

**BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET NO. 080317-EI**

**IN RE: TAMPA ELECTRIC COMPANY'S  
PETITION FOR AN INCREASE IN BASE RATES  
AND MISCELLANEOUS SERVICE CHARGES**



**DIRECT TESTIMONY AND EXHIBIT  
OF  
JOANN T. WEHLE**

DOCUMENT NUMBER-DATE

07057 AUG 11 8

FPSC-COMMISSION CLERK



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2                                   **PREPARED DIRECT TESTIMONY**

3   **OF**

4   **JOANN T. WEHLE**

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

8  
9   **A.**   My name is Joann T. Wehle. My business address is 702  
10           North Franklin Street, Tampa, Florida 33602. I am  
11           employed by Tampa Electric Company ("Tampa Electric" or  
12           "company") as Director, Wholesale Marketing & Fuels.

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

16  
17   **A.**   I received a Bachelor of Business Administration Degree  
18           in Accounting in 1985 from St. Mary's College, Notre  
19           Dame, Indiana. I am a Certified Public Accountant in  
20           the State of Florida and worked in several accounting  
21           positions prior to joining Tampa Electric. I began my  
22           career with Tampa Electric in 1990 as an auditor in the  
23           Audit Services Department. I became Senior Contracts  
24           Administrator, Fuels in 1995. In 1999, I was promoted  
25           to Director, Audit Services. Subsequently, I rejoined

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1 the Fuels Department as Director in April 2001. I  
2 became Director, Wholesale Marketing and Fuels in August  
3 2002. I am responsible for managing Tampa Electric's  
4 wholesale energy marketing and fuel-related activities.

5  
6 **Q.** What is the purpose of your direct testimony?

7  
8 **A.** My direct testimony describes Tampa Electric's fuel  
9 inventory planning process and the factors that  
10 influence the reliable supply and delivery of coal, oil  
11 and natural gas. Fuel inventory planning is used to  
12 determine the proposed fuel inventory working capital  
13 levels included in the rate base in this proceeding.

14  
15 **Q.** Have you prepared an exhibit to support your direct  
16 testimony?

17  
18 **A.** Yes, Exhibit No. \_\_\_ (JTW-1), entitled "Exhibit of Joann  
19 T. Wehle", was prepared under my direction and  
20 supervision. It consists of the following documents:

21 Document No. 1 List Of Minimum Filing Requirement  
22 Schedules Sponsored Or Co-Sponsored  
23 By Joann T. Wehle

24 Document No. 2 2009 Proposed Coal Inventory

25 Document No. 3 Coal Inventory Levels 2003-2007

**Q.** What is the objective of Tampa Electric's fuel inventory planning process?

**A.** The company seeks to maintain the level of fuel inventory necessary to minimize the risk of service interruptions due to fuel depletion or the lack of environmentally acceptable fuels. This means that the company's overall planning process must recognize factors that affect inventory levels, such as fuel supply uncertainty, fuel delivery disruption, fuel burn variation and extraordinary events.

Tampa Electric's fuel inventory planning process is driven by the understanding that depleting fuel inventory to unreasonably low levels is costly and unacceptable. The company believes that the cost of carrying sufficient levels of fuel is much less expensive than making emergency purchases of fuel at a premium price, buying replacement power or interrupting electrical service to customers due to the lack of supply of fuel. By recognizing the multitude of issues that may interrupt fuel supply at a power plant, Tampa Electric uses diverse supply sources, redundant delivery

1 methods and sufficient storage sites within its system.

2

3 **Q.** What types of fuel does Tampa Electric use?

4

5 **A.** Tampa Electric uses coal and pet coke ("coal"), natural  
6 gas, light oil and heavy oil for generation fuels. In  
7 2007, energy generated by Tampa Electric was fueled by  
8 about 56 percent coal, 44 percent natural gas and less  
9 than one percent fuel oil. The company's annual coal  
10 requirement is a burn of approximately five million tons  
11 and the annual natural gas requirements are about 60  
12 million MMBTUs. A relatively small amount of heavy (#6)  
13 oil and light (#2) oil is used to meet peak load and  
14 backup requirements.

