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

DATE: June 6, 2011

TO: Office of Commission Clerk (Cole)

FROM: Division of Regulatory Analysis (Brown, Carl, Graves)
Division of Economic Regulation (Barrett, Cicchetti, Lester, A. Roberts, Springer)
Office of the General Counsel (Murphy, Harris, Teitzman)

Handwritten signatures and initials: JBA, ARBA, ME, RB, CR, RT, MA, AF, etc.

RE: Docket No. 110018-EU – Joint petition for modification to determination of need for expansion of an existing renewable energy electrical power plant in Palm Beach County by Solid Waste Authority of Palm Beach County and Florida Power & Light Company, and for approval of associated regulatory accounting and purchased power agreement cost recovery.

AGENDA: 06/14/11 – Regular Agenda – Post Hearing Decision – Participation is Limited to Commissioners and Staff

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Edgar

CRITICAL DATES: 135 Day Statutory Deadline waived by parties until June 14, 2011.

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\RAD\WP\110018.RCM.06-14-11.DOC

Case Background

The Solid Waste Authority (SWA) is a dependent special district created by the Florida Legislature under the Palm Beach County Solid Waste Act, Chapter 2001-331, Laws of Florida (the Special Act), as a political subdivision of Palm Beach County, Florida. The Special Act authorizes the SWA to construct and operate resource recovery waste-to-energy (WTE) facilities to generate electrical power to supplement the electricity supply of the state through the

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combustion of municipal solid waste (MSW) from the geographical area of Palm Beach County, Florida, and to sell the resulting output to any governmental agency, individual, public or private corporation, municipality or other person. The SWA has engaged in such activities at its Palm Beach County site since 1989. The SWA's existing facility (Existing Facility) consists of a nominal 63 megawatt (MW) WTE facility. The Commission determined a need for the Existing Facility at a maximum 75 MW pursuant to Section 403.519, Florida Statutes (F.S.), in 1985.¹

On January 7, 2011, pursuant to Sections 403.519 and 377.709, F.S., the SWA and Florida Power & Light Company (FPL or Company) (collectively, the Joint Petitioners) petitioned the Florida Public Service Commission (Commission) for a determination of need to expand the Existing Facility (Expanded Facility) that would result in approximately 93 MW² of additional electrical generating capacity. The Joint Petitioners further request that the Commission approve a purchased power agreement (PPA) for firm capacity and energy between FPL and the SWA, and associated regulatory accounting and cost recovery treatment for FPL, pursuant to Section 377.709, F.S. The PPA provides that an advanced funding payment will be made during construction for the electrical component of the Expanded Facility. FPL requests recovery of the advanced funding payment through the Energy Conservation Cost Recovery (ECCR) clause. FPL requests recovery of its energy payments to SWA under the contract through the Fuel and Purchased Power Cost Recovery clause, consistent with the recovery of such payments for FPL's existing PPAs.

Pursuant to Section 403.519(4), F.S., the Commission must take into account the need for electric system reliability and integrity, the need for fuel diversity and supply reliability, the need for adequate electricity at a reasonable cost, and whether the proposed plant is the most cost-effective alternative available. The Commission must also expressly consider whether renewable energy sources or conservation measures taken by or reasonably available to the utility might mitigate the need for the proposed plant.

The initial Petition and testimony provided by the Joint Petitioners did not include the purchased power agreement or any supporting analyses regarding testimony that the contract for the Expanded Facility was cost-effective. The Joint Petitioners informed staff that the parties were still seeking final approval of the PPA from their respective management and that FPL was in the process of completing its 2011 load forecast. The Joint Petitioners informed staff that the supporting analyses and PPA would be provided to the Commission as soon as it was available. On February 9, 2011, staff held a telephonic meeting with the parties regarding timeframes and procedural scheduling matters. As a result of this meeting, the Joint Petitioners waived the 90 day requirement to hold a Hearing in the docket as required by Section 403.519(4), F.S., in order to finalize the PPA, develop the analyses to support the prefiled testimony, respond to discovery, and provide staff the time needed to evaluate the information.

¹ See Order No. 15280 (Fla P.S.C., 1985), Docket No. 85-0435-EU – In re: Petition of Palm Beach County Solid Waste Authority for Determination of Need of Solid-Waste-Fired Small Power Producing Electric Power Plant, issued October 21, 1985.

² At the April 25, 2011 Hearing, staff was informed that the contracted committed capacity range existed in the amount of 70 MW to 80 MW. The actual facility size may still be 93 MW.

Docket No. 110018-EU
Date: June 6, 2011

On February 9, 2011, Mr. Daniel R. Larson and Mrs. Alexandria Larson filed a petition to intervene. On February 21, 2011, Mr. Frank Woods and Ms. Kelly Sullivan filed a petition to intervene in the proposed docket. Both intervening parties were granted intervention on March 3, 2011, by the Prehearing Officer.³ On April 18, 2011, Mr. Woods and Ms. Sullivan submitted a notice of withdrawal from the docket.

An Evidentiary Hearing regarding the electrical need for proposed Expanded Facility was held on April 25, 2011. No public testimony was provided at the Hearing.

The Commission has jurisdiction over the subject matter of this proceeding pursuant to Sections 403.519, 377.709, 366.91, and 366.92, F.S.

³ See Order No. PSC-11-0147-PCO-EU and Order No. PSC-11-0148-PCO-EU, issued March 3, 2011, in Docket No. 110018-EU – In re: Joint Petition for Modification to Determination of Need for Expansion of an Existing Renewable Energy Electrical Power Plant in Palm Beach County by Solid Waste Authority of Palm Beach County and Florida Power and Light Company, and for Approval of Associated Regulatory Accounting and Purchased Power Agreement Cost Recovery.

Executive Summary

Background

Pursuant to Section 403.519(4), Florida Statutes, (F.S.), the Commission must consider the following when evaluating the need for certain new generating units: (a) the need for electric system reliability and integrity, (b) the need for adequate electricity at a reasonable cost, (c) the need for fuel diversity and reliability, (d) whether the proposed plant is the most cost-effective alternative available, and (e) whether renewable energy resources and or conservation measures are used to the extent reasonably available. As a Joint Petitioner in this case, FPL has assumed the responsibility to demonstrate the electrical need for and cost-effectiveness of the proposed project.

Section 377.709, F.S., enacted in 1984, authorizes the Commission to approve the advance funding of the electrical component of a governmentally owned waste-to-energy facility (WTE) by an investor-owned electric utility. Section 377.709,(3)(b)1., F.S., states:

If the commission determines that advanced-capacity payments to the local government during the period of construction are appropriate, such payments must be the lesser of:

a. The net present value of avoided-capacity cost for the electric utility calculated over the period of time during which the local government contracts to provide electrical capacity to the utility. The avoided-capacity cost is that cost established by the commission pursuant to s. 366.05(9) and in effect by commission rule at the time the order approving the contract is issued; or

b. An amount which is not more than the amount of the design costs of the electrical component of the solid waste facility as determined by the commission to be reasonable and prudent at the time of its order, or such portion thereof that is proportionate to the electrical capacity made available by contract to the electric utility.

The Joint Petition by the Solid Waste Authority of Palm Beach County and FPL is the first time this statute has been utilized.

Based on the revised testimony presented by SWA and FPL during the hearing, the advanced funding payment for the electrical component of the WTE is \$56,643,942. FPL proposes to pay the advanced funding payment to SWA and commence recovering the payment from its ratepayers through the Energy Conservation Cost Recovery (ECCR) clause starting in 2014. The in-service date of the WTE is expected to be around the second quarter of 2015. Once constructed, FPL will receive capacity and energy from the WTE for use on its system to supply retail load. The term of the contract for the delivery of firm capacity and energy from the facility extends through 2032. At the time of the hearing, FPL anticipated receiving from 70 to 80 MW of capacity from the facility⁴ at a 70 percent capacity factor. Since SWA has requested advanced funding, no additional capacity payment will be made through the term of the contract.

⁴ In their Joint Petition, SWA and FPL requested a need for an additional 93 MW of capacity at the existing facility.

Renewable energy generated by the WTE will displace fossil-fuel fired generation otherwise produced by FPL. FPL will pay an energy payment to SWA based on natural gas fuel prices and seeks recovery of these energy payments through the Fuel and Purchased Power Cost Recovery clause.

Summary of Recommendation

The final record in this case demonstrates that the Expanded Facility will enhance the reliability of FPL's system and will improve FPL's fuel diversity. Therefore, staff is recommending that the Commission grant the SWA's request for a determination of need for the Expanded Facility. However, as discussed in Issues 6, 7, 9, and 9A of the recommendation, staff is providing primary and alternate recommendations regarding the cost-effectiveness and subsequent recovery of the advanced funding payment by FPL.

The primary recommendation is that the advanced funding payment is less than FPL's current avoided cost, consistent with Section 377.709, F.S., and therefore the proposed project is cost-effective. Unlike a traditional purchased power agreement (PPA), if the contract term was extended or the committed capacity were increased for this contract, the fixed cost of the electrical component would remain the same but the value of deferral benefits would increase, resulting in additional savings for FPL's customers. Therefore, the primary recommendation is to encourage both parties to the agreement to vigorously explore the option of extending the term of the contract or increasing the committed capacity in order to maximize ratepayer savings.

The alternate recommendation is that there is considerable uncertainty associated with the cost-effectiveness of the proposed PPA, specifically with regard to the timing of FPL's avoided unit (2016). Pursuant to Section 377.309(3)(b), F.S., the Commission may modify a contract for advanced funding with the concurrence of the parties to the contract. The alternate recommendation is that the Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA such that the project is cost-effective. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process.

Applicant Status (Issue 1)

The legal issue of whether SWA, FPL, or both are proper applicants pursuant to Section 403.519, F.S., arises from the Florida Supreme Court case Tampa Electric Co. v. Garcia (*Tampa Electric*)⁵ which reversed a Commission need determination for a proposed power plant by an independent power producer which did not directly serve retail load (i.e. merchant plant). In Tampa Electric, the court made it clear that there had to be a direct nexus between the party requesting the need determination and the retail load to be served by the proposed power plant.

⁵ 767 So.2d 428 (Fla. 2000)

The court ruled that the generation from the proposed power plant must be “fully committed” to serving a specific and identified retail load.⁶

In the instant case, FPL will purchase the full output of the SWA waste-to-energy facility over the term of the contract as part of its overall bulk power supply to serve FPL’s retail consumers. As a Joint Petitioner in this case, therefore, FPL has provided the required nexus between the party constructing the facility and the retail load being served. As such, FPL has assumed the responsibility to demonstrate the electrical need for and cost-effectiveness of the proposed project.

Need for Reliability and Integrity (Issue 2)

Based on the revised testimony presented during the Hearing, FPL contends that additional capacity will be needed on its system by 2016. FPL’s 2011 Ten-Year Site Plan indicates the Company currently plans to construct a 1,200 MW natural gas fired generating plant with an in-service date of 2016 to meet this need. Pursuant to Commission Rule 25-17.0832, FPL has identified this unit as the avoided unit for purposes of purchasing capacity and energy from renewable energy facilities and other Qualifying Facilities. While the capacity from the WTE facility alone is not likely to affect the need for additional construction, in aggregate in combination with other alternatives such as conservation, net-metering, and other cost-effective power purchases deferral of FPL’s avoided unit may be accomplished. From an operational stand-point, capacity from the WTE facility will contribute to the reliability and integrity of FPL’s electric system.

Most Cost-effective Alternative (Issue 6)

Primary Staff

Because of the small size and timing of incremental capacity additions normally associated with renewable energy facilities, Commission Rule 25-17.0832, employs the value of deferral methodology to evaluate the cost-effectiveness of individual purchased power contracts. Such an evaluation allows for an assessment of the cost-effectiveness of small additions with in-service dates and contract lengths that differ from the economic life of the utility’s avoided unit.

In this case, the in-service date of FPL’s avoided unit is expected to be 2016 and the contract with SWA extends through 2032, a total of 17 years.⁷ Based on these assumptions, the cumulative present value of deferral savings is estimated to be in the range of approximately \$189,000 (at 70 MW of committed capacity) to \$8,212,000 (at 80 MW of committed capacity). These savings are derived by taking the difference between the advanced funding payment of \$56,643,942 and the value of deferral of 70 MW–80 MW of combined-cycle generating capacity for a term of 17 years. If either the term of the contract or the committed capacity were increased, the savings to ratepayers would also increase. However, if the timing of FPL’s need were to change to a later date than 2016, ratepayer savings would be significantly reduced.

⁶ Id.

⁷ The PPA includes an option to extend the contract for 26 months upon mutual agreement of SWA and FPL.

Based on the above, primary staff concludes that the proposed purchase power agreement between SWA and FPL is cost-effective. Our analysis indicates the PPA meets the criteria established in Section 377.709, F.S., that the advanced funding payment be less than or equal to:

the net present value of avoided-capacity cost for the electric utility calculated over the period of time during which the local government contracts to provide electrical capacity to the utility.

Alternative Staff

There is considerable uncertainty associated with the cost-effectiveness of the proposed PPA. As a Joint Petitioner, FPL is responsible for demonstrating the electrical need for and cost-effectiveness of the purchase of capacity and energy from SWA in this case. Throughout this proceeding, however, FPL's planning assumptions which form the basis for determining the electrical need and cost-effectiveness of the purchase have been in flux.

The initial petition and testimony provided by the Joint Petitioners did not include the purchased power agreement or any supporting analyses regarding testimony that the contract for the Expanded Facility was needed or cost-effective. After negotiating an extension to the timeline required by statute, staff was forced to extract the basic information necessary to evaluate the merits of the petition through discovery. Not all of the responses to staff's discovery pertaining to need and cost-effectiveness were complete. The final PPA was not made available until March 14, 2011. The Hearing was held on April 25, 2011.

Based on information provided during discovery, FPL now contends that additional capacity will be needed on its system by 2016 and be met by the construction of a 1,200 MW natural gas fired combined cycle plant. This contrasts significantly with earlier assertions that ranged from 2025 to 2018. Two significant assumptions appear to account for this change: (a) the assumption that more than 1,900 MW of generating capacity currently on inactive reserve will not be returned to service, and (b) the assumption that summer peak capacity would be reduced by 350 MW due to maintenance. As noted in the primary staff analysis, since FPL's generating fleet in 2011 is largely unchanged from its fleet in 2010, it is not clear why FPL has only recently included this reduction to generation supply due to summer maintenance requirements in its plans. Witness Hartman also stated that both the return of inactive units and the summer maintenance requirements were still under review by the company.

Staff analysis in Issue 2 indicates that FPL is currently projecting a need for more than 370 MW of additional capacity in 2016. If, as staff questions, FPL does not experience a 350 MW reduction in summer peak capacity due to maintenance, it appears the projected need for additional capacity in 2016 is reduced to 20 MW. Alternate staff finds it highly doubtful that FPL would find it necessary to advance the in-service date of a 1,200 MW combined cycle natural gas plant in order to meet a 20 MW shortfall in their targeted 20 percent reserve margin. On a system as large as FPL's this would not be prudent.

Staff's analysis also indicates that an advanced funding payment of \$55.6 million closely approximates FPL's estimate of avoided costs, with a savings of \$189,000 based on 70 MW of

committed capacity. If the in-service date of FPL's 2016 avoided unit is deferred by even a single year, then these savings are likely to disappear and the advanced funding payment to SWA would not be cost-effective.

