State of Florida

Public Service Commission

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-M-E-M-O-R-A-N-D-U-M-

DATE: May 19, 2010

TO: Office of Commission Clerk (Cole)

FROM: Division of Regulatory Analysis (Graves, Matthews)
Division of Economic Regulation (Lee, A. Roberts)
Office of the General Counsel (Bennett, Young)

RE: Docket No. 090505-EI – Review of replacement fuel costs associated with the February 26, 2008 outage on Florida Power & Light's electrical system.

AGENDA: 06/01/10 – Post Hearing – Participation is Limited to Commissioners and Staff

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Skop

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\RAD\WP\090505.RCM.06-01-2010.DOC

Case Background

On February 26, 2008, a fault occurred at Florida Power & Light's (FPL or Company) Flagami substation. The fault disrupted service to approximately 596,000 FPL customers and created conditions on the transmission grid that caused three of FPL's fossil-fueled generating units and FPL's Turkey Point Nuclear Units 3 and 4 to trip off-line. The fault and tripping of generators is referred to herein as the "February 26, 2008 outage."

As a result of the February 26, 2008 outage, FPL was required to: (1) operate several less efficient and more costly peaking units, (2) purchase power at a cost greater than the Company's marginal cost of power production, and (3) replace nuclear-fueled generation with more costly fossil-fuel fired generation.

In the 2008 fuel and purchased power cost recovery proceeding (Docket No. 080001-EI) the replacement power costs attributable to the February 26, 2008 outage were included as part of FPL's approved fuel cost recovery factor subject to refund. The following issue, identified as Issue 2C in the 2009 fuel and purchased power cost recovery proceeding (Docket No. 090001-EI), was raised to address the potential refund of replacement power costs associated with the February 26, 2008 outage:

> With respect to the February 26, 2008 outage, should FPL or its customers be responsible for replacement power costs associated with the outages?

By agreement of FPL and the Office of Public Counsel (OPC), consideration of this issue was deferred to the 2010 fuel and purchased power cost recovery proceeding (Docket No. 100001-EI) to allow time for completion of a Federal Energy Regulatory Commission (FERC) investigation into the causes of the February 26, 2008 outage. FPL and FERC reached an agreement closing the investigation on October 8, 2009.

On October 30, 2009, the Prehearing Officer in Docket No. 090001-EI issued Order No. PSC-09-0723-PHO-EI, which directed the following:

> Issue 2C shall be spun-out and addressed in a separate proceeding as early as practicable in [the] 2010 calendar year. In addition, FPL shall comply with all outstanding discovery requests served by OPC and Staff related to this issue within 30-days of October 20, 2009.

Docket No. 090505-EI was established to satisfy the requirements of Order No. PSC-09-0723-PHO-EI. The OPC and the Office of the Attorney General (AG) have intervened in Docket No. 090505-EI.

On December 4, 2009, FPL, OPC, and the AG executed a Proposed Resolution of Issues[1] in which FPL agreed to bear the replacement power costs attributable to the Flagami Transmission Event. On December 17, 2009, an informal preliminary issue identification meeting involving Commission staff, FPL, OPC, and the AG was held. All parties involved verbally identified the following issues for deliberation in this docket:

> 1. Should FPL credit to customers the replacement power costs attributable to the February 26, 2008 outage?
>
> 2. How should the replacement power costs attributable to the February 26, 2008 outage be measured, and what is the amount of such costs?
>
> 3. What is the appropriate method to credit customers for the replacement power costs determined pursuant to Issue 2?

At the January 26, 2010 Agenda Conference the Commission approved the parties' Proposed Resolution of Issues. The Commission's approval of the Resolution of Issues rendered the first

[1] The February 26, 2008 outage was referred to as the Flagami Transmission Event in the parties' Proposed Resolution of Issues.

issue listed above moot and limited the scope of this docket to determining how much FPL must repay and how that repayment will be refunded to customers (Issues 2 and 3 from the list above). This recommendation addresses these remaining issues. The Commission has jurisdiction over this subject matter pursuant to the provisions of Chapter 366, Florida Statutes, including Sections 366.04, 366.05, and 366.06, Florida Statutes.

Discussion of Issues

Issue 1: How should the replacement power costs attributable to the February 26, 2008 outage be measured, and what is the amount of such costs?