15

16 **Q.** What fuel inventories are components of your overall  
17 system-wide fuel inventory?

18

19 **A.** Tampa Electric considers coal, natural gas and oil to be  
20 components of its overall system-wide inventory. For  
21 coal, inventory includes all coal that the company owns  
22 and has in its control. This includes coal that is  
23 stored on-site at the power plants, stored off-site, and  
24 en route. The natural gas amount included in inventory  
25 is the amount owned by Tampa Electric and stored in

1 underground storage caverns or stored in interstate  
2 pipelines. For oil, only that which is stored on-site  
3 is included in inventory because oil is not under Tampa  
4 Electric's ownership or control until it reaches the  
5 plant site.

6  
7 **Q.** Please explain Tampa Electric's fuel inventory planning  
8 process.

9  
10 **A.** Tampa Electric's overall system-wide inventory planning  
11 process relies on projected burns, forecasted purchase  
12 arrangements and delivery lead times to convert the  
13 target days of inventory into the required tons, MMBTUs  
14 or barrels of inventory. As circumstances and  
15 projections change, Tampa Electric updates projections  
16 for future periods to assure it maintains reliable  
17 inventory levels. It is important to recognize that  
18 appropriate inventory levels vary from one type of fuel  
19 to another and are not necessarily the same for all  
20 utilities.

21  
22 **COAL INVENTORY**

23 **Q.** What system-wide coal inventory levels are included in  
24 the company's inventory planning process?

25

1 **A.** Tampa Electric's coal inventory levels are included at  
2 "target" levels. Tampa Electric's overall system-wide  
3 coal inventory target level is 98 days projected burn  
4 (95 days supply under normal circumstances plus 3 days  
5 supply for test-burn). This is consistent with the 98  
6 days projected burn approved in the company's last rate  
7 case. While the number of days of burn is the same, the  
8 overall tonnage of coal is actually less due to re-  
9 powering Gannon Power Station from coal to natural gas,  
10 and renaming it, H. L. Culbreath Bayside Power Station.

11  
12 **Q.** Please describe the company's experience in maintaining  
13 coal inventory.

14  
15 **A.** The company has over 50 years of experience in fuel  
16 supply management, including coal and other fuel  
17 sources. Over this time, the coal supply inventory  
18 levels have been impacted by adverse weather conditions  
19 including floods, hurricanes, water route blockages,  
20 coal and railroad industry strikes, burn variations and  
21 transportation provider equipment breakdowns. The  
22 company has established its coal inventory planning  
23 process to reflect the impact of these and other  
24 factors. These factors are monitored continually  
25 because running out of fuel or exceeding environmental



1 limitations due to the lack of environmentally useable  
2 coal types is not acceptable.

3  
4 **Q.** What major factors influence the level of coal inventory  
5 Tampa Electric proposes to maintain in 2009?

6  
7 **A.** There are a number of considerations that influence  
8 Tampa Electric's proposed 2009 coal inventory level.  
9 These factors can best be discussed under three major  
10 categories of inventory planning: 1) coal supply and  
11 transportation uncertainty 2) coal burn variability and  
12 3) other risk factors.

13  
14 **Q.** What are some examples of supply and transportation  
15 disruptions that contribute to or cause coal inventory  
16 uncertainty?

17  
18 **A.** Tampa Electric's plants are located approximately 1,000  
19 miles from the Illinois Basin where the vast majority of  
20 its coal is mined. Force majeure events and safety  
21 issues can halt coal production or interrupt  
22 transportation. Diminished supplier performance can  
23 also cause a supply disruption or reduction on contract  
24 and spot purchases.

