

# AUSLEY & McMULLEN

ATTORNEYS AND COUNSELORS AT LAW

123 SOUTH CALHOUN STREET  
P.O. BOX 391 (ZIP 32302)  
TALLAHASSEE, FLORIDA 32301  
(850) 224-9115 FAX (850) 222-7560

April 5, 2013

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Ms. Ann Cole, Director  
Division of Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

Re: Fuel and Purchased Power Cost Recovery Clause with Generating  
Performance Incentive Factor; FPSC Docket No. 130001-EI

Dear Ms. Cole:

Enclosed for filing in the above docket on behalf of Tampa Electric Company are the original and fifteen (15) copies of the Prepared Direct Testimony of J. Brent Caldwell and accompanying Exhibit No. \_\_\_ (JBC-1), identified as 2012 Hedging Activity True-Up.

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/encls.)

COM 5  
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01732 APR-5 2013

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing Testimony and Exhibit JBC-1 of Brent Caldwell has been furnished by U. S. Mail or hand delivery (\*) on this 5<sup>th</sup> day of April 2013 to the following:

Ms. Martha F. Barrera\*  
Senior Attorney  
Office of the General Counsel  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

Mr. John T. Burnett  
Ms. Dianne M. Triplett  
Progress Energy Florida, Inc.  
Post Office Box 14042  
St. Petersburg, FL 33733

Mr. Paul Lewis, Jr.  
Progress Energy Florida, Inc.  
106 East College Avenue  
Suite 800  
Tallahassee, FL 32301-7740

Mr. Jon C. Moyle, Jr.  
Moyle Law Firm  
118 N. Gadsden Street  
Tallahassee, FL 32301

Ms. Patricia A. Christensen  
Associate Public Counsel  
Office of Public Counsel  
111 West Madison Street – Room 812  
Tallahassee, FL 32399-1400

Ms. Beth Keating  
Gunster, Yoakley & Stewart, P.A.  
215 S. Monroe St., Suite 601  
Tallahassee, FL 32301

Samuel Miller, Capt., USAF  
USAF/AFLOA/JAC/ULFSC  
139 Barnes Drive, Suite 1  
Tyndall AFB, FL 32403-5319

Ms. Cheryl Martin  
Director/Regulatory Affairs  
Florida Public Utilities Company  
1641 Worthington Road, Suite 220  
West Palm Beach, FL 33409

Mr. John T. Butler  
Assistant General Counsel - Regulatory  
Florida Power & Light Company  
700 Universe Boulevard  
Juno Beach, FL 33408-0420

Mr. Kenneth Hoffman  
Vice President, Regulatory Relations  
Florida Power & Light Company  
215 South Monroe Street, Suite 810  
Tallahassee, FL 32301-1859

Mr. Robert L. McGee, Jr.  
Regulatory and Pricing Manager  
Gulf Power Company  
One Energy Place  
Pensacola, FL 32520-0780

Mr. Jeffrey A. Stone  
Mr. Russell A. Badders  
Mr. Steven R. Griffin  
Beggs & Lane  
Post Office Box 12950  
Pensacola, FL 32591-2950

Mr. Robert Scheffel Wright  
Mr. John T. LaVia, III  
Gardner, Bist, Wiener, Wadsworth,  
Bowden, Bush, Dee, LaVia & Wright, P.A.  
1300 Thomaswood Drive  
Tallahassee, FL 32308

Mr. Randy B. Miller  
White Springs Agricultural Chemicals, Inc.  
Post Office Box 300  
White Springs, FL 32096

Ms. Cecilia Bradley  
Senior Assistant Attorney General  
Office of the Attorney General  
The Capitol – PL01  
Tallahassee, FL 32399-1050

Mr. James W. Brew  
Mr. F. Alvin Taylor  
Brickfield, Burchette, Ritts & Stone, P.C.  
1025 Thomas Jefferson Street, NW  
Eighth Floor, West Tower  
Washington, D.C. 20007-5201

