

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

September 1, 2017

VIA: ELECTRONIC FILING

Ms. Carlotta S. Stauffer
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

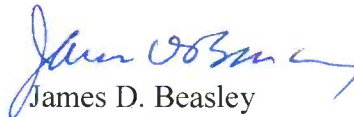
Re: Analysis of IOUs' hedging practices
FPSC Docket No. 20170057-EI

Dear Ms. Stauffer:

Attached for filing in the above docket, on behalf of Tampa Electric Company, is the Rebuttal Testimony of J. Brent Caldwell.

Thank you for your assistance in connection with this matter.

Sincerely,


James D. Beasley

JDB/pp
Attachment

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing Rebuttal Testimony, filed on behalf of Tampa Electric Company, has been furnished by electronic mail on this 1st day of September 2017 to the following:

Ms. Suzanne S. Brownless
Special Counsel
Office of the General Counsel
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850
sbrownle@psc.state.fl.us

Mr. J. R. Kelly
Mr. Erik L. Saylor
Office of Public Counsel
111 West Madison Street – Room 812
Tallahassee, FL 32399-1400
Kelly.jr@leg.state.fl.us
Saylor.erik@leg.state.fl.us

Ms. Dianne M. Triplett
Duke Energy Florida, Inc.
299 First Avenue North
St. Petersburg, FL 33701
Dianne.triplett@duke-energy.com

Mr. Matthew R. Bernier
Senior Counsel
Duke Energy Florida, Inc.
106 East College Avenue, Suite 800
Tallahassee, FL 32301-7740
Matthew.bernier@duke-energy.com

Mr. Jon C. Moyle, Jr.
Ms. Karen A. Putnal
Moyle Law Firm
118 North Gadsden Street
Tallahassee, FL 32301
jmoyle@moylelaw.com
kputnal@moylelaw.com

Mr. John T. Butler
Assistant General Counsel – Regulatory
Ms. Maria Jose Moncada
Principal Attorney
Florida Power & Light Company
700 Universe Boulevard (LAW/JB)
Juno Beach, FL 33408-0420
john.butler@fpl.com
maria.moncada@fpl.com

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

Mr. James W. Brew
Ms. Laura A. Wynn
Stone Mattheis Xenopoulos & Brew, PC
1025 Thomas Jefferson Street, NW
Eighth Floor, West Tower
Washington, D.C. 20007-5201
jbrew@smxblaw.com
law@smxblaw.com

Mr. Zachary M. Fabish
Mr. Steven J. Goldstein
Ms. Julie Kaplan
Ms. Diana Csank
Sierra Club
50 F Street, NW, Eighth Floor
Washington, DC 20001
steve.goldstein@sierraclub.org
julie.kaplan@sierraclub.org
diana.csank@sierraclub.org



ATTORNEY



BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20170057-EI
IN RE: ANALYSIS OF IOU'S HEDGING PRACTICES

REBUTTAL TESTIMONY
OF
J. BRENT CALDWELL

FILED: SEPTEMBER 1, 2017

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **REBUTTAL TESTIMONY**

3 **OF**

4 **J. BRENT CALDWELL**

5
6 **Q.** Please state your name, business address, and position
7 with Tampa Electric Company.

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

13
14 **Q.** Are you the same J. Brent Caldwell who has sponsored
15 Prepared Direct Testimony in this proceeding?

16
17 **A.** Yes I am.

18
19 **Q.** Has your job description, education, or professional
20 experience changed since your most recent testimony?

21
22 **A.** Yes, my duties and responsibilities have changed as I
23 took on a different role within the Wholesale Power,
24 Planning, and Fuels Department. In July 2017, I assumed
25 the position of Director, Portfolio Optimization, where

1 I am responsible for the unit commitment of Tampa
2 Electric's generation assets and oversee the company's
3 power and natural gas trading activities.

4
5 **Q.** What is the purpose of your rebuttal testimony?

