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April 7, 2015

VIA: ELECTRONIC FILING

Ms. Carlotta S. Stauffer
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. 150001-EI

Dear Ms. Stauffer:

Attached for filing in the above docket on behalf of Tampa Electric Company is the Prepared Direct Testimony of J. Brent Caldwell and accompanying Exhibit No. ____ (JBC-1), identified as 2014 Hedging Activity True-Up.

Thank you for your assistance in connection with this matter.

Sincerely,



Ashley M. Daniels

AMD/pp
Attachment

cc: All parties of record (w/attachment)

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 electronic mail on this 7th day of April 2015 to the following:

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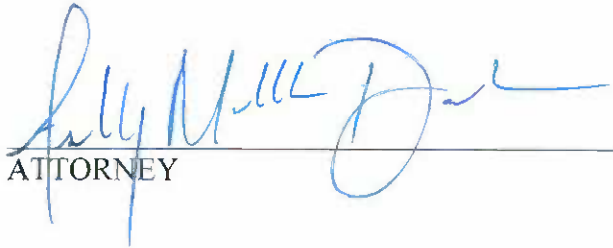
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ATTORNEY



BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 150001-EI
IN RE: FUEL & PURCHASED POWER COST RECOVERY
AND
CAPACITY COST RECOVERY

2014 HEDGING ACTIVITY TRUE-UP

TESTIMONY AND EXHIBIT

J. BRENT CALDWELL

FILED: APRIL 7, 2015

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 Bulk Fuel and Power.

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

16
17 **A.** I received a Bachelor's degree in Electrical Engineering
18 from Georgia Institute of Technology in 1985 and a
19 Master of Science degree in Electrical Engineering in
20 1988 from the University of South Florida. I have over
21 20 years of utility experience with an emphasis in state
22 and federal regulatory matters, fuel 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 supply planning and

1 procurement for Tampa Electric's generating stations.

2

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

5

6 **A.** Yes. I have submitted written testimony in the annual
7 fuel docket since 2011, and I testified before the
8 Commission in Docket No. 120234-EI regarding the
9 company's fuel procurement for the Polk 2-5 Combined
10 Cycle Conversion project

11

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

13

14 **A.** The purpose of my testimony is to present, for the
15 Commission's review, information regarding the 2014
16 results of Tampa Electric's risk management activities,
17 as required by the terms of the stipulation entered into
18 by the parties to Docket No. 011605-EI and approved by
19 the Commission in Order No. PSC-02-1484-FOF-EI.

20

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

23

24 **A.** Yes. Exhibit No. ____ (JBC-1), entitled Tampa Electric's
25 2014 Hedging Activity True-up, was prepared under my

1 direction and supervision. This report explains the
2 company's risk management activities and results for the
3 calendar year 2014.

4
5 **Q.** What is the source of the data you present in your
6 testimony in this proceeding?

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

14
15 **Q.** What were the results of Tampa Electric's risk
16 management activities in 2014?

17
18 **A.** As outlined in Tampa Electric's 2014 Hedging Activity
19 True-up, filed as an exhibit to this testimony, the
20 company follows a non-speculative risk management
21 strategy to reduce fuel price volatility while
22 maintaining a reliable supply of fuel. In particular,
23 Tampa Electric established a financial hedging program
24 to limit customers' exposure to spikes in the price of
25 natural gas. Over time, this program has been enhanced

1 as Tampa Electric's gas needs have evolved and grown.
2 All enhancements have been reviewed and approved by the
3 company's Risk Authorization Committee.
4

5 The report indicates that Tampa Electric's 2014 hedging
6 activities resulted in a net gain of approximately \$15.6
7 million. Tampa Electric followed the plan objective of
8 reducing price volatility while maintaining a reliable
9 fuel supply. Natural gas prices increased in early 2014
10 as a result of the significant inclement weather and
11 resulting impact on coal deliveries and inventories
12 during the winter of 2013/2014. Following that rise,
13 the continuing abundance of natural gas supply from non-
14 conventional, shale gas production has allowed natural
15 gas prices to decrease again.
16

17 **Q.** Does Tampa Electric implement physical hedges for
18 natural gas?
19

20 **A.** No, Tampa Electric does not hedge natural gas pricing
21 through physical gas supply contracts. Tampa Electric
22 does hedge its natural gas supply through
23 diversification. Tampa Electric also physically hedges
24 its supply through the use of a variety of sources,
25 delivery methods, inventory locations and contractual

1 terms to enhance the company's supply reliability and
2 flexibility to cost-effectively meet changing
3 operational needs.