  
\_\_\_\_\_  
ATTORNEY



BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 130001-EI  
IN RE: FUEL & PURCHASED POWER COST RECOVERY  
AND  
CAPACITY COST RECOVERY

2012 HEDGING ACTIVITY TRUE-UP

TESTIMONY AND EXHIBIT

J. BRENT CALDWELL

FILED: APRIL 5, 2013

DOCUMENT NUMBER-DATE

01732 APR-5 2013

FPSC-COMMISSION CLERK

1                                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2                                   **PREPARED DIRECT TESTIMONY**

3                                   **OF**

4                                   **J. BRENT CALDWELL**

5  
6   **Q.**   Please state your name, address, occupation and  
7           employer.

8  
9   **A.**   My name is J. Brent Caldwell. My business address is  
10           702 N. Franklin Street, Tampa, Florida 33602. I am  
11           employed by Tampa Electric Company ("Tampa Electric" or  
12           "company") as Director of Origination & Market Services.

13  
14   **Q.**   Please provide a brief outline of your educational  
15           background and business experience.

16  
17   **A.**   I received a Bachelor Degree in Electrical Engineering  
18           from Georgia Institute of Technology in 1985 and a  
19           Master of Science in Electrical Engineering in 1988 from  
20           the University of South Florida. I have over 15 years  
21           of utility experience with an emphasis in state and  
22           federal regulatory matters, natural gas procurement and  
23           transportation, fuel logistics and cost reporting, and  
24           business systems analysis. In October 2010, I assumed  
25           responsibility for long term fuel origination.

1 **Q.** Have you previously testified before the Florida Public  
2 Service Commission ("FPSC" or "Commission")?

3

4 **A.** Yes. I have previously testified before this Commission  
5 in Docket No. 120234-EI regarding the company's fuel  
6 procurement and delivery strategy for the Polk 2-5  
7 Combine Cycle Conversion.

8

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

10

11 **A.** The purpose of my testimony is to present, for the  
12 Commission's review, information regarding the 2012  
13 results of Tampa Electric's risk management activities,  
14 as required by the terms of the stipulation entered into  
15 by the parties to Docket No. 011605-EI and approved by  
16 the Commission in Order No. PSC-02-1484-FOF-EI.

17

18 **Q.** Do you wish to sponsor an exhibit in support of your  
19 testimony?

20

21 **A.** Yes. Exhibit No. \_\_\_\_ (JBC-1), entitled Tampa Electric's  
22 2012 Hedging Activity True-up, was prepared under my  
23 direction and supervision. This report explains the  
24 company's risk management activities and results for the  
25 calendar year 2012.

1 Q. What is the source of the data you present in your  
2 testimony in this proceeding?

3

4 A. Unless otherwise indicated, the source of the data is  
5 the books and records of Tampa Electric. The books and  
6 records are kept in the regular course of business in  
7 accordance with generally accepted accounting principles  
8 and practices, and provisions of the Uniform System of  
9 Accounts as prescribed by this Commission.

10

11 Q. What were the results of Tampa Electric's risk  
12 management activities in 2012?

13

14 A. As outlined in Tampa Electric's 2012 Hedging Activity  
15 True-up, filed as an exhibit to this testimony, the  
16 company follows a non-speculative risk management  
17 strategy to reduce fuel price volatility while  
18 maintaining a reliable supply of fuel. In particular,  
19 Tampa Electric established a financial hedging program  
20 to limit its exposure to spikes in the price of natural  
21 gas. Over time, this program has been enhanced as Tampa  
22 Electric's gas needs have evolved and grown. All  
23 enhancements have been reviewed and approved by the  
24 company's Risk Authorization Committee.

25 The report indicates that Tampa Electric's 2012 hedging

1 activities resulted in a net loss of approximately \$61.5  
2 million. Tampa Electric followed the plan objective of  
3 reducing price volatility while maintaining a reliable  
4 fuel supply. Natural gas prices declined in 2012 due to  
5 lower demand as a result of the ongoing economic  
6 downturn as well as from an abundance of natural gas  
7 supply from non-conventional, shale gas production.