Pursuant to Section 377.309(3)(b), F.S., the Commission may modify a contract for advanced funding with the concurrence of the parties to the contract. Unlike a traditional PPA, if the contract term was extended or the committed capacity were increased for this contract, the fixed cost of the electrical component would remain the same but the value of deferral benefits would increase, resulting in additional savings for FPL's customers. The proposed contract is for a term of 17 years from 2015 through 2032. However, the estimated life of the WTE facility, before its first major maintenance overhaul, is 20 years. The PPA also contains a provision by which the term can be extended an additional 26 months, if agreed upon by both parties. If the term of the PPA was extended 26 months now, rather than later, then the project would be cost-effective.

Because of the planning uncertainty associated with FPL's avoided unit and to better assure that ratepayers will benefit from the advanced funding of this project, alternate staff recommends that the Joint Petitioners should be afforded the opportunity to mutually agree to amend the proposed PPA to ensure that it is cost-effective. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process.

Is the Contract in the Best Interest of Ratepayers (Issue 7)

Primary Staff

Pursuant to Section 377.309(3)(b), F.S., the Commission may modify a contract with the concurrence of the parties to the contract. Staff believes that because the funding for the electrical component is paid in advance, FPL's ratepayers would experience more savings if a longer term contract was negotiated. The same can be said if the committed capacity amount were increased.

As with any negotiated agreement, there are always additional benefits that could be captured for retail ratepayers. Unlike a traditional PPA, if the contract term was extended or the committed capacity were increased, the fixed cost of the electrical component would remain the same but the value of deferral benefits would increase which in-turn would result in additional savings for FPL's customers. However, the Commission does not micro manage either FPL or the SWA and must evaluate the agreement that is brought before the Commission for approval. The proposed contract contains a provision in which it can be extended an additional 26 months, if agreed upon by both parties. Staff would expect FPL, as a prudently managed utility, to vigorously explore this option as well as increasing the committed capacity amount, in order to maximize ratepayer benefits. However, the final decision rests with the SWA to accept such modifications. Therefore, if the Commission conditions the approval of the contract for cost recovery on the premise that the contract is not the most cost-effective alternative available or in

the best interest of FPL's ratepayers, then the Commission would also be conditioning the need determination for the SWA.

Need for adequate electricity at reasonable cost (Issue 3)

Staff asked FPL to provide the residential rate impact on a typical customer's bill using 1,200 kWh if recovery of the advanced funding payment was over the life of the contract. Such a recovery method is being proposed by FPL. Under such a recovery period, the effect on a typical customer's bill would be an increase of approximately \$0.10 per month during the first few years of the contract, but gradually decline throughout the remainder of the contract. FPL's return on equity would be approximately \$28 million over the term of the contract. Staff recommends that FPL should be allowed to recover the advanced funding payment as proposed. By allowing FPL to recover the costs over the life of the contract, FPL's customers would pay for the capacity as they benefit from it. During the year in which FPL seeks recovery through the Energy Conservation Cost Recovery clause, the Company must verify that the carrying costs and administrative costs are reasonable and prudent.

Staff also requested FPL to estimate the customer bill impact if the advanced funding payment was recovered in one year. If the Company recovered the costs during the year in which the advanced funding payment is made, the effect on a typical customer's monthly bill would be approximately \$0.71 per month or \$8.52 for the one-year period. FPL's return on equity would be reduced to approximately \$40,000 under such a recovery methodology and increase the net present value savings by approximately \$5 million. For comparison, FPL's current 110 MW of solar projects have a net cost of approximately \$550 million⁸ with an estimated bill impact of approximately \$0.77 per month which is also projected to gradually decline through the year 2040.

Need for Fuel Diversity (Issue 4)

Currently, over 60 percent of FPL's generation is fueled by natural gas and approximately 1.2 percent comes from renewable generation sources. The Expanded Facility is projected to provide approximately 575,000 MWh each year which will reduce the amount of fossil fuel burned on FPL's system. While the energy from the expanded facility should increase the amount of renewable energy on FPL's system approximately 38 percent, the overall contribution from renewable energy will remain small on FPL's system at less than 1.6 percent. Such a result is not surprising given the relative difference in size between the Expanded Facility (70-80 MW) and FPL's existing system (over 23,000 MW).

Need for Conservation and Renewables (Issue 5)

The proposed project is renewable and FPL included the effects of the Commission's conservation goals established in Docket No. 080407-EG in its analyses.

⁸ See Order No. PSC-08-0491-PAA-EI, issued August 4, 2008, in Docket No. 080281-EI – In re: Petition for Approval of Solar Energy projects for Recovery through Environmental Cost Recovery, by Florida Power & Light Company (made final by Consummating Order No. PSC-08-0566-CO-EI, issued on September 2, 2008 in Docket No. 080281-EI).

Recovery of Advanced Funding Payment (Issues 8, 9, 9A, 9B, 10)

For the first time since its enactment in 1984, the Commission is being asked to approve an advanced funding payment pursuant to Section 377.709(3)(b)1, F.S., which states:

If the commission determines that advanced-capacity payments to the local government during the period of construction are appropriate, such payments must be the lesser of:

a. The net present value of avoided-capacity cost for the electric utility calculated over the period of time during which the local government contracts to provide electrical capacity to the utility. The avoided-capacity cost is that cost established by the commission pursuant to s. 366.05(9) and in effect by commission rule at the time the order approving the contract is issued; or

b. An amount which is not more than the amount of the design costs of the electrical component of the solid waste facility as determined by the commission to be reasonable and prudent at the time of its order, or such portion thereof that is proportionate to the electrical capacity made available by contract to the electric utility.

As discussed above, the advanced funding payment was shown to be below FPL's current avoided costs resulting in an estimated savings of approximately \$189,000 to \$8,212,000.

Section 377.709(3)(b)4, F.S., further states:

The amount of financing, including all carrying costs, plus reasonable and prudent administrative costs incurred by the electric utility, must be recovered from the ratepayers of the electric utility pursuant to the provisions of the Florida Energy Efficiency and Conservation Act. An electric utility may not be required to pay to the local government any funding in excess of that collected from its ratepayers.

Therefore, unlike the Commission's rules governing recovery of capacity payments to renewable generators and other non-utility generators, the advanced funding payment for capacity from the Expanded Facility is required to be recovered through the ECCR clause and not the Capacity Recovery clause.

Summary/Wrap-up /Should Docket be Closed (Issues 11 & 12)

Primary staff contends that after considering all the evidence contained in the record, staff recommends approval of the Joint Petition for modification to determination of need for the Expanded Facility. In addition, staff recommends approval of associated regulatory accounting and purchase power agreement cost-recovery through the ECCR clause pursuant to Section 377.709(3)(b)(4), F.S. FPL should illustrate that the carrying costs and administrative costs are reasonable and prudent during the ECCR cost recovery proceedings.

Alternate staff asserts that the need for the proposed Expanded Facility should be approved. However, because of the planning uncertainty associated with FPL's avoided unit and to better assure that ratepayers will benefit from the advanced funding of this project, the Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA and extend its term by 26 months, at a minimum. Cost recovery of the advanced funding payment by FPL should be withheld until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process.

Suggested Order of Issues

Because the issues associated with a determination of need case are so intertwined, staff would suggest addressing the issues in this docket in the following order:

Issue 1 – Legal threshold issue addressing proper applicant

Issue 2 – Need for reliability and integrity

Issue 6 – Most cost-effective alternative

Issue 7 – Is contract in the best interest of ratepayers

Issue 3 - Need for adequate electricity at reasonable cost

Issue 4 – Need for fuel diversity

Issue 5 – Need for Conservation and Renewables

Issue 8 – Consistency of rules and statutes

Issue 9 - Recovery of advanced funding through ECCR

Issue 9A – Amount of advanced funding

Issue 9B – Recovery of any additional capacity costs

Issue 10 – Recovery of energy costs through fuel clause

Issue 11 – Summary/wrap up of all previous issues

Issue 12 – Should Docket be closed

Discussion of Issues

Issue 1: Are the Solid Waste Authority of Palm Beach County and Florida Power & Light Company the proper applicants within the meaning of Section 403.519, F.S.?

Recommendation: SWA and FPL are not required to both be applicants within the meaning of Section 403.519, F.S. SWA is a proper applicant within the meaning of Section 403.519, F.S. As a Joint Petitioner, FPL has assumed the responsibility to demonstrate the electrical need for and cost-effectiveness of the proposed project. (Murphy)

Position of the Parties:

Joint Petitioners: SWA is the proper applicant under Section 403.519, F.S., because, under the Florida Electrical Power Plant Siting Act and as authorized by special act of the Florida Legislature, SWA is the lawful and proper applicant for site certification for the Expanded Facility with the Florida Department of Environmental Protection (FDEP).

Larsons: Yes. FPL must be included as an applicant for the determination of need consistent with the holding in Tampa Electric Co. v. Garcia, 767 So. 2d 428 (Fla. 2000).

Staff Analysis:

Ever since the Florida Supreme Court reversed a Commission need determination in Tampa Electric Co. v. Garcia (*Tampa Electric*), staff has included a generic “proper applicant” issue in Commission need determination proceedings undertaken pursuant to Section 403.519, F.S. In the instant case, SWA and FPL are Joint Petitioners in the proceeding; however, SWA has identified itself as the sole applicant for the need determination. When distilled, the issue is whether SWA alone is a proper applicant pursuant to Section 403.519, F.S., or whether both SWA and FPL are required to be the applicants.

PARTIES' ARGUMENTS

The Joint Petitioners assert that SWA is the proper applicant within the meaning of Section 403.519, F.S., as follows:⁹

- The Palm Beach County Solid Waste Act¹⁰ authorizes SWA to construct and operate resource recovery waste-to-energy facilities to generate electrical power through combustion of municipal solid waste, and to sell the resulting output to any governmental agency, individual, public or private corporation, municipality, or other person.
- SWA has been continuously, engaged in such activities at its site in Palm Beach County, Florida, since 1989. (Bruner TR 29).

⁹ Joint Petitioners BR. pp. 5-7.

¹⁰ Chapter 2001-331, Laws of Florida.

- SWA is specifically authorized to engage in such activities to meet the requirements of Section 403, F.S., which governs the instant need determination being made by the Commission.¹¹
- SWA was the applicant with the Florida Department of Environmental Protection for site certification for its Existing Facility and is presently the applicant for modification of that certification with FDEP in order to build the Expanded Facility.¹²
- As the proper and lawful applicant for site certification, SWA is the proper applicant for the Commission's determination of need under Section 403.519, F.S.
- SWA has previously been found to be the proper applicant in a Commission determination of need proceeding pursuant to Section 403.519, F.S.; this was the need determination for the Existing Facility that SWA now seeks to modify.¹³
- For purposes of Section 403.519, F.S., "applicant" means "any electric utility which applies for certification pursuant to the provisions of this act" and "electric utility" means "cities and towns, counties, public utility districts, regulated electric companies, electric cooperatives, and joint operating agencies, or combinations thereof, engaged in, or authorized to engage in, the business of generating, transmitting, or distributing electric energy."
- As a dependent special district and political subdivision of Palm Beach County created by Chapter 2001-331, Laws of Florida, and authorized to produce and sell electrical power, SWA is an applicant for purposes of Section 403.519, F.S.

The Larsons assert that FPL must be included as an applicant for the determination of need consistent with the holding in *Tampa Electric*.

ANALYSIS

Staff believes that the Joint Petitioners are persuasive in their argument that, pursuant to Chapter 2001-331, Laws of Florida, SWA:

- is a dependent special district and political subdivision of Palm Beach County.
- is authorized to produce and sell electrical power.
- is authorized to engage in activities to meet the requirements of Section 403, F.S.¹⁴

¹¹ Chapter 2001-331, Laws of Florida.

¹² See DEP OGC Case No. 1026, DOAH Case. No. 10-5935-EPP - In Re: Solid Waste Authority of Palm Beach County Florida, Palm Beach Renewable Energy Facility #2, officially recognized by the Commission in Order No. PSC-11-0198-PHO-EU, p. 16.

¹³ See Order No. 15280 (Fla P.S.C., 1985), Docket No. 85-0435-EU – In re: Petition of Palm Beach County Solid Waste Authority for Determination of Need of Solid-Waste-Fired Small Power Producing Electric Power Plant.

Similarly, staff agrees that SWA was previously recognized by the Commission as the applicant for the determination of need for its existing facility¹⁵ and that SWA is currently the applicant with FDEP for modification of its existing facility, pursuant to the Siting Act.¹⁶

Staff believes that the *Tampa Electric* decision, relied upon by the Larsons, can be distinguished from the instant case based upon the facts presented. In *Tampa Electric*, the Florida Supreme Court described the precise question before it as follows:

Does section 403.519, Florida Statutes, authorize the granting of a determination of need upon an application for a proposed power plant for which the owner and operator is not a Florida retail utility regulated by the PSC and for which only thirty megawatts of the plant's 514-megawatt capacity have been committed by contract to be sold to a Florida retail utility regulated by the PSC?

Id. p. 433.

In that scenario, the Florida Supreme Court found that,

the statutory scheme embodied in the Siting Act . . . was not intended to authorize the determination of need for a proposed power plant output that is not fully committed to use by Florida customers who purchase electrical power at retail rates The projected need of unspecified utilities throughout peninsular Florida is not among the authorized statutory criteria for determining whether to grant a determination of need pursuant to section 403.519, Florida Statutes. Moreover, . . . the fact of Duke's joining with New Smyrna in this arrangement for a thirty-megawatt commitment does not transform the application into one that complies with the Siting Act. . .

Id. pp. 435-36.

By contrast, in the instant case, FPL is entitled by its contract with SWA to all of the committed capacity from the proposed SWA unit (Hartman TR 154) and the statutory need criteria will be evaluated against the specific need of FPL to provide adequate electricity at reasonable cost (Hartman TR 112-116) and not, as in *Tampa Electric*, based on what the Florida

¹⁴ See e.g., Section 6, paragraph (8), Chapter 2001-331, Laws of Florida, which provides that SWA is authorized to "Acquire, construct, reconstruct, improve, maintain, equip, furnish, and operate at its discretion such resource recovery and waste management facilities as are required to carry out the purposes and intent of this act and to meet the requirements of Section 403, F. S., and other applicable law."

¹⁵ See Order No. 15280, issued October 21, 1985, , Docket No. 85-0435-EU - In Re: Petition of Palm Beach County Solid Waste Authority for Determination of Need for Solid-Waste-Fired Small Power Producing Electric Power Plant, (Fla. P.S.C., 1985).

¹⁶ See DEP OGC Case No. 10-2026, DOAH Case. No. 10-5935-EPP - In Re: Solid Waste Authority of Palm Beach County Florida, Palm Beach Renewable Energy Facility #2,officially recognized by the Commission in Order No. PSC-11-0198-PHO-EU, p. 16.

Supreme Court described as “[t]he projected need of unspecified utilities throughout peninsular Florida. . . .” *Id.* p. 436. In sum, staff believes that SWA is the proper applicant and staff is not aware of *any* requirement that FPL be an applicant in the Commission’s instant determination of need proceeding.

Nonetheless, staff observes that Section 403.519(4), F.S., requires the Commission to take the following into account:

- the need for electric system reliability and integrity.
- the need for adequate electricity at a reasonable cost.
- the need for fuel diversity and supply reliability.
- whether the proposed plant is the most cost-effective alternative available.
- whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available.