Recommendation: The calculation of the replacement power costs should be the incremental cost of the system replacement fuel and purchased power cost associated with the generation lost less any mitigating measures, plus interest. The amount to be refunded should be $13,854,054. (Graves, Matthews, Lee)

Positions of Parties

FPL: The proper amount of the replacement power costs to be credited to customers is $2,024,035, which reflects replacement fuel and replacement power costs incurred in the 8-hour period immediately following the Flagami Transmission Event until the system stabilized. During the outages at Turkey Point Units 3 and 4 resulting from the event, FPL took prudent and conservative measures to investigate, inspect, and analyze system components prior to safely restarting those units. It would be unfair and serve as a major disincentive to the construction and operation of low fuel-cost generating technologies if the replacement power cost calculation were based specifically on the outages of those two nuclear units where there was no imprudence in their maintenance or operation.

OPC: FPL "accepted responsibility" for costs attributable to Flagami-caused outages; however, it wants to reduce the refund from $15.9 million of actual replacement power costs to $2.024 million. FPL's calculation artificially truncates the 158 hours of lost nuclear generation to 8, and creates the fiction that the replacement costs supplanted—not economical nuclear generation—but system average costs. FPL tries to replace cause-and-effect with a baseless claim of "new risks" and a contrived distinction between "transmission costs" and "generation costs." The Commission should see in FPL's claim of "disincentives" the distorted view that Florida's regulatory policy should be to impose on customers the excessive costs of utilities' mistakes. The Commission should require FPL to refund the full $15.9 million to customers.

AG: The Attorney General adopts the argument of Public Counsel with the following additions. The Stipulation and Consent Decree between FERC, NERC, and FPL was entered into evidence in these proceedings. Paragraph 2 under Stipulated Facts specifies that FPL stipulates to the following:

> "2. On February 26, 2008, portions of the lower two-thirds of the Bulk Electric System ("BES") in peninsular Florida experienced a loss of service to electric customers. **The event led to the loss of 22 transmission lines, 4,300 MW of generation**, and 3,650 MW of customer service or load. Approximately 596,000 FPL customer accounts and 354,000 non-FPL customer accounts were out of service, representing approximately 8% of Florida electric customer accounts." (emphasis added)

Since FPL has previously stipulated that the Flagami event led to the loss of 4,300 MW of generation (which included the two nuclear plants), it is disingenuous for them to now claim that they should not be held responsible for this loss to their customers.

Accordingly, the Attorney General would submit that customers should receive the full $15.9 million for their loss.

FIPUG: The nuclear units would not have tripped off line if the Flagami event had not occurred. Because the Flagami event was the result of an FPL employee's actions, FPL must be responsible for all replacement power costs based on the replacement fuel costs for the nuclear units. The amount of replacement power cost should be calculated as described by Dr. Dismukes in his Exhibit No. 18 (DED-8). The amount of the replacement costs is $15,974,055. This should be refunded to customers.

Staff Analysis:

PARTIES' ARGUMENTS

FPL contends that the replacement power costs incurred as a result of transmission-related operation should be treated differently than replacement power costs incurred as a result of imprudent power plant operation. Thus, FPL argues that lost generation costs should be based on the utilities' entire fleet of generation as opposed to a particular plant that was affected by the transmission event. In this case FPL believes that the cost basis for lost generation should be the Company's system average cost for the time period of the event. Similarly, FPL believes that the duration of a transmission induced outage should not be based on the outage time for a particular unit, but should be based on the amount of time the transmission event had a significant effect on the utility's ability to operate its generation system. FPL claims that the significant effects of the transmission event ended when it could economically dispatch its own available generating units, eight hours immediately after the event. (FPL BR 3-4)

FPL additionally argues that basing the lost generation costs on generating units which were tripped for reasons unrelated to the operation of those units, would be unfair and serve as a major disincentive to the investment, construction, and operation of low fuel-cost generating technologies. (FPL BR 4)

OPC and the AG[2] disagree with FPL's rationale of separating transmission from generation. OPC believes that Turkey Point-specific costs are the appropriate cost basis for the generation lost during the February 26, 2008 outage since the company was avoiding nuclear fuel costs, not system average costs, during the course of the outage. (OPC BR 12) OPC further claims that the refund should be calculated over the entire duration of time that Turkey Point Units 3 and 4 were off-line. (OPC BR 11)

OPC believes that two prior cases, one in Texas and one in Louisiana, set a precedent for not separating transmission and generation. OPC claims that the orders are important to this case because the regulators (The Texas Public Utility Commission and the Louisiana Public Service Commission) recognized the "cause and effect" relationship between a transmission event, for which management was responsible, and the subsequent outage of a nuclear power plant. (OPC BR 28-29) In those cases lost generation costs were based on nuclear generation. (OPC BR 29-30)

[2] The AG adopts the OPC's argument. Therefore, any reference to OPC with respect to a position or argument in Issue 1 of this docket includes reference to the AG.