8  
9 **Q.** Does Tampa Electric implement physical hedges for  
10 natural gas?

11  
12 **A.** No, Tampa Electric does not hedge natural gas pricing  
13 through physical gas supply contracts. However, Tampa  
14 Electric does hedge its supply through diversification.  
15 In addition to financial hedging, Tampa Electric uses a  
16 variety of sources, delivery methods, inventory  
17 locations and contractual terms to enhance the company's  
18 supply reliability and flexibility to cost-effectively  
19 meet changing operational needs.

20  
21 Tampa Electric continually pursues new creditworthy  
22 counterparties and maintains contracts for gas supplies  
23 from various regions and on different pipelines. The  
24 company also contracts for pipeline capacity to access  
25 non-conventional shale gas production which is less

1 sensitive to interruption by hurricanes. Additionally,  
2 Tampa Electric has storage capacity with Bay Gas Storage  
3 near Mobile, Alabama. All of these actions enhance the  
4 effectiveness of Tampa Electric's gas supply portfolio.

5  
6 **Q.** Does Tampa Electric use a hedging information system?

7  
8 **A.** Yes, Tampa Electric continues to use Sungard's Nucleus  
9 Risk Management System ("Nucleus"). Nucleus supports  
10 sound hedging practices with its contract management,  
11 separation of duties, credit tracking, transaction  
12 limits, deal confirmation, risk exposure analysis and  
13 business report generation functions. The Nucleus  
14 system records all financial natural gas hedging  
15 transactions, and the system calculates risk management  
16 reports.

17  
18 **Q.** Did the company use financial hedges for commodities  
19 other than natural gas in 2012?

20  
21 **A.** No. Tampa Electric did not use financial hedges for  
22 commodities other than natural gas in 2012.

23  
24 Tampa Electric's generation is comprised mostly of coal  
25 and natural gas. Although the price of coal has also

1 decreased, it is historically stable compared to the  
2 prices of oil and natural gas. In addition, there is  
3 not an organized nor a liquid market for financial  
4 hedging instruments for the high-sulfur Illinois Basin  
5 coal that Tampa Electric uses at Big Bend Station, its  
6 largest coal-fired generation facility.

7

8 Tampa Electric consumes a small amount of oil; however,  
9 its low and erratic usage pattern makes price hedging  
10 impractical.

11

12 Similarly, Tampa Electric did not use financial hedges  
13 for wholesale power transactions because a liquid,  
14 published market does not exist for power in Florida.

15

16 **Q.** How does Tampa Electric assure physical supply of other  
17 commodities?

18

19 **A.** Tampa Electric assures sufficient physical supply of  
20 coal and oil through supply diversification, inventory  
21 sufficiency, and delivery flexibility for coal. For  
22 coal, the company enters into a portfolio of contracts  
23 with differing terms and various suppliers to obtain the  
24 types of coal used in its electric generation system.  
25 This is of particular importance because of increasing

1 competition for Illinois Basin coal supply. This  
2 increased competition comes from domestic utilities that  
3 have added sulfur dioxide scrubbers to their coal plants  
4 and from the international market. This competition for  
5 low cost supply puts greater emphasis on the need for a  
6 robust coal supply portfolio.

7  
8 Additionally in 2009, Tampa Electric added rail delivery  
9 capability for coal to Big Bend Station. The addition  
10 of rail to the existing waterborne transportation  
11 facilities enhanced Tampa Electric's access to coal  
12 supply and increased delivery reliability.

13  
14 For oil, Tampa Electric fills its oil tanks prior to  
15 entering hurricane season to reduce exposure to supply  
16 or price issues that may arise during hurricane season.  
17 Competition for potentially limited oil supplies and oil  
18 transportation during a crisis emphasizes the need for  
19 maintaining sufficient inventory.

20  
21 **Q.** What is the basis for your request to recover the  
22 commodity and transaction costs described above?