Based on *Tampa Electric*, it appears that all of these criteria must be evaluated against a specific electric utility’s (or utilities’) electricity needs. Moreover, based on *Tampa Electric*, it appears that the output of the proposed plant must be fully committed. Therefore, FPL is not required to be an *applicant* in this case. However, staff believes that as a Joint Petitioner, FPL has assumed the responsibility to demonstrate the electrical need for and cost-effectiveness of the proposed project since it would be difficult for the SWA to meet applicable requirements of Section 403.519, F.S., absent FPL’s (or a similarly situated utility’s) participation in the docket.

CONCLUSION

Based on the foregoing, staff recommends that the SWA *and* FPL are not required to both be applicants within the meaning of Section 403.519, F.S. The SWA is a proper applicant in this proceeding. As a Joint Petitioner, FPL has assumed the responsibility to demonstrate the electrical need for and cost-effectiveness of the proposed project.

Issue 2: Is there a need for the SWA Expanded Facility taking into account the need for electric system reliability and integrity, as this criterion is used in Section 403.519, F.S.?

Recommendation: Yes. FPL is currently projecting a need for more than 370 MW of additional capacity in 2016. The Expanded Facility, projected to provide between 70 and 80 MW of firm capacity by 2015, will satisfy a portion of FPL's projected need. Therefore, the SWA Expanded Facility will contribute to the reliability and integrity of FPL's electric system. (Graves, A. Roberts)

Position of the Parties:

Joint Petitioners: Yes. The SWA Expanded Facility will positively impact FPL's system reliability and integrity through the addition of renewable energy to FPL's system improving fuel diversity as well as providing firm capacity during a period when FPL's system will have a capacity requirement.

Larsons: No. According to FPL, "There is no measurable capacity benefit from SWA." Additionally, FPL summer reserve margins are entirely adequate without the SWA contract. The proposed contract unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required to meet electric system reliability and integrity standards.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that FPL has a need for additional capacity in 2016, and the capacity resulting from the proposed contract between the Joint Petitioners would serve to defer a portion of that capacity requirement. (Joint Petitioners BR 7) The Joint Petitioners further assert that the additional capacity provided by SWA's Expanded Facility will increase FPL's system reliability and integrity by reducing its dependence upon fossil resources. (Joint Petitioners BR 7) The Joint Petitioners conclude that the Expanded Facility will contribute to FPL's electrical system reliability and integrity. (Joint Petitioners BR 8)

The Larsons contend that according to FPL, "There is no measurable capacity benefit from SWA." (Larsons BR 1) In addition, the Larsons further assert that FPL's summer reserve margins are entirely adequate without the SWA contract. (Larsons BR 1) Finally, the Larsons state that the proposed contract unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required to meet electric system reliability and integrity standards. (Larsons BR 1)

ANALYSIS

FPL determines the magnitude and timing of its resource needs considering a minimum reserve margin. (EXH 6, p. 3159) The reserve margin criteria measures available generating capacity during peak demand periods. FPL has established a minimum reserve margin of 20 percent above peak demand for reliability purposes. (EXH 6, p. 3159) Witness Hartman testified that completion of construction of the proposed Facility is anticipated in late 2015, at which time

SWA would be under contract to provide the output of the Expanded Facility as firm capacity and energy to FPL until 2032. (TR 112)

FPL's initial testimony, filed January 7, 2011, indicated that the Company would have a reliability need sometime between 2018 and 2025, depending upon a number of system planning assumptions which have not yet been finalized. (TR 112) Such a range of capacity need is consistent with FPL's 2010 Ten-Year Site Plan (TYSP) which was filed April 1, 2010. In the 2010 TYSP, FPL projected a reliability need in 2018 and anticipated returning inactive reserve units¹⁷ to service in order to satisfy that need. (EXH 7, p. 3392) Following the return of the inactive reserve units FPL did not project a need for new capacity until 2025. (EXH 6, p. 2887) FPL updates its planning assumptions at least annually and files an updated TYSP each April. Therefore, FPL was in the middle of updating its planning assumptions when the testimony for this docket was filed.

In response to several staff Interrogatories, FPL identified a reliability need beginning in 2016. This projection is consistent with FPL's 2011 TYSP filed April 1, 2011. Witness Hartman's testimony was amended at the Hearing to reflect the new date. (TR 106) Two changes in planning assumptions, an increase in forecasted peak load and a decrease in generation supply during peak periods, have accelerated FPL's projected reliability needs from its 2010 to its 2011 TYSP. (EXH 5, pp. 249-250) Staff's review of FPL's assumptions and inputs used in projecting its future needs are discussed in detail below.

Increase in Load Forecast (Peak Demand)

FPL's load forecast serves as its starting point for determining the magnitude and timing of resource needs. (EXH 6, p. 3156) FPL's load forecast assumptions in this docket were drawn from independent sources which the Commission has relied upon in prior cases. (EXH 5, pp. 259-261) The regression models used to calculate the projected peak demands conform to accepted economic and statistical practices. Staff believes that the projected peak demands appear to be a reasonable extension of historical trends. When compared to FPL's 2010 TYSP, current projections for customer growth are greater by an average of 1 percent beginning in the year 2013. (TR 150)

DSM resources such as conservation and load-management serve as projected reductions to the forecasted load. (EXH 6, p. 3109) FPL's current projections assume compliance with the most recent DSM goals set by the Commission in Docket No. 080407-EG. (EXH 6, p. 3174) However, when compared to FPL's 2010 TYSP, the Company is assuming a decrease in its cumulative DSM savings through 2019 which may be the result of changes in per participant reductions and projected signups. (EXH 7, pp. 3388-3389)

The combination of increased load and reduced DSM savings results in FPL's current firm peak demand forecast being 492 MW greater than the same projection contained in the Company's 2010 TYSP. (EXH 5, p. 249) Table 1 below summarizes a comparison of the peak demand forecast contained in FPL's 2010 and 2011 TYSPs.

¹⁷ In 2009 FPL temporarily removed generating capacity from active service (inactive reserve). In total, more than 1,900 MW of generating capacity have been placed on inactive reserve. (EXH. 5, p. 320)

Table 1: Comparison of 2010 and 2011 TYSP Summer Peak Load Forecasts¹⁸

	2011 TYSP (MW)	2010 TYSP (MW)	Difference (2011-2010) (MW)
2011	19,697	19,539	158
2012	19,712	19,731	-19
2013	19,837	19,749	88
2014	20,917	20,810	107
2015	21,462	20,983	479
2016	21,734	21,242	492
2017	22,008	21,526	482
2018	22,117	21,948	169
2019	22,419	22,282	137

Source: EXH 6, p. 3198 and EXH 6, p. 2917

Decrease in Supply Source Capacity

FPL's supply sources consist of installed capacity and purchased power from qualified facilities and other utilities. The potential expiration of two existing purchased power agreements with Southern Company and JEA respectively are projected to reduce FPL's firm capacity by more than 1,300 MW by 2016. (EXH 6, p. 3116) Witness Hartman testified that prior analysis concluded that it was not cost-effective to renew the agreement with Southern Company (931 MW); however, FPL will continue to evaluate the economics of the contract. (TR 151-152) If the agreement with Southern Company is extended, or a similar contract is negotiated, FPL's projected 2016 need could be deferred. (TR 152) Due to Internal Revenue Service regulations, the total amount of energy that FPL may receive from its agreement with JEA (375 MW) is limited. (EXH 6, p. 3158) Once this limit is reached, FPL will be unable to receive firm capacity and energy from these purchases. (EXH 6, p. 3128) FPL currently assumes, for planning purposes, that this limit will be reached in the first half of 2016. These assumptions are consistent with FPL's 2010 and 2011 TYSP.

New for 2011, witness Hartman testified that FPL will also have a 350 MW loss of capacity during summer peak periods due to maintenance. (TR 150-151) Like most utilities, FPL has historically attempted to avoid scheduling planned maintenance of its generating units during its peak load months of January and August. (EXH 6, pp. 3165-3166) FPL explained that the planned maintenance of the combustion turbine component of its combined cycle generating units is governed by their service hours. (TR 150-151) FPL elaborated, as the number of combined cycle generating units on FPL's system has increased, the scheduling of planned maintenance outside of the peak months has become more difficult to do. (EXH 5, p. 368) Given that the Company's generating fleet in 2011 is largely unchanged from its fleet in 2010, staff questions why FPL has only recently included this reduction to generation supply in its TYSP. Nevertheless, such complications highlight the importance of fuel diversity and a reduced reliance on natural gas-fired generation for FPL.

¹⁸ Based on FPL's current load forecast and projected available capacity its need for capacity is governed by the summer peak demand. Assumes no new resource additions with the exception of resource additions already approved by the Commission.

FPL’s 2010 TYSP assumed more than 1,900 MW of generating capacity on inactive reserve would be returned to service to satisfy future reliability needs projected for 2018. (EXH 6, p. 2838) FPL has indicated that preliminary projections show the construction of new generating capacity may be more economical than bringing inactive reserve units back on-line. (TR 150) Therefore, FPL’s 2011 TYSP does not anticipate the return to service of these units (EXH 6, p. 3116) FPL identified several factors that are influencing its analysis including: (a) forecasted fuel prices, (b) the capital and operating cost of returning the inactive-reserve units to active service, (c) the capital and operating costs of new generating capacity, and (d) transmission system-related costs associated both with bringing inactive reserve units back to active service and the siting of new generation capacity. (EXH 5, p. 323) Witness Hartman testified that FPL has yet to conclude its analysis, therefore, there is uncertainty regarding the future utilization of FPL’s inactive-reserve units. (TR 151) If the Company’s inactive-reserve units are returned to service FPL’s reliability need for new capacity could be deferred.

When compared to its 2010 TYSP, FPL’s current projections show a 299 MW reduction of firm capacity in 2016. The reduction is attributable to peak period maintenance and assumptions regarding the Company’s inactive-reserve units. Table 2 below summarizes a comparison of available firm capacity in FPL’s 2010 and 2011 TYSPs.

Table 2: Comparison of 2010 and 2011 TYSP Projections of Firm Capacity (MW)¹⁹

	2011 TYSP	2010 TYSP	Difference (2011-2010)
2011	24,168	24,497	-329
2012	24,329	24,695	-366
2013	24,885	26,009	-1,124
2014	26,097	27,221	-1,124
2015	26,923	27,221	-298
2016	25,617	25,916	-299
2017	25,617	25,916	-299
2018	25,617	26,308	-691
2019	25,617	26,695	-1,078

Source: EXH 6, p. 3198 and EXH 6, p. 2917

Reserve Margin

Staff has reviewed FPL’s forecast assumptions, regression models, and the projected system peak demands and believes they are suitable for use in this docket. Based on FPL’s current projections for peak demand and firm capacity the Company will have a need for additional capacity beginning in 2016. (TR 149) However, staff would note that uncertainty regarding potential capacity resources on FPL’s system (inactive reserve units, maintenance during peak periods, and contract extensions) as well as the inherent uncertainty associated with load forecast, the projected timing of FPL’s need may change. (EXH 6, p. 3188) Table 3 below summarizes a comparison of FPL’s projected reserve margin capacity needs in its 2010 and 2011

¹⁹ Based on FPL’s current load forecast and projected available capacity its need for capacity is governed by the summer peak demand.

TYSPs. Staff believes the differences illustrate the aforementioned uncertainty in both load and supply-side capacity projections.

Table 3: Comparison of 2010 and 2011 TYSP Projections of Reserve Capacity Needs (MW)¹⁹

	2011 TYSP MW above/below 20%	2010 TYSP MW above/below 20%	Difference (2011-2010)
2011	530	1,050	-520
2012	674	1,017	-343
2013	1,079	2,309	-1,230
2014	995	2,248	-1,253
2015	1,258	2,041	-783
2016	-374	426	-800
2017	-704	85	-789
2018	-834	-29	-805
2019	-1,197	-44	-1,153

Source: EXH 6, p. 3198 and EXH 6, p. 2917

As shown in Table 3 above, FPL is currently projecting a need for more than 370 MW of additional capacity in 2016. The Expanded Facility, projected to provide between 70 and 80 MW of firm capacity by 2015, will satisfy a portion of FPL's projected need. (TR 92) Because the Expanded Facility alone will not meet the projected need, FPL's resource plan with and without the Expanded Facility is unchanged. For this reason, if capacity and energy from the Expanded Facility falls below expectations, FPL will not have a loss of load. Based on this example, FPL witness Hartman indicated that there is no measurable capacity benefit from the Expanded Facility. (EXH 5, p. 182)

Pursuant to Rule 25-17.001(5)(d), F.A.C., all electric utilities are required 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.

The business needs of renewable generators do not always match the reliability needs of the purchasing utility. In this docket, the SWA has a waste disposal requirement to satisfy by 2015, but FPL's capacity needs are not until at least 2016. (TR 62, 66, 128, 131, 149) In addition, it is rare that a single PPA will meet the entire reliability needs of the purchasing utility. As noted above the Expanded Facility will satisfy a portion of FPL's projected capacity requirements. However, the accumulation of several PPAs could have a significant impact on FPL's future capacity needs.

Finally, staff believes that the Joint Petitioners are persuasive in their argument that the Expanded Facility will improve electric system reliability and integrity on FPL's system. In addition to providing additional capacity, the Expanded Facility, which will be located in Southeast Florida, has attributes that will address two system concerns for FPL: (a) enhancing fuel diversity which is further discussed in Issue 4, and (b) maintaining a regional balance

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between load and generating capacity, particularly in the Southeastern Florida. (TR 152 and EXH 6, p. 3114) The cost-effectiveness of the Expanded Facility is discussed in Issue 6.

CONCLUSION

FPL is currently projecting a need for more than 370 MW of additional capacity in 2016. The Expanded Facility, projected to provide between 70 and 80 MW of firm capacity by 2015, will satisfy a portion of FPL's projected need. Therefore, the SWA Expanded Facility will contribute to the reliability and integrity of FPL's electric system.

Issue 3: Is there a need for the SWA Expanded Facility, taking into account the need for adequate electricity at a reasonable cost, as this criterion is used in Section 403.519, F.S.?

Recommendation: Yes. As discussed in Issue 2, the Expanded Facility will satisfy a portion of FPL's projected capacity needs. As discussed in Issue 6, the Expanded Facility is estimated to produce savings to FPL's ratepayers ranging from approximately \$189,000 to \$8,212,000. The incremental bill impact resulting from the advanced funding payment is reasonable at approximately \$0.10 per month. (Brown)

Position of the Parties:

Joint Petitioners: Yes. The SWA Expanded Facility will result in adequate electricity at a reasonable cost because the proposed purchased power contract is cost-effective for FPL's customers. FPL's payments under the contract are lower than FPL's full avoided cost resulting in cost savings to FPL's customers compared to the avoided unit.

Larsons: No. According to FPL, "There is no measureable capacity benefit from SWA." Additionally, FPL summer reserve margins are entirely adequate without the SWA contract. The proposed contract unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required to meet electric system reliability and integrity standards.

