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

DATE: September 8, 2011

TO: Office of Commission Clerk (Cole)

FROM: Division of Regulatory Analysis (Ellis)
Division of Economic Regulation (Lester, Watts)
Office of the General Counsel (Robinson, Tan)

RE: Docket No. 110090-EQ – Petition for approval of negotiated power purchase agreement with U.S. EcoGen Polk, LLC by Progress Energy Florida, Inc.

AGENDA: 09/20/11 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Brown

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\RAD\WP\110090.09-08-11.RCM.DOC

Case Background

On April 1, 2011, Progress Energy Florida, Inc., (PEF or company) filed a petition requesting approval of a negotiated contract for the purchase of firm capacity and energy (contract) between U.S. EcoGen Polk, LLC (EcoGen) and PEF, dated March 28, 2011. The negotiated contract is based on EcoGen constructing, owning, and operating a biomass electric generating facility (Facility), located in Polk County, Florida. EcoGen proposes to sell 60 megawatts (MW) of firm capacity and associated energy from the Facility to PEF for an approximate 30-year period from January 1, 2014, through May 31, 2043.

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On May 26, 2011, PEF filed two revised negotiated contract sheets. The changes included correcting typographical errors and providing a table that had previously been omitted.

On August 17, 2011, letters were filed in support of the EcoGen Facility by the Polk County Board of Commissioners, the Polk County Manager, and the Central Florida Development Council. On August 26, 2011, Hacklake Forests, LLLP filed a letter of support, and on September 1, 2011, the Central Florida Regional Planning Council also filed a letter of support.

The Commission has jurisdiction over this matter pursuant to Sections 366.051, 366.81, and 366.91, Florida Statutes (F.S.).

Discussion of Issues

Issue 1: Should the Commission approve for cost recovery the negotiated purchased power agreement between US EcoGen Polk, LLC, and Progress Energy Florida, Inc.?

Recommendation: Yes. While the contract is marginally cost-effective compared to PEF's most recent estimate of avoided cost, the contract does meet the requirements of the Commission's Rules. The fixed rates for capacity and energy contained in the contract are a form of hedging. In the event of a default where the termination security and/or collateral from EcoGen is not adequate, PEF should be responsible for reimbursing ratepayers for early capacity payments. (Ellis, Lester)

Staff Analysis: EcoGen proposes to sell 60 megawatts (MW) of firm capacity and energy from its Facility to PEF for a term from January 1, 2014, through May 31, 2043. Rule 25-17.0832(3), Florida Administrative Code (F.A.C.), states that in reviewing negotiated firm capacity and energy contracts for the purpose of cost recovery, the Commission shall consider factors relating to the contract that would impact the utility's general body of retail and wholesale customers, including: need for power, the cost-effectiveness of the contract, security provisions for early payments, and performance guarantees associated with the Facility. These factors are evaluated below.

A. Need for Power

PEF's 2011 Ten-Year Site Plan (TYSP) shows the next planned capacity addition in 2020, when it anticipates bringing into service a 178 MW natural gas-fired combustion turbine. The 2011 TYSP does not include the 60 MW of committed capacity from this contract, which has an in-service date of 2014. As the in-service date of the Facility is earlier than the avoided unit, it is important to note that the business requirements for renewable generators do not always match the reliability needs of a utility. As such, Commission Rules require security provisions in purchased power contracts with early capacity payments. This is more fully discussed in Part C, below.

Although the proposed facility alone provides a relatively small reliability benefit, the accumulation of several purchased power contracts from renewable facilities may help to defer the construction of a future utility generation unit. It has been the Commission's policy to approve cost-effective contracts that use renewable resources as the primary fuel. Rule 25-17.001(5)(d), F.A.C., encourages electric utilities to:

> Aggressively integrate nontraditional sources of power generation including cogenerators with high thermal efficiency and small power producers using renewable fuels into the various utility service areas near utility load centers to the extent cost effective and reliable.

Therefore, staff believes the proposed negotiated contract will enhance PEF's system reliability, encourage the use of renewable fuels in Florida, and promote fuel diversity for PEF's ratepayers.