23  
24 **A.** Tampa Electric requests cost recovery pursuant to the  
25 Commission Order No. PSC-02-1484-FOF-EI, in Docket No.

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011605-EI:

Each investor-owned electric utility shall be authorized to charge/credit to the fuel and purchased power cost recovery clause its non-speculative, prudently-incurred commodity costs and gains and losses associated with financial and/or physical hedging transactions for natural gas, residual oil, and purchased power contracts tied to the price of natural gas.

**Q.** Does this conclude your testimony?

**A.** Yes, it does.

**J. BRENT CALDWELL**

**EXHIBIT**

**2012 HEDGING ACTIVITY TRUE-UP**

## **Tampa Electric 2012 Hedging Activity True-up**

Tampa Electric's Risk Management Plan identified the following objectives:

- **Qualitative Objectives**  
Tampa Electric's primary goal in managing risk associated with fuel or power purchases focuses 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 mitigated without compromising supply reliability or imposing unreasonable costs on its customers, Tampa Electric is committed to executing strategies to accomplish its risk management goal.
- **Quantitative Objectives**  
Tampa Electric's quantitative objective is to prudently manage its fuel and wholesale energy procurement activities so as 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.

### **2012 Risk Management Activities**

The company's activities in 2012 that supported the objectives listed above are described in the following section.

- **Coal Purchases**  
Tampa Electric maintains a portfolio of short-term (also called spot market), medium-term and long-term coal contracts with the goal of minimizing fuel costs and price risk while maintaining reliability of supply. The company procured all of its 2012 coal needs from suppliers with known, established pricing. Thus, the cost for the commodity was known. Tampa Electric continued to monitor deliveries and volume commitments in contracts as the pricing in the coal market changed. Tampa Electric takes advantage of favorable spot market pricing when the coal supply is needed. Coal was used to produce approximately 58 percent of the electricity the company generated in 2012.
- **Coal Risk Management Activities**  
Tampa Electric's long-established policy of using physical hedges within its portfolio of different term coal supply contracts continued to help protect ratepayers from coal price volatility.

➤ **Natural Gas Purchases**

In 2012, approximately 41 percent of the electricity Tampa Electric generated was produced using natural gas. Tampa Electric's risk management strategy continues to focus on supply reliability and price volatility reduction. The components critical to the success of the natural gas purchasing strategy are as follows:

- Execution of the natural gas hedge plan approved by the Risk Authorizing Committee;
- Maintaining liquidity by contracting with numerous qualified counterparties;
- Time horizon for natural gas hedging activity that allows the company to hedge natural gas prices into the future;
- Maintaining a minimum and maximum hedge volume percentage by month into the future;
- Maintaining physical natural gas storage capacity near Mobile Bay, Alabama;
- Diversifying interstate pipeline receipt points;
- Expanding access to additional interstate pipelines;
- Maintaining databases and reports to monitor activity;
- Maintaining coordination between power plant operations and natural gas scheduling;
- Maintaining separation of duties and installation of controls consistent with current industry practices.

➤ **Natural Gas Hedging Activities**

Natural gas prices historically have been more volatile than coal prices. Natural gas prices are more volatile due to the significant variations in natural gas consumption by natural gas fired power plants that increase and decrease generation to follow changes in demand. Additionally, hurricane activity and other weather-related production reductions or demand increases have a significant impact on the natural gas market. Therefore, Tampa Electric continued to use financial instruments to hedge the price of a portion of the natural gas consumed in 2012 to reduce customers' exposure to the volatility of natural gas prices. Tampa Electric used financial floating-price-to-fixed-price swaps to hedge natural gas prices. The costs associated with these instruments are embedded in the price of the instruments and are included in the fuel commodity costs reported by the company. The hedges are described in the following table.

