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IN REPLY REFER TO

Tallahassee

May 7, 1996

HAND DELIVERY

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

Re: Prudency Review to Determine Regulatory Treatment of Tampa Electric Company's Polk Unit; FPSC Docket No. 960409-EI

Dear Ms. Bayo:

Enclosed for filing in the above docket are the original and fifteen (15) copies of each of the following:

1. Prepared Direct Testimony of Girard F. Anderson. 05109-96
2. Prepared Direct Testimony of Thomas F. Bechtel. 05110-96
3. Prepared Direct Testimony and Exhibit of Charles R. Black. 05111-96
4. Prepared Direct Testimony and Exhibit of Thomas L. Hernandez. 05112-96
5. Prepared Direct Testimony and Exhibit of John R. Rowe, Jr. 05113-96
6. Prepared Direct Testimony and Exhibit of Hugh W. Smith. 05114-96
7. Prepared Direct Testimony and Exhibit of Elizabeth A. Townes. 05115-96

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

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Thank you for your assistance in connection with this matter.

Sincerely,

Lee L. Willis

LLW/pp
Enclosures

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

23P

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TAMPA ELECTRIC COMPANY

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 960409-EI

TESTIMONY

OF

GIRARD F. ANDERSON

TAMPA ELECTRIC COMPANY

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 960409-EI

TESTIMONY

OF

GIRARD F. ANDERSON

TAMPA ELECTRIC COMPANY
DOCKET 960409-EI
SUBMITTED FOR FILING 5/7/96

BEFORE THE PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

GIRARD F. ANDERSON

Q. Please state your name, address and occupation.

A. My name is Girard F. Anderson. My business address is 702 North Franklin Street, Tampa, Florida 33602. I am President of TECO Energy, Inc., Tampa Electric's parent company.

Q. Mr. Anderson, please furnish a brief outline of your educational background and business experience.

A. I attended the University of Florida and received a Bachelor of Science degree in Chemical Engineering in 1959. I began my career with Tampa Electric in 1959 as a student engineer in the Production Department. I held various production management jobs until 1980, when I was elected Vice President of Production Operations and Maintenance before being promoted to Senior Vice President of Power Distribution in April, 1985. In July, 1987, I was elected President and Chief Operating Officer of Tampa Electric Company. In 1994, I was named President and Chief

Operating Officer of TECO Energy, Inc., Tampa Electric's parent company.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to encourage the Commission to approve the costs of the Polk Project for all regulatory purposes. The Commission has already approved construction of Polk Unit One at its present site, based on its conclusion that the resulting capacity would be needed and that the project represented the most cost-effective alternative available to provide additional capacity for meeting Tampa Electric's obligation to serve its Customers growing needs for electricity. That decision represented the culmination of many months of effort and data exchange between the Commission's staff, Tampa Electric and other parties to the need proceeding, Docket No. 910883-EI.

In my testimony I will describe the broad decisions made during the process of selecting a site and completing construction of the plant. I will discuss the significant changes that occurred in the environmental, land use, political, regulatory, and public policy arenas and the impact those changes had on the site selection process and the ultimate preparation of the site. I will also describe

Tampa Electric's implementation of the Commission's determination of need for Polk Unit One. Other witnesses from Tampa Electric will provide detailed support in their areas as follows:

Mr. Thomas L. Hernandez will describe the continuing planning studies supporting our conviction that Polk Unit One is the most cost-effective alternative for satisfying Tampa Electric's need for additional capacity and that the plant is a reasonable and prudent addition to Tampa Electric's generating capability.

Mr. Charles R. Black will explain the technology employed at Polk Power Station and will describe the very stringent project management and cost control efforts undertaken by Tampa Electric.

Mr. Hugh W. Smith, will describe the fuel availability and price forecasts and fuel alternative assumptions supporting our conclusion that Polk Unit One remains the most cost-effective solution to the need for additional capacity.

Mr. John R. Rowe, Jr. will describe the appropriate regulatory treatment of Tampa Electric's investment and expenses associated with the Polk Power Station and the

Port Manatee site.

Ms. Elizabeth A. Townes will identify the specific costs Tampa Electric proposes to include in its rate base and net operating income reporting for regulatory purposes. In addition, Ms. Townes will explain how the Polk regulatory treatment proposed by Mr. Rowe should be reflected in the company's accounting system and in the surveillance reports filed periodically with the Commission.

