State of Florida

Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

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

DATE: October 15, 2009

TO: Office of Commission Clerk (Cole)

FROM: Office of Strategic Analysis and Governmental Affairs (Graves, Ellis, Gilbert, Matthews)
Division of Economic Regulation (Matlock)
Office of the General Counsel (Hartman)

RE: Docket No. 090109-EI – Petition for approval of solar energy power purchase agreement between Tampa Electric Company and Energy 5.0, LLC.

AGENDA: 10/27/09 – PAA Regular Agenda – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: None assigned at this time

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\SGA\WP\090109.RCM.DOC

Case Background

On March 9, 2009, Tampa Electric Company (TECO or Company) filed a petition requesting approval of a purchased power agreement (Contract) with Energy 5.0, LLC (Energy 5.0). The Contract, executed on February 25, 2009, is based on TECO purchasing the entire net electrical output of Energy 5.0's Florida Solar I Facility (Facility) for a period of 25 years beginning on January 1, 2011. Energy 5.0 will sell as-available energy produced by the Facility to TECO at a price per megawatt-hour (MWh) that is fixed for the term of the Contract. The Facility is a 25 megawatt (MW) solar photovoltaic array that can provide approximately 50,000 MWh of energy annually.

In addition to the purchase of energy, the Contract specifies that TECO will receive all environmental attributes and renewable energy credits (RECs) associated with the renewable energy that is sold to TECO.

On August 11, 2009, TECO filed updated information to its petition. Following an interconnection study performed by TECO, the Company identified a necessary upgrade to its 69kV network in order to accommodate the proposed facility. TECO's updated information included the costs associated with the described upgrades.

This recommendation addresses TECO's petition for approval of the Contract with Energy 5.0. The Commission has jurisdiction over this matter pursuant to Sections 366.051, 366.81, 366.91, and 366.92 Florida Statutes.

Discussion of Issues

Issue 1: Should the Commission approve the requested recovery for costs incurred under the negotiated Contract between TECO and Energy 5.0?

Recommendation: Yes. Staff recommends that TECO be authorized to recover the energy payments made to Energy 5.0, up to TECO's as-available energy rate, through TECO's annual fuel cost recovery factor. Staff considers any costs in excess of TECO's as-available energy cost to be associated with the purchase of environmental attributes or renewable energy credits (RECs) which are discussed in Issue 2. (Graves, Ellis, Matthews)

Staff Analysis: Energy 5.0 will sell as-available energy produced by the Florida Solar I Facility to TECO for a term of 25 years beginning on January 1, 2011. The Facility is a 25 MW solar photovoltaic array that can provide approximately 50,000 MWh of energy annually. TECO has agreed to pay a fixed price per MWh for the life of the Contract. Because the Facility will not provide firm energy, there are no capacity payments associated with the Contract.

Rule 25-17.0825(6), Florida Administrative Code (F.A.C.), states that the recovery of costs associated with the purchase of as-available energy made from qualifying facilities pursuant to a separately negotiated contract are conditional on two factors: (1) The payments to the qualifying facility are not reasonably projected to result in higher cost electric service and, (2) The adequacy and reliability of electric service will not be adversely affected. These two factors are evaluated below.

Economic Evaluation of Payments:

Because the Contract is for as-available energy, not firm capacity and energy, the payments to Energy 5.0 were evaluated against the utility's projected avoided energy costs. Per Rule 25-17.0825(6), F.A.C., avoided energy costs are the utility's incremental fuel cost, identifiable variable operating and maintenance expenses, and identifiable variable utility power purchases which can be avoided by the purchase of as-available energy. TECO considered several forecasts and potential costs in developing an avoided energy cost to evaluate the Contract.

TECO evaluated the Contract assuming the Company's September 15, 2008, fuel forecast (Base Case) which was used in TECO's 2009 fuel cost recovery projection filing. TECO additionally evaluated the contract assuming a higher fuel price forecast (High Fuel). In general, higher fuel costs would improve the economics of the proposed contract.