Similar to OPC, FIPUG disagrees with FPL's argument separating transmission and generation. FIPUG contends that because an FPL employee caused the initiating event it is responsible for all resulting events. FIPUG's argument is one of causation; but for the transmission outage, the nuclear units would not have tripped off-line. (FIPUG BR 2-3) Thus, FIPUG believes that the replacement power costs should be measured considering the full duration of the outage and Turkey Point-specific costs. (FIPUG BR 4-5)

OPC argues that the aforementioned Texas and Louisiana orders demonstrate that the investment community will perceive nothing new in the recognition that transmission-related mistakes can affect nuclear operations, and can serve as the basis for adjustments to the replacement power costs collected from customers. (OPC BR 30) Additionally, OPC claims that investors are fully aware that the Commission has authority to review all of FPL's costs, and protect customers from expenses that are excessive, without limitation. OPC pointed to several communications between FPL and investors (as well as the public) on the subject of the risks that it faces as the basis for its argument. (OPC BR 30-32)

FPL refutes OPC's application of the prior orders claiming that the transformer at issue in those orders was dedicated to providing power during start up of the River Bend nuclear plant. Thus, FPL concludes that the discussed orders are not analogous to the present situation and should not be relied upon for deliberation of this case. (FPL BR 26-27)

FIPUG disagrees with FPL's argument regarding the potential disincentives associated with basing the replacement power costs on specific plants. FIPUG believes that a $16 million refund is hardly a disincentive to an $8 billion investment. (FIPUG BR 6-7)

ANALYSIS

The differing replacement power costs proposed by FPL and the intervening parties revolve around two primary variables: the dollar per megawatt-hour cost basis for the lost generation and the amount of time over which costs should be measured. (TR 344-345) For purposes of clarity staff will analyze the two variables separately.

Cost Basis for Lost Generation

The net replacement power costs associated with the February 26, 2008 outage are determined by comparing the actual costs incurred and the costs that would have been incurred absent the February 26, 2008 outage. The difference between the two represents the net replacement power costs. The dollar per megawatt-hour cost basis for the generation lost during the February 26, 2008 outage directly affects the calculation of costs that would have been incurred absent the outage. From a directional standpoint, a higher cost basis for lost generation would reduce the net replacement power costs.

FPL's calculation of the net replacement power costs used an adjusted system average cost as the cost basis for lost generation. (TR 117) The system average cost is the cost of power production based on FPL's entire fleet of generation. (TR 117) FPL adjusted its system average cost for the month of February to include the lost generation of Turkey Point Nuclear Unit 3 and 4. (TR 117) In order to perform this adjustment FPL assumed that the lost nuclear generation was made up with a combination of oil and natural gas units. (TR 118) The resultant cost basis

for lost generation for the month of February 2008 was $51.32/MWh. (TR 118) A similar calculation for the month of March 2008 yielded an adjusted system average cost of $55.34/MWh. (EXH 27, BSP 267) Assuming the full duration of the outage and using FPL's proposed adjusted system average cost basis the net replacement power costs would be slightly more than $6.5 million.[3] (EXH 27, BSP 281)

Staff does not believe that it is appropriate to employ a methodology of calculating replacement power costs that artificially changes or substitutes values. Furthermore, the use of a system average cost basis would mark a significant departure from past Commission decisions. FPL witness Yupp acknowledged that the Commission relied on an incremental cost approach to determine the refund in Commission Order No. PSC-09-0024-FOF-EI[4], which addressed FPL's refund of fuel costs incurred during an outage extension caused by the Company's investigation and repair of a small hole which was drilled in pressurized piping. (TR 153) Witness Yupp additionally acknowledged that he was not aware of the Commission ever determining replacement power costs based on the method proposed by FPL in this docket. (TR 152-153)

OPC witness Dismukes provided a calculation of net replacement power costs based on Turkey Point Units 3 and 4 only. OPC's assumption resulted in a cost basis of $4.68/MWh and $4.38/MWh for the months of February 2008 and March 2008, respectively. (EXH 18) Assuming the full duration of the outage and using OPC's proposed Turkey Point-specific cost basis the net replacement power costs would be approximately $16 million. (TR 344)

Staff believes that OPC's calculation is flawed because it does not consider the natural gas units which were tripped off-line during the outage. OPC's calculations are based solely on the loss of Turkey Point Units 3 and 4. Witness Dismukes' calculation assumes that FPL's Turkey Point Units 3 and 4 produced more than 16,500 MWh over the first eight hours of the outage. Given the capacity of Turkey Point Units 3 and 4 (717 MW + 717 MW = 1,434 MW), the maximum amount of energy production over that amount of time is substantially less (1,434 MW x 8 Hours = 11,472 MWh). Therefore, OPC's calculations overstate the net replacement power costs.