Finally, Mr. Thomas F. Bechtel, Director of the U.S. Department of Energy's (DOE) Morgantown Energy Technology Center, will describe the DOE Clean Coal Technology Program and will explain the basis for DOE's high regard for Tampa Electric's management of the Polk Project.

Preliminary Comments

Q. Do you have any preliminary comments regarding the anticipated economic effects of Polk Unit One from the perspective of your customers?

A. Yes, I do. For over two years now Tampa Electric has had in place a major corporate direction, the goal of which is to carefully control costs and aggressively pursue all available efficiencies, with the ultimate purpose of

driving our rates to the lowest levels possible. We have had some extraordinary achievements in this effort, in anticipation of Polk Unit One coming on line. In particular, we have succeeded in reducing our costs sufficiently to enable us to enter into a stipulation, later approved by the Commission, which will keep our base rates flat for a three-year period. We have strived as hard as possible to avoid having Polk Unit One's commercial operation cause our customers to experience increases in prices. Our corporate direction clearly is not a "business as usual" approach. Instead, it represents an innovative approach to our business, in general and, ratemaking, in particular, that puts our customers first. This effort is ongoing and will continue to be given the highest priority.

Selection of Polk Power Station Site

Q. Please describe some of the events leading to the selection of the site for the Polk Power Station?

A. As far back as the early 1970s, Tampa Electric regarded the area south of Cockroach Bay, on the Hillsborough/Manatee County line in southeast Hillsborough County, as a promising power plant site. That site has had various names over time and I will refer to it in my testimony as

the Port Manatee site. The Hillsborough County plan "Horizon 2000" land use maps covering the Port Manatee site clearly noted its possible use as the location for a future power plant. By the early 1980s, when our plans to build additional capacity to meet projected needs beyond the 1985 commercial operation date of our Big Bend Unit Four began to gel, the Port Manatee site was regarded as a probable location for a new plant.

As we continued to assess the timing of the need for additional capacity, significant external factors affecting the power plant siting process were undergoing dramatic change. In 1985, a major amendment of the Local Government Comprehensive Planning and Land Regulation Act was enacted by the Florida Legislature. This amendment mandated a statewide approach to growth management. Among other things, a phased-in timetable was established requiring all 67 Florida counties to either adopt or modify existing Comprehensive Land Use Plans to meet new requirements of the Act, such as providing infrastructure (water, sewer, transportation, etc.) to support all densities in the plan in a manner consistent with the state's comprehensive plan, the addition of Coastal Zone Management Plans in applicable plans, and the review and approval of such plans on a periodic basis by the Department of Community Affairs,

acting as the primary state land planning agency. In keeping with the established timetable, a Hillsborough county review and amendment process was scheduled to begin in 1988.

By 1987, our plans were to construct a phased-in, oil-fired 440 MW combined cycle unit to meet the company's needs through the year 2000. Based on the site selection study which we performed, the Port Manatee parcel was selected as the preferred site. This study also identified the need to purchase additional land adjacent to the original parcel in Hillsborough and Manatee counties to accommodate the planned plant. Therefore, we initiated efforts to acquire the necessary additional property and began to prepare for participation in the upcoming Hillsborough land use plan amendment process in order to have the Port Manatee site officially designated in the amended land use plan as a power plant site.

Our efforts in the Hillsborough County land use plan amendment process were met with steadily increasing opposition from several key governmental agencies, including the Tampa Bay Regional Planning Council, Hillsborough and Manatee County newspaper editorial writers, owners of land adjacent to the proposed site and

numerous local and statewide environmental groups. In April of 1987, the Governor and Cabinet, acting in their capacities as trustees of Florida public lands, adopted a Department of Natural Resources Cockroach Bay Aquatic Preserve Management Plan, which increased the environmental constraints on the use of the Port Manatee site as the location for a power plant. The plan contained the notation that the Port Manatee site was not a suitable location for a power plant because of the "potential damage" it might do to the coastline parallel aquatic preserve. On another front, our efforts to acquire necessary additional property from the Manatee Port were frustrated by the refusal of the Manatee County Commission to approve the acquisition. In the wake of the Manatee County Commission's action, necessary purchases of private property adjacent to the site became much more complicated and difficult. As these events unfolded, it became increasingly clear that we might not have enough land in the uplands portion of the Port Manatee site to accommodate our proposed plant and still meet necessary buffer requirements.