Staff Analysis:

PARTIES ARGUMENTS

The Joint Petitioners contend that the Expanded Facility and the associated proposed contract between SWA and FPL will positively enhance FPL's ability to provide adequate electricity at a reasonable cost for its customers. (Joint Petitioners BR 8) The Joint Petitioners further assert that because FPL's total cost under the proposed contract in terms of cumulative present value revenue requirements is less than FPL's system cost without the contract, the proposed contract to purchase power from the Expanded Facility is cost-effective. (Joint Petitioners BR 8) The Joint Petitioners further contend that FPL customers will save money if the proposed Expanded Facility operated at a committed capacity in the range of 45 MW-90 MW and capacity factors of 70 percent or 85 percent. (Joint Petitioners BR 8) Moreover, the Joint Petitioners assert that the cost savings that would be experienced by FPL's customers are a result from fuel and environmental cost savings under the proposed contract. (Joint Petitioners BR 8-9) The Joint Petitioners state that customers' cost savings offset any customer bill impacts resulting from FPL's cost recovery associated with its payments for firm capacity and energy under the proposed contract, resulting in net cost savings to FPL's customers. (Joint Petitioners BR 9)

The Larson's contend that according to FPL, "There is no measureable capacity benefit from SWA." (Larsons BR 1) In addition, the Larsons assert FPL's summer reserve margins are entirely adequate without the SWA contract. (Larsons BR 1). Finally, the Larsons argue that the proposed contract unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required to meet electric system reliability and integrity standards.

ANALYSIS

As discussed in Issue 2, the Expanded Facility will satisfy a portion of FPL's projected capacity needs. Therefore, the Expanded Facility is projected to provide adequate electricity to FPL's system. As discussed in Issue 6, the Expanded Facility is estimated to produce savings to FPL's ratepayers of ranging from approximately \$189,000 to \$8,212,000. The resulting incremental bill impact associated with the advanced funding payment is discussed below.

Customer Bill Impact

Staff asked FPL to provide the residential rate impact on a typical customer's bill using 1,200 kWh if recovery of the advanced funding payment was over the life of the contract. Such a recovery method is being proposed by FPL. (TR 143, EXH 5, p. 263) Under such a recovery period, the effect on a typical customer's bill would be an increase of approximately \$0.10 per month during the first few years of the contract, but gradually decline throughout the remainder of the contract. (EXH 5, p. 264) FPL's return on equity would be approximately \$28 million over the term of the contract. (TR 154, EXH 10, p. 3465) Staff recommends that FPL should be allowed to recover the advanced funding payment as proposed. By allowing FPL to recover the costs over the life of the contract, FPL's customers would pay for the capacity as they benefit from it. (EXH 7, p. 3428) During the year in which FPL seeks recovery through the Energy Conservation Cost Recovery clause, the Company must verify that the carrying costs and administrative costs are reasonable and prudent.

Staff also requested FPL to estimate the customer bill impact if the advanced funding payment was recovered in one year. If the Company recovered the costs during the year in which the advanced funding payment is made, the effect on a typical customer's monthly bill would be approximately \$0.71 per month or \$8.52 for the one-year period. (EXH 10, p. 3466, TR 133, 152) FPL's return on equity would be reduced to approximately \$40,000 under such a recovery methodology and increase the net present value savings by approximately \$5 million. (EXH 10, p. 3467) For comparison, FPL's current 110 MW of solar projects have a net cost of approximately \$550 million²⁰ with an estimated bill impact of approximately \$0.77 per month which is also projected to gradually decline through the year 2040. (EXH 7, p. 3398, EXH 7, p. 3401)

CONCLUSION

As discussed in Issue 2, the Expanded Facility will satisfy a portion of FPL's projected capacity needs. As discussed in Issue 6, the Expanded Facility is estimated to produce savings to FPL's ratepayers ranging from approximately \$189,000 to \$8,212,000. The incremental bill impact resulting from the advanced funding payment is reasonable at approximately \$0.10 per month.

²⁰ See Order No. PSC-08-0491-PAA-EI, issued August 4, 2008, in Docket No. 080281-EI – In re: Petition for Approval of Solar Energy projects for Recovery through Environmental Cost Recovery, by Florida Power & Light Company.

Issue 4: Is there a need for the SWA Expanded Facility, taking into account the need for fuel diversity and supply reliability, as this criterion is used in Section 403.519, F.S.?

Recommendation: Yes. The Expanded Facility is projected to provide approximately 575,000 MWh each year which will reduce the amount of fossil fuel burned on FPL's system. While the energy from the Expanded Facility should increase the amount of renewable energy on FPL's system approximately 38 percent, the overall contribution from renewable energy will remain small on FPL's system at less than 1.6 percent. Such a result is not surprising given the relative difference in size between the Expanded Facility (70-80 MW) and FPL's existing system (over 23,000 MW). (Brown, Graves)

Position of the Parties:

Joint Petitioners: Yes. This renewable energy project and its indigenous fuel source (MSW) will result in increased fuel diversity and fuel supply reliability while reducing reliance on fossil fuels in the production of electricity, with up to 90 MW of additional base load generating capacity, using renewable fuel, made available to FPL.

Larsons: No. FPL recently extended the PPA for the existing facility and already has solar. FPL summer reserve margins are entirely adequate without the SWA contract. The proposed contract unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required for fuel diversity or supply reliability.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that because this is a renewable energy project, there will be an increase in fuel diversity and supply reliability while reducing reliance on fossil fuels in the production of electricity. (Joint Petitioners BR 9) In addition, the Joint Petitioners further assert that the proposed Expanded Facility will result in up to 90 MW of additional base load generating capacity using renewable fuel for FPL. (Joint Petitioners BR 5) The Joint Petitioners also state that the proposed Expanded Facility will increase FPL's fuel supply reliability because of the abundant supply of MSW as a fuel source and will further enhance supply reliability because it is a locally transported fuel source. (Joint Petitioners BR 5-6)

The Larsons contend that there is no need for the SWA Expanded Facility, taking in account the need for fuel diversity and supply reliability. (Larsons BR 2) In addition, the Larsons assert that FPL recently extended the PPA for the existing SWA facility and already has solar. Furthermore, the Larsons state that the FPL summer reserve margins are entirely adequate without the SWA contract. (Larsons BR 2) Finally, the Larsons contend that the proposed contract unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required for fuel diversity and supply reliability. (Larsons BR 2)

ANALYSIS

In 2006, the Florida Legislature amended Section 403.519, F.S., to require the Commission to specifically consider the need for fuel diversity on a utility's system when evaluating a Petition for need.²¹ Currently, over 60 percent of FPL's existing generation is derived from natural gas. (EXH 5, p. 265) Nuclear generation represents over 20 percent, followed by over 1 percent of renewable generation. (EXH 5, p. 265) Staff asked FPL to provide a list of its fuel mix with and without the proposed Expanded Facility. (EXH 5, pp. 265-266) FPL's generation mix with the SWA Facility is based on the proposed Expanded Facility having a committed capacity of 90 MW and producing 670,000 MWh of energy each year. As such the addition of the Expanded Facility would increase FPL's current renewable generation mix from 1.2 percent to 1.6 percent and decrease FPL's dependency on natural gas from 63.6 percent to 63.3 percent. (EXH 5, pp. 265-266) However, as discussed in Issue 6, staff believes these values are overstated. The record indicates the committed capacity of the Expanded Facility would fall somewhere in the range of 70 MW–80 MW and generate approximately 575,000 MWh of energy annually. (EXH 3, p. 99, TR 92) The energy from the Expanded Facility should increase the amount of renewable energy on FPL's system approximately 38 percent. (EXH 5, p. 255, EXH 3, p. 119) However, the overall contribution from renewable energy will remain small on FPL's system at less than 1.6 percent. Such a result is not surprising given the relative difference in size between the Expanded Facility (70-80 MW) and FPL's existing system (over 23,000 MW). (EXH 6, pp. 3122-3123)

Finally, staff believes that the Joint Petitioners are persuasive in their argument that the Expanded Facility will diversify FPL's generation fleet and enhance supply reliability. Staff agrees that the proposed Expanded Facility will reduce FPL's reliance on fossil fuels while adding approximately 70 – 80 MW of base load renewable generation to FPL's fuel mix.

CONCLUSION

Currently, over 60 percent of FPL's generation is fueled by natural gas and approximately 1.2 percent comes from renewable generation sources. The Expanded Facility is projected to provide approximately 575,000 MWh each year which will reduce the amount of fossil fuel burned on FPL's system. While the energy from the expanded facility should increase the amount of renewable energy on FPL's system approximately 38 percent, the overall contribution from renewable energy will remain small on FPL's system at less than 1.6 percent. Such a result is not surprising given the relative difference in size between the Expanded Facility (70-80 MW) and FPL's existing system (over 23,000 MW)

²¹ Section 43, Chapter 2006-230, Laws of Florida

Issue 5: Are there any renewable energy sources and technologies, as well as conservation measures, taken by or reasonably available to Florida Power & Light Company or SWA which might mitigate the need for the SWA Expanded Facility as this criterion is used in Section 403.519, F.S.?

Recommendation: No. SWA's conversion of municipal solid waste to electricity by incineration is, by statute, both a renewable energy source and a conservation measure. In addition, The evidence in the record demonstrates that calculation of FPL's reserve margin included projected DSM savings based on the goals established in 2009. (Garl)

Position of the Parties:

Joint Petitioners: No. No renewable energy sources, technologies, or conservation measures are reasonably available to mitigate the need for the Expanded Facility. Without the Expanded Facility, SWA will consume scarce landfill capacity at a much greater and unacceptable rate, and FPL has considered all cost-effective, reasonably achievable demand side management measures.

Larsons: Yes. The FPL energy efficiency and conservation goals adopted by the Commission would avoid the need for FPL to purchase the energy and capacity from the SWA Expanded Facility altogether. Additionally, FPL is seeking to build an additional 500 MW of solar generation in the state.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners argue that the SWA Expanded Facility will provide firm capacity during a period when FPL's system will have a capacity requirement. (Joint Petitioners BR 7) The Joint Petitioners assert that the Florida Legislature clearly declared in Section 377.709(1), F.S., that waste-to-energy facilities such as the proposed Expanded Facility are an effective conservation effort and preferred alternative to conventional solid waste disposal in the state of Florida. (Joint Petitioners BR 10) Furthermore, the Joint Petitioners contend that there are no renewable energy sources, technologies, or conservation measures that would avoid the need for the proposed Expanded Facility. (Joint Petitioners BR 10) In addition, the Joint Petitioners state that all cost-effective, reasonably achievable demand side management measures consistent with the Commission's Orders in FPL's demand side management goals were recognized in the analysis of the resource options available as part of the evaluation of the purchase of electrical output from the Expanded Facility. (Joint Petitioners BR 11) The Joint Petitioners also assert that SWA needs the proposed Expanded Facility by 2015 in order to maintain its ability to dispose of MSW in a reliable and environmentally sound alternative available to meet the objectives and obligations of the SWA. (Joint Petitioners BR 10)

The Larsons argue that adherence to FPL's DSM goals would avoid the need for FPL to purchase the energy and capacity from the SWA Expanded Facility. The Larsons also assert that FPL seeks to build an additional 500 MW of solar generation, but the Company has not included that new capacity in its resource plan. (Larsons BR 2)

ANALYSIS

Section 366.91(2)(d), F.S., defines renewable energy as:

electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced from sources other than fossil fuels, **biomass**, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power.

(Emphasis added)

Biomass is further defined in Section 366.91(2)(a) as:

a power source that is comprised of, but not limited to, combustible residues or gases from forest products manufacturing, waste, byproducts, or products from agricultural and orchard crops, waste or coproducts from livestock and poultry operations, waste or byproducts from food processing, urban wood waste, **municipal solid waste**, municipal liquid waste treatment operations, and landfill gas.

(Emphasis added)

Section 377.709(1), F.S., states:

. . . The Legislature further declares that the combustion of refuse by solid waste facilities to supplement the electricity supply not only represents **an effective conservation effort** but also represents an environmentally preferred alternative to conventional solid waste disposal in this state. . .

(Emphasis added)

The statutes quoted above describe MSW as a renewable energy source and an effective conservation effort.

None of the assertions presented by the Larsons are supported by any evidence in the record. The evidence in the record demonstrates that calculation of FPL's reserve margin included projected DSM savings based on the goals established in 2009. (EXH 5, pp. 249-250) FPL's adherence to the DSM goals established by the Commission in Docket No. 080407-EG, will not avoid the need for FPL to purchase the energy and capacity from the SWA Expanded Facility.

Staff believes the Joint Petitioners are persuasive in their argument that there are no other renewable energy sources, technologies, or conservation measures available that would mitigate the need for the Expanded Facility. Furthermore, staff agrees with the Joint Petitioners that FPL's adherence that the DSM goals in its analysis will not avoid the need for the Expanded Facility.

CONCLUSION

SWA's conversion of municipal solid waste to electricity by incineration is, by statute, both a renewable energy source and a conservation measure. In addition, the evidence in the record demonstrates that calculation of FPL's reserve margin included projected DSM savings based on the goals established in 2009.

Issue 6: Is the SWA Expanded Facility the most cost-effective alternative available, as this criterion is used in Sections 377.709 and 403.519, F.S.?

Recommendation:

Primary Staff: Yes. The present value of the advanced funding payment (\$55.9 million) is less than the present value of FPL's current avoided costs at 70–80 MW (\$56.1 million and \$64.1 million). As such, the proposed Expanded Facility could produce savings in the range of approximately \$189,000 to \$8,212,000. If either the term of the contract or the committed capacity were increased, the savings to ratepayers would also increase. Therefore, as discussed in Issue 7, staff would encourage both parties to explore extending the term of the contract or increasing the committed capacity in order to maximize ratepayer benefits. (Brown, Ballinger, Graves, Garl, Springer, Barrett)

Alternate Staff: No. Because of planning uncertainty, it is not clear that the advanced funding payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process. (Trapp)

Position of the Parties:

Joint Petitioners: Yes. The Extended Facility is the most cost-effective alternative available to SWA to meet its legal obligation to dispose of Palm Beach County's municipal solid waste. FPL's purchase of the output of the Expanded Facility under the terms of the contract is a cost-effective alternative for FPL.

Larsons: No. FPL summer reserve margins are adequate without the SWA contract. FPL doesn't need to buy additional energy and capacity. Irrespective of how the resource plan was manipulated to fabricate a phantom need, the most cost-effective alternative is not purchasing unneeded energy and capacity from the SWA Expanded Facility.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that the proposed Expanded Facility is the most cost-effective alternative available to SWA to meet its legal obligation to dispose of Palm Beach County's municipal solid waste while meeting its waste reduction, landfill conservation, and renewable energy objectives. (Joint Petitioners BR 12) Furthermore, the Joint Petitioners assert that without the Expanded Facility, up to 3,000 tons per day of MSW will be sent to landfills with negative economic and environmental consequences. (Joint Petitioners BR 12) The Joint Petitioners state that the contract results in system cost savings on a cumulative present value of revenue requirements basis over the life of the contract and would provide economic and environmental benefits to the customers of SWA, most of which are also FPL customers. (Joint Petitioners BR 13) The Joint Petitioners further contend that FPL customers would receive

approximately \$80 million worth of value of deferral that they are receiving at a cost of approximately \$56 million. (Joint Petitioners BR 13)

The Larsons contend that FPL's reserve margins are adequate without the SWA contract. (Larsons BR 2) The Larsons further assert that FPL does not need to buy additional energy and capacity. Moreover, the Larsons state that irrespective of how the resource plan was manipulated to fabricate a phantom need, the most cost-effective alternative is not purchasing unneeded energy and capacity from the SWA Expanded Facility. (Larsons BR 2)

ANALYSIS

Primary Staff Analysis:

SWA claims that the proposed Expanded Facility is the most cost-effective alternative available to SWA to meet its legal obligation to dispose of Palm Beach County's municipal solid waste. (TR 118) Neither Section 377.709, F.S., or Section 403.519, F.S., grants the Commission jurisdiction over the business decisions of the SWA. As such, staff's analysis focuses on the cost-effectiveness to FPL's electric ratepayers.