Both FPL and OPC provided replacement power costs that were manually calculated. Per staff's request, FPL provided a production costing simulation which produced a net replacement power cost of approximately $14.5 million. (EXH 27, BSP 319) A production costing simulation takes into account the actual load, the actual unit conditions, and the actual fuel prices that existed during the outage. (TR 126) The simulation performed by FPL additionally considered the power ascension process which is the process of taking the nuclear units from 0 percent output to 100 percent output once back online. (TR 126-127; EXH 32 BSP 530) The calculations performed by OPC and FPL did not consider power ascension and used average costs based on FPL's relevant A-Schedules. (TR 126) FPL witness Avera claimed that a production costing simulation is more accurate than manual calculations using average numbers. (TR 248) Staff agrees that the production costing simulation would likely provide the most

[3] FPL recommends that the Commission only consider the first eight hours of the outage when determining the appropriate refund to customers which results in a refund of roughly $2 million. The representation of $6.5 million over the full duration of the outage is for purposes of comparison only.

[4] Issued January 7, 2009, in Docket No. 080001-EI, In re: Fuel and purchased power cost recovery clause with generating performance incentive factor.

accurate account of actual costs incurred as a result of the outage; however, all parties involved have recommended values which were determined using manual calculations of the replacement power costs based on average numbers. Staff believes that manual calculations allow for potential adjustments associated with mitigating events. Therefore, staff believes that manual calculations are acceptable for the purposes of this case. Staff believes that the simulation can be used as a gauge to check the reasonableness of the manual calculations.

It is staff's position that the calculation of the replacement power costs should be based on incremental costs which take into account all generation lost during the outage. Although staff's method of calculating the net replacement power costs is generally consistent with OPC's approach, staff assumed that generation beyond the maximum potential of Turkey Point Units 3 and 4 was produced by natural gas-fired generation. Additionally, staff took into consideration the power ascension of each nuclear unit. Staff believes that its approach is reflective of the events which occurred during the February 26, 2008 outage. Using an incremental approach staff calculated a net replacement power cost of roughly $15 million.

The table below summarizes the results of FPL, OPC, and staff's calculations of the net replacement power costs assuming the full duration of the outage which captures the total time Turkey Point Units 3 and 4 were off-line (158 hours and 107 hours, respectively). The table additionally compares the respective manual calculations with the value produced by FPL's production costing simulation. As illustrated by the table below, staff's calculation most closely approaches the simulated value. Also illustrated is the effect of using FPL's proposed system average approach which reduces the actual net replacement power costs by more than 50 percent.

Table 1: Comparison of Lost Generation Costs

	Calculated Value ($)	Difference ($)	Percent Change
Production Costing Simulation	14,557,536		
Staff	14,971,069	413,534	2.84%
FPL	6,568,514	-7,989,022	-54.88%
OPC	15,974,055	1,416,519	9.73%

Appropriate Duration of Outage

Within three hours of the fault FPL restored service to all of its non-interruptible customers. (EXH 12) Eight hours and ten minutes after the event FPL was able to meet its load requirements without the use of peaking units or purchased power and was able to economically dispatch its available units. (EXH 26, BSP 9) However, Turkey Point Units 3 and 4, for various reasons, remained off-line for a total of 158 hours and 107 hours, respectively. (TR 49)

FPL claims that the initial eight hour time-period represents the amount of time that the transmission event had a significant effect on its system. (TR 114) FPL believes that the Commission should only consider these first eight hours of the February 26, 2008 outage when determining the appropriate refund to customers. FPL's argument is based on the rationale of distinguishing a transmission incident from a resultant outage of generation plants that were operated prudently. (TR 249-240)

