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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 08_____-EI
FLORIDA POWER & LIGHT COMPANY

IN RE: FLORIDA POWER & LIGHT COMPANY'S PETITION TO DETERMINE NEED FOR CONVERSION OF CAPE CANAVERAL PLANT

IN RE: FLORIDA POWER & LIGHT COMPANY'S PETITION TO DETERMINE NEED FOR CONVERSION OF RIVIERA PLANT

DIRECT TESTIMONY & EXHIBITS OF:

ALAN S. TAYLOR

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF ALAN S. TAYLOR

DOCKET NO. 08____ - EI

APRIL 30, 2008

Q. Please state your name and business address.

A. My name is Alan S. Taylor, and my business address is 5511 Northfork Court, Boulder, Colorado, 80301.

Q. By whom are you employed and what position do you hold?

A. I am President of Sedway Consulting, Inc.

Q. Please describe your duties and responsibilities in that position.

A. I perform consulting engagements in which I assist utilities, regulators, and customers with the challenges that they may face in today's dynamic electricity marketplace. My area of specialization is in the economic and financial analysis of power supply options.

Q. Please describe your education and professional experience.

A. I earned a Bachelor of Science Degree in energy engineering from the Massachusetts Institute of Technology and a Masters of Business Administration from the Haas School of Business at the University of California, Berkeley, where I specialized in finance and graduated valedictorian.

I have worked in the utility planning and operations area for 20 years, predominantly as a consultant specializing in integrated resource planning, competitive bidding analysis, utility industry restructuring, market price forecasting, and asset valuation. I have testified before state commissions in proceedings involving resource solicitations, environmental surcharges, and fuel adjustment clauses.

I began my career at Baltimore Gas & Electric Company (BG&E), where I performed efficiency and environmental compliance testing on the utility system's power plants. I subsequently worked for five years as a senior consultant at Energy Management Associates (EMA, now New Energy Associates), training and assisting over two dozen utilities in their use of EMA's operational and strategic planning models, PROMOD III and PROSCREEN II. During my graduate studies, I was employed by Pacific Gas & Electric Company (PG&E), where I analyzed the utility's proposed demand side management (DSM) incentive ratemaking mechanism, and by Lawrence Berkeley Laboratory (LBL), where I evaluated utility regulatory policies surrounding the development of brownfield generation sites.

Subsequently, I worked at PHB Hagler Bailly (and its predecessor firms) for ten years, serving as a vice president in the firm's Global Economic Business Services practice and as a senior member of the Wholesale Energy Markets practice of PA Consulting Group, when that firm acquired PHB Hagler Bailly

in 2000. In 2001, I founded Sedway Consulting, Inc. and have continued to specialize in economic analyses associated with electricity wholesale markets.

Q. What is the purpose of your testimony?

A. Sedway Consulting was retained to assist Florida Power & Light Company (FPL) in conducting its 2007 solicitation for competitive power supplies. I was the principal consultant on the project, reviewed FPL's solicitation process, and performed a parallel and independent economic evaluation of FPL's Next Planned Generating Unit (NPGU) and the proposals that were received by FPL in response to the utility's solicitation. Ultimately, I concluded that FPL's West County Energy Center (WCEC) Unit 3 combined-cycle (CC) facility described in FPL's Request for Proposals (RFP), with an in-service date of June, 2011, represented the most cost-effective resource for meeting FPL's resource needs for 2011-2013. In early April, 2008, I filed testimony in another proceeding before the Florida Public Service Commission regarding that evaluation and selection decision.

Subsequently, Sedway Consulting was retained by FPL to perform an independent evaluation of the economics of specific conversion options (that FPL is considering for its existing Cape Canaveral and Riviera power plants) relative to the power supply options that were evaluated by Sedway Consulting in FPL's recent 2007 RFP. The purpose of my testimony is to describe my role as an independent evaluator and present my findings. I will discuss the process and tools that I used to conduct that economic evaluation.

Based on the results of my independent evaluation, I concluded that FPL's Cape Canaveral and Riviera conversion options are more cost-effective than the proposed power purchase agreement (PPA) alternatives that were submitted in FPL's 2007 resource solicitation two months ago (on February 13, 2008).

Q. Are you sponsoring any exhibits in this case?

A. Yes. I am sponsoring Exhibits AST-1 and AST-2, which are attached to my direct testimony:

Exhibit AST-1 Resume of Alan S. Taylor

Exhibit AST-2 Sedway Consulting's Independent Evaluation Report.

Q. Before describing your role in the review of FPL's conversion options, please describe the role you performed as an independent evaluator in FPL's 2007 RFP project.

A. As the independent evaluator in FPL's 2007 RFP project, I reviewed FPL's 2007 Ten-Year Site Plan and the utility's modeling processes pertaining to its use of P-MArea, a detailed production costing model that was used in the economic evaluation of resource options in the solicitation. I, and/or members of the Sedway Consulting team, listened in on the December 11, 2007 Pre-Issuance Conference Call and attended the December 20, 2007 Bidders Conference. Before receiving the proposals, I had requested that FPL run P-MArea and provide production costing results that I could use to calibrate Sedway Consulting's resource evaluation model. I participated in the opening of proposal packages in Miami on the Proposal Due Date (February 13, 2008),

retained one copy of each submitted proposal, and evaluated the economic/pricing information from each proposal. Using Sedway Consulting's Response Surface Model (RSM), I developed and evaluated portfolios of resources and assessed their overall costs. I compared Sedway Consulting's portfolio ranking and results with those of FPL to confirm consistency of assumptions and concurrence of conclusions, and I documented the entire process in an independent evaluation report.