Section 403.519, F.S., requires the Commission to consider whether the proposed facility is the most cost-effective alternative available. As discussed in Issue 2, the electrical need and cost-effectiveness of the proposed PPA is evaluated from the perspective of FPL as one of the Joint Petitioners in this docket. The Commission has consistently used a utility's avoided cost as a means to evaluate the relative cost-effectiveness of purchases from renewable generators.

Section 377.709(1), F.S., describes a funding program as a mechanism to encourage the development by local governments of solid waste facilities that use solid waste as a primary source of fuel for the production of electricity. In order for a contract to be approved by the Commission, the advanced funding payment for the Expanded Facility must be less than the net present value of the utility's avoided cost, or an amount which is not more than the amount of the design cost of the electrical component of the WTE facility.

The initial Petition and testimony from the Joint Petitioners did not contain any analyses to support statements that entering into a contract for capacity from the Expanded Facility was cost-effective. As such, staff submitted several Interrogatories and Production of Document requests to complete its own analysis to gauge the cost-effectiveness of the project. Staff requested that FPL illustrate the economics of the proposed Expanded Facility through two separate analyses: (a) a value of deferral analysis which compared the payment stream of the proposed advanced funding payment to the costs of the 2010 and 2011 standard offer contracts, and (b) a system cost analysis with and without the proposed Expanded Facility (EXH 5, BSP 179, 337-344, 348-354, 358, TR 126) Staff's cost-effectiveness analyses of the proposed Expanded Facility is discussed below.

Value of Deferral

Based on the requirements of Section 377.709, F.S., an analysis illustrating a capacity deferral benefit is a more proper analysis to determine the proposed Expanded Facility's cost-effectiveness.

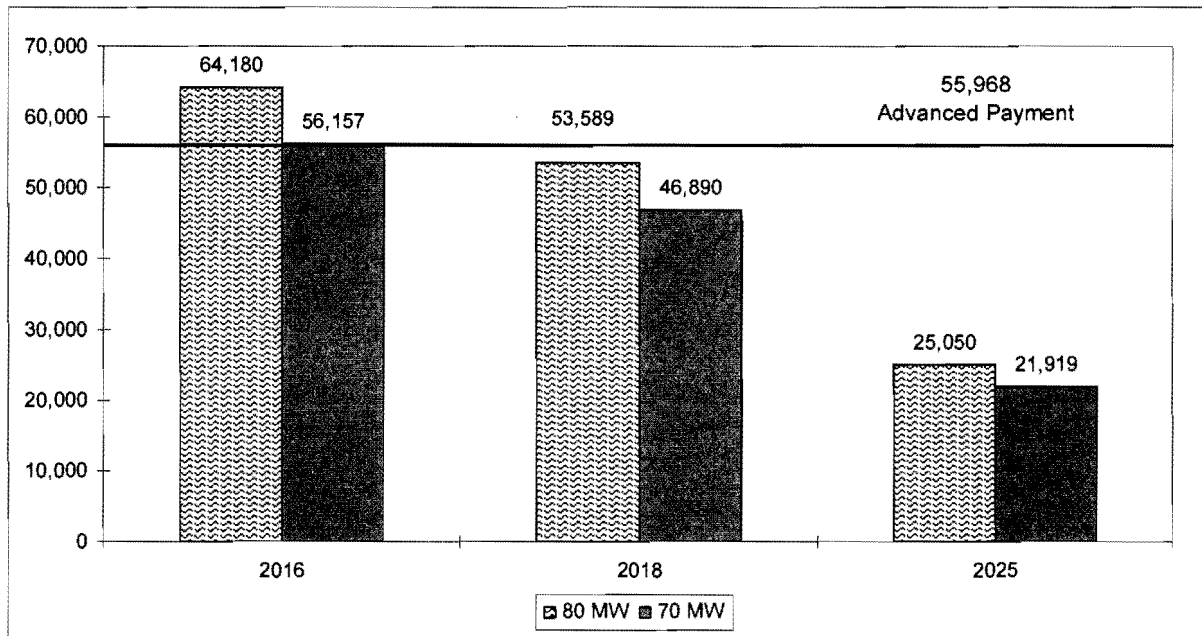
Section 377.709(3), F.S., describes the establishment of a funding program to encourage the development by local governments of solid waste facilities that use solid waste as a primary source of fuel for the production of electricity. Pursuant to Sections 377.709(3)(b)1a, F.S., and 377.709(3)(b)1b, F.S., in order for a contract to be approved by the Commission, the advanced funding payment for the electrical component of the Expanded Facility must be the lesser of the net present value of the avoided unit, or an amount which is not more than the amount of the design cost of the electrical component. Such a definition results in the advanced funding payment being at or below the utility's avoided cost as defined by the Commission's existing rules.

Staff requested value of deferral analyses to compare the advanced funding payment to the capacity cost of a 2018 and 2025 combined cycle unit in order to test the planning assumptions contained in FPL's 2010 TYSP. Staff also requested a value of deferral analysis to compare the advanced funding payment to the capacity cost of a 2016 combined cycle unit in order to test FPL's 2011 TYSP assumptions. All of these analyses were requested at committed capacities of 45 MW and 90 MW based on the information known at the time of the request. At the April 18, 2011, Prehearing Conference, the SWA updated the design cost of the electrical component to \$56.6 million and the committed capacity range to between 70 MW and 80 MW. On April 20, 2011, staff counsel suggested to FPL counsel that the revised information provided by the SWA at the Prehearing Conference may impact several FPL responses to previous staff Interrogatories. Staff counsel further suggested that such updates may be more appropriate at the Hearing rather than through additional supplemental discovery responses since the Hearing was scheduled to begin in two business days. At the Hearing, no concrete committed capacity amount had been chosen by the SWA so the committed capacity range was still between 70 MW and 80 MW. (TR 92) No updated values were made available to staff to compare the 70 MW or 80 MW avoided unit cost to the updated advanced funding payment during the Hearing. FPL witness Hartman did state that if the committed capacity were reduced to 45 MW, then the "net present value of the value of deferral of capacity payments would be less than 56.6, and that would set the advanced funding payment, but at 70 MW, the \$56.6 million advanced funding payment would be correct." (TR 153-154)

By using the values contained in Exhibit 2, pp. 42, 72-77 and Exhibit 5, p. 175, staff calculated a \$/kW value for FPL's avoided cost and compiled its own analysis comparing the estimated cost of a 70 MW and 80 MW portion of the 2016 avoided unit to the updated advanced funding payment. The 70 MW and 80 MW committed capacity amounts were chosen to reflect the new updated committed capacity range chosen by the SWA. Table 4 below illustrates that the present value of the advanced funding payment (\$55.9 million) is less than the present value of FPL's current avoided costs at 70 MW and 80 MW. The analysis concludes that compared to FPL's current avoided costs, customers could expect to see savings ranging from approximately

\$189,000 to \$8,212,000. The table also shows that the advanced funding payment is higher than the 2018 and 2025 avoided units.

**Table 4: Value of Deferral Comparison
(in millions)**



Source: EXH 2, pp. 42, 72-77 and EXH 5, p. 175

Staff would expect that if FPL's needs were to shift, then the value of deferral would control and the advanced funding payment would be reduced accordingly in order to comply with Section 377.709, F.S.

Based FPL's on the record in this docket, FPL projects a capacity need in 2016, as discussed in Issue 2. Therefore, pursuant to Section 377.709(3)(b)1, F.S., the advanced funding payment for the budgeted cost of the electrical component meets the requirements of the statute in that it is less than the capacity cost of the utility's avoided unit.

System Analysis

As discussed in Issue 2, the proposed Expanded Facility will only provide a portion of FPL's need for additional capacity in 2016 and the Company has stated that with or without the Expanded Facility, it would still build a 1,200 MW combined cycle natural gas facility in 2016. (TR 131-132) Therefore, the system analyses do not contain a capacity deferral benefit. However, such analyses do provide insight to the relative energy savings that can be expected from PPAs.

Staff requested multiple sensitivities involving committed capacity amounts and capacity factors with and without the proposed Expanded Facility over the life of the contract. Specifically, staff requested the sensitivities to reflect various avoided units and the expanded

facility operating under committed capacity amounts of 45 MW and 90 MW, with capacity factors of 70 percent and 85 percent. The system analyses concluded that the Expanded Facility would provide savings for FPL's customers ranging from \$4 million to \$67 million. (EXH 5, BSP 179, 337-344, 348-354, 358) Compared to the cost of the total FPL system, the best case which assumes \$67 million in savings represents a savings of .069 percent of total system costs. Such results are not surprising given the size of the proposed Expanded Facility (70-80 MW) compared to FPL's existing capacity resources which are over 23,000 MW. (EXH 6, BSP 3122-3123) Moreover, the system analysis revealed the majority of savings from the proposed Expanded Facility are a result of projected environmental savings (EXH 5, BSP 178, 337-344, 348-354, 358-359, TR 162) It should be noted that there are no current regulations on carbon dioxide (CO₂) emissions from generating facilities. Staff will discuss its analysis regarding environmental costs in the section below.

FPL assumed that the amount of annual energy produced from a 90 MW facility which operates at an 85 percent capacity factor would result in approximately 670,000 MWh of energy produced in one year. SWA asserts that the Expanded Facility will be capable of producing 575,000 MWh of energy annually. (EXH 3, p. 99) Such a value is consistent with a 93 MW facility, as proposed, operating at a 70 percent capacity factor. Staff performed its own calculation and concluded that a 90 MW facility operating at a 70 percent capacity factor would produce approximately 551,880 MWh of annual energy. Therefore, staff believes based on the record, FPL's system analysis which assume a 90 MW facility operating at an 85 percent capacity factor is overstated. The greater weight should be given to the energy related costs and savings associated with the analysis which assumes 90 MW of capacity operating at a 70 percent capacity factor. Table 5 illustrates that FPL's projected system benefits range from \$37 million to \$44 million over the term of the contract. (EXH 5, p. 359)

Table 5: FPL's Projected System Economics with Environmental Savings

Projected System Savings with FPL's Environmental Savings (millions)				
Capacity (MW)	CF (%)	2016	2018	2025
		Avoided Unit	Avoided Unit	Avoided Unit
90	70	44	37	39

Source: EXH 5, p. 359

Environmental Costs

FPL used significantly different emission numbers in its analysis of the environmental costs assumed in the proposed Expanded Facility compared to the analysis of environmental costs assumed in the recent DSM goals proceedings. (EXH 5, p. 374) The projected CO₂ savings were derived from an ICF study and are based solely on FPL's electric system. (TR 162-163) FPL's emission costs assumed for the proposed Expanded Facility were based on the ICF Emission and Fuel Markets Outlook 2010 – 4th quarter update. (EXH 5, p. 374) FPL's recent DSM goal proceeding (Docket No. 080407-EG) emission costs were based on the ICF Emission and Fuel Markets Outlook 2007. (EXH 5, p. 374) Staff believes this illustrates that costs of CO₂ are unknown and volatile.

Table 6 illustrates the emission cost assumptions used in the current docket, and FPL DSM dockets. (EXH 5, p. 374)

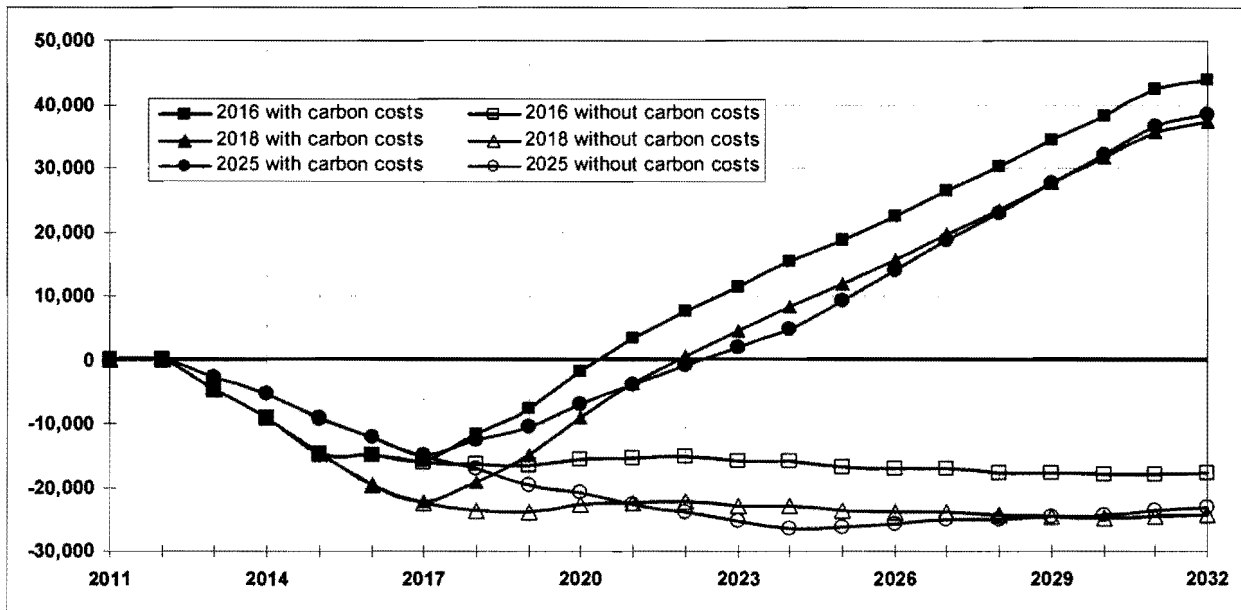
Table 6: Comparison of projected Emission Costs in Expanded Facility and FPL DSM dockets

Year	Docket No.	Docket No.	Docket No.	Docket No.	Docket No.	Docket No.
	110018-EU	080407-EG	110018-EU	080407-EG	110018-EU	080407-EG
	CO2 (\$/Ton)	CO2 (\$/Ton)	SO2 (\$/Ton)	SO2 (\$/Ton)	NOx (\$/Ton)	NOx (\$/Ton)
2011	0	0	53	1398	473	956
2012	0	0	104	1532	485	1047
2013	0	14	113	1677	497	1146
2014	0	16	57	1837	509	1256
2015	0	17	58	2013	522	1375
2016	0	19	59	2204	535	1507
2017	0	21	61	2413	548	1649
2018	27	23	62	2641	562	1805
2019	29	25	64	2891	576	1975
2020	32	27	66	3164	590	2162
2021	34	29	67	3466	605	2368
2022	37	33	69	3796	620	2593
2023	40	35	71	4157	636	2841
2024	44	39	72	4554	652	3112
2025	47	43	74	4988	668	3408
2026	51	46	76	4877	685	2909
2027	55	50	78	4767	702	2482
2028	59	55	80	4659	719	2119
2029	64	62	82	4554	737	1809
2030	68	67	84	4453	756	1545
2031	70	73	86	4320	775	1158
2032	72	79	88	4178	794	751

Source: EXH 5, p. 374

FPL's analyses show that the majority of savings FPL's customers would experience from the SWA Expanded Facility are driven by environmental or emission savings on the FPL system, particularly unregulated CO₂. (TR 162, EXH 5, p. 378) It should be noted that there are no current regulations of CO₂. (TR 162) Further, FPL's analysis only takes into consideration reductions in emission levels on its system. The Joint Petitioners did not evaluate the emissions from the WTE facility which will incinerate waste and, hence, produce carbon and other air emissions. (TR 163) In other words, even if emission levels and costs are reduced on FPL's system as a result of the PPA, actual emission levels may stay the same or even increase on a statewide basis. Figure 1 below compares FPL's projected system costs with and without the environmental savings and shows that FPL's customers could pay an additional \$18 million to \$23 million over the term of the contract if environmental costs were removed from its analysis. (EXH 5, p. 359) In other words, if future environmental regulations do not materialize as projected, FPL's customers will realize a net energy cost as a result of the PPA associated with the proposed Expanded Facility. Because of the incomplete analysis and speculative nature of these savings, staff does not recommend that the Commission rely on the system analyses in this docket when evaluating the cost-effectiveness of the proposed Expanded Facility.