6
7 **A.** My rebuttal testimony addresses shortcomings in the
8 substance and recommendations of witness Michael A.
9 Gettings, testifying on behalf of the Commission's Staff.
10 I also take issue with the recommendation of witness
11 Jeffrey Pollock, testifying for the Florida Industrial
12 Power User's Group ("FIPUG") that financial hedging of
13 natural gas purchases be offered as an optional service.

14
15 **Q.** Have you reviewed the rebuttal testimony submitted in this
16 proceeding by Dr. Detlef Hallermann on behalf of Tampa
17 Electric, Florida Power & Light Company and Duke Energy
18 Florida?

19
20 **A.** Yes I have, and I agree with Dr. Hallermann's rebuttal
21 testimony.

22
23 **Gettings' Hedging Proposal**

24 **Q.** Please describe your understanding of how Mr. Gettings'
25 hedging proposal would operate.

1 **A.** Labeled a risk responsive risk management plan, the main
2 difference of the Gettings proposal from that which the
3 Florida IOUs have used in recent years is Mr. Gettings
4 use of a Value-at-Risk ("VaR") model to determine when to
5 execute new hedges as well as when to liquidate, or
6 protect with options, hedges currently held. The details
7 of Mr. Gettings proposal are described in my Direct
8 Testimony at pages 9 through 11.

9
10 **Difficulties with the Gettings Proposal**

11 **Q.** What concerns does Tampa Electric have with respect to
12 Mr. Gettings' proposal?

13
14 **A.** Tampa Electric is primarily concerned with the degree of
15 complexity of Mr. Gettings model, the lack of specificity
16 about how the model would be implemented as well as the
17 cost of implementation.

18
19 The Gettings proposal requires frequent monitoring and
20 decision-making about whether to add or eliminate hedge
21 positions, based on the results of a VaR model the utility
22 must maintain. Tampa Electric has concerns about how to
23 manage the model, how long it would take to react to changes
24 in the model analytics, and how to defend this model and
25 resulting decisions from later criticisms or second-

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guessing if outcomes are deemed unfavorable.

The Gettings proposal involves the use of a complex model with significant administrative and implementation costs. The necessary knowledge and systems to audit and review the utility programs are substantial. The program includes multiple decision points and utility discretion, including triggers for simultaneous defensive and contingent hedging.

Mr. Lawton, testifying on behalf of the Office of Public Counsel, agrees with criticisms of the Gettings proposal, concluding that Mr. Gettings risk responsive financial hedging proposal should be rejected in that such a program will likely lead to more uncertainty, more litigation, and potentially more costs. (Direct Testimony of Daniel J. Lawton, p. 6)

Benefits of OTM Call Option Hedging Proposal over the Gettings Approach

Q. Do you believe the investor owned utilities' proposed OTM call option approach would better serve electric customers in this state than the Gettings proposal?

A. Yes I do. Tampa Electric believes the OTM call option proposal is a much simpler method to achieve similar results

1 to those achieved by the staff proposal. The OTM call option
2 proposal will mitigate upward price spikes, and it will be
3 less expensive when compared to swap settlement losses
4 under certain market conditions, as has been shown when
5 applying the method to the previous 12 years of data. While
6 premiums will be incurred, the OTM call option strategy
7 will provide that protection with a zero-dollar limit on
8 settlement losses, a much lower limit on settlement losses
9 than would be achieved under the Gettings proposal.

10
11 The OTM call option hedging proposal is better aligned with
12 what customers would likely expect from a hedging program.
13 The OTM call option proposal is similar to insurance against
14 dramatic price spikes while the Gettings proposal is a
15 trading scheme. The utilities' proposal pays a premium to
16 cap the price customers pay for natural gas during a rare,
17 but usually dramatic, price spike. The Gettings model uses
18 VaR, mark-to-market, tolerances, contingencies, and other
19 sophisticated financial derivative concepts to trade based
20 on expectations of market movements. The Gettings model is
21 not well-suited for utility hedging, as is further
22 discussed in the testimony of witness Dr. Hallerman.