Power Plant Siting Task Force

In view of the magnitude and diversity of the opposition we were facing, we concluded in April, 1989, that it was

necessary to create a consensus with regard to the siting of the proposed plant if we were to be successful in adding the needed capacity in a timely manner. Therefore, we decided to seek the input of a citizens advisory group, later known as the Citizen's Siting Task Force (the "Task Force"), to assist us in evaluating various plant site alternatives, including the Port Manatee site, in hopes of reaching a consensus. Our objective was to select a viable power plant site that would meet our needs in a cost-effective and timely manner, while balancing the new land use and land development requirements with environmental considerations and public opinion.

Q. Please describe the Task Force and its role in the site selection process.

A. The Task Force consisted of 17 private citizens and policy makers, including environmentalists, economists, educators and business people from within Tampa Electric's service area and throughout the State of Florida. Some of the Task Force members were Dr. Sanford V. Berg, Professor of Economics at the University of Florida; Bruce A. Sampson, former chairman of the Southwest Florida Water Management District board and president of the University of Tampa; Dr. David Denslow, Professor of Economics and member of the

Governor's Council of Economic Advisors for Florida; Nathaniel P. Reed, former Assistant Secretary of the Interior and former chairman of the Florida Department of Air and Water Pollution Control, and Victoria Tschinkel, former secretary of the Florida Department of Environmental Regulation.

The goal of the Task Force was to identify the most suitable site or sites for the needed facilities within a six county area that included Tampa Electric's service territory and adjacent areas. The Task Force provided input, guidance and recommendations to Tampa Electric throughout the site selection process and the company concurred with the Task Force's final guidance and recommendations regarding the selection of the preferred sites for the planned facilities.

Q. Were there other events occurring during the Task Force's advisory participation that heightened your need to select a plant site?

A. Yes. We experienced extreme cold weather over the Christmas Holidays of 1989. This event focused everyone's attention on the need for adequate and reliable generating capability for peninsular Florida.

Q. What was the final input of the Task Force?

A. The Task Force assessed 35 sites and ultimately recommended three alternative sites in the phosphate mining district in southwestern Polk County at their final formal meeting on September 25, 1990. The recommendation was made public at that time through the news media. The Task Force's recommendation was one of the many valuable inputs we would consider as we set about to make our final decision on a plant site.

Q. What is the significance of the Task Force's involvement in the site selection process?

A. I think it represents a new era in power plant siting in Florida. In meeting its statutory obligation to serve its customers, a utility in Florida can no longer plan on implementing the construction of a power plant or any major facility without the consent and cooperation of the communities it serves and the communities in which the facilities will be located. Our process represented the first time in Florida that a citizens advisory group reviewed the facts, recommended that the plant was needed, and recommended preferred site alternatives. Without the advice and consent of the community, years of costly

litigation would have ensued. In adopting the Polk site, Tampa Electric acquired a site that is available for use for future generating units and a site with which its customers and the residents of surrounding communities are satisfied.

Tampa Electric was subsequently awarded the 1994 Florida Growth Management Conflict Resolution Consortium's Timer Powers Dispute Resolution Leadership Award for turning to the public process the company relied on to resolve the power plant siting concerns. It was the first time a private sector organization had been named to receive the honor. The company was also awarded the 1991 Florida Audubon Society's Corporate Award. These awards are a significant tribute to the dedicated efforts of the Task Force members and they underscore the value of the process.

Q. What factors did Tampa Electric consider before acting on the Task Force's recommendation and ultimately selecting the Polk Power Station site?

A. We considered many factors prior to selecting the Polk Power Station site. Those factors generally fell into three major categories. First, we had to take into account the intense opposition we had received on all fronts

relative to our proposed siting of a plant on the bay. This included opposition from the same governmental entities from whom we would have to obtain permitting in order to construct the plant at Port Manatee.