Figure 1: Comparison of FPL's System Savings with Expanded Facility (\$000)



Source: EXH 5, p. 359

Assumptions Used in Analyses

Contained below is a discussion of the reasonableness of the key assumptions used in the above analyses.

Financial Assumptions

FPL's analysis utilized an incremental overall cost of capital of 7.29 percent on an after-tax basis. (EXH 5, p. 188) This return is based on a capital structure of 59 percent equity at a cost rate of 10 percent and 41 percent debt at a cost rate of 5.5 percent. (EXH 5, p. 188) The incremental cost of capital is appropriate to use when evaluating new investment.

The Company's allowed overall cost of capital was used to determine the anticipated clause return on the advanced funding payment recovered through the Energy Conservation Cost Recovery clause. (EXH 5, p. 188) This capital structure consists of 35.8 percent debt at a cost rate of 5.4 percent, 47 percent equity at a cost rate of 10 percent, and 17.2 percent zero cost capital. (EXH 5, p. 188) The allowed weighted average cost of capital used for the anticipated clause return on the advanced funding capacity payments is 6.6 percent on an after-tax basis.

(EXH 5, p. 188) This cost of capital is consistent with FPL's last rate case²² and the settlement agreement.²³ (EXH 5, p. 1632)

FPL's other financial assumptions include an annual inflation rate of 3.0 percent for capital expenditures and 2.5 percent for Operation and Maintenance (O & M) expenses. (EXH 5, p. 188) Staff believes that the financial assumptions used by FPL are reasonable and there is no evidence in the record that disputes the reasonableness of FPL's financial assumptions. (EXH 5, p. 188)

Fuel Costs

In FPL's Supplemental Response to Staff's First Request for Production of Documents, Item No. 8, FPL provided a comprehensive fuel forecast. (EXH 8, pp 3450-3453) This fuel forecast modeled low, medium, and high future prices of various fossil fuels on a \$/MMBTU basis. For the purposes of this proceeding, FPL witness Hartman states that FPL used the "medium" values. (EXH 5, BSP 316) He explained that FPL's fuel forecast blends "near term" data (which he describes as data that goes out two years and is actionable in commodity markets) with longer term, or "fundamental" data (which can be from three years out to much longer time periods). (TR 166) In its Response to Staff's Fourth Set of Interrogatories, Nos. 72-74, FPL described the outside sources it used in developing its forecast. The PIRA Energy Group (PIRA) is a consulting firm with expertise in all aspects of the oil and natural gas industry. FPL used an extensive database from PIRA to support its short and long term price projections for oil and natural gas. FPL's forecast also used escalation rates from the Department of Energy's Energy Information Administration for its long term oil and natural gas projections. In addition, JD Energy, Inc., an energy price forecasting firm, contributed information about long term projections in coal and petroleum coke markets.²⁴ (EXH 5, pp. 316-318, EXH 7, pp. 3404-3407)

Staff believes FPL used reasonable methods to develop its fuel forecast. FPL's fuel forecast covers the time period of 2011 through 2034, and uses the same sources utilized in FPL's Ten-Year Site Plan. (Hartman TR 167; EXH 7, pp. 3404-3405) Staff notes that the short-term pricing information was indexed to current commodity markets, and the longer term data came from authoritative and independent sources, which staff believes is reasonable.

Projected Cost of Avoided Unit

FPL evaluated the Expanded Facility against the Company's 2010 and 2011 standard offer contracts. Both standard offer contracts were based on natural gas-fired combined cycle technology, therefore, the projected performance specifications contained in the two standard offer contracts are comparable. The Commission has previously reviewed and approved the

²² See Order No. PSC-10-0153-FOF-EI, issued March 17, 2010, in Docket No. 080677-EI, In re: Petition for increase in rates by Florida Power & Light Company.

²³ See Order No. PSC-11-0089-S-EI, issued February 1, 2011, in Docket No. 080677-EI, In re: Petition for increase in rates by Florida Power & Light Company.

²⁴ Staff notes that even though the avoided unit was natural gas unit, coal and petroleum coke information was forecasted because these fuels are used in FPL's generating fleet.

Company's 2010 standard offer contract and associated cost estimates. FPL's 2011 standard offer contract was filed April 1, 2011, and is awaiting Commission approval.

As discussed, FPL's cost estimates and variables for its 2011 standard offer contract are based on a natural gas-fired combined cycle power plant which is proven, commercially available, and widely used in the power industry. FPL's projected total installed cost (\$941.72/kW) is comparable with recent filings received from FPL.

Cost of Electrical Component (Advanced Funding)

Section 377.709, F.S., allows an electric utility to provide advanced funding to a local government for the construction of the electrical component (turbine, generator, and associated transmission facilities) of a solid waste facility. The funding amount must be the lesser of the utility's avoided cost or the design costs of the electrical component of the solid waste facility.

SWA conducted a bidding process in order to obtain a contract for the design and construction of the Expanded Facility. SWA received proposals from three pre-qualified bidders. SWA indicated that the proposals ranged from a high of \$56.241 million to a low of \$55.389 million for the electrical component of the facility. Because of a firm amount was not known, FPL conservatively used the upper bound (\$56.241 million) for its responses to staff Interrogatories regarding economic evaluations of the Expanded Facility. Based on preliminary information, FPL assumed the payment would be made in 2013. When considering carrying costs, FPL projected the total net present value of the advance funding payment would be approximately \$60.3 million over the life of the contract. (TR 49)

During the deposition of SWA's witness' the design cost of the electrical component was updated of \$56.643 million. (EXH 4, p. 146) Additionally the projected date of the payment shifted to 2014. FPL provided staff with updated projections of its payment stream to SWA based on the updated cost and payment date. The slightly higher payment and the shift in the payment date resulted in a total net present value of approximately \$55.9 million, approximately \$4 million less than initial projections. Therefore, the projected capacity payments used to evaluate the Expanded Facility were conservatively high. SWA confirmed the \$56.643 million cost for the electrical component at the April 25, 2011, Hearing. (TR 49)

Primary staff believes that the Joint Petitioners are persuasive in their argument that the Expanded Facility is the most cost-effective alternative available. Based on a value of deferral analysis, the proposed Expanded Facility would provide at a minimum, 70–80 MW of renewable fueled capacity estimated to save FPL's ratepayers approximately \$189,000 to \$8,212,000.

CONCLUSION

The present value of the advanced funding payment (\$55.9 million) is less than the present value of FPL's current avoided costs at 70–80 MW (\$56.1 million and \$64.1 million). As such, the proposed Expanded Facility could produce savings in the range of approximately \$189,000 to \$8,212,000. If either the term of the contract or the committed capacity were increased, the savings to ratepayers would also increase. Therefore, as discussed in Issue 7, staff

would encourage both parties to explore extending the term of the contract or increasing the committed capacity in order to maximize ratepayer benefits.

Alternate Staff Analysis:

There is considerable uncertainty associated with the cost-effectiveness of the proposed PPA. As a Joint Petitioner, FPL is responsible for demonstrating the electrical need for and cost-effectiveness of the purchase of capacity and energy from SWA in this case. Throughout this proceeding, however, FPL's planning assumptions which form the basis for determining the electrical need and cost-effectiveness of the purchase have been in flux.

The initial Petition and testimony provided by the Joint Petitioners did not include the purchased power agreement or any supporting analyses regarding testimony that the contract for the Expanded Facility was needed or cost-effective. After negotiating an extension to the timeline required by statute, staff was forced to extract the basic information necessary to evaluate the merits of the Petition through discovery. Not all of the responses to staff's discovery pertaining to need and cost-effectiveness were complete. The final PPA was not made available until March 14, 2011. The Hearing was held on April 25, 2011.

Based on information provided during discovery, FPL now contends that additional capacity will be needed on its system by 2016 and be met by the construction of a 1200 MW natural gas fired combined cycle plant. This contrasts significantly with earlier assertions that ranged from 2025 to 2018. Two significant assumptions appear to account for this change: (a) the assumption that more than 1900 MW of generating capacity currently on inactive reserve will not be returned to service, and (b) the assumption that summer peak capacity would be reduced by 350 MW due to maintenance. As noted in the primary staff analysis, since FPL's generating fleet in 2011 is largely unchanged from its fleet in 2010, it is not clear why FPL has only recently included this reduction to generation supply due to summer maintenance requirements in its plans. Witness Hartman also stated that the return of inactive units was still under review by the Company. (TR 150 - 151)

Staff analysis in Issue 2 indicates that FPL is currently projecting a need for more than 370 MW of additional capacity in 2016. If, as staff questions, FPL does not experience a 350 MW reduction in summer peak capacity due to maintenance, it appears their projected need for additional capacity in 2016 is reduced to 20 MW. Alternate staff finds it highly doubtful that FPL would find it necessary to advance the in-service date of a 1200 MW combined cycle natural gas plant in order to meet a 20 MW shortfall in their targeted 20 percent reserve margin. On a system as large as FPL's this would not be prudent.

Staff's analysis also indicates that an advanced funding payment of \$55.6 million closely approximates FPL's estimate of avoided costs, with a savings of only \$189,000 based on the facility providing 70 MW of capacity. If the in-service date of FPL's 2016 avoided unit is deferred by even a single year, then these savings are likely to disappear and the advanced funding payment to SWA would not be cost-effective.

Pursuant to Section 377.709(3)(b), F.S., the Commission may modify a contract for advanced funding with the concurrence of the parties to the contract. Unlike a traditional PPA, if the contract term was extended or the committed capacity were increased for this contract, the fixed cost of the electrical component would remain the same but the value of deferral benefits would increase, resulting in additional savings for FPL's customers. The proposed contract is for a term of 17 years from 2015 through 2032. The estimated life of the WTE facility, before its first major maintenance overhaul, is 20 years. The PPA contains a provision by which the term can be extended an additional 26 months, if agreed upon by both parties. If the parties were to agree now, rather than later, to extend the term of the PPA by 26 months, the project would be cost-effective.

Because of the planning uncertainty associated with FPL's avoided unit and to better assure that ratepayers will benefit from the advanced funding of this project, alternate staff recommends that the Joint Petitioners should be afforded the opportunity to modify the PPA to ensure that it is cost-effective. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process.

CONCLUSION

Because of planning uncertainty, it is not clear that the advanced funding payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process.

Issue 7: Is the proposed contract between SWA and FPL reasonable, prudent, and in the best interest of FPL's customers and appropriate and consistent with the provisions of Section 377.709, F.S.?

Primary Recommendation: Yes. As discussed in Issue 6, the proposed contract between the SWA and FPL is projected to provide benefits to FPL's ratepayers. However, staff would encourage both parties to explore extending the term of the contract or increasing the committed capacity in order to maximize ratepayer benefits. (Brown, Graves, Ballinger)

Alternate Recommendation: No. Because of planning uncertainty, it is not clear that the advanced funding payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process. (Trapp)

Position of the Parties:

Joint Petitioners: Yes. The proposed contract is reasonable, prudent, and in the best interest of FPL's customers and consistent with Section 377.709, F.S., because: (a) the contract is priced lower than FPL's avoided cost resulting in significant cost savings, and (b) the contract provides greater renewable energy generation for FPL's system.

Larsons: No. FPL doesn't need to purchase energy and capacity from the SWA Expanded Facility. The proposed contract unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required because FPL profits \$60 million dollars from capitalizing an advanced capacity payment which violates Section 377.709 (3)(b)(1)(b.), F.S.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that the fact that the contract is significantly lower than FPL's avoided cost demonstrates a cost savings to FPL's customers, which is reasonable, prudent, and in the best interest of FPL's customers and consistent with Section 377.709, F.S. (Joint Petitioners BR 14) In addition, the Joint Petitioners assert that the SWA Expanded Facility would displace between 45 and 90 MW from higher cost units on FPL's system. (Joint Petitioners BR 14) Furthermore, the Joint Petitioners state that the proposed contract complies with the advanced funding mechanism of Section 377.709, F.S., which specifies that the advanced funding will be the lower of the present value of deferral capacity payments for the electrical component of the Expanded Facility. (Joint Petitioners BR 14)

The Joint Petitioners state that Section 377.709, F.S., specifically states that if the SWA operates the Expanded Facility below a 70 percent capacity factor, then FPL's customers will receive a refund on a pro rata basis with interest for the capacity that was paid in advance. (Joint Petitioners BR 14) In addition, the Joint Petitioners believe that not only is the advanced

capacity payment a benefit for FPL customers, but a benefit for the SWA and its customers as well because it will allow the SWA to avoid the need for a separate taxable bond issue to fund the acquisition of the electrical component for the proposed Expanded Facility. (Joint Petitioners BR 14) The Joint Petitioners contend that because the energy pricing on the contract is tied to the 2011 Ten-Year Site Plan's avoided unit (2016), it would produce the lowest energy costs and displace higher cost units. (Joint Petitioners BR 15)

The Joint Petitioners assert that the proposed contract will result in savings for FPL's customers. (Joint Petitioners BR 16) The Joint Petitioners contend that the advanced capacity payment is the lower of the value to FPL's customers of the capacity provided by the facility or the design cost of the electrical component for the Expanded Facility. (Joint Petitioners BR 16) Furthermore, based on the analyses conducted by the Joint Petitioners, a committed capacity range of 45 MW to 90 MW and a capacity factor for the unit in the range of 70 percent to 85 percent would yield projected savings in the range of \$4 million to approximately \$67 million. Thus, the Joint Petitioners assert that under every scenario and combination of the avoided unit permitted under the contract, FPL customers would see savings. (Joint Petitioners BR 16) Moreover, the Joint Petitioners assert that with the updated minimum committed capacity of 70 MW, the contract would be more favorable and cost-effective to FPL's customers. (Joint Petitioners BR 16)

The Larsons contend that FPL does not need to purchase energy and capacity from the SWA Expanded Facility. (Larsons BR 2) Furthermore, the Larsons believe that the proposed contract unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required because FPL profits \$60 million dollars from capitalizing an advanced capacity payment which violates Section 377.709(3)(b)(1)(b.), F.S. (Joint Petitioners BR 2)

ANALYSIS

Primary Staff Analysis:

As previously discussed in Issue 6, the proposed contract for capacity from the Expanded Facility should provide savings to FPL's ratepayers. The proposed contract between the Joint Petitioners is a 17-year purchase power agreement which commences in 2015 and terminates in 2032. (TR 112) Once commercial operation begins, energy for the Expanded Facility will be paid at a combination of fixed and floating energy rates. The percentage of the fixed energy rates is calculated by the product of the Annual Capacity Factor as of the previous calendar year. A percentage has not been determined by the SWA, but the contract states that the percentage of fixed energy pricing will not exceed 50 percent. (TR 94, EXH 2, p. 45) The SWA states that it is important to fix a portion of the energy payment because doing so allows the promotion rate stability. (TR 93) It should be noted, however, that a fixed energy payment is subject to risks. (TR 93) For instance, if future energy fuel costs are higher than forecasted, the result could be a loss of energy revenues for the SWA. (TR 93) In terms of ratepayer risk, if actual fuel prices are lower than the fixed amount, then ratepayers would pay more than the energy price during that period. The contract has a mechanism that protects consumers in the event that the Expanded Facility operates at less than 70 percent capacity factor. If the facility operates at less than a 70 percent capacity factor, FPL's customers will receive a refund on a pro rata basis with interest for the advanced funding payment. (EXH 2 p. 54) The minimum 70 percent capacity factor

performance requirement is contained in Section 377.709(4), F.S. Staff would note that FPL's planned combined cycle generating units are capable of operating at much higher capacity factors, i.e. 94 percent. Finally, the contract also includes an option to extend the agreement 26 months that must be mutually agreed upon by both FPL and the SWA. (EXH 2, p. 42, TR 94)

Pursuant to Section 377.709(3)(b), F.S., the Commission may modify a contract with the concurrence of the parties to the contract. Staff believes that because the funding for the electrical component is paid in advance, FPL's ratepayers would experience more savings if a longer term contract was negotiated. The same can be said if the committed capacity amount were increased. Therefore, staff requested an analysis that would extend the contract period beyond the initial 17-year term to a 30-year term (2046) which is the typical life of a utility owned generation asset. However, no value of deferral dollar savings estimates were provided and FPL responded that if the contract were to be extended through 2046, it would result in additional value of deferral benefits to the contract. (EXH 5, pp. 336, 360)

Unlike a traditional PPA with a renewable generator, the SWA elected to receive an advanced funding payment for the electrical component of its Expanded Facility. As shown in Exhibit No. 5, p. 242, this would result in the SWA receiving approximately \$30 million less in total revenues compared to FPL's current avoided costs. Witness Bruner stated that when the SWA and FPL began negotiations, the avoided costs was based on FPL's 2010 TYSP and the capacity and energy payments at that time were not as attractive. (EXH 2, p. 144) The SWA chose the advanced funding option because they could avoid some finance charges and that this was the best deal they could strike with FPL. (TR 144)

As with any negotiated agreement, there are always additional benefits that could be captured for retail ratepayers. Unlike a traditional PPA, if the contract term was extended or the committed capacity were increased, the fixed cost of the electrical component would remain the same but the value of deferral benefits would increase which, in turn, would result in additional savings for FPL's customers. However, the Commission does not micro manage either FPL or the SWA and must evaluate the agreement that is brought before the Commission for approval. The proposed contract contains a provision in which it can be extended an additional 26 months, if agreed upon by both parties. Staff would expect FPL, as a prudently managed utility, to vigorously explore this option as well as increasing the committed capacity amount, in order to maximize ratepayer benefits. However, the final decision rests with the SWA to accept such modifications. Therefore, if the Commission conditions the approval of the contract for cost recovery on the premise that the contract is not the most cost-effective alternative available or in the best interest of FPL's ratepayers, then the Commission would also be conditioning the need determination for the SWA.

CONCLUSION

Primary staff is persuaded by the Joint Petitioners that the proposed contract between SWA and FPL is reasonable, prudent, and in the best interest of FPL's customers and appropriate and consistent with the provisions of Section 377.709, F.S. The evidence shows that the proposed contract between the SWA and FPL is projected to provide benefits to FPL's ratepayers between \$189,000 to \$8,212,000. However, staff would encourage both parties to

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explore extending the term of the contract or increasing the committed capacity in order to maximize ratepayer benefits.

Alternate Staff Analysis:

See discussion in Issue 6.

CONCLUSION

Because of planning uncertainty, it is not clear that the advanced funding payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective.. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process.

Issue 8: Is FPL's proposal to recover the advanced capacity payment to SWA through the Energy Conservation Cost Recovery clause pursuant to Section 377.709, F.S., consistent with Rules 25-17.200 through 25-17.310, F.A.C.?

Recommendation: Yes. Both, Section 377.709, F.S., and Rules 25-17.200 through 25-17.310, protects ratepayers by limiting cost recovery to the utility's avoided cost. The proper method of recovery is discussed in Issue 9. (Brown, Graves)

Position of the Parties:

Joint Petitioners: Yes. FPL's proposal is consistent with Section 377.709, F.S., and Rules 25-17.200 through 25-17.310, F.A.C. The contract is in the best interest of FPL's customers as FPL proposes to recover the advanced capacity payment costs from its customers over the time period when the customers receive a capacity benefit.

Larsons: No.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that FPL is unaware of any proposal that has been brought before the Commission for approval under Section 377.709, F.S., and nothing in Rules 25-17.200 through 25-17.310, F.A.C. expressly addresses cost recovery for an advanced capacity payment under Section 377.709, F.S. (Joint Petitioners BR 17-18) Furthermore, the Joint Petitioners assert that FPL's proposed recovery mechanism is consistent with Section 377.709, F.S., and the contract is in the best interest of FPL's customers whereby FPL would recover the advanced capacity payment costs from its customers over the duration of the contract. (Joint Petitioners BR 18) Moreover, the Joint Petitioners state that the contract provides an up-front advanced capacity payment to SWA for capacity during the term of the proposed contract. As such, FPL will finance the payment through its balance sheet which will therefore tie its customers' payment for capacity to when the customers receive the benefit of that capacity. (Joint Petitioners BR 18) The Joint Petitioners further assert that such practice is consistent with Commission practice, in which the Commission has allowed for recovery over time of investments by FPL under the Environmental Cost Recovery clause. (Joint Petitioners BR 18)

The Larsons contend that FPL's proposal to recover the advanced capacity payment to SWA through the Energy Conservation Cost Recovery clause pursuant to Section 377.709, F.S., is not consistent with Rules 25-17.200 through 25-17.310. (Larsons BR 3)

ANALYSIS

Nothing in Rules 25-17.200 through 25-17.310, F.A.C., expressly addresses cost recovery for advanced funding under Section 377.709, F.S. Staff is unaware of any proposal that has been brought to the Commission for approval under Section 377.709, F.S.

Both, Section 377.709, F.S., and Rules 25-17.200 through 25-17.310, F.A.C. rely on the utility's avoided cost as a cap for capacity payments. Section 377.709(3)(b)1, F.S., allows an electric utility to provide advanced funding to a local government for the construction of the electrical component of a solid waste facility. Such payments must be the lesser of: (a) the net present value of avoided-capacity cost for the electric utility calculated over the period of time during which the local government contracts to provide electrical capacity to the utility, or (b) an amount which is not more than the amount of the design costs of the electrical component of the solid waste facility. Rule 25-17.240, F.A.C. encourages investor-owned utilities and renewable generating facilities to negotiate contracts for the purchase of firm capacity and energy. The cost recovery aspects of negotiated contracts are described in Rule 25-17.0832(2), F.A.C. which states in part:

Negotiated contracts will be considered prudent for cost recovery purposes if it is demonstrated by the utility that the purchase of firm capacity and energy from the qualifying facility pursuant to the rates, terms, and other conditions of the contract can reasonably be expected to contribute towards the deferral or avoidance of additional capacity construction or other capacity-related costs by the purchasing utility at a cost to the utility's ratepayers which does not exceed full avoided costs...

(Emphasis added)

CONCLUSION

Staff believes both Section 377.709, F.S., and Rules 25-17.200 through 25-17.310, F.A.C. protects ratepayers by limiting cost recovery to the utility's avoided cost. The proper method of recovery is discussed in Issue 9.

Issue 9: Should the Commission allow FPL to recover from its customers the advanced capacity payment associated with the Expanded Facility's electrical component made to SWA pursuant to and/or resulting from the proposed contract, as well as the carrying costs and administrative costs incurred by FPL, through the Energy Conservation Cost Recovery clause, pursuant to Section 377.709, F.S.?

Primary Recommendation: Yes. Pursuant to Section 377.709(3)(b)4, F.S., FPL should be allowed to recover the fixed advanced funding amount of \$56,643,942 as well as the carrying costs and prudent administrative costs incurred by FPL through the Energy Conservation Cost Recovery clause. As discussed in Issue 7, the parties should explore extending the term of the contract or increasing the committed capacity in order to maximize ratepayer benefits. (Brown, Graves, Ballinger)

Alternate Recommendation: No. Because of planning uncertainty, it is not clear that the advance capacity payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process. (Trapp)

Position of the Parties:

Joint Petitioners: Yes. Under Section 377.709(3)(b)(4), F.S., FPL should be permitted to recover from its customers through the ECCR clause the advanced capacity payment associated with the Expanded Facility's electrical component under the proposed contract, including the amount of financing, all carrying costs, and all reasonable and prudent administrative costs incurred by FPL.

Larsons: No. The Advanced Capacity Payment is expressly limited to the "design costs of electrical component" pursuant to Section 377.709(3)(b)(1)(b.), F.S. Unlike a traditional PPA, FPL profits \$60 million dollars from capitalizing an advanced capacity payment equal to the "budgeted cost of the power block" in violation of the statute.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that FPL is entitled to recover the amount of financing, including all carrying costs, plus reasonable and prudent administrative costs incurred by FPL associated with the construction of the electrical component of SWA's solid waste facility. (Joint Petitioners BR 19) The Joint Petitioners further assert that the legislative intent is clear that since the SWA Expanded Facility is a conservation measure, it is permissible for FPL to recover its financing for the Expanded Facility from its customers through the Energy Conservation Cost Recovery clause. (Joint Petitioners BR 19) The Joint Petitioners state that based on a unit with a committed capacity of 90 MW, the net present value of the Ten-Year Site Plan's 2016 avoided capacity cost over the life of the proposed contract is approximately \$85,874,425. Moreover, the

budgeted cost of the electrical component for the proposed Expanded Facility is \$56,643,942. (Joint Petitioners BR 19) The Joint Petitioners assert that therefore pursuant to Section 377.709(3)(b)(1), F.S., cost recovery is allowed based on the budgeted cost of the electrical component for the Expanded Facility. (Joint Petitioners BR 19)

The Joint Petitioners contend that the firm capacity and energy from the Expanded Facility can reasonably be expected to contribute to the potential deferral of FPL's next planned fossil generating unit and provide fuel diversity and fuel stability to FPL's customers. (Joint Petitioners BR 20) Furthermore, the Joint Petitioners believe that by financing the advanced capacity payment, FPL is reasonably matching up its customers' payments for the advanced capacity payment with the benefits those same customers are receiving through energy and cost savings. In addition, the Joint Petitioners state that once the contract is expired, the SWA would have fulfilled its commitment of providing capacity at a price less than FPL's avoided capacity cost. (Joint Petitioners BR 20)

The Larsons contend that the Commission should not allow FPL to recover from its customers the advanced capacity payment associated with the Expanded Facility's electrical component made to SWA pursuant to and resulting from the proposed contract. (Larsons BR 3) The Larsons further assert that the Advanced Capacity Payment is expressly limited to the "design cost of the electrical component" pursuant to Section 377.709(3)(b)(1)(b.), F.S. (Larsons BR 3) Finally, the Larsons believe that unlike a traditional purchase power agreement, FPL profits \$60 million dollars from capitalizing an advanced capacity payment equal to the "budgeted cost of the power block" in violation of the statute. (Larsons BR 3)

ANALYSIS

Primary Staff Analysis:

Pursuant to Section 377.709(3)(b)4, F.S., the amount of financing for the construction of the electrical component, including all carrying costs, plus all reasonable and prudent administrative costs incurred by the utility, must be recovered from the ratepayers of the electric utility pursuant to the provisions of the Florida Energy Efficiency Conservation Act. Pursuant to Sections 377.709(3)(b)1a, F.S., and 377.709(3)(b)1b, F.S., such payments must be the lesser of: (a) the net present value of avoided-capacity cost for the electric utility calculated over the period of time during which the local government contracts to provide electrical capacity to the utility, or (b) an amount which is not more than the amount of the design costs of the electrical component of the solid waste facility. As such, based on the statute and costs of the electrical component and avoided unit, FPL should be granted cost-recovery for the advanced funding payment towards the electrical component of the Expanded Facility.

FPL should be allowed to recover the cost of the electrical component over the life of the contract. During the first year in which FPL seeks recovery, the Company must verify that the carrying costs and administrative costs are reasonable and prudent. (EXH 5, p. 3428) As discussed in Issue 7, the parties should explore extending the term of the contract or increasing the committed capacity in order to maximize ratepayer benefits.

CONCLUSION

Pursuant to Section 377.709(3)(b)4, F.S., FPL should be allowed to recover the fixed advanced funding amount of \$56,643,942 as well as the carrying costs and prudent administrative costs incurred by FPL through the Energy Conservation Cost Recovery clause. As discussed in Issue 7, the parties should explore extending the term of the contract or increasing the committed capacity in order to maximize ratepayer benefits.

Alternate Staff Analysis:

See discussion in Issue 6.

CONCLUSION

Because of planning uncertainty, it is not clear that the advanced funding payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process.

Issue 9A: If yes, what amount should FPL be allowed to recover from its ratepayers?

Primary Recommendation: Yes. FPL should be allowed to recover the fixed advanced funding amount of \$56,643,942 as well as the carrying costs and prudent administrative costs incurred by FPL. (Brown, Graves)

Alternative Recommendation: No. Because of planning uncertainty, it is not clear that the advance capacity payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process. (Trapp)

Position of the Parties:

Joint Petitioners: Yes. FPL should be allowed to recover from its customers the entire amount of the advanced capacity payment made to SWA plus FPL's carrying costs and reasonable and prudent administrative costs. The advanced capacity payment, based on the design cost of the electrical component of SWA's Expanded Facility, is \$56,643,942.00.