25

1 The river and rail transportation systems used to  
2 deliver coal are subject to supply disruptions. Tampa  
3 Electric faces the possibility of river closings  
4 associated with the repair of lock mechanisms. These  
5 river locks raise and lower the barges for proper  
6 navigation through the Mississippi and Ohio River  
7 systems. Almost every year the river systems have high  
8 and/or low water conditions due to excessive drought or  
9 rainy conditions. Fog, ice and transportation equipment  
10 breakdowns can delay or interrupt transportation on the  
11 river system as well.

12  
13 Likewise, the Gulf transportation system can be affected  
14 by fog, hurricanes and equipment breakdowns. Gulf Coast  
15 hurricanes such as Hurricane Katrina that impact the  
16 mouth of the Mississippi can significantly disrupt coal  
17 and all other energy commodity deliveries.

18  
19 The rail transportation system can be affected by  
20 congestion, maintenance down time, rail blockings,  
21 flooding and equipment breakdowns resulting in slower  
22 turn times, the time it takes a train to return to the  
23 coal mine for its next shipment and fewer annual  
24 deliveries.

25

1 **Q.** How can these coal supply and transportation disruptions  
2 affect Tampa Electric's inventory?

3  
4 **A.** Up to 50 percent of Tampa Electric's coal inventory at  
5 any given time is off-site or in-transit. As a result,  
6 up to half of the inventory is subject to the risk of  
7 being delayed due to many factors, which can affect coal  
8 availability. The availability of Tampa Electric's coal  
9 supply and consequently the level of inventory the  
10 company must have on hand must reflect these types of  
11 coal supply uncertainties.

12  
13 **Q.** What is meant by coal burn variability?

14  
15 **A.** Coal burn variability refers to the difference between a  
16 planned and actual coal burn. One reason for having  
17 coal inventories is to ensure against periods of  
18 unexpectedly high coal burn requirements. Typically,  
19 coal suppliers and transporters require relatively level  
20 production and delivery schedules to offer their lowest  
21 pricing. However, the coal units' consumption actually  
22 varies daily and monthly depending on weather,  
23 performance, fuel type and outages.

24  
25 **Q.** Why is the recognition of coal burn variability

1 important for Tampa Electric in its planning process?

2

3 **A.** The importance relates to reliability. The amount of  
4 burn variability in the overall inventory planning  
5 process depends on how quickly and how completely the  
6 company's means of coal delivery can respond to  
7 unexpected fuel requirements at the plants. As I  
8 previously stated, the company's power plants are  
9 located approximately 1,000 miles away from their coal  
10 supply sources; therefore, the company's coal inventory  
11 planning process must ensure that higher than expected  
12 fuel consumption can be accommodated.

13

14 **Q.** What is meant by other risk factors affecting coal  
15 inventory planning?

16

17 **A.** Other risk factors are those unidentified low  
18 probability but high consequence events that prudent  
19 fuel inventory management must take into consideration  
20 because they could significantly affect fuel levels.  
21 These events can result in major disruptions to coal  
22 supplies by affecting suppliers, the transportation  
23 system and even fuel requirements.

24

25 **Q.** What are some examples of these other risk factors?

1 **A.** These other risk factors include events of severe  
2 weather such as hurricanes, transportation route shut  
3 downs or legislative and regulatory changes affecting  
4 fuel use.

5  
6 Given the risks associated with hurricane activity and  
7 the problems one Gulf hurricane can cause, maintaining a  
8 98 day coal inventory level is very reasonable. For  
9 example, due to Hurricanes Katrina and Rita in 2005 coal  
10 inventory levels were depleted to less than 20 days at  
11 Big Bend Power Station in the months following the  
12 hurricanes because of the extended interruption of  
13 transportation. These same events caused a shutdown of  
14 gas supply due to the evacuation of and damage to gas  
15 production platforms in the Gulf of Mexico. As a  
16 result, limited gas supply due to infrastructure and  
17 transportation facility damage can create a higher  
18 demand for coal.