**Tampa Electric**  
**Natural Gas Risk Management Activities**  
**January 1, 2012 through December 31, 2012**

|        | Type of Hedge | Mark-to-Market Saving/(Loss) | Hedged Volume (MMBTU) | Consumption (MMBTU) | Percent Hedged | Budget Price | Hedge Price | Settle Price |
|--------|---------------|------------------------------|-----------------------|---------------------|----------------|--------------|-------------|--------------|
| Jan-12 | Swaps         | \$(4,265,540)                |                       | 3,138,497           |                |              |             | \$3.08       |
| Feb-12 | Swaps         | \$(5,183,010)                |                       | 2,530,912           |                |              |             | \$2.68       |
| Mar-12 | Swaps         | \$(4,650,960)                |                       | 3,187,972           |                |              |             | \$2.45       |
| Apr-12 | Swaps         | \$(7,270,405)                |                       | 5,450,966           |                |              |             | \$2.19       |
| May-12 | Swaps         | \$(7,706,895)                |                       | 6,810,671           |                |              |             | \$2.04       |
| Jun-12 | Swaps         | \$(7,164,500)                |                       | 7,035,403           |                |              |             | \$2.43       |
| Jul-12 | Swaps         | \$(6,117,660)                |                       | 6,916,527           |                |              |             | \$2.77       |
| Aug-12 | Swaps         | \$(5,495,850)                |                       | 5,806,105           |                |              |             | \$3.01       |
| Sep-12 | Swaps         | \$(6,371,570)                |                       | 5,984,744           |                |              |             | \$2.63       |
| Oct-12 | Swaps         | \$(4,050,300)                |                       | 4,373,632           |                |              |             | \$3.02       |
| Nov-12 | Swaps         | \$(1,744,670)                |                       | 2,714,208           |                |              |             | \$3.47       |
| Dec-12 | Swaps         | \$(1,496,760)                |                       | 3,445,415           |                |              |             | \$3.70       |
| Total  |               | \$(61,518,120)               |                       | 57,395,052          |                |              |             |              |

Consistent with Tampa Electric's non-speculative risk management plan objective, Tampa Electric's natural gas hedging plan provided price stability and certainty during 2012. The losses for 2012 are due to a reduction in the price of natural gas during 2012. The price decline was driven primarily by a supply surplus due to higher supply from non-conventional production of shale gas and reduced demand due to mild weather and continued economic weakness.

Tampa Electric maintains natural gas storage capacity of 1,250,000 MMBtu in order to enhance its physical reliability of gas supply. The storage provides Tampa Electric with improved access to "intraday" natural gas when an operational need arises, provides improved hurricane coverage, and can be used to cost-effectively manage swings in gas supply needs during extreme weather conditions, weekends, holidays and unplanned power plant outages.

Tampa Electric also continues to improve its physical access to natural gas supply by diversifying its receipt points along the Gulf Coast and other areas when opportunities arise.

In summary, financial hedging activities for natural gas resulted in a net loss of approximately \$61.5 million in 2012; however, Tampa Electric was successful in reducing price uncertainty and maintaining fuel supply reliability for customers for both its physical and financial hedges.

### **2012 Market Pricing**

Tampa Electric provides a comparison of 2012 fuel prices to the market price for the respective commodity in the following section.

- **Coal**  
Coal is a commodity with a great range of potential quality characteristics. Market indexes provide a guide to current market pricing but are not specific enough to accurately demonstrate the market price of a particular coal. Market prices for coal are most accurately determined by competitive bid solicitations that specify the required coal quality or characteristics. With the exception of purchases for reliability reasons, short-term purchases for changing plant operation needs and spot market purchases to take advantage of favorable pricing, Tampa Electric purchases coal at prices determined by competitive bid solicitations; therefore, the company's purchases are at market. A comparison of coal contract prices for 2012 to the average acceptable bid price or index price is provided in the following table. Unless otherwise stated, the prices represent the market at the time each contract was entered into and are not representative of today's market. Any comparison to current market prices overlooks the market conditions that existed at the time the coal was procured.