The second major category of consideration was cost. We knew from experience that the cost of building a new power plant on the bay was uncertain but certainly high, and likely to rise due to the low elevation and resulting need for significant site preparation, environmental considerations and public opinion. As part of the land use planning process, we were required to designate all but 75 acres of our site as either environmentally sensitive land or buffer lands. This required that we acquire additional property suitable for heavy industrial use at an estimated average cost per acre of $13,975, not including potentially significant site preparation costs. In addition, the prospects for final permitting, zoning and land acquisition on the bay were uncertain at best. Therefore, we believed that potential site preparation costs inland likely would be offset by other environmentally related costs at a coastal site.

The third major consideration was the fact that the Task Force, after its very detailed analysis of many, many

factors, recommended the three Polk County sites as optimal locations for the new plant. The Task Force weighed all of the competing factors, including economic and environmental effects, and served as a surrogate for public opinion.

While we carefully considered the Task Force's recommendations, we ultimately reached our own conclusion that the uncertainties and the high costs associated with coastal development, combined with the increasingly strident opposition to a coastal site favored selection of the inland site. Thus, as Mr. Black explained in his testimony, the company selected the Polk Power Station site, from among the inland sites under consideration, as its most viable and cost-effective site alternative. The following determination of need proceeding before this Commission consisted of an exhaustive review of the need for capacity and project alternatives by Tampa Electric, the Commission, its Staff and the various intervenors. In its order approving the project and the proposed site, the Commission indicated that the company had provided sufficient information on this site and the need for capacity for the Commission to adequately evaluate our proposal. The Commission's approval of the project was later affirmed by the State Supreme Court of Florida. We took comfort in your order and its affirmation by the State

Supreme Court and set about the task of securing permitting and developing the site so that construction could begin.

The Need Determination Process

Q. On what basis did Tampa Electric decide to apply for a determination of need for Polk Unit One?

A. That decision was made with great care and with detailed consideration of a wide variety of alternatives. As discussed in the testimony of Messrs. Hernandez, Black and Smith, Tampa Electric identified the need for additional capacity through its internal resource planning process. The selection of plant type was based on an exhaustive economic analysis and through technical review of available power station systems. Prior to deciding on the IGCC technology, we had anticipated developing a gas-fired combined cycle unit. However, the opportunity to obtain a significant amount of funding from the United States Department of Energy, creating the potential for significant ratepayer savings, and the technological advancements that improved the operating efficiency, economics and environmental benefits of the IGCC technology were of great interest to the company. Ultimately, these factors had a large influence on our selection of an IGCC unit. The Commission conditioned its determination of

need for Polk Unit One on Tampa Electric receiving the DOE funding.

Q. What impact did the Commission's determination of need have?

A. The process that resulted in approval of the Polk One Project not only assured the public that new generating capacity was needed and that the type of capacity was cost effective, but it also provided assurance to the company, its suppliers and investors that construction could proceed without the undue regulatory risk that the large investment would not be fully recoverable. Tampa Electric proceeded with its financial commitments in reliance upon the findings of the need certification process.

Implementation of the Commission's Determination of Need

Q. Please describe the company's implementation of the Commission's determination of need for Polk Unit One.

A. Based on the Commission's determination of need, Tampa Electric began to seek the permitting, perform the engineering, acquire and prepare the site and put the necessary organization together in order to implement the plan on time and in a cost-effective manner. The

construction of a major power plant is clearly an extremely complex, dynamic and time consuming undertaking. The process requires years of planning, engineering and construction. Such a project also involves numerous necessary contractual commitments, many of which must be made early in the project. These commitments generate costs if the project is curtailed or significantly modified, and these costs must receive constant consideration as the project plans develop. By their very nature, contractual commitments constrain the flexibility of the contract parties.

Q. How has Tampa Electric monitored the continued need and ongoing cost-effectiveness of the project subsequent to the need determination proceeding?

A. As Mr. Hernandez will detail in his testimony, Tampa Electric has regularly reviewed the changes and assumptions, forecasts and plans subject to the need determination process, and re-evaluated and determined the most cost-effective options, taking into account the funds prudently expended, committed, and necessary to change options. Our continued construction of Polk Unit One has been and still remains reasonable and prudent based on our analysis. We expect Polk Unit One to be completed on time

and ready for commercial operation in October of this year.