23
24 Other important aspects of implementing the Gettings
25 proposal such as timeline and costs, ongoing model

1 complexity and administration, and ease of reporting and
2 monitoring must be carefully considered. This raises the
3 question of the appropriate balance to achieve cost-
4 effective hedging. Tampa Electric does not believe it is in
5 customers' best interests to spend additional money and
6 time implementing a more complex methodology such as the
7 Gettings proposal, when the OTM call option proposal is
8 likely to yield very similar results over time. Tampa
9 Electric believes the OTM call options proposal strikes the
10 right balance of protection against price spikes, zero
11 exposure to settlement losses, and reasonable option
12 premium costs for that price spike protection.

13
14 Tampa Electric has a final and very important concern about
15 the Gettings model. The Gettings model is vaguely defined
16 and leaves its interpretation and implementation far too
17 open; and it would call for implementation decision making
18 at various undefined points moving forward. This is very
19 disconcerting to Tampa Electric and would make it virtually
20 impossible for the Commission, in the regulatory review
21 process, to ascertain whether the model has been complied
22 with. When coupled with staff witness Cicchetti's statement
23 that "...prudence will be determined by what was known, or
24 should have been known, at the time decisions were made..."
25 (pg 24, lines 9 and 10, emphasis added), the numerous

1 decision points and methodologies sound like a formula for
2 endless litigation over whether utilities have acted
3 prudently in administering such a model.

4
5 **Advantages of the OTM Call Option Hedging Strategy Alternative**

6 **Q.** What are the advantages of the utilities' proposed OTM
7 call option hedging strategy versus Mr. Gettings
8 approach?

9
10 **A.** The IOUs' proposed OTM call option strategy will achieve
11 the goals of eliminating hedging settlement losses
12 associated with the previous financial model for hedging
13 natural gas purchases while at the same time providing
14 continued protection of its customers from price spikes in
15 the natural gas market.

16
17 The OTM call option model will certainly be easier to
18 administer than the Gettings model. It will also be quicker
19 to implement. During the course of the hedging workshops it
20 appeared the IOUs would require up to two years to implement
21 the Gettings model whereas the OTM call option model could
22 be implemented promptly after receiving Commission
23 approval. The Gettings model also requires frequent
24 monitoring and decision-making about whether to add or
25 eliminate hedge positions, based on the results of a VaR

1 model the utility must maintain. Tampa Electric has
2 concerns about how to manage the model, how long it would
3 take to react to changes in the model analytics, and how to
4 defend this model and resulting decisions from later
5 criticisms or second-guessing if outcomes are deemed
6 unfavorable.

7
8 The OTM call option strategy will not require the costly
9 system additions and modifications and additional personnel
10 required to implement and administer the Gettings model.
11 The OTM call option strategy will result in easier tracking
12 and reporting and, therefore, less expensive implementation
13 and administrative costs, when compared to the Gettings
14 model.

15
16 The OTM call option model will require fewer guidelines
17 from the Commission than the Gettings model. It will also
18 be easier to revisit and modify or disassemble if it is
19 shown not to be working as designed. All of these factors
20 strongly suggest that the Commission would be well advised
21 to authorize the IOUs to implement the OTM call option model
22 over the more complex Gettings model.

23
24 The OTM call option proposal will not allow settlement
25 losses, unlike fixed price swaps. The Gettings model will

1 continue to utilize the fixed price swaps that have been
2 criticized in the utility programs for leading to
3 settlement losses when the market experience is a period of
4 sustained decreasing prices; therefore, the Gettings model
5 will result in swap settlement losses. As the companies
6 discussed at the February 21, 2017 workshop, the results of
7 back testing showed the OTM call option model to be a less
8 costly alternative to the Gettings model in many years. The
9 OTM call option model is also less costly than the fixed
10 price swaps hedging model during a period of declining
11 market prices.