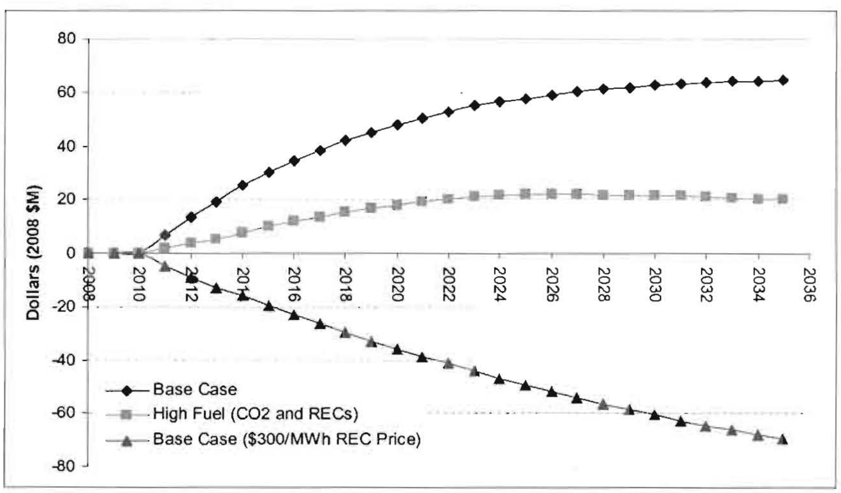
TECO also considered potential costs associated with future CO_2 emission penalties (CO_2 Cost Case) in its analysis of the contract. TECO's CO_2 emissions penalty costs were based on values produced in Navigant Consulting's recent Florida Renewable Energy Potential

Assessment report (Navigant Study).[1] In general, the inclusion of costs associated with CO_2 would improve the economics of the proposed contract.

In addition to the purchase of as-available energy, the Contract states that all environmental attributes and RECs associated with the electric energy produced by the facility will belong to TECO. For evaluation of the Contract TECO assumed REC selling prices based on values produced in the Navigant Study. In general, higher REC values would improve the economics of the Contract. An additional economic analysis was performed utilizing a REC price based on a Renewable Portfolio Standard (RPS) that exists in some east coast markets. Giving consideration to these markets, TECO estimated a REC value of $300/MWh per year.

TECO's evaluation of the Contract, without revenues from the sale of RECs, indicates that purchased power pursuant to the Contract would have a net cost above TECO's as-available energy costs of approximately $44 million to $65 million over the life of the contract. Figure 1 below, illustrates the difference in cost between the Contract and TECO's avoided energy cost. TECO's analyses show that the Contract is above avoided cost for every year of the 25-year contract. TECO's analyses also indicate that the sale of RECs could produce revenues to offset the costs of the Contract. However, it is only under the scenario in which TECO assumed a $300/MWh selling price for RECs that the Contract resulted in a net savings (nearly $70 million).

Figure 1: The Contract vs. As-available Energy (Cumulative Present Value Revenue Requirements)[2]
Note: Positive values indicate a net cost and negative values indicate a net savings to ratepayers.



Staff additionally requested an analysis using updated fuel assumptions and carbon cost assumptions. The results of the updated analyses show that the Contract would be less economical than with previous assumptions. In summary, TECO's analyses indicate that the Contract would only be cost-effective to TECO's ratepayers if TECO were able to sell the RECS

[1] The Navigant Study was Submitted to the Commission on December 30, 2008 for use in Docket No. 080503, In re: Establishment of Rule on Renewable Portfolio Standard.
[2] Values calculated by Staff, using a Discount Rate of 7.89% and data provided by TECO in response to Staff Interrogatory No. 66, of Staff's Second Set of Interrogatories.

associated with the Contract for \$300/MWh for the 25-year life of the contract. The results of TECO's original economic analysis are summarized in Table 1 below. A positive value indicates a net cost and a negative value indicates a net savings to ratepayers.

Table 1: Summary of Economic Analyses (Cumulative Present Value Dollars 2008 \$M)

	Base Case	High Fuel
No CO_2 or RECs	64.66	51.63
Only CO_2	56.56	43.73
Only RECs	41.03	27.99
CO_2 & RECs	32.92	20.09
\$300/kwh REC	(69.46)	N/A

Source: Page's 11,12, and 15 of TECO's Petition.

Staff additionally requested an analysis using updated fuel assumptions and carbon cost assumptions. The results of the updated analyses show that the Contract would be less economical than with previous assumptions.

On August 11, 2009, TECO filed updated information to its March 9 petition. Following an interconnection study performed by TECO, the Company identified a necessary upgrade to its 69kV network in order to accommodate the proposed facility. TECO's updated information included the costs (\$750,000) associated with the described upgrades. In response to a staff data request, TECO stated that the network upgrades would be primarily capital improvements that would become the property of TECO and be included in the company's rate base by 2011. The resulting effect of the additional costs were relatively minimal (less than a 1 percent increase in costs) to the overall cost-effectiveness of the Contract. TECO also indicated that the transmission upgrades should not affect the in-service date of the proposed facility.

