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September 9, 2005

#### HAND DELIVERED

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

#### Fuel and Purchased Power Cost Recovery Clause with Generating Re: Performance Incentive Factor; FPSC Docket No. 050001-EI

Dear Ms. Bayo:

Enclosed for filing in the above docket are the original and fifteen (15) redacted copies of Tampa Electric's Company's Fuel Procurement and Wholesale Power Purchases Risk Management Plan 2006. A single confidential version of the Plan with the confidential information highlighted in yellow is being separately filed this date with your office along with a Request for Confidential Classification.

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 Enclosure

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

> DOCUMENT NUMBER-DATE 08607 SEP-98

> FPSC-COMMISSION CLERK

# **BEFORE THE**

# FLORIDA PUBLIC SERVICE COMMISSION

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In re: Fuel and Purchased Power Cost Recovery Clause with Generating Performance Incentive Factor DOCKET NO. 050001-EI FILED: SEPTEMBER 9, 2005

# TAMPA ELECTRIC COMPANY'S

# FUEL PROCUREMENT AND WHOLESALE POWER PURCHASES

### **RISK MANAGEMENT PLAN**

2006

### TAMPA ELECTRIC COMPANY FUEL PROCUREMENT AND WHOLESALE POWER PURCHASES RISK MANAGEMENT PLAN 2006

#### Introduction

Tampa Electric meets the electric service needs of its retail customers through a portfolio of generation and wholesale purchases. The fuel mix of the generation portfolio became more diverse with the completion of H. L. Culbreath Bayside Station ("Bayside Station") in 2004. While fuel mix diversity enhances long-term reliability, the increased reliance on natural gas increases variation in fuel prices. The company's risk management activities reduce the impact of price volatility to the Fuel and Purchased Power Cost Recovery Clause. In anticipation of the commercial operation of Bayside Station, the company developed and followed a hedging plan that was approved by TECO Energy's Risk Authorizing Committee ("RAC") in early 2003. In August 2004, the RAC approved an updated hedging plan that incorporates the experience gained in operating the generation system with the addition of Bayside Station. Tampa Electric continues to hedge fuel price exposure consistent with the approved hedge plan and makes regular reports of activity to the RAC.

#### I. Qualitative and Quantitative Risk Management Objectives

- A. Qualitative objectives: Tampa Electric's goals in managing risks associated with fuel or power purchases are focused on minimizing supply risk to ensure reliability of electric service to its customers at a reasonable price. To the extent that price risk can be reduced without compromising supply reliability or imposing unnecessary costs on its customers, Tampa Electric is committed to executing strategies to accomplish its risk management goals.
- B. Quantitative objectives: Tampa Electric's quantitative objective is to prudently manage its fuel and wholesale energy procurement activities to minimize the variance from projected expenditures while taking advantage of cost-saving opportunities that do not result in increased supply risk. Tampa Electric has established a portfolio of fuel and purchased power products with creditworthy counterparties for known volumes and prices.

#### II. Oversight & Reporting of Fuel Procurement Activities

The company provides its fuel and wholesale energy procurement activities with independent and unavoidable oversight.

- A. The TECO Energy Board of Directors established an Energy Risk Management Policy ("Risk Policy"). This policy governs all energy commodities transacting activity at each of TECO Energy's operating units. The scope of the policy includes:
  - Roles and responsibilities of various persons and functions with respect to risk management
  - Authorized transacting activity
  - Risk limits
  - Valuation and data management
  - Credit risk management
  - Reporting
  - Compliance and enforcement
- **B.** The Risk Policy established the RAC. The responsibilities of the RAC include the following:
  - Reviewing the Risk Management Policy periodically and recommending changes and enhancements for approval by the Board of Directors ("Board")
  - Reviewing corporate risk limits for recommendation to the Board
  - Within Board approved corporate risk limits, establishing the quantitative limits for operating companies. The RAC may, at its discretion, delegate approval of sub-limits to operating company management
  - Approving parameters for counterparty credit limits and the allocation of limits among the operating companies
  - Establishing guidelines for risk management and measurement
  - Overseeing and reviewing the risk management process and infrastructure
  - Reviewing and approving transacting strategies proposed by the operating companies
  - Understanding and approving methodologies used for valuation and risk measurement
  - Reviewing and approving corporate and operating company risk limits
  - Establishing credit underwriting standards, and monitoring credit risk-taking activities and related exposures
  - Reviewing risk reports, including portfolio risk summaries and profitability and performance summaries
  - Enacting, maintaining, and enforcing limit violation and trader misconduct policies
  - Taking appropriate courses of action when the risk position of a transacting group has exceeded or is approaching the established limits
  - Reviewing and approving new risk management products