In its rebuttal testimony, FPL suggests that a conservative measure of the outage time attributable to the fault at the Flagami substation would be 48 hours. (TR 406) FPL witness Stall testified that 48 hours is the typical amount of time necessary to bring a single unit back on-line after an unexpected plant shut down. (TR 406) Witness Stall indicates that additional time beyond 48 hours was the result of unrelated and unavoidable events that do not reflect any inappropriate or imprudent actions on FPL's part. (TR 407) However, witness Stall also testified that the unique circumstance of starting two units following an unplanned outage certainly lengthens the typical 48 hour timeframe. (TR 40) Witness Stall clarified that following a dual unit trip, such as the one experienced during the February 26, 2008 outage, it typically takes 3 to 5 days (72 hours to 120 hours) to return the units to service. (EXH 32, BSP 501) When considering the additional time for power ascension, the typical time to restore the units to full output is approximately 84 hours to 134 hours. (TR 53)

OPC believes that FPL should be responsible for costs beginning from the time of the Flagami substation incident to the point at which the Turkey Point nuclear units were restored to service. FIPUG also agrees that FPL should be responsible for the full duration of the outage and further asserts that because an FPL employee caused the initiating event, FPL is responsible for all resulting events. FIPUG's argument is one of causation: but for the transmission outage, the nuclear units would not have tripped off-line. Thus, FIPUG believes that the replacement power costs should be measured considering the full duration of the outage and Turkey Point-specific costs.

FPL contends that the Company's operation of its generating resources, in response to the fault at the Flagami substation, was prudent and proper. (TR 50) Staff does not believe that there is any evidence in the record to suggest otherwise; however, FPL did accept responsibility for the initiating event and subsequent loss of generation. Therefore, unless the Commission agrees with FPL's rationale of distinguishing a transmission incident, which was the responsibility of the utility, from a resultant outage of generation plants that were operated prudently, the Company should be responsible for all replacement power costs associated with the outage, less any mitigating circumstances.

Staff agrees with the position taken by OPC, AG, and FIPUG, that FPL should be responsible for the full duration of the outage. However, staff believes that consideration must be given to the actions and events which followed the initial tripping of those units. Staff's recommendation regarding the appropriate duration of the outage for refund considers the actions taken at Turkey Point Units 3 and 4 independently. Therefore, staff will examine the two units separately.

Turkey Point Unit 3

As a result of the fault at the Flagami substation, Turkey Point Unit 3 tripped off-line automatically in response to voltage fluctuations. (TR 38-39) FPL witness Stall testified that this response is exactly what the unit was designed to do in such a situation. (TR 40) Turkey Point Unit 3 ultimately returned to full output approximately 158 hours after the fault at the Flagami substation. (TR 127)

Seven hours after the initiating event FPL began repair of the rod position indication system. (EXH 27, BSP 254) FPL witness Stall testified that the rod position indication system previously malfunctioned in October 2007. (TR 41) According to FPL, if the repairs were performed when the malfunction was initially identified, it would have taken a very long time to complete for several reasons. (TR 424) The deferral of the repairs of the rod position indication system allowed the company to prepare for the repairs and subsequently minimize the amount of time necessary for the repairs. (TR 105-106) As part of an amendment to its Nuclear Regulatory Commission (NRC) operating licenses for Turkey Point Units 3 and 4, FPL was required to repair the rod position indication system at the next time the unit shutdown. (TR 42) In response to a production of documents request, FPL provided a document describing the timing of the rod position indication system repairs. The document provided by FPL identifies 27 hours in which activities related to repairing the rod position indication system were being performed. (EXH 31, BSP 405)

Commission Order No. 23232[5] addressed the Commission's disposition of an outage which was prompted by FPL's nuclear operators' failure to pass an NRC requalification exam. Order No. 23232 reads as follows:

> The Turkey Point Unit 3 outage commencing March 29, 1989, was attributed to FPL's nuclear operator's failure to pass [an] NRC requalification exam. Because operator training is directly a management function, we find that this outage was the responsibility of FPL's management. However, the outage concurred with a previously scheduled outage for equipment safeguards testing that was set to begin April 1, 1989. During this planned outage, FPL identified and performed essential repairs. Thus, even though management was responsible for the outage, replacement fuel costs were prudently incurred commencing April 1.
>
> Therefore, only replacement fuel costs for the period March 29 through April 1, 1989, should be disallowed. (emphasis added)

Staff believes that Order No. 23232 set a precedent for crediting a utility's performance of planned essential repairs such as the ones performed by FPL with respect to the rod position indication system which were required by the NRC. Based on Order No. 23232, staff believes that the Commission's determination of the appropriate duration of the outage must take into account the Company's repair of the rod position indication system. Staff recommends that the Commission allow FPL cost recovery for the 27 hours of work that FPL performed planned essential repairs. FPL should be required to refund the costs associated with the remaining 131 hours that Turkey Point Unit 3 was off-line.