12
13 Finally, utilizing OTM call options is a non-speculative
14 approach to hedging that can be readily implemented and is
15 straightforward to audit. And, since the Commission will be
16 approving the budget for call option premiums, all parties
17 will be aware of the maximum total cost for the price spike
18 protection provided.

19
20 **Rebuttal to Witness Jeffrey Pollock's Testimony**

21 **Q.** Please explain your concerns regarding the testimony of
22 FIPUG witness Jeffrey Pollock to the effect that financial
23 hedging of natural gas purchases should be offered as an
24 "optional service" to which customers can "opt in".

25

1 **A.** I disagree with FIPUG's proposal. It is interesting that
2 FIPUG has renamed its proposal an optional service to
3 which customers can opt in, when previously FIPUG has
4 urged that its members be able to "opt out" of paying for
5 the costs and receiving the benefits of financial hedging
6 of natural gas. Regardless of the marketing title FIPUG
7 wishes to assign to its proposal, its efforts are not
8 appropriate.

9
10 First of all, if hedging is a desirable tool to mitigate
11 against natural gas price volatility, it provides this
12 desirable trait to all customers, not just certain customer
13 classes. Moreover, an opt-in (or opt-out program for
14 industrial customers) would be confusing and costly to
15 administer. IOUs do not purchase generation fuel for
16 particular classes of customers, but do so collectively for
17 all customers. Such a change would require costly system,
18 reporting, and accounting changes. It would be difficult to
19 administer a program where customers in different rate
20 classes were charged different fuel rates based on a
21 decision to opt-in or opt-out of hedging year by year. Since
22 hedges have typically been placed, one, two or even three
23 years ahead of the period in which fuel costs are incurred,
24 there would need to be a significant lag when a customer
25 decided to change their hedging status. This would make an

1 opt-in (or opt-out) program even more cumbersome to track
2 and administer. Finally, if the IOUs' proposed OTM call
3 option hedging strategy is approved, it will eliminate
4 settlement losses associated with the previous hedging
5 model that is subject to the current moratorium and replace
6 it with a less expensive strategy that is also able to
7 mitigate the effects of price increases. The magnitude of
8 recent settlement losses is the chief criticism FIPUG has
9 raised regarding the financial swaps hedging model
10 currently in moratorium. Approval of the OTM call option
11 model will eliminate the basis for that criticism.

12
13 **Summary**

14 **Q.** Please summarize your testimony.

15
16 **A.** I would urge the Commission not to adopt the complex risk
17 responsive risk management plan proposed by Mr. Gettings.
18 Mr. Gettings proposal requires frequent monitoring and
19 decision making about whether to add or eliminate hedge
20 positions, based on the results of a VaR model utilities
21 would have to maintain. Tampa Electric has genuine concerns
22 about how to manage the model, how long it would take to
23 react to changes in the model analytics, and how to defend
24 this model and resulting decisions from later criticisms or
25 second guessing if outcomes are deemed unfavorable. The OTM

1 call option proposal of FPL, Duke and Tampa Electric is a
2 much simpler method for achieving the same goals achieved
3 by the Staff's proposal. The OTM call option proposal will
4 mitigate upward price spikes and illuminate settlement
5 losses, which have been one of the chief criticisms of the
6 swaps based hedging procedures previously utilized by the
7 IOUs in Florida.

8
9 Finally, my rebuttal testimony points out the shortcomings
10 of the opt-in (or opt-out) program advanced by FIPUG's
11 witness Jeffry Pollock. FIPUG's primary objection to
12 financial hedging of natural gas purchases - settlement
13 losses - would be eliminated by the IOU's proposed OTM call
14 option hedging strategy.

15
16 **Q.** Does this conclude your rebuttal testimony?

17
18 **A.** Yes, it does.
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