**Tampa Electric  
 Coal Contract to Market Indicator Price Comparisons**

| Supplier (Mine)     | Contract (\$ / MMBtu) | Market Indicator (\$ / MMBtu) | Difference | Market Indicator Source                  | Note |
|---------------------|-----------------------|-------------------------------|------------|--|------|
| Knight Hawk         |                       | \$3.07                        |            | GEN-2009-01 December2007                 | 1    |
| Warrior             |                       | \$3.00                        |            | GEN-2009-01 December2007                 | 1    |
| K H-2012SP1-09      |                       | \$3.89                        |            | Gen 2012-01 (issued 10.12.2011)          | 1    |
| Allied Res-11LT1-15 |                       | \$3.87                        |            | Gen 2011-01 (issued 2.23.2011)           | 1    |
| Allied Res-11CP1-15 |                       | \$3.08                        |            | ICAP United, Inc - Coal 6/24/09          | 2,3  |
| KenAm-11CP1-09      |                       | \$4.03                        |            | ICAP United, Inc - Coal 8/31/2011        | 2    |
| Armstrong-11LT1-09  |                       | \$3.87                        |            | Gen 2011-01 (issued 2.23.2011)           | 1    |
| Patriot 2012SP1-09  |                       | \$3.89                        |            | Gen 2012-01 (issued 10.12.2011)          | 2    |
| Patriot 2012SP2-09  |                       | \$3.27                        |            | ICAP United, Inc - Coal 11/9/2012        | 2    |
| Glencore 2012SP1-LS |                       | \$5.55                        |            | Polk-LS-2012-01 (issued July 28,2011)    | 1, 4 |
| Valero 2012 A 01    |                       | \$3.45                        |            | Polk-PC-2012-01 (issued August 11, 2011) | 1    |

Notes:

The contract \$/MMBTU refers to the initial price of the contract at its inception. This price could be subject to escalation per the terms of the contract.

All prices are determined on a fully delivered basis. Index values have also been calculated on a delivered basis for comparison purposes.

1. The bid solicitation price is the average price submitted of all acceptable coal bids.
2. Pricing based on ICAP United Inc. - Daily Coal price index.
3. Call / Put option entered into in June 2009.
4. While the Glencore \$/MMBTU was [REDACTED], the [REDACTED] yielded the lowest overall cost.

➤ **Natural Gas**

Tampa Electric purchases natural gas at prices that are set by published indexes that reflect the market price. Most of the monthly baseload gas is purchased at a price relative to the New York Mercantile Exchange natural gas futures last day settlement price. Tampa Electric purchases additional baseload gas at monthly index prices published in *Inside FERC, Gas Market Report*. Tampa Electric uses the indexes representing market prices for natural gas on the Gulf Coast that can be transported to Tampa Electric's service area: Henry Hub, Mobile Bay, or Florida Gas Transmission ("FGT") Zone 1, Zone 2 or Zone 3. For daily and short-term natural gas, Tampa Electric typically purchases natural gas based on the FGT index price published in *Gas Daily*. In rare instances, Tampa Electric also purchases small volumes of spot natural gas needed for short durations at fixed prices. Since the price of natural gas Tampa Electric purchases is based upon a published market index, the company's natural gas purchases are at market.

➤ **No. 2 Oil**

Tampa Electric purchases No. 2 oil for combustion turbines at Polk Station and for Big Bend Station startup. The purchase price is based upon the daily index price published in Platt's *Oilgram* for Gulf Coast Waterborne spot purchases of ultra-low sulfur No. 2 oil. Since the price is determined by the published market index, the price paid by Tampa Electric is at market.

➤ **No. 6 Oil**

Tampa Electric no longer purchases No. 6 oil for Phillips Station. Phillips Station was placed on long term standby in September 2009.

➤ **Propane**

Tampa Electric purchases propane for Polk Unit No. 1. The purchase price is based upon the average of daily index prices published by Oil Price Information Service at Mont Belvieu, the primary propane hub for the southern United States. Since the price is determined by the published market index, the price paid by Tampa Electric is at market.