Staff believes that it is also important to consider the fact that, per NRC requirements, the repairs to the rod position indication system would have been performed at the next outage regardless of the nature of the outage. OPC witness Dismukes stated that in a scenario in which the initiating event was beyond FPL's control the utility should not be responsible for the replacement power costs. (EXH 35) Staying with such a hypothetical scenario, any incremental time added by the repairs would be borne by the ratepayers.

[5] Issued July 20, 1990, in Docket No. 900001-EI, In re: Fuel and Purchased Power Cost Recovery Clause and Generating Performance Incentive Factor.

Turkey Point Unit 4

Turkey Point Unit 4 also tripped off-line automatically in response to voltage fluctuations caused by the fault at FPL's Flagami substation on February 26, 2008. (TR 39) Likewise, the response is exactly what the unit was designed to do in such a situation. (TR 40) Turkey Point Unit 4 ultimately returned to full output approximately 107 hours after the fault at the Flagami substation. (TR 44)

Following the fault at the Flagami substation there were two additional plant shutdowns that extended the outage for Turkey Point Unit 4. (TR 47) The first shutdown was caused by a relay for a protective circuit which did not function properly and ultimately caused an automatic shutdown of the turbine. (TR 47) FPL witness Stall described the occurrence as a random mechanical failure. (TR 47)

The second additional shutdown, which occurred on February 29, 2008, resulted from a manual reactor trip due to the water level in one of the steam generators exceeding 75 percent. (TR 49) Witness Stall testified that a reactor shutdown because of high steam generator water level occurring during plant restart is not an unusual event. (TR 47) Witness Stall additionally added that the manual reactor trip was required by plant procedures. (TR 51)

Unlike the Company's actions at Turkey Point Unit 3, the measures taken by FPL at Turkey Point Unit 4 were typical and not unusual with respect to operation of nuclear generators. Therefore, staff does not believe that any credit should be given to the duration of time that Turkey Point Unit 4 was out of service.

As discussed earlier, according to FPL the typical time to return two nuclear units to full output following a dual unit trip is 84 hours to 134 hours. Staff's recommended outage times of 131 hours and 107 hours for Turkey Point Units 3 and 4 respectively are within FPL's suggested typical timeframe. Staff is not recommending that typical times represent a benchmark; however, staff believes this comparison illustrates that the operational challenges presented by nuclear generation are a known concern when selecting future generation technologies.

Summary of Refund Calculations

Staff's calculation of the costs incurred during the February 26, 2008 outage consists of two distinguishable parts: (Part A) the first 8 hours and 10 minutes of the outage, and (Part B) the time period following the first 8 hours and 10 minutes. Staff's calculation of incurred costs for Part A coupled the cost of running peaking units at three FPL sites and the payments for the purchased power that was purchased during the first eight hours. Staff's calculation of incurred costs for Part B assumes that the lost nuclear generation was replaced with a blend of FPL's fossil-fuel fleet. Additionally in Part B, staff adjusted the amount of lost nuclear generation in order to account for the power ascension of the nuclear plants. Staff's calculation of the replacement power costs over the full duration of the February 26, 2008 outage resulted in a value of $16,202,719.

Staff's calculation of the fuel costs that would have been incurred absent the outage consists of the same parts as those discussed above. For Part A, staff assumes that generation beyond the maximum potential of Turkey Point Units 3 and 4 is produced by natural gas-fired

generation. This approach differs from FPL's and OPC's approach which assumed an adjusted system average cost and a nuclear specific cost, respectively. All fuel costs calculated for the period beyond the first eight hours were specific to Turkey Point Units 3 and 4. Staff's calculation of fuel costs that would have been incurred absent the February 26, 2008 outage yielded a value of $1,231,649.

Netting the fuel costs that would have been incurred absent the outage against the fuel costs incurred results in a net replacement power cost of $14,971,070. Staff believes that this is the maximum value that FPL should be responsible for, plus any interest discussed later in this recommendation.

As discussed, staff believes that it is necessary to account for FPL's performance of essential repairs. Therefore, staff recommends subtracting 27 hours of replacement power costs ($1,477,865) from the net replacement power cost. This adjustment for essential repairs results in a total refund value of $13,493,204.