4
5 Tampa Electric continually pursues new creditworthy
6 counterparties and maintains contracts for gas supplies
7 from various regions and on different pipelines. The
8 company also contracts for pipeline capacity to access
9 non-conventional shale gas production which is less
10 sensitive to interruption by hurricanes. Additionally,
11 Tampa Electric has storage capacity with Bay Gas Storage
12 near Mobile, Alabama. All of these actions enhance the
13 effectiveness of Tampa Electric's gas supply portfolio.

14
15 **Q.** Does Tampa Electric use a hedging information system?

16
17 **A.** Yes, until recently, Tampa Electric has used Sungard's
18 Nucleus Risk Management System ("Nucleus"). In 2013,
19 Tampa Electric initiated a project to replace Nucleus
20 with Allegro. The natural gas portion of the Allegro
21 project replaced Nucleus for all natural gas financial
22 and physical transactions effective November 1, 2014.
23 Allegro supports sound hedging practices with its
24 contract management, separation of duties, credit
25 tracking, transaction limits, deal confirmation, risk

1 exposure analysis and business report generation
2 functions. The Allegro system records all financial
3 natural gas hedging transactions, and the system
4 calculates risk management reports.

5
6 **Q.** Did the company use financial hedges for commodities
7 other than natural gas in 2014?

8
9 **A.** No. Tampa Electric did not use financial hedges for
10 commodities other than natural gas in 2014.

11
12 Tampa Electric's generation comprises mostly coal and
13 natural gas. The price of coal has historically been
14 stable compared to the prices of oil and natural gas.
15 In addition, there is not an organized, nor a liquid,
16 market for financial hedging instruments for the high-
17 sulfur Illinois Basin coal that Tampa Electric uses at
18 Big Bend Station, its largest coal-fired generation
19 facility.

20
21 Tampa Electric consumes a small amount of oil; however,
22 its low and erratic usage pattern makes price hedging
23 impractical.

24
25 Similarly, Tampa Electric did not use financial hedges

1 for wholesale power transactions because a liquid,
2 published market does not exist for power in Florida.

3

4 **Q.** How does Tampa Electric assure physical supply of other
5 commodities?

6

7 **A.** Tampa Electric assures sufficient physical supply of
8 coal and oil through supply diversification, inventory
9 sufficiency, and delivery flexibility. For coal, the
10 company enters into a portfolio of contracts with
11 differing terms and various suppliers to obtain the
12 types of coal used in its electric generation system.
13 Through a competitive bid process, supplier diversity
14 and transportation flexibility, Tampa Electric is able
15 to get competitive prices with valuable quality and
16 transportation flexibility by selecting from a wide
17 range of purchase options.

18

19 For oil, Tampa Electric fills its oil tanks prior to
20 entering hurricane season to reduce exposure to supply
21 or price issues that may arise during hurricane season.
22 Competition for potentially limited oil supplies and oil
23 transportation during a crisis emphasizes the need for
24 maintaining sufficient inventory.

25

1 Q. What is the basis for your request to recover the
2 commodity and transaction costs described above?

3

4 A. Tampa Electric requests cost recovery pursuant to the
5 Commission Order No. PSC-02-1484-FOF-EI, in Docket No.
6 011605-EI:

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

16

17 Q. Does this conclude your testimony?

18

19 A. Yes, it does.

20

21

22

23

24

25

Tampa Electric 2014 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.

2014 Risk Management Activities

The company's activities in 2014 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 2014 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 62 percent of the electricity the company generated in 2014.

- **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 2014, approximately 38 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 2014 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 Company
 Natural Gas Hedging Activities
 January 1, 2014 through December 31, 2014

Contract	Type of Hedge	Realized Gain/(Loss)	Hedged Volume (MMBtu)	Consumption (MMBtu)	Percent Hedged	Budget Price	Hedge Price	Settle Price
January 2014	Swap	\$1,067,285		3,388,832				\$4.41
February 2014	Swap	\$4,942,700		3,157,828				\$5.56
March 2014	Swap	\$2,232,670		4,603,963				\$4.86
April 2014	Swap	\$1,791,450		4,973,592				\$4.58
May 2014	Swap	\$2,668,620		5,530,263				\$4.80
June 2014	Swap	\$2,677,190		5,480,316				\$4.62
July 2014	Swap	\$1,903,555		5,467,277				\$4.40
August 2014	Swap	(\$382,010)		5,971,293				\$3.81
September 2014	Swap	(\$770,010)		5,411,089				\$3.96
October 2014	Swap	\$43,200		4,697,477				\$3.98
November 2014	Swap	(\$906,615)		2,776,256				\$3.73
December 2014	Swap	\$347,750		2,638,561				\$4.28
		\$15,615,785		54,096,745				

Consistent with Tampa Electric’s non-speculative risk management plan objective, Tampa Electric’s natural gas hedging plan provided price stability and certainty during 2014. For 2014, the calendar year net position for natural gas hedges was slightly below the closing price of natural gas, resulting in a mark-to-market net gain of \$15.6 million. The closing price was above the fixed hedge price primarily due to an increase in demand for natural gas following the colder than normal weather for the winter of 2013/2014.