- Presenting periodic reports to the Board or its committees
- **C.** TECO Energy established a corporate risk management function ("middle office"), which is overseen by the Director of Independent Risk Oversight.
- **D.** Tampa Electric established additional oversight or control mechanisms to ensure compliance with policies and procedures. The following practices provide checks and balances on procurement activities.
  - Fuel and wholesale energy procurement activities are conducted in accordance with company guidelines, including review by the operating stations, Environmental Health and Safety Department and other management.
  - All agreements are formalized in a written contract that is reviewed by the company's Legal Department.
  - The contracts are reviewed by the Corporate Credit Manager of TECO Energy's Treasury Department for potential credit risks and incorporation of appropriate credit protection.
  - The company maintains approval authority restrictions based on term and value of the transaction.
  - Payments of invoices under each contract are approved by the Manager(s) and/or Director of the Wholesale Marketing and Fuels
    Department and reviewed by the Regulatory Accounting Department.
  - Each transaction is eligible for review by outside, internal and regulatory auditors.
  - Implementation of an information system that provides transaction authority control, credit monitoring, mark-to-market and value-atrisk analysis and other key controls.
- E. In accordance with the Risk Policy, Tampa Electric established commodity transaction limits for related commodity transactions.
- **F.** Tampa Electric's Wholesale Marketing and Fuels Department updated and formalized its policies and procedures.
- **G.** Reports are generated that summarize the fuel procurement activities of the company. These include monthly financial reports produced by Regulatory Accounting, FERC Electric Quarterly Reports, FERC Form 1, FERC Form 580, FERC Form 423, FPSC A schedules and FPSC E schedules. In addition, position and mark-to-market reports are produced and reviewed by the Director of Independent Risk Oversight. The appropriate entries and related disclosures are made in the company's books and records as required by accounting standards.

### III. Risk Assessment

In its Risk Policy, TECO Energy has identified the following types of risks for its commodity portfolio:

#### Market Risk

Market risk is the potential change in value of a commodity contract caused by adverse changes in market factors (price and volatility). The following are types of market risk.

**Price Risk:** Price risk refers to the uncertainty associated with changes in the price of an underlying asset. For instance, if a company has a short position in the market (*e.g.*, needs to meet load requirements by purchasing electricity or natural gas), it will be susceptible to price increases. Conversely, if a company is in a long position (*e.g.*, excess generation or natural gas supply), it is exposed to decreases in market prices. Tampa Electric manages its price risk using physical and financial hedges.

In 2006, Tampa Electric is subject to some price risk related to variation in coal prices. That price risk is mitigated in part because the company has already contracted for most of its expected coal needs at known prices. Expected market conditions do not currently require further price risk mitigation, for the reasons described in Section IV of this plan.

Tampa Electric evaluated its exposure to changes in the price for natural gas in 2006 based on the forward price and estimated volatility for natural gas and the company's expected usage under both low and high price natural gas cases. As expected, natural gas expenditures decrease in the low case by an estimated and , respectively, due to lower prices. Natural gas expense also decreases in the high case because total natural gas volume consumed decreases due to higher dispatch prices for the natural gas-fired units. However, the decrease in natural gas expense and natural gas-fired generation is offset by an increase in economic wholesale purchases. In the high case, natural gas expenditures decrease by an estimated ; however, total fuel and purchased power costs increase by This exposure estimate does not take into account any hedges the company may implement to limit its exposure. Tampa Electric's hedging strategy with respect to natural gas is outlined in Section IV of this plan.