Electric Service Adequacy and Reliability:

The Contract provides that TECO may curtail or reduce deliveries of as-available energy, to the extent necessary to maintain the reliability and integrity of TECO's system. Staff believes that the provisions of the Contract are sufficient to ensure that the Florida Solar I Facility will not adversely affect the adequacy or reliability of electric service to TECO's customers.

Conclusion:

The negotiated Contract between TECO and Energy 5.0 will provide a viable source of renewable energy that will displace energy generated by fossil fuels, thus reducing the state's dependence on these resources and promoting fuel diversity. However, the Contract is estimated to be significantly above TECO's avoided cost under a variety of scenarios. As stated in Rule 25-17.0825(6), F.A.C., payments for as-available energy made to qualifying facilities pursuant to a separately negotiated contract shall be recoverable by the utility through the Commission's periodic review of fuel and purchased power costs if the payments are not reasonably projected to result in higher cost electric service to the utility's general body of ratepayers. Therefore, staff recommends that TECO only be allowed recovery of costs from ratepayers up to the utility's as-available energy cost. Staff considers any costs in excess of TECO's as-available energy cost to be associated with the purchase of environmental attributes or RECs which are discussed in Issue 2.

Issue 2: Should the Commission approve cost recovery for payments, above avoided cost, incurred under the negotiated contract between TECO and Energy 5.0 for the purchase of environmental attributes and renewable energy credits?

Recommendation: No. Pursuant to Rule 25-17.0825(6), F.A.C., payments to a qualifying facility for as-available energy cannot result in higher cost electric service to the utility's general body of ratepayers. Staff recommends that the environmental attributes and RECs purchased should be the property of TECO, and any risk of profit or loss resulting from the sale of such attributes should be borne by TECO's stockholders. (Graves, Ellis, Matthews)

Staff Analysis: As noted in Issue 1, the Contract states that all environmental attributes and RECs associated with the electric energy produced by the facility will belong to TECO. No information was provided in the Contract identifying a monetary amount associated with environmental attributes and RECs. However, in response to a staff interrogatory, TECO indicated that if the Contract was absent environmental attributes and RECs, the Company would expect the fixed energy cost to decrease. As discussed in Issue 1, any costs in excess of the utilty's projected hourly as-available energy cost must be associated with the purchase of environmental attributes or RECs.

Consistent with a recent Commission decision,[3] staff believes it is not appropriate at this time to allow the recovery of costs associated with speculative costs associated with environmental attributes or RECs. Order No. PSC-08-0116-PAA-EQ states:

> Payment for renewable energy credits are speculative at this time and there is no regulatory requirement for their purchase. There are many varied scenarios which could possibly develop within the provisions of the FPL agreement for the purchase of "Green Attributes" from the Manatee project. It would not be appropriate for the general body of ratepayers to be obligated at this time to pay the cost to purchase speculative "Green Attributes" that may be associated with the Manatee project.

Order No. PSC-08-0116-PAA-EQ also directed that:

> FPL may seek recovery for capacity and energy payments incurred under the negotiated contract, but may not seek recovery through the fuel clause for costs associated with payments for "Green Attributes" under the terms of the negotiated contract.

Conclusion:

Staff believes that the purchase of RECs remains speculative at this time and there is still no requirement for their purchase. Staff recommends that TECO may not seek recovery through the fuel clause for costs associated with payments for environmental attributes and RECs. In the view of staff, TECO has an opportunity to purchase and own the environmental attributes and

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[3] Order No. PSC-08-0116-PAA-EQ, issued: February 22, 2008, in Docket No. 070677, In re: Petition for approval of negotiated renewable energy contract with Manatee Green Power, LLC, by Florida Power & Light Company.

RECs provided in the Contract as a non-regulated operation. The environmental attributes and RECs purchased should be the property of TECO, and any risk of profit or loss resulting from the sale of such attributes should be borne by TECO's stockholders. If TECO chooses to go forward with this Contract, the utility's stockholders could benefit from participating in the voluntary market utilizing utility-based expertise, while protecting the ratepayer from any additional costs which may arise from such a purchase.

Issue 3: Should this docket be closed?

Recommendation: Yes, this docket should be closed upon issuance of a Consummating Order unless a person whose substantial interests are affected by the Commission's decision files a protest within 21 days of the issuance of the proposed agency action. (Hartman)

Staff Analysis: This docket should be closed upon issuance of a Consummating Order unless a person whose substantial interests are affected by the Commission's decision files a protest within 21 days of the issuance of the proposed agency action.