B. Cost-Effectiveness

Rule 25-17.0832(3)(b), F.A.C., states in part that the Commission should consider whether the cumulative present worth of payments to a qualifying facility are no greater than the cumulative present worth of the purchasing utility's avoided cost of capacity and energy. A utility's full avoided cost is reflected in its Standard Offer Contract (Standard Offer), which is filed annually on April 1, as required by Rule 25-17.250, F.A.C. Payments in the Standard Offer are broken into two categories: fixed capacity payments based on the unit's capital cost and fixed O&M, and variable energy rates based on as-available energy and the avoided unit's estimated fuel costs and variable O&M.

PEF and EcoGen began negotiations in early 2010. These negotiations were based on the 2010 Standard Offer, which was filed April 1, 2010 and approved July 21, 2010.[1] PEF's Petition in this docket was also filed on April 1, 2011, along with the company's TYSP and 2011 Standard Offer. Then, when the petition was filed, the 2010 Standard Offer had already expired, based on (1) Rule 25-17.250(3), F.A.C., as the in-service date for the avoided unit had changed in the 2011 TYSP, and (2) the terms and conditions of the 2010 Standard Offer, which had an expiration date of April 1, 2011. The 2011 Standard Offer was approved on July 8, 2011.[2]

Historically, when approval of a negotiated contract stretched between years and therefore Standard Offers, the Commission considered both Standard Offers when evaluating the contract for cost recovery purposes.[3] Staff believes the use of the most recent fuel forecast and avoided unit is appropriate when considering the cost-effectiveness, and consistent with the Commission's prior decisions. However, unlike several previous recommendations, the use of more recent data causes a decline in the contract's cost-effectiveness. This is discussed in more detail below.

Table 1 summarizes the three cost-effectiveness scenarios staff reviewed for the EcoGen contract. These scenarios are described in more detail below.

Table 1 - Cost-Effectiveness Comparison of Scenarios

Reference	Cumulative NPV Savings	Estimated Date NPV Savings Begin
	(2011 $000)	(Year)
2010 Standard Offer w/Oct. 2009 Fuel Forecast (PEF's Petition)	$59,818	Year 4 of 30
2010 Standard Offer w/Sept. 2010 Fuel Forecast	$6,804	Year 26 of 30
2011 Standard Offer w/ Sept. 2010 Fuel Forecast	$814	Year 29 of 30

[1] See Order No. PSC-10-0464-TRF-EI, issued July 21, 2010, in Docket No. 100168-EI – In re: Petition for approval of amended standard offer contract, by Progress Energy Florida.

[2] See Order No. PSC-11-0295-TRF-EI, issued on July 8, 2011, in Docket No. 110092-EI – In Re: Petition for approval of amended standard offer contract, by Progress Energy Florida, Inc.

[3] See Order No. PSC-09-0562-PAA-EQ, issued August 14, 2009, in Docket No. 090150-EQ - In re: Petition for approval of a modification to existing negotiated renewable energy contract with Solid Waste Authority of Palm Beach County, by Florida Power & Light Company; and Order No. PSC-09-0851-PAA-EQ, issued December 30, 2009, in Docket No. 090371-EQ - In re: Petition for approval of amended negotiated purchase power contract with Vision / FL, LLC by Progress Energy Florida.

In its Petition, PEF provided a cost-effectiveness analysis based on the 2010 Standard Offer, compared to the negotiated contract's fixed capacity and energy rates. The 2010 Standard Offer has a natural gas-fired combustion turbine with a 178 MW summer rating scheduled to be in-service in 2018. The fuel forecast used in PEF's Petition was developed in October 2009, as part of the 2010 TYSP development. EcoGen's Facility was assumed to have a capacity of 60 MW and to operate for the full duration of the contract at a capacity factor of 94 percent, producing a net savings to ratepayers of $59.8 million in net present value (NPV) over the approximate 30-year term. Based on the estimated payments, customers would begin accruing NPV savings in the fourth year of the thirty-year contract.