In its response to Staff's First Set of Interrogatories (EXH 27), FPL provided the calculation of interest effect using the same schedules and actual interest rates for its fuel cost recovery in 2008 and 2009. The calculation shows for each $1,000 refund due to replacement fuel cost disallowance in February 2008, there is an additional adjustment of $27.60 at year-end 2009. (EXH 27, BSP 11) This increase is due mainly to the interest effect, but also includes jurisdictional sales and line loss factors that increase the refund amount by $0.57 for each $1,000 replacement fuel cost disallowance in February 2008. Similarly, for each $1,000 refund in March 2008, there is an interest effect of $25.06 cumulative at year-end 2009. (EXH 27, BSP 14) Using the methodology described above staff calculated an interest amount of $360,833. Consistent with Commission practice, the company should make an adjustment to its year-end 2009 true-up to reflect the Commission's decision. This practice ensures that the amount will continue to have an interest effect based on actual interest rates until full recovery under the true-up process.

The table below summarizes the respective refund values proposed by the parties and staff. A summary of staff's calculation of the refund of replacement power costs and associated interest is in Attachment A.

Table 2: Summary of Recommended Refund Amounts

	FPL	OPC/AG/FIPUG	Staff
Net Replacement Power Costs	$2,024,035.00	$15,974,055.40	$14,971,069.60
Credit for Mitigating Actions	n/a	n/a	($1,477,864.81)
Interest	$55,865.00	$427,300.72	$360,849.84
Total Refund	$2,079,900.00	$16,401,356.12	$13,854,054.63

CONCLUSION

With regard to the cost basis for lost generation, staff believes that the calculation of the replacement costs should be based on incremental costs which take into account the actual generation lost during the outage. With regard to the duration of the outage, staff believes that FPL should be responsible for the full duration of the outage less any time required for essential repairs. Based on staff's analysis the amount FPL should refund to customers is $13,854,054.63.

Issue 2: What is the appropriate method to credit customers for the replacement power costs determined pursuant to Issue 1?

Recommendation: The appropriate method of issuing the credit is through the 2010 net true-up in Docket 100001-EI, which would lower FPL's 2011 fuel factors. (A. Roberts)

Positions of Parties

FPL: The Commission should utilize the traditional fuel cost recovery true-up process to implement the RPC credit in order to minimize the billing system expense and workload associated with a unique, one-time credit. Using this method, FPL would reflect the credit in the 2010 net true-up, where it would serve to reduce 2011 fuel cost recovery factors.

If the Commission determines that FPL should implement a one-time credit, the credit should be issued to customers of record during the first billing cycle beginning 60 days after the Commission decides to the credit amount, based on customers' consumption in that billing cycle. Implementing a one-time credit based on 12 months of consumption would be costly, complex and would delay implementation.

OPC: Took no position as to how the refund should be issued.

AG: The Attorney General asks that the Commission award the refund as a one-time credit consistent with the manner in which it awarded the refund in the "Drill Hole Case," Docket No. 080001-EI. This one-time refund would allow customers to realize the full benefit of the refund.

FIPUG: As stated in FIPUG's brief, a one-time credit should be issued immediately to ratepayers. No charges for administering the refund should be assessed to customers.

Staff's Analysis: There are three principal options for implementing a refund: (1) issue a one-time credit based on the customer's current consumption, (2) issue a one-time credit based on 12 months of customer consumption, or (3) incorporate the credit into the 2010 Fuel Net True-Up. The three options are discussed in detail below.

One-Time Credit Based On Customers' Current Consumption

Under the first option, a one-time credit would be applied to FPL retail customers of record, based on the customer's current consumption, as a cent per kilowatt-hour (kWh) credit in the month the refund is made. Witness Keith testified that this option is the quickest method of refunding monies back to FPL's customers (TR 297). This option was utilized when the Commission ordered a refund in Order No. PSC-09-0024-FOF-EI, issued January 7, 2009, in Docket No. 080001-EI, In re: Fuel and purchased power cost recovery clause with generating performance incentive factor, and Docket No. 090001-EI, 2009 net true-up over-recovery. In Keith's testimony, he states this method of issuing the credit would cost the Company $70,000, and require 60 days to implement (TR 292). The AG and FIPUG support this option and agree the refund should be issued in this manner.