Tampa Electric's expected expenditures for purchased power have an open position of approximately **services** for 2006. Tampa Electric's hedging strategy with respect to purchased power is outlined in Section IV of this plan.

Tampa Electric requires small quantities of fuel oil and maintains a requirements contract that eliminates its supply risk. Due to the small quantities in question, the cost impact caused by price risk is minimal and is therefore not quantified.

*Time Spread Risk:* This is the risk that the relationship between two points (*i.e.*, one month versus six months) on the forward curve changes. Because the shape of the fuel or electricity forward curve changes to reflect the market's expectations of spot and future fuel or electricity prices, the relationship between any two points on the curve is not always constant. Because of the nature of its business Tampa Electric has little reason or opportunity to offset energy commodity requirements in one month with resources delivered in another month. Therefore, time spread risk is not a significant issue for Tampa Electric.

Liquidity Risk: Liquidity risk is associated with the lack of marketability of a commodity. It includes the risk of an adverse cost or return variation stemming from the lack of marketability of a financial instrument. Liquidity risk may arise because a given position is very large relative to typical trading volumes of like commodity and contract tenor, or because market conditions are unsettled. Liquidity risk is usually reflected in a wide bid-ask spread and large price movements in response to any attempt to buy or sell. A firm facing the need to quickly unwind a portfolio of illiquid instruments may find it necessary to sell at prices far below fair value. Tampa Electric is not exposed to liquidity risk since the company does not purchase instruments for resale.

**Basis Risk:** Basis risk is the risk exposure due to a difference in commodity value between different delivery points. Electricity markets are regional. Prices can be different at different locations because of differences in both supply costs and the cost of transmission between the two locations. These price differences are dynamic, primarily due to changes in transmission availability between the two locations. Due to the stability of the coal market, Tampa Electric's negligible use of oil, and the indexing of its natural gas contract pricing, basis risk is not a significant issue for the company.

**Option Risk (Convexity):** Option risk is associated with purchasing or writing an option, and represents the risk that the value of an option at expiration or upon exercise is different from the premium paid when the option was purchased or sold. Option risk is limited to the value of the premium paid at the time the option is purchased.

Fundamentally, market risk is created by the existence of "open" positions. An open position is the difference between an existing requirement and the ability to

meet that requirement with existing resources.

#### Volume Risk

Volume risk is the potential adverse economic impact of unanticipated changes in supply or demand. Tampa Electric faces supply risk, because there is uncertainty associated with the availability of generating units or fuel availability for those units. If a generating unit fails, Tampa Electric must replace the power with another unit's generation or with purchased power at market prices. Tampa Electric also faces demand risk since there is uncertainty associated with customer demand, and thus uncertainty in the determination of the fuel or energy purchase volumes necessary to supply such demand. Tampa Electric's volume risk for fuel and purchased power in 2006 is managed operationally and through contract terms enforcement, including appropriate legal remedies, should a party default.

### Credit Risk

Credit risk is the risk of financial loss due to a counterparty's failure to fulfill the terms of a contract on a timely basis. It includes both settlement risk associated with payment for fuel or energy received, as well as potential risk, which reflects the risk that the counterparty defaults on an obligation to provide or receive fuel or energy. Credit risk depends on the probability of counterparty default, the concentration of credit exposure with a small number of counterparties, the total amount of exposure, and the volatility of markets. Tampa Electric's credit risk commodity price hedging will vary based on the number of its trading counterparties and the mark-to-market value of its hedge transactions. Tampa Electric's existing credit risk is minimal since it uses a wide-variety of counterparties, continues to add to its portfolio of counterparties and has systems and processes in place to monitor and control Credit Risk.