Tampa Electric maintains natural gas storage capacity of 1,500,000 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 gain of approximately \$15.6 million in 2014; more importantly, Tampa Electric was

successful in reducing price uncertainty and maintaining fuel supply reliability for customers for both its physical and financial hedges.

2014 Market Pricing

Tampa Electric provides a comparison of 2014 fuel prices to the market price for the respective commodity in the following section.

➤ **Coal**

Coal is a commodity with a great range of quality characteristics. Market indexes provide a guide to current market pricing but are not specific enough to always 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 2014 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 Coal		\$3.07		Gen-2009-01 December 2007 (RFP)	1
Sunrise Coal		\$3.14		Big Bend Gen 2013-01 (issued 10.5.12) (RFP)	1,6
GLENCORE (Columbia)		\$4.43		Polk-LS-2013 (RFP)	1
Valero Marketing		\$2.82		Polk-PC-2013 (RFP)	1
Warrior Coal		\$3.39		Gen 2014-01 (RFP issued 11.5.13)	1
CONSOL (Bailey)		\$3.65		Gen 2014-01 (RFP issued 11.5.13) - Indices analysis	1,7
KNIGHT HAWK (Prairie Eagle, etc.)		\$3.39		Gen 2014-01 (RFP issued 11.5.13)	1
KNIGHT HAWK (Prairie Eagle, etc.)		\$3.39		Gen 2014-01 (RFP issued 11.5.13)	1
GLENCORE (Columbia)		\$3.60		Gen- 2015-01-LS (email issued April 2014)	1
Armstrong Coal Company		\$3.30		Gen 2015-02 (email issued 6.10.14)	1
COALSALLES (Arclar)		\$3.50		Gen 2015-03 (email issued Sept 2014)	1
Trafigura AG Branch Office		\$3.50		Gen 2015-03 (email issued Sept 2014)	1
CONSOL (Bailey)		\$3.84		Argus Coal Daily Atlantic basin August 15, 2014	8
CONSOL (Bailey)		\$3.71		Argus Coal Daily Atlantic basin October 24, 2014	8
Marathon		\$3.22		Argus/Pace Petroleum Coke Indexes (Jan/Feb 2014)	3
PATRIOT(Dodge Hill)		\$3.56		ICAP United / Argus Coal Daily 6/14/13 (Index)	4
PATRIOT(Dodge Hill)		\$3.56		ICAP United / Argus Coal Daily 6/14/13 (Index)	4
Trafigura AG Branch Office		\$3.35		ICAP United / Argus Coal Daily 8/9/13 (Index)	2,10
Trafigura AG Branch Office		\$3.36		Coaldesk (formally ICAP) / Argus Coal Daily 08/29/14 (Index)	5
Trafigura AG Branch Office		\$3.36		Coaldesk (formally ICAP) / Argus Coal Daily 08/29/14 (Index)	5
White Oak		\$2.82		Coaldesk (formally ICAP) / Argus Coal Daily 11/19/14- 1/21/14 (Index)	9
TCP Petcoke		\$3.22		Argus/Pace Petroleum Coke Indexes (Jan/Feb 2014)	3

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. 8/9/13. Argus 11,500 5.0 Lb SO₂, ICAP 11,500, 5.2 Lb SO₂

3. Average of Jan 14, Feb14 Argus PC index and Pace PC Index
4. Coal Pricing based on average of three indices 6/14/13. Argus 11,800 3.0lb SO₂, ICAP 11,500 4.5 LbSO₂ and Argus 11,500 Btu 5.0 Lb SO₂
5. Coal Pricing based on average of two indices. Argus 11,500 5.0lb SO₂, ICAP 11,500 5.2 LbSO₂
6. Test burns, spot contracts purchased from long term solicitation.
7. Indicative pricing based on Argus coal daily and ICAP NAPP pricing 11/8/2013.
8. Coal Daily Atlantic Basin, US East Coast, FOB Hampton Rd 12,000 <1%
9. Coal Pricing based on average of two indices. Argus 11,800 4.5 Lb SO₂, Coaldesk, LLC 11,800 4.5 Lb SO₂
10. The offer was the only offer available.

➤ **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 purchased 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.