Q. Please describe the role you performed as an independent evaluator in reviewing FPL's conversion options.

A. I assessed the economics of the FPL conversion options in the context of the proposals that FPL received and considered in the utility's recent RFP. In performing that assessment, I used the same model (the RSM) that Sedway Consulting used in that solicitation.

Q. Please describe Sedway Consulting's RSM model and its use in FPL's conversion assessment project.

A. The RSM is a spreadsheet model that I have used in solicitations around the country, and it was used in the conversion assessment project in the same way that it was used in FPL's 2007 RFP project. It is a relatively straightforward tool that allows one to independently assess the cost impacts of different generating or purchase resources for a utility's supply portfolio. Most of the evaluation analytics in the RSM involve calculations that are based entirely on my input of proposal costs and characteristics. A small part of the model examines system production cost impacts and needs to be calibrated to

simulate a specific utility's system. In the case of the FPL solicitation, in the weeks prior to the proposal opening, I requested that FPL execute specific sets of runs with P-MArea. With the results of these runs, I was able to calibrate the RSM to approximate the production cost results that P-MArea would produce in a subsequent evaluation of any proposals or self-build options that FPL might receive. Thus, I would not have to rely on FPL's modeling of a proposal or self-build option; instead, I would be able to insert my own inputs into my own model and independently evaluate the economic impact of any particular resource. In short, the RSM provides an independent assessment to help ensure against the inadvertent introduction of significant mistakes that could cause the evaluation team to reach the wrong conclusions.

Q. How is the RSM an independent analytical tool if it is based on initial P-MArea results?

A. As I noted above, most of the calculations performed by the RSM are not based on P-MArea results in any way. There are two main categories of costs that are evaluated in a resource solicitation: fixed costs and variable costs. The costs in the first category – the fixed costs of a proposal – are calculated entirely separately in the RSM, with no reliance on the P-MArea model for these calculations. The second category – variable costs – has two parts: (1) the calculation of a resource's variable dispatch rates and, (2) the impact that a resource with such variable rates is likely to have on FPL's total system production costs. As with the fixed costs, a proposal's variable dispatch rates are calculated entirely separately in the RSM, with no basis or reliance on the

P-MArea model. It is only in the final subcategory – the impact that a resource is likely to have on system production costs – that the RSM has any reliance on calibrated results from P-MArea.

Q. Please elaborate on that area of calculations where the RSM is affected by the P-MArea calibration runs.

A. This is the area of system production costs. These costs represent the total fuel, variable operation and maintenance (O&M), emission, and purchased power energy costs that FPL incurs in serving its customers' load. Given FPL's load forecast, the existing FPL supply portfolio (i.e., all current generating facilities and purchase power contracts), and many specific assumptions about future resources and fuel costs, P-MArea simulates the dispatch of FPL's system and forecasts total production costs for each month of each year of the study period. At the outset of the solicitation project, the RSM was populated with monthly system production cost results that were created by the P-MArea calibration runs.

Q. What did the RSM do with this production cost information?

A. Once incorporated into the RSM, the production cost information allowed the RSM to answer the question: How much money (in monthly total production costs) is FPL likely to save if it acquires a proposed resource, relative to a reference resource? The use of a reference resource simply allowed a consistent point of comparison for evaluating all proposals and FPL's self-build options. As a reference resource, I used a hypothetical gas-fired resource with a very high variable dispatch rate associated with a heat rate of

25,000 Btu/kWh. In fact, I could have picked any variable dispatch or heat rate for the reference resource and obtained the same relative ranking of proposals out of the RSM. The cost of the reference resource has no impact on the relative results – it is merely a consistent reference point.

Q. Can you provide a numerical example that shows how the RSM works?

A. Certainly. Assume that a utility has a one-year resource need of 1,000 MW and must select one of the two following proposals:

	Proposal A	Proposal B
Capacity:	1,000 MW	1,000 MW
Capacity Price:	$9.00/kW-month	$5.50/kW-month
Energy Price:	$20/MWh	$50/MWh

For both proposals, the RSM has already calculated the fixed costs (and represented them in the capacity price) and the variable costs (and represented them in the energy price). Proposal A is more expensive in terms of fixed costs, but Proposal B is more expensive on an energy cost basis. The RSM calculates the final piece of the economic analysis – the different impacts on system production costs – to determine which proposal is less expensive in a total sense for the utility system as a whole.

Assume that the 25,000 Btu/kWh reference unit has a variable cost of $150/MWh and that the RSM has been calibrated and populated with the following production cost information:

For a 1,000 MW proxy resource, the utility's one-year total system production costs are:

- $2.500 billion for a $150/MWh energy price reference resource
- $2.488 billion for a $50/MWh energy price resource (Proposal B)
- $2.452 billion for a $20/MWh energy price resource (Proposal A)

Thus, the energy savings (relative to the selection of a $150/MWh reference resource) are $48 million for Proposal A with its $20/MWh energy price and $12 million for Proposal B with its $50/MWh energy price. In its proposal ranking process, the RSM converts all production cost savings into a $/kW-month equivalent value so that the savings can be deducted from the capacity price to yield a final net cost (in $/kW-month) for each proposal. Converting the energy savings in this numerical example into $/kW-month equivalent values yields the following:

$48 million / (1,000 MW * 12 months) = $4.00/kW-month

$12 million / (1,000 MW * 12 months) = $1.00/kW-month

The RSM calculates the net cost of both proposals by subtracting the energy cost savings from the fixed costs:

	Proposal A	Proposal B
Capacity Price:	$9.00/kW-month	$5.50/kW-month
Energy Cost Savings:	$4.00/kW-month	$1.00/kW-month
Net Cost:	**$5.00/kW-month**	**$4.50/kW-month**

Proposal B is less expensive. This can be confirmed through a total cost analysis as well:

Proposal A will require total capacity payments of $108 million (= 1,000 MW x $9.00/kW-month x 12 months), and Proposal B will require $66 million (= 1,000 MW x $5.50/kW-month x 12 months). Thus, Proposal A has fixed costs that are $42 million more than Proposal B.