By fixing energy payment rates, the rates are not allowed to float with changes to the avoided unit's fuel costs. This allocates all the risk of fuel price fluctuations from EcoGen to PEF's ratepayers. For example, if fuel costs do not escalate as quickly as projected in the contract, it may result in a NPV loss. Conversely, if fuel costs escalate faster, customers would see an increased benefit. Regardless, PEF would remain obligated to pay the contracted rate and may seek to recover the costs from the ratepayers through the fuel cost recovery clause, subject to Commission review.

Given the fixed nature of the contract's payments, and the contract's reliance upon lower fuel payments to be cost-effective, staff requested additional scenarios from PEF to provide an updated analysis.

The first scenario compares the EcoGen contract to the 2010 Standard Offer using an updated fuel forecast. The updated fuel forecast was published by PEF's fuel forecasting vendor in September 2010, as part of the development of the 2011 Ten-Year Site Plan, which was filed the same day as this Petition. While avoided capacity costs remain the same, there is a considerable downward shift in the avoided energy costs. As the contract prices are fixed, this reduces PEF's original estimate of savings by 88.6 percent, to only $6.8 million. The updated fuel forecast also pushes back the point where customers begin receiving NPV benefits from year 4 to year 26 of the contract.

The second scenario compares the EcoGen contract to the 2011 Standard Offer, which also uses the updated fuel forecast discussed above, and is considered by staff to be the most recent estimate of avoided cost available. The 2011 Standard Offer features a later in-service date for the avoided unit by two years, in 2020, and a lower discount rate. Overall, this causes the avoided capacity costs to be reduced compared to the original analysis. Combined with the impact of the updated fuel forecast above, the contract's savings decrease significantly. When compared to PEF's most recent estimate of avoided cost, the contract's savings are marginal, at only $0.8 million, or a 98.6 percent reduction in savings from PEF's original estimate. Under this scenario customers realize NPV savings in only the last two years of the contract.

Staff believes the long-term fuel price forecast that PEF used in its analysis is acceptable. For the most recent estimate of avoided cost analysis requested by staff, PEF used a long-term natural gas price forecast taken from the 2011 TYSP, which was prepared by averaging three reputable forecasts: the Ventyx Fall 2010 forecast (converted to nominal dollars at an escalation

rate of 2.4 percent), the CERA forecast dated September 2010, and the Energy Information Administration (EIA) forecast dated April 2010.

Staff compared PEF's 2011 long-term natural gas price forecast to EIA's long-term natural gas price forecast released April 2011. PEF's prices are higher for the first 11 years of the project (2014 to 2025).[4] After 2025, PEF's prices are generally in line with the EIA's forecast.

Staff notes that PEF and EIA's forecasts generally follow the same trend. Also, PEF's forecast is an average of three reputable forecasts. Therefore, staff believes PEF's forecast is a reasonable long-term natural gas price forecast for purposes of a project NPV analysis.

Staff recognizes that contracts featuring fixed prices for capacity and energy are contemplated in the Commission's Rules. PEF has signed, and the Commission approved, several contracts featuring fixed prices for capacity and energy, including combined capacity/energy payments.[5] However, the previous contracts were estimated to provide significant savings under various scenarios.

While the company does not make a return on purchased power, it is responsible for protecting the ratepayers during negotiations with renewable power providers and should include terms and conditions that minimize risk to the company's general body of ratepayers. By using fixed prices for all components of the contract, risks associated with fuel price fluctuations are shifted to the ratepayers, and away from the renewable generator. PEF should strive in its future negotiations to be diligent in protecting its ratepayers from undue or excessive risk.

Staff believes that while the contract is only marginally cost-effective, it meets the minimum qualifications of the Commission's Rule. Since the capacity and energy payments are fixed, this contract is a form of hedging against potential increases in fuel prices. As a result, the negotiated contract requires strong security and performance provisions, discussed below, to ensure that the Facility delivers firm capacity and energy for the full duration.

