused by wholesale sales; rather, the increase in total fuel costs is measured by incremental costs.

V. DOES TAMPA ELECTRIC NEED AN INCENTIVE TO MAKE WHOLESALE SALES?

Q. Should Tampa Electric receive an incentive to make wholesale sales?

A. Yes. The service provided to wholesale customers is entirely discretionary. Tampa Electric can choose whether to sell to wholesale customers, can choose how much it will sell and for how long, and can determine a variety of other terms and conditions that affect the cost of service. In making the sales decision, Tampa Electric must be satisfied that the sale will improve rather than detract from earnings. Unless earnings are improved, there is no reason to undertake the risk and cost of making the sale.

Q. Will any such incentive be inconsistant with the principles of rate making?

A. No. The regulatory model has always contained incentives to both the retail and wholesale jurisdictions. The purpose of these incentives, regardless of their form, have been to encourage behavior that benefits ratepayers.

Q. Will Tampa Electric's proposal be consistent with the interests of the retail customer?

A. Yes. I can understand that representatives of retail customers might try to collect more of the benefits from wholesale sales in order to lower retail rates, but I cannot understand why the same persons would be prepared to argue that no incentive should be provided to encourage Tampa Electric to seek business that benefits ratepayers.

Q. Mr. Larking (p. 20, lines 1-18) and Mr. Pollock (p.3, lines 1-20) argue that regulated electric utilities are merely using their retail customers to gain a competitive advantage over other wholesale entities "which do not have the luxury of using their 'captive' customers to subsidize discounted wholesale rates." How do you respond to this argument?

A. I would agree with the argument if the premise were true; that is, if the costs of serving wholesale customers were in fact shifted to retail customers. Since the premise is not true for Tampa Electric's proposal, I do not agree with the conclusion.

On the contrary, the solution suggested by Mr. Larkin and Mr. Pollock to require Tampa Electric to credit retail customers on the basis of average embedded costs for any wholesale sale, will tend to drive regulated utilities out of the wholesale market. The reason is that nonregulated entities will make decisions to sell in the wholesale market on the basis of their incremental costs, not their average embedded costs. These entities will be able to under-price regulated utilities, even when their incremental costs are above those of regulated utilities. This will allow them to capture a disproportionate share of the wholesale market. Consequently, a Commission decision that regulated utilities must credit the costs of wholesale transactions at average embedded costs, while competing suppliers have the freedom to make sales decisions on the basis of incremental costs, will severely bias the competitive equation against regulated utilities.

An unfortunate result of this outcome is that the lowest cost, most efficient producers will not necessarily be supplying the wholesale market. Wholesale prices will be higher than they should be, yet fewer profits earned from wholesale sales will flow back to the benefit of retail consumers. Thus, ratepayers of regulated utilities will be worse off, the shareholders of regulated utilities will be worse off, and the ultimate consumers of wholesale power will be worse off. The only beneficiaries of such a misguided policy will be the shareholders of the nonregulated entities. I suspect that enhancing their profits will not serve to benefit the people in the state of Florida, however.

Q. Does this conclude your testimony?

A. Yes, it does.