Proposal A will provide $36 million more in energy cost savings (= $48 million - $12 million); however, this is not enough to warrant paying $42 million more in fixed costs. Therefore, Proposal B is the less expensive alternative.

Note that the RSM is described in more detail in the independent evaluation report that is attached to my testimony as Exhibit AST-2.

Q. With that understanding of the RSM process, what did you do to calibrate the RSM to P-MArea?

A. I reviewed the production cost information that FPL provided at the start of the project and confirmed that the production costs were, for the most part, exhibiting smooth, correct trends (i.e., they were increasing where they should be increasing and declining where they should be declining). Having verified that the RSM production cost values were "smooth," I was confident that inputting variable cost parameters into the models for similar proposals would yield similar production cost results. Although the RSM is not a detailed model and could not simulate FPL's production costs with P-MArea's accuracy, in the end, the independent RSM evaluation results tracked P-MArea's results reasonably well. As noted above, FPL incorporated some revised planning assumptions into its latest analysis. Thus, I would not necessarily expect a direct correlation between FPL and Sedway Consulting's analysis anyway. Instead, my analysis focused on how FPL's Cape Canaveral and Riviera conversion options compared to the proposed PPAs from FPL's recent resource solicitation, based on the original assumptions that were in place prior to the February 13, 2008 RFP Proposal Due Date.

Q. Did you find it necessary to modify the proposal information to conduct your analysis?

A. Yes. The proposals had been in response to a solicitation for power supplies as early as 2011. In the conversion analysis, I assumed that FPL's West County Energy Center Unit 3 would be in service by 2011, thereby pushing

out FPL's need for new capacity until 2014. I did not think that it would be appropriate to evaluate the proposals with their original start dates because they would represent excess capacity and would be disadvantaged in the economic analysis.

Q. How then did you modify the proposal information to conduct your analysis?

A. I advanced the PPA start dates to 2014 for all proposals. Unless there were explicit escalation parameters included in the proposals, I kept the pricing at the original start date's value. I think that this is a conservative assumption. Given general inflation and the cost increases that are being experienced in the generation technology markets, had FPL requested revised proposals from the bidders for later (2014) PPA start dates, it is likely that the prices would have been higher than the original proposals.

Q. What were the results of Sedway Consulting's RSM analysis?

A. Using the RSM, Sedway Consulting performed a portfolio analysis. The portfolio with the oil-fired steam units at Cape Canaveral (Units 1 and 2) and Riviera (Units 3 and 4) converted at each site to a new 3-on-1 G combined cycle facility was found to be $481 million (cumulative present value of revenue requirements – CPVRR) less expensive than the best portfolio that included any of the proposed PPAs. The results and ranking of portfolios are described in detail in Sedway Consulting's independent evaluation report that is attached as Exhibit AST-2.

Q. What do you conclude about FPL's conversion projects?

A. I conclude that the Cape Canaveral and Riviera conversion projects are more cost effective than the procurement of power through the long-term PPAs that were submitted for consideration in FPL's recent resource solicitation (and appropriately adjusted to make the timing of those PPAs as favorably comparable to the FPL conversion projects as possible).

Q. Does this conclude your testimony?

A. Yes.

RESUME OF ALAN S. TAYLOR

AREAS OF QUALIFICATION

Independent evaluation services for competitive bidding resource selection, integrated resource planning, market analysis, risk assessment, and strategic planning

EMPLOYMENT HISTORY

- President, Sedway Consulting, Inc., Boulder, CO, 2001-present
- Senior Member of PA Consulting, Inc., Boulder, CO, 2001
- Vice President, Global Energy Business Sector, PHB Hagler Bailly, Inc., Boulder, CO, 2000
- From Senior Associate to Principal, Utility Services Group, Hagler Bailly Consulting, Inc., Boulder, CO, 1991-1999
- Senior Consultant, Energy Management Associates, Atlanta, GA, 1983-1988
- Internships at: Pacific Gas & Electric Company, San Francisco, CA (1990)
  Lawrence Berkeley Laboratory, Berkeley, CA (1989-1991)
  MIT Resource Extraction Laboratory, Cambridge, MA (1982)
  Baltimore Gas and Electric Company, Baltimore, MD (1980)

EDUCATION

- Walter A. Haas School of Business, University of California at Berkeley, MBA, Valedictorian, Corporate Finance, 1991
- Massachusetts Institute of Technology, BS, Energy Engineering, 1983

PROFESSIONAL EXPERIENCE

- Developed and/or reviewed dozens of requests for proposals for utility resource solicitations.
- Conducted numerous competitive bidding project evaluations for conventional generating resources, renewable facilities, and off-system power purchases.
- Assisted in or monitored contract negotiations with shortlisted bidders in utility resource solicitations.
- Testified on utility competitive bidding solicitation results, affiliate transactions, cost recovery procedures, rate case calculations, and incentive ratemaking proposals.
- Managed the development of market price forecasts of North American and European electricity markets under deregulation.
- Performed financial modeling of electric utility bankruptcy workout plans.
- Trained and assisted many of the nation's largest electric and gas utilities in their use of operational and strategic planning computer models.

SELECTED PROJECTS

2005- **California Solicitations for Conventional and Renewable Resources**
2008 Client: Southern California Edison

Served as the Independent Evaluator (IE) in three solicitations for new power supplies in southern California – one for over 2,500 MW of conventional resources and two others for renewable energy purchases to help Southern California Edison meet its state Renewable Portfolio Standard requirements. Mr. Taylor managed a Sedway Consulting team that performed a parallel evaluation of all proposals, monitored communications and negotiations with power suppliers, and supported the review of the final selected proposals by the Procurement Review Group – a collection of non-market-participant stakeholders and regulators who were provided confidential access to the evaluation results at intermediate stages. He has filed IE reports and sponsored testimony before the California Public Utilities Commission concerning the results of the solicitations.