#### Administrative Risk

Administrative risk is risk of loss associated with deficiencies in a company's internal control structure and management reporting due to human error, fraud or a system's inability to adequately capture, store and report transactions. The company has consistently maintained appropriate administrative controls for entering and administration of coal and oil contracts. Tampa Electric's controls for natural gas procurement have changed due to the increased use of natural gas. In 2004, the company purchased and implemented the Nucleus risk management system. With the use of the Nucleus system, Tampa Electric has significantly enhanced its internal controls and management reporting for natural gas.

### IV. Risk Management Strategy and Current Hedging Activity

Tampa Electric's risk management strategy is designed to limit exposure to different types of risk that are applicable to the company's operation.

#### Market Risk

Tampa Electric's potential market risk is the result of open positions in four commodities:

- Coal
- Natural Gas
- Fuel Oil
- Purchased Power

Projected system energy requirements during 2006 will be served in the proportions shown in the following table.

Commodity	Percent of System Energy		
Coal	50		
Natural Gas	32		
No. 2 Oil	<1		
No. 6 Oil	<1		
Purchased Power	18		

Based on Tampa Electric's assessment of market risk factors, the company has implemented the market risk management strategies described below.

Coal. Tampa Electric has contracted for most of its expected coal needs for 2006 through bilateral agreements with coal producers. The company provided the projected amounts in both tons and dollars in its 2006 projection filing submitted September 8, 2005. Tampa Electric's contracts with suppliers incorporate legal remedies in the event of default, which address volume risk. In addition, the coal market is expected to remain higher but relatively stable for Tampa Electric in 2006. Tampa Electric's ability to utilize high-sulfur, Illinois Basin coal in its units has reduced its exposure to the extreme price volatility experienced in 2004 and 2005 for low-sulfur, compliance (Central Appalachian) coal. Similarly, Tampa Electric's use of waterborne transportation has protected it from the price volatility and delivery problems experienced by utilities relying upon rail In addition, the Illinois Basin is a region where coal transportation. production may increase relatively quickly to respond to increased needs.

As a result, Tampa Electric's coal volume risk in 2006 is minimal. Tampa Electric has continued to strengthen its credit review process. Newly established agreements incorporate stricter credit provisions; and as older contracts expire, the company plans to include the stricter provisions in future coal supply agreements.

**Fuel Oil.** In 2006, Tampa Electric will continue to purchase its fuel oil needs at indexed market prices. Oil represents less than one percent of the company's needs on a GWH basis, and therefore, associated price risk is minimal. Tampa Electric maintains a requirements contract with a local supplier to deliver all of its needs, which mitigates supply risk.

**Natural Gas.** Tampa Electric continues to implement prudent financial hedging strategies for natural gas requirements. In 2005, the company used swap agreements—the exchange of a payment tied to the value of a natural gas index for a fixed payment—to hedge natural gas. Tampa Electric plans to hedge a significant percentage of its projected natural gas usage in 2006, using a portfolio of financial hedging instruments.

Tampa Electric uses the forward pricing information of the New York Mercantile Exchange ("NYMEX") natural gas forward price curve in developing natural gas price hedging strategy. Tampa Electric also subscribes to energy consulting services that provide information about underlying issues affecting the availability and price of natural gas and other commodities. The purpose of Tampa Electric's natural gas hedge plan is to reduce natural gas price volatility by utilizing financial instruments relying on three key variables: price, volume and time.

Tampa Electric projects price during the company's annual fuel budgeting process. The volume of natural gas that the company will hedge falls between a minimum and a maximum percentage of the expected natural gas burn. The percentages vary according to the time remaining until the contract month.

Tampa Electric reviews and considers enhancements to its Risk Management Plan frequently. Recognizing the recent change in the natural gas market dynamics, the company is considering options for enhancements to the plan. Some of the options being considered include extending the time forward for which financial hedges can be entered, increasing the percentage allowed to be hedged in the outer months, and utilizing new financial hedging structures. When the evaluation of options is complete, recommendations will be submitted to the RAC for approval.

Currently, Tampa Electric estimates about percent of its total 2005 natural gas purchases will be covered by financial hedges. The net effect

of these hedges is estimated to be a gain of over **Example**. For 2006, Tampa Electric has approximately percent hedged with a currently estimated gain of **Example**.