Larsons: No. The Advanced Capacity Payment should be denied because there is no need. If granted by the Commission, the amount must be limited to the "design costs of electrical component" pursuant to Section 377.709(3)(b)(1)(b.), F.S. SWA stated this amount was \$1,657,500. FPL should not profit \$60 million from a PPA.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners assert that the advanced capacity payment recovered should be the lower of the deferred capacity value of FPL's avoided unit, i.e., the net present value of FPL's avoided capacity costs, or the design cost (budgeted cost) of the electrical component for the Expanded Facility. (Joint Petitioners BR 20) Furthermore, the Joint Petitioners state that the design cost of the electrical component is the lower number between the avoided capacity cost and design costs of the electrical component based on the un-contradicted record in this proceeding. (Joint Petitioners BR 20) The Joint Petitioners contend that FPL should be allowed to recover the entire amount of the advanced capacity payment for the electrical component as well as associate finance and administrative costs through the ECCR clause. (Joint Petitioners 20) Finally, the Joint Petitioners state that the advanced capacity payment on the firm design cost of the electrical component is \$56,643,942. (Joint Petitioners BR 20-21) Moreover, the advanced capacity payment does not imply ownership of the electrical component, or its output. (Joint Petitioners BR 24)

The Joint Petitioners assert that the design cost of the electrical component is the budgeted cost to construct the component (Joint Petitioners BR 21) and Section 377.709(3)(b)(1), F.S., uses the term "design costs of the electrical component of the solid waste

facility” in connection with the amount of the advanced capacity payment from a utility and government. (Joint Petitioners BR 21) The Joint Petitioners further contend that the term design costs, represents more than merely the “cost of design” of the electrical component, i.e., engineering fees and professional charges for the electrical component. (Joint Petitioners BR 21)

The Larsons contend that the Advanced Capacity Payment should be denied because there is no need. (Larsons BR 3) The Larsons further state that if granted by the Commission, the amount must be limited to the “design costs of electrical component” pursuant to Section 377.709(3)(b)(1.) (b.), F.S., and stated by the SWA in the amount of \$1,657,500. (Larsons BR 3) Finally, the Larsons believe that FPL should not profit \$60 million from a PPA. (Larsons BR 3)

ANALYSIS

Primary Staff Analysis:

There was testimony presented regarding the interpretation of the design cost of the electrical component and the cost of design for the electrical component. (TR 44-45, 88-89) The Joint Petitioners explained that the cost of design referred to engineering fees and professional charges for the design of the electrical component system. (TR 89) In addition, the cost of design (\$3,298,884) is far less than the design cost of the electric component. (TR 45) The Joint Petitioners claim that the term “design costs” and “budgeted costs” are one in the same and refer to the estimated cost of construction for the electrical component of the Expanded Facility (TR 170-171) The statute does not mention a requirement to enter into a contract to provide funding for only the engineering fees and professional charges of the electrical component. It is also reasonable to conclude that “design cost” would be for the estimated cost of the asset, i.e. the electrical component, since FPL will be earning a return on the value of the funding amount. Therefore, staff disagrees with the position taken by the Larsons that the design costs should be limited to only engineering and professional service fees.

Table 7 below illustrates that after FPL makes the funding payment of \$56.6 million, the Company will begin recouping the payment in 2014 before the Expanded Facility comes in-service. (EXH 10, p. 3465)

Table 7: Capitalization of Advanced Funding Payment

Capitalization of the Advanced Funding Payment for the Expanded Facility (in millions)						
Year	Capital Cost	Depreciation	Tax	Cost of Debt	Return on Equity	Total
2014	56,600		1,671	1,102	2,661	5,435
2015	56,600		1,671	1,102	2,661	5,435
2016	54,935	3,329	1,622	1,070	2,583	8,604
2017	51,606	3,329	1,524	1,005	2,426	8,285
2018	48,276	3,329	1,425	940	2,270	7,965
2019	44,947	3,329	1,327	875	2,113	7,645
2020	41,618	3,329	1,229	810	1,957	7,326
2021	38,288	3,329	1,131	746	1,800	7,006
2022	34,959	3,329	1,032	681	1,644	6,686
2023	31,629	3,329	934	616	1,487	6,366
2024	28,300	3,329	836	551	1,331	6,047
2025	24,971	3,329	737	486	1,174	5,727
2026	21,641	3,329	639	421	1,018	5,407
2027	18,312	3,329	541	357	861	5,088
2028	14,982	3,329	442	292	704	4,768
2029	11,653	3,329	344	227	548	4,448
2030	8,324	3,329	246	162	391	4,129
2031	4,994	3,329	147	97	235	3,809
2032	1,665	3,329	49	32	78	3,489
Total		56,600	17,548	11,573	27,943	113,664
NPV 2011						55,968

Source: EXH 10, p. 3465

CONCLUSION

FPL should be allowed to recover the fixed advanced funding amount of \$56,643,942 as well as the carrying costs and prudent administrative costs incurred by FPL.

Alternate Staff Analysis:

See discussion in Issue 6.

CONCLUSION

Because of planning uncertainty, it is not clear that the advanced funding payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. However, the electrical need for the WTE facility should be granted to allow SWA to go forward with the power plant certification process.

Issue 9B: To the extent FPL incurs firm capacity costs associated with the contract between SWA and FPL that are not recovered through the ECCR clause, should FPL be allowed to recover those costs through the Capacity Cost Recovery clause?

Recommendation: No. An electric utility is authorized to seek recovery for the financing of an electrical component plus all carrying costs and reasonable and prudent administrative costs pursuant to Section 377.709(3)(b)4, F.S. The contract contains no other capacity payments except those made for the advanced funding. Therefore, FPL should be authorized to recover the funding payment, carrying costs, and reasonable and prudent administrative costs through the ECCR clause. (Brown, Graves)

Position of the Parties:

Joint Petitioners: Yes. FPL should be permitted to recover firm capacity costs associated with the proposed contract, if any, through the Capacity Cost Recovery clause, if the Commission does not permit recovery of such costs through the ECCR clause.

Larsons: No. There is no need for FPL to purchase the energy and capacity from the SWA Expanded Facility under the proposed PPA. FPL should not be allowed to profit \$60 million under the proposed PPA. FPL wants customers to pay for something that is not required because FPL will profit.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that FPL should be permitted to recover firm capacity costs associated with the proposed contract, if any, through the Capacity Cost Recovery clause if the Commission does not permit recovery of such costs through the ECCR clause. (Joint Petitioners BR 26) Furthermore, the Joint Petitioners state that FPL and other investor-owned utilities are routinely authorized to recover through the Capacity Cost Recovery clause the full measure of prudently incurred capacity payments made in connection with power purchases. (Joint Petitioners BR 26)

The Larsons assert that FPL should not be allowed to recover capacity costs through the ECCR or Capacity Cost Recovery clause. (Larsons BR 3) In addition, the Larsons contend that there is no need for FPL to purchase the energy and capacity from the SWA Expanded Facility under the proposed PPA. (Larsons BR 3) The Larsons further assert that FPL should not be allowed to profit \$60 million under the proposed PPA and that FPL wants customers to pay for something that is not required because FPL will profit. (Larsons BR 3)

ANALYSIS

Normally, investor-owned utilities are authorized to recover costs incurred in purchased power contracts through the Capacity Cost Recovery clause. This is the first time in which the Commission will preside over a docket pursuant to Section 377.709, F.S., regarding funding of an electrical component through an advance funding payment and approving cost-recovery of

that funding through the ECCR clause. The current docket contains a purchased power contract between the Joint Petitioners. However, pursuant to Section 377.709(3)(b)4, F.S., recovery for the advanced funding payment must be recovered from ratepayers pursuant to the provisions of the Florida Energy Efficiency and Conservation Act, which also governs the Commission's role with regard to conservation goals and program approval. The Commission has historically used the Energy Conservation Cost Recovery clause to recover utility expenditures for conservation programs. As such, it would be consistent to allow the recovery of the advanced funding payment to flow through the ECCR clause. The contract contains no other capacity payments except those made for the advanced funding. (EXH 2)

CONCLUSION

An electric utility is authorized to seek recovery for the financing of an electrical component plus all carrying costs, plus reasonable and prudent administrative costs pursuant to Section 377.709(3)(b)(4), F.S. FPL has stated that there are no other capacity payments except those made for the advanced funding. Therefore, FPL should be authorized to recover the funding payment, carrying costs, and reasonable and prudent administrative costs through the ECCR clause.

Issue 10: Should FPL be allowed to recover from its customers all payments for energy made to SWA pursuant to and/or resulting from the proposed contract between SWA and FPL through the Fuel and Purchased Power Cost Recovery clause?

Recommendation: Yes. FPL should be able to recover all reasonable and prudent payments for energy made to SWA to and/or resulting from the proposed contract between SWA and FPL through the Fuel and Purchased Power Cost Recovery clause. (Brown, Graves,)

Position of the Parties:

Joint Petitioners: Yes. FPL should be allowed to recover all payments for energy made to SWA pursuant to the proposed contract through the Fuel and Purchased Power Cost Recovery clause.

Larsons: No. There is no need for FPL to purchase the energy and capacity from the SWA Expanded Facility under the proposed PPA. FPL summer reserve margins are adequate without the SWA contract. The proposed contract unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that FPL should be allowed to recover all payments for energy made to SWA pursuant to the proposed contract through the Fuel and Purchased Power Cost Recovery clause. (Joint Petitioners BR 27) Moreover, the Joint Petitioners state that by entering into the proposed contract, FPL's customers will benefit from fuel savings, variable operation and maintenance savings, and environmental savings which all outweigh the costs that FPL will recover from its customers. (Joint Petitioners BR 27) Finally, the Joint Petitioners state that FPL and other investor-owned utilities are routinely authorized to recover through the Fuel and Purchased Power Cost Recovery clause the full measure of prudently incurred energy payments made in connection with power purchases and such payments under the proposed contract should be permitted under the fuel clause. (Joint Petitioners BR 28)

The Larsons assert that FPL should not be allowed to recover from its customers all payments for energy made to SWA pursuant to and/or resulting from the proposed contract through the Fuel and Purchased Power Cost Recovery clause. (Larsons BR 4). Furthermore, the Larsons state that there is no need for FPL to purchase the energy and capacity from the SWA Expanded Facility under the proposed PPA and FPL's summer reserve margins are adequate without the SWA contract. (Larsons BR 4) Finally, the Larsons believe the proposed contract unjustly burdens FPL's ratepayers with additional costs for energy and capacity that is not required. (Larsons BR 4)

ANALYSIS

It is Commission practice to allow investor-owned utilities to recover prudent energy payments incurred through purchased power agreements through the Fuel and Purchased Power Cost Recovery clause. Section 377.709(3)(b)2, F.S., states:

If the commission determines that energy payments to the local government are appropriate, such payments may not be greater than the lesser of: (a) the hourly incremental energy rates of the electric utility as provided for in its approved tariffs over the period of the contract; or (b) the energy costs associated with the avoided-capacity costs of the electric utility as determined by the Commission.

Before the commercial operation date of the Expanded Facility, FPL will pay the SWA for each MWH of energy at a rate equal to 99 percent of its as-available avoided energy costs for FPL's Southeastern/Eastern region. (EXH 2, p. 45) Once the Expanded Facility comes on-line, FPL shall pay the SWA for the energy at a combination of fixed and floating energy rates. (EXH 2, p. 45)

The percentage fixed energy rates for the Expanded Facility has not been determined, however, the amount will not exceed 50 percent. (EXH 2, p. 45) Once the fixed percentage has been determined, for each month of the calendar year, the payment for the fraction of fixed energy rates shall be calculated as the total net generation for each hour of each month, times the fraction of fixed energy rates, times the forecasted energy rates included in the contract summed over all hours of the month. (EXH 2, p. 45) The calculation to obtain a yearly average of the fraction of fixed energy rates consists of taking each complete calendar month and include those results in a cumulative average of the partial calendar year. (EXH 2, p. 45)

Prior to commercial operation, the floating energy payment shall be calculated as the sum over all hours of the month, times the generation for the hour, times the as-available avoided energy costs for FPL's Southeastern/Eastern region, times 99 percent. (EXH 2, p. 45) After commercial operation, the floating energy payment will be calculated as the sum over all hours of the month, times the generation for the hour, times the lesser of avoided energy cost of the avoided unit or as-available avoided energy costs for FPL's Southeastern/Eastern region. (EXH 2, p. 45)

CONCLUSION

FPL should be able to recover all reasonable and prudent payments for energy made to SWA to and/or resulting from the proposed contract between SWA and FPL through the Fuel and Purchased Power Cost Recovery clause.

Issue 11: Based on the resolution of the foregoing issues, should the Commission grant the Joint Petition for modification to determination of need by SWA and FPL and for recovery of purchased power contract costs?

Primary Recommendation: Yes. (Brown, Graves, Garl, Ballinger)

Alternative Recommendation: Yes. The electrical need for the WTE facility should be granted allowing SWA to go forward with the power plant certification process. However, because of planning uncertainty, it is not clear that the advance capacity payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective. (Trapp)

Position of the Parties:

Joint Petitioners: Yes. The Commission should grant the Joint Petition with approval of: (a) the requested Modification to the Determination of Need, (b) the proposed purchase power agreement between SWA and FPL, and (c) the requested cost recovery and regulatory accounting treatment associated for FPL with the proposed purchase power agreement.

Larsons: No. The Commission must deny the determination of need, cost recovery, and contract approval requested within the Joint Petition. FPL has no need to purchase energy and capacity from the SWA Expanded Facility. The PPA unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners believe the Commission should grant the Joint Petition with approval of: (a) the requested Modification to the Determination of Need, (b) the proposed purchase power agreement between SWA and FPL, and (c) the requested cost recovery and regulatory accounting treatment associated for FPL with the proposed purchase power agreement. (Joint Petitioners BR 28-29) Furthermore, the Joint Petitioners assert that the record overwhelmingly establishes that SWA's Expanded Facility and the associated proposed purchase power contract with FPL will result in significant benefits for the customers of SWA and FPL. (Joint Petitioners BR 29) Moreover, the Joint Petitioners contend that the evidence in the case demonstrates that the Expanded Facility will meet SWA's need for effective and efficient disposal of MSW in Palm Beach County for SWA's customers and the resulting renewable energy electrical output will produce cost savings for FPL's customers. (Joint Petitioners BR 29) Finally, the Joint Petitioners assert that without the Expanded Facility and proposed contract, SWA will use up its scarce landfill resources at an increased rate, and FPL's customers will not enjoy the associated cost savings from the Expanded Facility's electrical output and the added benefit of increased renewable energy generation. (Joint Petitioners BR 29)

The Larsons contend that the Commission must deny the determination of need cost recovery, and contract approval requested within the Joint Petition. (Larsons BR 4) In addition, the Larsons assert that FPL has no need to purchase energy and capacity from the SWA Expanded Facility. Finally, the Larsons state that the PPA unjustly burdens FPL ratepayers with additional costs for energy and capacity that is not required. (Larsons BR 4)

ANALYSIS

After considering all the evidence contained in the record, staff recommends approval of the Joint Petition for modification to determination of need for the Expanded Facility. In addition, staff recommends approval of associated regulatory accounting and purchase power agreement cost-recovery through the Energy Conservation Cost Recovery clause pursuant to Section 377.709(3)(b)4, F.S. FPL should illustrate that the cost of the carrying costs and administrative costs are reasonable and prudent during the annual ECCR proceedings.

CONCLUSION

After considering all the evidence contained in the record, staff recommends approval of the Joint Petition for modification to determination of need for the Expanded Facility.

Alternate Staff Analysis:

See discussion in Issue 6.

CONCLUSION

The electrical need for the WTE facility should be granted allowing SWA to go forward with the power plant certification process. However, because of planning uncertainty, it is not clear that the advance capacity payment to SWA is cost-effective pursuant to Sections 377.709 and 403.519, F.S. The Joint Petitioners should be afforded the opportunity to correct this deficiency by mutually agreeing to amend the proposed PPA. The Commission should not approve the proposed PPA until it can be demonstrated to be cost-effective.

Docket No. 110018-EU

Date: June 6, 2011

Issue 12: Should this docket be closed?

Recommendation: Yes. Upon issuance of a final Order addressing the Solid Waste Authority and Florida Power & Light Joint Petition to determine need for the Expanded Facility, the docket should be closed when the time for filing an appeal has run. (Murphy)

Staff Analysis: Upon issuance of a final Order addressing the Solid Waste Authority and Florida Power & Light Joint Petition to determine need for the Expanded Facility, the docket should be closed when the time for filing an appeal has run.