2007- **Avoided Cost Analysis for Interruptible Loads**
2008 Client: Public Service Company of Colorado

Provided an independent assessment of Public Service Company of Colorado's peaking resource avoided costs for use in the utility's development of customer credits for its interruptible service tariff.

2007 **Florida Solicitation for New Resources**
Client: Tampa Electric Company

Provided independent evaluation services in Tampa Electric Company's solicitation for 600 MW of new power supplies for 2013, as a market test for the utility's proposal to develop an integrated gasification combined cycle (IGCC) facility (Polk 7).

2005- **California Solicitations for Conventional and Renewable Resources**
2008 Client: Pacific Gas & Electric

Served as the Independent Evaluator in three solicitations for new power supplies in northern California – one for 2,200 MW of conventional resources and two others for between 1,400 and 2,800 GWh/year of renewable energy purchases. Mr. Taylor managed a Sedway Consulting team that performed a parallel evaluation of all proposals, monitored communications and negotiations with power suppliers, and supported the review of the final selected proposals by the Procurement Review Group – a collection of non-market-participant stakeholders and regulators who were provided confidential access to the evaluation results at intermediate stages. He has filed IE reports and sponsored testimony before the California Public Utilities Commission concerning the results of the solicitations.

2004- **Regulatory Support of Commission Staff**
2005 Client: Utah Division of Public Utilities

Assisted staff for the Utah Division of Public Utilities in the division's efforts to analyze PacifiCorp's 2005 rate case. Mr. Taylor reviewed production cost modeling results and forecasts of system-wide fuel and purchase power costs.

2004- **Minnesota Solicitation for New Resources**
2005 Client: Minnesota Power

Provided independent evaluation services in a solicitation for 200 MW of firm power supplies. Mr. Taylor reviewed all proposals and performed a parallel economic evaluation among proposed turnkey facilities and power purchases.

2004 **Canadian Solicitations for Conventional and Renewable Resources**
Client: Ontario Energy Ministry

Participated in a broader consulting team and provided assistance in the development of RFPs for 2,500 MW of conventional resources and 300 MW of renewable resources. New long-term sources of power were sought to replace regional coal-fired generation.

2003- **Florida Solicitation for New Resources**
2004 Client: Florida Power & Light

Provided independent evaluation services in Florida Power & Light's solicitation for 1,100 MW of new power supplies for 2007. Mr. Taylor performed a parallel economic evaluation to that which was undertaken by the utility. His work efforts allowed all proposal parameters to be cross-checked and corrected where necessary. He sponsored testimony before the Florida Public Service Commission concerning the results of the solicitation evaluation.

2002- **Minnesota Solicitation for New Resources**
2003 Client: Northern States Power

Assisted in the evaluation of a large number of multi-option proposals for new power supplies in the 2005-2009 time frame. Mr. Taylor was the independent evaluator in two separate solicitations. He managed a team of individuals in the evaluation of responses for both Requests for Proposals (RFPs). In the first solicitation, contingent proposals were received that could serve as replacement contracts for 1,100 MW of nuclear capacity if NSP were forced to decommission its Prairie Island power plant in 2007. In the second solicitation, NSP sought approximately 1,000 MW of new supplies to supplement its existing supply portfolio. The evaluation included the review of over a dozen proposed wind projects.

2002 **Florida Revisions to Bidding Rule**
Client: Consortium of utilities

Provided the Florida Public Service Commission with recommendations concerning appropriate revisions to the state's bidding rule. Mr. Taylor participated in public workshops to provide the benefits of his extensive experience in performing competitive bidding solicitations and to convey what changes should or should not be made to Florida's existing bid rule to ensure the selection of the best resources for the state's electricity customers.

2002 **Arizona Testimony Concerning Competitive Bidding Solicitations**
Client: Harquahala Generating Company, LLC

Filed testimony before the Arizona Corporation Commission in the Generic Proceedings Concerning Electric Restructuring Issues and Associated Proceedings. Mr. Taylor's testimony provided the Commission with information about competitive bidding processes that he had seen work in other states. Also, his testimony addressed various concerns that were raised by Arizona Public Service as to the feasibility of implementing competitive bidding in Arizona.

2002 **Florida Solicitation for New Resources**
Client: Florida Power & Light

Provided independent evaluation services in Florida Power & Light's solicitation for 1,750 MW of new power supplies in the 2005-2006 time frame. Mr. Taylor performed a parallel economic evaluation to that which was undertaken by the utility. His work efforts allowed all proposal parameters to be cross-checked and corrected where necessary. Also, he provided suggestions on resource optimization modeling approaches that ensured the most comprehensive examination of thousands of potential combinations of proposals.

2001 **Wisconsin Testimony Concerning Competitive Bidding Solicitations**
Client: MidWest Independent Power Suppliers

Provided testimony in a proceeding before the Wisconsin Public Service Commission on behalf of a consortium of independent power producers. Mr. Taylor testified on the benefits and timing of a competitive bidding solicitation that Wisconsin Electric Power Company (WEPCO) should be ordered to conduct prior to the utility's development of $2.8 billion in self-build generation facilities (embodied in a WEPCO proposal called Power the Future – 2). Without the benefits of a competitive solicitation, there would be no defensible means of ensuring that the utility's customers were being offered the best, most cost-effective resources.