**Purchased Power.** Total forecasted purchased power for 2006 is 3,800,000 MWH. As of August 2005, Tampa Electric has physically hedged 46 percent of its 2006 expected purchased power needs through pre-scheduled purchased power agreements. Of this total, firm cogeneration energy purchases account for 435,000 MWH. The company expects to purchase 227,000 MWH from Hardee Power Partners, at cost-based capacity and energy rates, and an additional 93,000 MWH from Calpine. Lastly, in anticipation of the replacement of the existing purchase from Progress Energy Florida, Tampa Electric projects the purchase of an additional 1,018,000 MWH at a cost-based price.

The remaining 2,073,000 MWH or 54 percent of 2006 forecasted wholesale energy purchases will be purchased from as-available cogenerators or on the short-term, non-firm market for economy purposes, which are not hedged. The table below shows the expected spot purchased power amounts by month.

EXPECTED PURCHASES 2006						
	Total Purchases (MWH)	Open Position Purchases (MWH)	Open Position % of Total	Projected Transaction Price (\$/MWH)	Open Position (\$)	
JAN	233,965					
FEB	223,501					
MAR	476,625					
APR	277,300					
MAY	208,420					
JUN	281,158					
JUL	338,059					
AUG	329,471					
SEP	365,353					
OCT	386,372					
NOV	293,779					
DEC	392,708					
TOTAL	3,806,711	2,072,932	54%			

The company's purchased power contracts include a fuel component; therefore, Tampa Electric has exposure to fuel price risk for its wholesale energy purchases, particularly for purchased power supplied from natural gas-fired generation. The fuel component of the price risk could be

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hedged with financial derivatives, but Tampa Electric does not currently hedge wholesale energy transactions with financial instruments due to the lack of a liquid, published wholesale energy market and appropriate available instruments. The company will continue to evaluate the merits of hedging the fuel price risk of purchased power contracts in its risk management strategy.

In summary, Tampa Electric's planned operations in 2006 result in nominal market risk associated with coal and fuel oil. Non-price risks associated with natural gas and purchased power are also minimal. Therefore, while the company continues to evaluate risk for all fuel and energy commodity transactions, it is currently focused on mitigating the price risk associated with natural gas and purchased power.

#### Volume Risk

Hedging of volumetric risk is problematic due to a limited number of viable financial hedging instruments. Tampa Electric has identified the following hedges:

- Maintaining appropriate inventory stockpiles provides a physical hedge against volume risk
- "Swing" contracts enable the buyer to take variable volumes up to a predefined limit
- Full requirement contracts enable the buyer to take any volume up to total usage
- Weather derivatives enable the buyer to take variable volumes depending on weather temperatures and have significant price premiums

Tampa Electric uses swing contracts and full requirements contracts where needed commodity volumes are small and in situations where commodity volumes are unpredictable in volume and/or timing. The company has evaluated weather derivatives and does not anticipate using them in the near future because they are not appropriate for Tampa Electric's situation.

### Credit Risk

TECO Energy's credit risk management process is composed of the following primary steps. (Also see the figure below.)

- Receive counterparty information for initial processing
- Assess counterparty creditworthiness and assign credit rating (i.e., third-party and internal)
  - Determine credit collateral requirements, as needed
  - Request, review and monitor contractual requirements, legal covenants, collateral documents and credit provisions

- Establish corporate maximum exposure and allocate appropriate counterparty credit limits to operating companies
- Quantify counterparty exposure and measure against approved limits Monitor counterparty and collateral credit qualities
  - Calculate appropriate credit reserves to offset losses associated with potential default
    - Prepare credit exposure reports that result in updated credit limits for new business transactions entered into by the operating companies

#### **TECO'S Credit Risk Management Process**



#### Administrative Risk

In 2004, Tampa Electric purchased and implemented the energy trading risk management system called Nucleus to more efficiently track, monitor and evaluate hedging activities and provide greater reporting capability and control functionality.