C. Security Provisions for Early Capacity Payments

The Commission has recognized the need for security as a protection for contracts in which the renewable provider receives capacity payments prior to the in-service date of the avoided unit. These early capacity payments incur an early cost to ratepayers that is gradually

[4] Annual Energy Outlook 2011, Reference Case. This natural gas price forecast is in 2009 dollars. Staff converted these prices to nominal dollars using a 2.4 percent assumed general inflation rate.

[5] See Order No. PSC-07-0911-PAA-EQ, issued November 9, 2007, in Docket No. 070561-EQ – In re: Petition for approval of negotiated power purchase contract for purchase of firm capacity and energy with BG&E of Florida, LLC, by Progress Energy Florida; Order No. PSC-08-0131-PAA-EQ, issued March 3, 2008, in Docket No. 070726-EQ – In re: Petition for approval of second negotiated power purchase contract for purchase of firm capacity and energy with BG&E of Florida, LLC, by Progress Energy Florida, Inc.; Order No. PSC-09-0108-PAA-EQ, issued February 24, 2009, in Docket No. 080533-EQ – In re: Petition for approval of negotiated power purchase contract for purchase of firm capacity and energy with Horizon Energy Group, LLC, by Progress Energy Florida, Inc.; and Order No. PSC-09-0852-PAA-EQ, issued December 30, 2009, in Docket No. 090372-EQ – In re: Petition for approval of negotiated purchase power contract with FB Energy, LLC by Progress Energy Florida.

recovered over the term of the contract with lower payments in outer years and may require several years to realize savings. Security is designed to ensure repayment of early costs that are incurred but may not be fully recovered as a result of a default during the term of the contract. Rule 25-17.0832(3)(c), F.A.C., requires the Commission to consider whether sufficient security is provided by the contract for these payments.

The negotiated contract requires EcoGen to maintain Termination Security, in the form of a letter of credit, with the intention of making the ratepayers whole in the event of a default. The Termination Security required is based on a calculation using the 2010 Standard Offer discussed above. Staff considers the most recent estimate of avoided cost to be the 2011 Standard Offer. Under the 2011 Standard Offer, capacity payments are delayed by an additional two years, resulting in additional early capacity payments requiring security. In the event of a default, this could result in the termination security and/or other collateral from EcoGen not being adequate to fully reimburse the ratepayers for early capacity payments. Therefore, PEF's shareholders should be responsible for reimbursing the general body of ratepayers the difference of the early capacity payments to the Facility and the 2011 Standard Offer's avoided capacity costs, minus the termination security and/or other collateral. Staff believes that with this requirement, PEF's ratepayers should be protected in the event of a default.

D. Performance Guarantees Associated with the Facility

Performance guarantees, as included in this contract, detail how a Facility is to operate and require financial penalties or other remedies should it fail to do so within the contract's terms and conditions. Rule 25-17.0832(3)(d), F.A.C., requires the Commission to consider whether the utility's ratepayers will be protected by the contract's terms.

Staff has reviewed the performance guarantees contained in the negotiated contract and finds them adequate. These protections include a scaled capacity payment in which the Facility would only receive a full capacity payment when it maintains an average capacity factor of 94 percent, with reduced payments until an average capacity factor of 74 percent. The negotiated contract also requires the Facility to maintain collateral, in cash held in an interest bearing escrow account, based on reaching certain milestones and EcoGen's credit rating. This collateral may be drawn upon by PEF in the event that the Facility is unable to deliver firm capacity and energy as stated in the terms and conditions of the contract.

Conclusion

Staff believes that the negotiated contract between US EcoGen Polk, LLC and Progress Energy Florida, Inc., is marginally cost-effective compared to the most recent estimate of avoided cost and meets the requirements of the Commission's Rules. The fixed rates for energy contained in the contract represent a form of hedging against potential spikes in energy prices. In the event of a default where termination security and/or other collateral from EcoGen is not adequate, PEF should be responsible for reimbursing ratepayers for early capacity payments. Therefore, staff recommends that the Commission approve Progress Energy Florida's Petition for cost recovery of the negotiated contract with US EcoGen Polk, LLC.

Issue 2: 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. (Robinson, Tan)

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.