2001 **Negotiation of Full-Requirements Purchase Contract**
Client: Georgia cooperative utility

Assisted in negotiation of a $2 billion power purchase contract. Mr. Taylor worked with a team of legal experts and other consultants to assist the client in negotiating a 15-year full-requirements contract with a large, national power supplier. Detailed modeling simulations were performed to compare the complex transaction to the utility's own self-build alternatives. Mr. Taylor helped investigate and negotiate detailed provisions in the power supply contract concerning ancillary services and other operational parameters.

2001 **Evaluation of Resource Proposals**
Client: North Carolina municipal utility

Reviewed responses to a utility resource solicitation and assisted the client in developing a short list of the best bidders. Mr. Taylor reviewed the results of the client's economic analysis of the proposals and provided insights on various nonprice factors related to each of the top-ranked proposals. Mr. Taylor helped the client in structuring and strategizing for the negotiation process.

2000-2001 **Solicitation for New Resources**
Client: Public Service of Colorado

Assisted in the evaluation of a large number of multi-option proposals for new power supplies in the 2002-2005 time frame. Mr. Taylor managed a team of a dozen individuals who performed economic and nonprice evaluations of conventional and renewable proposals. Mr. Taylor developed recommendations for a short list of the best resources and managed a supplemental evaluation of second-tier bidders when the client's capacity needs subsequently increased. Ultimately, over $2 billion of contracts were negotiated for over 1,700 MW of new power supplies under terms of up to 10 years. Mr. Taylor testified before the Colorado Public Utilities Commission on the processes and results of both the primary and supplemental evaluations.

1999-2000 **Solicitation for New Resources**
Client: MidAmerican Energy

Reviewed MidAmerican's solicitation for new power supplies for the 2000-2005 resource planning period. Mr. Taylor managed a team of individuals who performed an independent parallel evaluation of MidAmerican's analysis of responses to the utility's request for proposals (RFP). Mr. Taylor reviewed MidAmerican's evaluation and negotiation process and testified to the fairness and appropriateness of MidAmerican's actions. He filed testimony before the utility regulatory commissions in Iowa, Illinois, and South Dakota.

2000 **Electricity Market Assessments**
Client: various American and European clients

Helped develop electricity market prices for regional electricity markets in North America (California, New England, Arizona/New Mexico, Louisiana) and Europe (Austria, Belgium, France, Germany, and the Netherlands). Mr. Taylor worked with project teams in the U.S. and Europe to develop simulation models and databases to forecast energy and capacity prices in the deregulating power markets.

1999 **Evaluation of New Resources**
Client: Florida Power Corporation

Helped prepare the FPC's RFP for long-term supply-side resources and assisted in the independent evaluation of responses. Mr. Taylor oversaw the review of FPC's computer simulations (in PROVIEW and PROSYM) of the proposals that were received. The project team also evaluated the proposals by using a response surface model to approximate the results that might be produced in the more detailed simulations. Mr. Taylor testified before the Florida Public Service Commission concerning his assessment of FPC's solicitation and the results of the analysis.

1998 **Evaluation of New Resources**
Client: Public Service of Colorado

Assisted the evaluation of proposals for PSCo's near-term 1999 resource additions and managed the complete third party evaluation of proposals for resources in the 2000-2007 time frame. Such resources included third-party facilities and power purchases, as well as company-sponsored interruptible tariffs. Mr. Taylor assisted with the development of the request for proposals and oversaw the evaluation of all responses. He and his team monitored subsequent negotiations with shortlisted bidders. Mr. Taylor testified before the Colorado Public Utilities Commission on the fairness of the solicitation and the results of the evaluation.

1997- **Evaluation/Negotiation of Transmission Interconnection Solicitation**
1999 Client: New Century Energies

Managed a solicitation for participation in a major transmission project interconnecting Southwestern Public Service (a Texas member of the Southwest Power Pool) and Public Service of Colorado (a member of the Western Systems Coordinating Council). As the first major inter-reliability-council transmission project in the era of open access, FERC required that SPS and PSCo solicit third-party interest in participation. This project required the development of an RFP and evaluation of responses for both equity participation and long-term transmission service for over 21 alternative high-voltage AC/DC/AC transmission projects. The evaluation focused on the costs and intangible risks of different transmission alternatives relative to the benefits and

savings associated with increased economy interchange, avoided future generating capacity, and reductions in single-system spinning reserve and reliability requirements.

1996- **Evaluation/Negotiation of All-Source Solicitation**
1997 Client: Southwestern Public Service

Managed the evaluation of a broad array of responses to an all-source solicitation that was issued by Southwestern Public Service (SPS). Resources in the areas of conventional supply-side generation, renewable resources, off-system transactions, DSM, and interruptible loads were proposed. The evaluation entailed scoring the proposals for a variety of price and nonprice attributes. Mr. Taylor assisted Southwestern in its negotiations with the bidders and performed the detailed evaluation of the best and final offers.

1996- **Risk Assessment for 1,000-MW Solicitation**
1997 Client: Seminole Electric Cooperative

Managed the review and assessment of risks associated with responses to a 1,000-MW solicitation that was issued by Seminole Electric Cooperative. The evaluation entailed reviewing selected proposals' financial feasibility, performance guarantees, fuel supply plans, O&M plans, project siting, dispatching flexibility, and bidder qualifications.

1997 **Analysis/Testimony Concerning Louisville Gas & Electric's Fuel Adjustment Clause**
Client: Kentucky Industrial Utility Customers

Performed a detailed examination of Louisville Gas & Electric's (LG&E) fuel adjustment clause and identified misallocated costs in the areas of transmission line losses and purchased power fuel costs. Mr. Taylor also critiqued LG&E's rate adjustment methodology and recommended closer scrutiny of costs associated with jurisdictional and non-jurisdictional sales. Mr. Taylor testified before the Kentucky Public Service Commission and presented the findings of his analysis.