Q. What recognition should be given to the extent to which you have relied on the need determination as the company proceeded to construct Polk Unit One?

A. In reviewing an on-going cost-effectiveness analysis of the project, subsequent to the need hearing, recognition must be given to the amount of sunk costs which have already been prudently expended in reliance on the need determination and the additional costs to adapt to some new plan, including the cancellation costs that would be incurred if construction commitments were materially changed or terminated. In the case of Polk Unit One, these cancellation costs would include the cost of abandoned equipment, damages on outstanding contracts, and the potential loss of U.S. Department of Energy funding.

Q. Mr. Anderson, can you summarize the effects of changes in your industry in recent years and how these changes should be taken into account by this Commission in considering the prudence of Tampa Electric's construction of Polk Unit One?

A. Yes, I can. Since the mid 1980s significant external

events and longer term changes in the energy business coupled with changes in public perception and policy have changed the viewpoint from which all affected parties analyze the viability of this project.

We believe it is important for the Commission, in considering the prudence of the Polk project, to ask itself whether our various decisions over the course of the project have been rationally based, given the facts and circumstances known to us at the time these decisions have been made.

We also believe that after you make this analysis, you will agree that the Company has acted reasonably and prudently in its management of the construction process and its continuing reevaluation of the project with a careful eye on changing circumstances.

Some of the changes which have occurred are as follows:

I have already mentioned the extended cold weather over the 1989 Christmas Holidays which demonstrated, in an unfortunate way, the important need for power reliability.

We have seen significant changes in the natural gas

markets, especially as they related to the transportation component of the business. Following FERC Order 636, the transportation of natural gas has become more flexible. However, transportation of natural gas in Florida for intermediate or peaking type capacity remains unreliable. Gas prices are directly related to the short term market which has experienced many price spikes which are the result of weather and high demand. This makes us very cautious about over relying on natural gas as a generation fuel.

On the positive side, we have seen the recent emergence of petroleum coke as an available and very economic feedstock for the Polk Unit One gasifier.

Also on the plus side is the fact that the coal market has remained relatively stable with prices actually somewhat lower than they were at the time of the Polk Unit One need determination proceeding.

We have seen the National Energy Policy Act amendments and proposals for changes in wholesale transmission access policy by the Federal Energy Regulatory Commission. This has brought about significant changes in the electric wholesale markets. This has added uncertainty for electric

utilities without removing our retail obligation to serve. We still must have sufficient capability to meet the needs of all our retail customers.

We have also seen amendments to the Clean Air Act. Allowable SO_2 emissions have already been greatly reduced and mandated reductions in the emission of other substances are expected over the next two years. The positive effect of Polk Unit One in this regard is the fact that, with its high efficiency and low emissions, it will dispatch first on our system, ahead of units with higher emissions and thereby help us meet our environmental obligations.

In the final analysis, taking into consideration the changes discussed, we believe the Polk Power project remains in the best interests of all Tampa Electric Customers and represents the best means for Tampa Electric to meet its obligation to serve the future needs of its Customers. We believe that each aspect of the site selection, site development, engineering and construction of this project have been managed extremely well and we will show you why that is so.

Q. Please summarize your testimony.

A. Polk Unit One was determined by the Commission to be, and it still remains, a reasonable, prudent and cost-effective project which will enable Tampa Electric to meet its growing generation requirements. We expect to bring Polk Unit One on line in October of this year in order to continue meeting the needs of our customers with safe, reliable and reasonably priced electric power.

In evaluating the regulatory treatment of Polk Unit One, the Commission should take into account the fact that the need for Polk Unit One was determined by the Commission after exhaustive efforts by Tampa Electric, the Commission, the Staff and various intervenors in a need determination proceeding. The determination of need was also approved by the Supreme Court of Florida. Once that decision was made, Tampa Electric commenced the extremely complex, dynamic and time-consuming construction of this plant.

Relying upon the determination of need by the Commission and our continuing reviews of the cost-effectiveness of this project, Tampa Electric has prudently gone about its business to bring this unit into commercial operation in a timely and cost-effective manner. We urge the Commission to recognize the prudence of our efforts and to recognize the costs of this project for regulatory purposes.

Q. Does that conclude your testimony?

A. Yes it does.