19  
20 Catastrophic events like damage to the Sunshine Skyway  
21 Bridge in the 1980's blocked the channel and prevented  
22 coal deliveries for an extended period. Vessels can and  
23 have sunk in the Port of Tampa channels, blocking  
24 deliveries.

25

1 In addition, the events of September 11, 2001  
2 complicated and delayed the transportation of coal due  
3 to heightened security in ports.

4  
5 There is an additional risk that multiple supply  
6 disruption events can occur in rapid succession and  
7 compound the effects of these individual risks. The  
8 prospect of running out of fuel is not an option;  
9 therefore, it is essential to have an adequate cushion  
10 to avoid such an event.

11  
12 **Q.** Please summarize Tampa Electric's proposed 2009 coal  
13 inventory.

14  
15 **A.** The overall anticipated quantities of coal in inventory  
16 by station for 2009 are reflected in Document No. 2 of  
17 my exhibit. This chart includes coal stored on-site at  
18 the power plants, stored off-site and in-transit. The  
19 inventory levels are consistent with the targets in the  
20 company's inventory planning process, which reflects the  
21 company's projected needs.

22  
23 **Q.** What is the proposed average coal inventory level for  
24 2009?

1   **A.**   The proposed 13-month average coal inventory value for  
2           2009 is \$83,819,000 and is equivalent to 94 days burn  
3           under normal circumstances at an approximate 13,000  
4           daily tonnage burn rate. This tonnage does not include  
5           any test burn supply because the company will be  
6           continuing its installation of the final selective  
7           catalytic reduction equipment at Big Bend Power Station  
8           and will not perform test burns until the installation  
9           is complete. This proposed level is slightly less than  
10          but consistent with the 98 days coal burn total (95 day  
11          supply under normal circumstances plus three days supply  
12          for test burn) established in the company's last full  
13          rate case. A 94 day coal inventory is conservative  
14          because of the circumstances and risks I have described.  
15          A 94 day coal inventory is the absolute minimum given  
16          that a 98 day coal inventory target is appropriate.

17  
18   **Q.**   How does the proposed coal inventory level compare to  
19          Tampa Electric's historical coal inventory levels?

20  
21   **A.**   It compares favorably with the company's actual coal  
22          inventory levels over the past five years. Tampa  
23          Electric's actual coal inventories have averaged 1.21  
24          million tons. Extraordinary events such as the 2004 and  
25          2005 hurricanes and significant river lock outages in

1 2006 brought the overall inventory levels down by  
2 several days on average. In the past two years,  
3 inventory of coal for Tampa Electric represented an  
4 average of 97 days. Document No. 3 of my exhibit  
5 details the historic coal inventory levels for 2003  
6 through 2007.

7  
8 **Q.** Aside from the Commission Order issued in the company's  
9 last base rate proceeding, how does the proposed coal  
10 inventory level compare to other Commission precedent?

11  
12 **A.** Order No. 12645, issued in Docket No. 830001-EU,  
13 addresses Fuel Inventory Policies. In this Order, staff  
14 proposed a "generic" fuel inventory policy to be applied  
15 in a rate case if a utility fails to fully justify its  
16 inventory level. The proposed generic fuel inventory  
17 policy for coal was 90 days projected burn plus base  
18 coal volumes. Tampa Electric has fully justified its  
19 request for 98 days of coal inventory and the level  
20 requested is slightly higher than but consistent with  
21 the 90 day fuel inventory policy.

22  
23 **NATURAL GAS INVENTORY**

24 **Q.** Please describe the company's experience in maintaining  
25 natural gas inventory.



1   **A.** Tampa Electric's oldest natural gas fired unit, Polk  
2   Unit 2, is a combustion turbine that became operational  
3   in 1998. Since that time, Tampa Electric has added  
4   three more combustion turbines and re-powered Gannon  
5   Station as natural gas combined cycle Bayside Units 1  
6   and 2. Bayside Units 1 and 2 became operational in 2003  
7   and 2004, respectively. Tampa Electric has continually  
8   enhanced its natural gas supply portfolio since 1998  
9   including adding underground natural gas storage  
10  capacity beginning in 2005.