1995 **Development of All-Source Solicitation RFPs**
Client: Southwestern Public Service

Managed the development of five RFPs that solicited resources in the areas of conventional supply-side generation, renewable resources, off-system transactions, DSM, and interruptible loads. The RFPs were issued by SPS as part of an all-source solicitation to identify resources that may be competitive with two generation facilities that SPS intended to develop.

1994 **Development of Competitive Bidding RFP**
Client: Empire District Electric Company

Based on knowledge gained from the review of dozens of other utility RFPs, developed a combined-cycle resource RFP for Empire District Electric Company. The project team was

responsible for the RFP's entire development, including the development of scoring provisions for price and nonprice project attributes.

1993 **Selection of Developer for 25 MW Wind Facility**
Client: Northern States Power

Evaluated ten bids that were received by NSP in a solicitation for the development of a 25 MW wind facility in Minnesota. The proposals were scored and ranked through a point-based evaluation system that was developed prior to the solicitation. The scoring involved an assessment of operational and financial feasibility, power purchase pricing terms, construction schedules, and community acceptance issues.

1993 **Competitive Bidding Design**
Client: Northern States Power

Assisted NSP in the utility's effort to design a generic competitive bidding RFP that could be issued for a variety of generation resources. Two dozen RFPs from other utilities were reviewed to determine the appropriate weights and mechanisms that should be used to score various project attributes.

1993 **Evaluation of 500 MW Supply-Side Solicitation**
Client: San Diego Gas & Electric

Assisted in the evaluation of 15 bids that were received from a 500 MW solicitation for power by SDG&E. The utility wanted to determine whether or not there were less expensive alternatives to the implementation of its plan to repower one of its own units. The 15 projects represented over 4,000 MW. The bids were evaluated using extensive production costing modeling, in which over 1,000 model runs were performed to evaluate each bid under a variety of scenarios.

Sedway Consulting, Inc.

INDEPENDENT EVALUATION REPORT FOR FLORIDA POWER & LIGHT'S PROPOSED CAPE CANAVERAL AND RIVIERA CONVERSION PROJECTS

Submitted by:

Alan S. Taylor
Sedway Consulting, Inc.
Boulder, Colorado

April 30, 2008

Introduction and Background

On December 13, 2007, Florida Power & Light Company (FPL) issued a Request for Proposals (RFP) for capacity and energy to satisfy the utility's projected incremental resource needs for 2011-2012. On February 13, 2008, FPL received three proposals from two power suppliers that were compared with an FPL power plant construction option – namely, a natural-gas-fired 3-on-1 combined-cycle (CC) power plant at the West County Energy Center site in Palm Beach County, with a summer capacity rating of 1,219 MW and an expected in-service date of June, 2011; this resource was referred to as the Next Planned Generating Unit (NPGU). On the basis of that comparison, FPL selected the NPGU and subsequently filed a Need Determination application for the resource earlier this month (April, 2008).

Sedway Consulting, Inc. (Sedway Consulting) was retained to provide independent evaluation services to FPL and provide a parallel economic evaluation of responses to the RFP. Alan Taylor, Sedway Consulting's President and the individual who provided the primary consulting services for this project, has provided independent evaluation services in numerous utility power supply solicitations around the country.

Subsequent to the conclusion of the 2007 RFP process, FPL requested that Sedway Consulting review the economics of two FPL plant conversion projects and provide an independent evaluation of these projects relative to the recent proposals from the 2007 RFP. Given that very little time had lapsed since FPL had received the three proposals from the outside power providers, it seemed reasonable for Sedway Consulting to perform an economic comparison of the conversion projects with those recent offers (modified appropriately, as discussed below) – so that FPL could assess whether or not the conversion projects were more cost-effective than potential options in the marketplace.

It is important to note that after the RFP was issued, a revised load forecast and additional circumstances led FPL to conclude that it may not have a resource need until 2013 (of 301 MW). However, FPL recognized that there may be substantial benefits associated with acquiring capacity earlier than would be dictated solely by standard reserve margin requirements. Specifically, the possibility of performing extensive maintenance or converting some of its older power plants could be facilitated by having sufficient capacity to cover such outages.

Although FPL has continued to revised and update its generation planning assumptions, Sedway Consulting decided to evaluate all resource options under the same planning assumptions that were in place when proposals were received on February 13, 2008. Thus, while its results may differ from FPL's latest estimates, Sedway Consulting's independent evaluation is anchored in information that was known prior to the receipt and evaluation of the outside offers.

Assuming that the West County NPGU is approved for development and comes on-line in 2011, FPL will not have a resource need until 2014; that need is currently forecasted to

be 314 MW. Table 1 provides a summary of the FPL self-build and outside-bidder-proposed options that Sedway Consulting assumed would be available to meet that need. The FPL Conversions involve the retirement of FPL's existing 1960s-vintage oil-fired steam boiler Cape Canaveral Units 1 and 2 (with a combined capacity of 792 MW) and FPL's existing 1960s-vintage oil-fired steam boiler Riviera Units 3 and 4 (with a combined capacity of 565 MW) and the development at each site of a new 3-on-1 G CC facility. The CC plant at Cape Canaveral is expected to have a summer capacity of 1,219 MW, with a planned in-service date of June, 2013. The CC plant at Riviera will be virtually identical but because of slightly different prevailing conditions is expected to have a summer capacity of 1,207 MW; its planned in-service date is June, 2014. Thus, the combined net capacity that the conversion would provide to meet FPL's 2014 need would be 1,069 MW (= 1,219 MW + 1,207 MW – 792 MW – 565 MW).