One-Time Credit Based On 12 Months of Consumption

FPL's witness Keith presented in his testimony, an option for a one-time credit based on 12 months of consumption. This credit would be applied to FPL retail customers of record, and based on the customer's average consumption for the 12 consecutive billing cycles prior to the refund. Witness Keith testified that this credit method requires very detailed and extensive adjustments, monitoring, and testing of FPL's billing system.

According to witness Keith's testimony, calculations based on this method require more than just reading 12 rows of data and then adding them together. To make these calculations, FPL must identify all exceptions occurring within a customer's account. An example of an exceptional or extenuating circumstance would be a customer who is away from their residence for a period of time during the month consumption is calculated for the refund. FPL must then determine whether to include or exclude the exception within the refund. FPL's billing system would require additional coding, new programs, and significant processing time to decipher any exceptions found within a customers account.

This option addresses customers whose consumption dropped during the month of the refund calculation, due to extenuating or exceptional circumstances.[6] However, staff does not believe this is an adequate method of issuing a refund in this particular case. In staff's opinion, this method should not be used because, (1) the anticipated amount of the refund is not significant, (2) the work required would be extensive, and (3) the costs imposed to implement the refund are excessive in comparison to the refund amount.

2010 Fuel Cost Recovery Net True-up

The third option, which staff is recommending, is to recognize the refund amount, including interest, during the 2010 fuel proceeding. This approach would affect FPL's fuel factors for 2011. Staff believes this method of issuing the refund is the most efficient method in refunding monies back to FPL's customers. In comparison to the two previous options listed above, this third option poses no additional cost for FPL to implement, and will take place during the annual Fuel Cost Recovery proceeding. Given the timing of the refund and the anticipated amount to be refunded, staff believes this is the best option of issuing a credit to FPL's customers for replacement power costs attributable to the February 26, 2008 outage.

Bill Impact on a 1,000 kWh Bill

The impact on a 1,000 kWh residential customer's bill will vary based on the Commission's final decision of the total dollars to be refunded by FPL for RPC for the Flagami Event. In response to Staff's Second Set of Interrogatories (Interrogatories 52 and 53), the estimated one-time bill impact on the June 2010 residential 1,000 kWh bill for each $1,000,000

[6] See Order No. PSC-10-0051-FOF-EI, issued January 20, 2010 in Docket No. 100001-EI, In re: Fuel and purchased power cost recovery clause with generating performance incentive factor. The Commission considered this option but ruled that administrative efficiency and minimizing costs are important considerations. As a result, the Commission rejected this refund option and ordered FPL to issue the refund on January 2010 bills, based upon that bill's consumption.

refunded is $0.11, assuming estimated interest was calculated from February 2008 through May 2010. (EXH 28) The estimated bill impact, applied through the true-up, on a residential 1,000 kWh bill for each $1,000,000 refunded is $0.01. Estimated interest was calculated from February 2008 through December 2010.

Based on staff's recommended refund amount of $13,853,392, including interest, the estimated impact of a one-time credit on a 1,000 kWh residential bill is $1.53. Using staff's recommended method of using the normal true-up mechanism, the impact would be $.14 per month over a 12-month period. The bill impact based on the second option of a one-time credit based on 12 months of consumption is not available, but would likely be similar on average to the $1.53 figure based on a one-month credit.

FIPUG took the position that any of the costs incurred to implement the refund should be absorbed by FPL and not passed on to its customers in any manner; staff agrees.

CONCLUSION

After reviewing the record, staff believes the appropriate method of issuing the credit to FPL' customers for RPC, is through the 2010 Fuel Cost Recovery Net true-up. Issuing the credit in this manner would serve to offset the 2011 annual fuel factors set for FPL at the hearing. While staff's recommendation is not the most immediate form of relief, staff does believe it is the most efficient method for refund of the Flagami replacement power cost dollars, given the relatively small amount to be refunded.

Issue 3: Should this docket be closed?

Recommendation: The docket should be closed after the time for filing an appeal has run. (Bennett)

Staff Analysis: The docket should be closed after the time for filing an appeal has run.

Overview of Total Refund

A	Estimate of Replacement Power Costs	$16,202,719.35
B	Estimate of Fuel Costs Incurred Assuming No Outages	$1,231,649.75
C	***Net Replacement Power Costs (A-B)***	***$14,971,069.60***
D	Credit for Performance of Essential Repairs	$1,477,864.81
E	***Sub-Total 2 (C-D)***	***$13,493,204.78***
F	Interest	$360,849.84
G	***Total Refund (E+F)***	***$13,854,054.63***