11  
12  **Q.** What is Tampa Electric's inventory planning process for  
13  natural gas?

14  
15  **A.** The company's supply plan for natural gas is to maintain  
16  a portfolio of natural gas supply arrangements that have  
17  various delivery points, volume flexibility and term  
18  lengths. These natural gas supply arrangements are  
19  conducted through industry standard contracts with  
20  creditworthy parties. This process allows for  
21  reliability of supply, operational flexibility and lower  
22  overall cost.

23  
24  Besides having secure supply arrangements, underground  
25  natural gas storage is a valuable component of

1 maintaining reliable service for customers. Natural gas  
2 storage is used primarily to address unexpected swings  
3 in gas supply needs due to forced outages of units and  
4 weather changes, and to "smooth" gas supplies over  
5 weekends and holidays when consumption levels may change  
6 dramatically. Tampa Electric also maintains nearly full  
7 contracted storage levels during times of greatest  
8 uncertainty. For instance, Tampa Electric fills storage  
9 before the start of each hurricane season since supply  
10 availability may be at risk during the same period that  
11 gas consumption is at its maximum. Similarly, Tampa  
12 Electric keeps natural gas storage nearly full during  
13 major plant outages and extreme cold periods since gas  
14 consumption has the greatest uncertainty during those  
15 periods.

16  
17 **Q.** What natural gas storage does Tampa Electric have?  
18

19 **A.** Tampa Electric currently has a contract with Bay Gas  
20 Storage for up to 850,000 MMBTU of storage capacity and  
21 expects to increase its total storage to 1,250,000 MMBTU  
22 with the completion of Bay Gas Storage Cavern in the  
23 summer of 2009. The 1,250,000 MMBTU of storage capacity  
24 provides Tampa Electric with approximately six summer  
25 days of gas supply. The volume of natural gas in

1 storage in 2009 is projected to average about 545,000  
2 MMBTU of gas in storage with a 13-month average value of  
3 \$4,495,000.  
4

5 **OIL INVENTORY**

6 **Q.** What is the company's oil inventory planning process?  
7

8 **A.** Although less than one percent of the company's  
9 generation comes from its oil-fired units, this  
10 generation is critical for peak demand periods.  
11 Therefore, the company is concerned with maintaining  
12 proper levels of oil inventory. The minimum desired  
13 level for both light and heavy oil at each plant is an  
14 adequate supply determined to be necessary to maintain  
15 the reliability of the company's generation system  
16 during maximum demand conditions.  
17

18 **Q.** Do the criteria for oil inventory levels differ from  
19 those applicable to coal inventory?  
20

21 **A.** Yes. While the normal generation dispatch procedure  
22 provides for priority generation by coal, the oil-fired  
23 generating units must have adequate supplies of oil, not  
24 only for expected use, but also to allow for their  
25 continued use in the event of unscheduled outages of

1 major coal-fired units, limitations of natural gas  
2 supply, and/or higher than expected loads. This  
3 contingency consideration dictates that greater  
4 quantities of oil be maintained in inventory than  
5 normally would be maintained on a purely projected burn  
6 basis. The No. 2 oil is also necessary for boiler  
7 ignition of the coal-fired units.

8  
9 **Q.** What is the goal of Tampa Electric's inventory planning  
10 process for heavy oil?

11  
12 **A.** The company's heavy oil inventory planning process is to  
13 maintain, at a minimum, the level of oil necessary to  
14 provide peaking reliability in its generating system.  
15 The company projects to average 9,203 barrels of heavy  
16 oil in inventory in 2009, with an average value of  
17 \$780,000.

18  
19 **Q.** What is Tampa Electric's inventory plan for light oil?