Table 1
Summary of Evaluated Resources

Resource	Summer Capacity (MW)	Start Year	Technology	Location*	Term/ Economic Life (years)
P1	568	2014**	CT	St. Lucie Co.	3
P2	600	2014***	CC	DeSoto Co.	25
P3	600	2014***	CC	DeSoto Co.	20
FPL Conversions	1069	2013 & 2014	CC	Cape Canaveral & Riviera sites	27****

* All projects were located in Florida.
** The start year of the original proposal was 2011.
*** The start year of the original proposal was 2012.
**** These projects had life-of-facility terms and were assumed to generate throughout the study period.

Although mathematically speaking there were numerous potential resource combinations or portfolios that would meet or exceed FPL's capacity need, many of such combinations would result in FPL acquiring far in excess of its 2014 resource need. Thus, for this analysis, Sedway Consulting condensed the universe of potential combinations down to six specific portfolios that are depicted in Table 2.

Sedway Consulting conducted its parallel economic evaluation of the proposals and FPL self-build options by using its proprietary response surface model (RSM). The RSM is a power supply evaluation tool that can be calibrated to simulate the expected resource dispatch and resulting production costs of a specific utility's operations. Prior to the opening of the proposals, Sedway Consulting requested FPL to execute several dozen runs of its system simulation planning tool – P-MArea, a detailed production cost model.

The results of these runs were used to calibrate the RSM and allowed Sedway Consulting to evaluate the production cost impacts of all proposed resources.[1]

Table 2
Evaluated Portfolios

Portfolio Number	2013 Resource	2014 Resource
1		P1
2		P2
3		P3
4		P1, P2
5		P1, P3
6	Cape Canaveral Conversion	Riviera Conversion

This independent evaluation report documents Sedway Consulting's evaluation process and presents the results of Sedway Consulting's economic analysis. It describes the RSM, the ranking methodology that was employed, fundamental assumptions that were applied, and additional economic factors that affected the final cost of each portfolio of resources. Also, it presents the evaluation results and depicts the resource portfolios without disclosing proposers' identities or any specific proposal pricing information.

Overview of Results

Sedway Consulting found that the least-cost portfolio was the portfolio that consisted of FPL's conversion options at its Cape Canaveral and Riviera sites.

Sedway Consulting estimated that the next lowest cost portfolio was at least $481 million more expensive than the conversion portfolio on a cumulative present value of revenue requirements (CPVRR) basis.[2] Thus, Sedway Consulting concluded that the FPL conversion projects should be selected.

[1] FPL made some changes to its P-MArea modeling assumptions that resulted in subsequent sets of RSM calibration runs being provided to Sedway Consulting after proposals had been opened. Sedway Consulting chose to continue to use the original set of information (i.e., that which was provided prior to bid opening) as a cross-check to ensure that the late modifications did not affect the selection decision.

[2] All CPVRR values in the evaluation have a base year of 2008 and were discounted with an 8.3% discount rate.

Evaluation Process

Sedway Consulting received the following economic information for each proposal:

- Capacity (winter and summer; base and duct-fired, where applicable)
- Commencement and expiration dates of contract
- Capacity pricing, including transmission interconnection costs
- Fixed operation and maintenance (O&M) and capital replacement pricing
- Firm fuel transportation assumptions
- Fuel pricing or indexing
- Heat rate (base and duct-fired, where applicable)
- Variable O&M pricing (base and duct-fired, where applicable)
- Start-up costs and fuel requirements
- Expected forced outage and planned outage hours.

The same or analogous information was received for FPL's conversion projects.

The remainder of this report section addresses the following topics:

- a description of the RSM and the ranking process that it employed,
- the use of a "filler" resource in evaluating proposed transactions that expired before the end of the study period, and
- the process of developing cost estimates for portfolios of resources.

RSM and Net Levelized Fixed Price Ranking

The economic information for all outside proposals and FPL's conversion options was input into Sedway Consulting's RSM – a power supply evaluation tool that was calibrated to approximate the impact of each proposal on FPL's system production costs. The RSM calculated each option's annual fixed costs and variable dispatch costs, estimated the production cost impacts of each option, accounted for capacity replacement costs for all proposed contracts that expired before the end of the study period, and developed a ranking of all options. That ranking was based on the net levelized fixed price of each option, expressed in $/kW-month.

An option's net cost was a combination of fixed and variable cost factors. On the fixed side, the RSM calculated annual fixed costs associated with capacity payments (or generation and transmission revenue requirements), fixed O&M costs, incremental capital charges, and firm gas transportation costs. These annual total fixed costs were discounted and converted into an equivalent levelized fixed price, expressed in $/kW-month. This was done by taking the present value of the stream of costs and dividing it by the present value of the kW-months of capacity associated with the option.

On the variable cost side, the RSM first developed a variable dispatch charge (in $/MWh) for each option for each month. This charge was calculated by multiplying the option's heat rate by the specified monthly fuel index price and adding the variable O&M charge and a $/MWh estimate of an option's start costs.

The RSM then estimated FPL's system production costs for each month and each option by interpolating between production costs estimates that were extracted from a set of P-MArea runs. These runs were performed at the start of the project and were used to calibrate the RSM by varying the monthly variable dispatch charge for a proxy proposal and recording the resulting FPL system production cost.

For the same capacity as the proposal under consideration, the RSM also estimated FPL's system production costs for a natural-gas-fired reference unit that had a high variable dispatch charge based on a heat rate of 25,000 Btu/kWh. Thus, for each option, the RSM yielded estimates of the annual production cost savings that FPL would be projected to experience if the utility selected the resource option, relative to acquiring the same sized transaction but at the high reference resource dispatch rate. The lower an option's variable dispatch charge, the greater the production cost savings.