20  
21 **A.** The company's light oil inventory plan is to maintain,  
22 at a minimum, the level of oil necessary to provide  
23 peaking reliability in its generating system. The  
24 company has included 77,068 barrels of light oil in  
25 inventory for 2009, which equates to a 13-month average

1 of \$9,312,000.

2

3 **TOTAL FUEL INVENTORY**

4 **Q.** What is the total amount of fuel inventory that Tampa  
5 Electric proposes to be included in working capital for  
6 2009?

7

8 **A.** The 2009 13-month average total fuel inventory included  
9 in working capital is \$98,406,000 as shown on Document  
10 No. 4 of my exhibit.

11

12 **Q.** Please summarize your direct testimony.

13

14 **A.** Tampa Electric generates energy for customer use from a  
15 diversified portfolio of coal, oil and natural gas fired  
16 units. The company utilizes a dynamic fuel inventory  
17 plan that takes into account fuel supply and  
18 transportation uncertainty, fuel burn variability, and  
19 other risk factors, to provide a consistent level of  
20 system protection and reliability. Inventory levels  
21 take into account the types of fuel maintained and  
22 burned to meet plant requirements at the lowest possible  
23 cost to customers.

24

25 Tampa Electric's 2009 total proposed fuel inventory of

1           \$98,406,000 is an appropriate value for the fuel  
2           inventory component of working capital. This level of  
3           inventory provides for continued reliable service at a  
4           cost that is less than the consequences of not having  
5           enough fuel to meet the customer needs. Finally, this  
6           inventory level is consistent with the company's  
7           inventory planning process and actual historic inventory  
8           levels.

9

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

11

12   **A.** Yes, it does.

13

14

15

16

17

18

19

20

21

22

23

24

25

EXHIBIT

OF

JOANN T. WEHLE

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TAMPA ELECTRIC COMPANY  
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LIST OF MINIMUM FILING REQUIREMENT SCHEDULES  
SPONSORED OR CO-SPONSORED BY JOANN T. WEHLE

<b>MFR Schedule</b>	<b>Title</b>
B-18	Fuel Inventory By Plant
C-8	Detail Of Changes In Expenses
C-9	Five Year Analysis - Change In Cost
C-37	O&M Benchmark Comparison By Function
C-39	Benchmark Year Recoverable O&M Expenses By Function
C-41	O&M Benchmark Variance By Function
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**2009 PROPOSED COAL INVENTORY**

	<b>Tons</b>	<b>Amount (\$000)</b>	<b>Days Burn</b>
Big Bend Units 1 – 4	506,381	\$36,724	
Polk Unit 1	108,981	8,796	
Storage Facility	602,986	38,299	
<b>Total 2009 Proposed Coal Inventory</b>	<b>1,218,348</b>	<b>\$83,819</b>	<b>94</b>

**COAL INVENTORY LEVELS 2003-2007**

<b>Coal Inventory Level *</b> <b>(in days)</b>					
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>January</b>	95	99	57	84	74
<b>February</b>	98	105	64	88	96
<b>March</b>	95	100	81	87	117
<b>April</b>	103	103	92	91	132
<b>May</b>	104	99	89	90	132
<b>June</b>	104	92	90	87	128
<b>July</b>	101	93	88	85	121
<b>August</b>	92	87	85	83	117
<b>September</b>	86	79	85	77	105
<b>October</b>	86	75	84	86	97
<b>November</b>	93	73	93	91	92
<b>December</b>	98	56	98	84	82

\* Total system wide average, based on end of the month inventory using projected burn.

TAMPA ELECTRIC COMPANY  
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**2009 PROPOSED FUEL INVENTORY**

	<b>Amount</b>
	<b>(\$000)</b>
Coal	\$83,819
Natural Gas	4,495
Light (#2) Oil	9,312
Heavy (#6) Oil	780
<b>Total 2009 Proposed Fuel Inventory</b>	<b>\$98,406</b>