The RSM then converted these annual savings into a levelized $/kW-month value, using the same arithmetic process that was performed with the annual fixed costs. Although energy-related costs are not normally expressed this way, this conversion normalized the production cost savings (i.e., accounted for the different amounts of capacity offered by each option) and yielded a value that could be subtracted from the levelized fixed price. Because the purpose of the solicitation was to acquire firm capacity, this conversion process translated energy savings into a metric (i.e., a comparable standard of measurement) that was tied to the capacity that an option offered.

For each proposal, the RSM then subtracted the levelized production cost savings from the levelized fixed price to yield a net levelized fixed price – a value expressed in $/kW-month that embodied both the fixed costs and variable production cost impacts of a proposed resource. The proposals and FPL resources were ranked in ascending order based on this net levelized fixed price. The top-ranked options had the lowest net levelized fixed prices, representing those options with the lowest fixed costs, or the greatest production cost savings, or a good combination of both.

Filler Resource

As was mentioned earlier, the RSM accounted for the costs of replacing capacity for all proposed contracts that expired before the end of the study period (2040). This was done by "filling in" for the lost capacity at the end of each proposal's term of service. This allowed for a side-by-side comparison of the value of proposals that had varying contract durations. Also, the RSM had been calibrated with P-MArea runs that assumed that a proxy proposed resource would provide its capacity for the entire duration of the study period. Thus, it was necessary to continue a proposal's capacity throughout the entire period so as to maintain consistent and sufficient reserve margins. In effect, by

supplementing each short-term proposal with a filler resource for the later years, the RSM was simulating what FPL would have to do when a proposed transaction expired – acquire or develop an amount of replacement capacity equal to that expired resource.

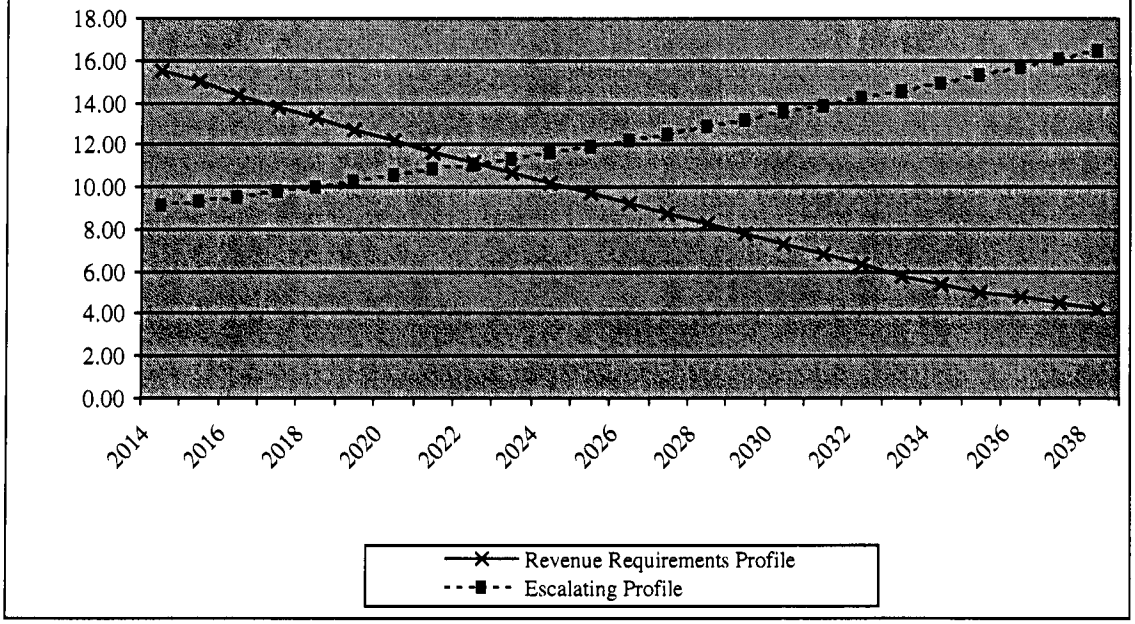
As the basis for cost assumptions for the filler resource, Sedway Consulting used the same future 3-on-1 G technology CC resource as FPL used in the early years of its P-MArea runs. The same $/kW fixed cost assumptions (e.g., construction cost, fixed O&M costs, capital replacement charges) and variable cost assumptions (e.g., heat rates, variable O&M costs, fuel supply issues) were used in the RSM as in P-MArea.[3] The only difference involved a methodological variation, whereby the RSM scaled the replacement capacity to exactly equal the size of the expiring proposal resource. Thus, all proposals enjoyed the benefit of being replaced at the end of their terms with a resource that exhibited the operating efficiencies and economy-of-scale benefits of a 1,219 MW combined-cycle plant. In other words, if a 200 MW proposal ended in 2032, the RSM assumed that a 200 MW combined-cycle facility replaced it in 2033; however, the construction costs for the replacement facility were not those that would typically be associated with a 200 MW combined-cycle plant, but rather, they were a prorated portion (i.e., 200/1219) of the construction costs of a larger combined-cycle facility.[4]

Depending on the "in-service date" for the filler resource, the filler's capital costs were escalated from a 2013 base-year value by 2.5% per annum. This escalation assumption represented FPL's estimate of how construction costs were likely to increase for its generation alternatives. Sedway Consulting decided to use this escalation value to trend the filler's annual capacity charges over time. Thus, instead of using FPL's declining revenue requirements profile for the recovery of capacity costs, Sedway Consulting used an escalating pattern that yielded the same long-term present value of revenue requirements. A traditional revenue requirements profile results in the highest capital charges in a project's early years. Thereafter, the capital-related charges decline. This is the opposite from what is usually seen in most power purchase proposals in power supply solicitations. Most power purchase proposals tend to have flat or escalating capacity charges, presumably reflecting expectations that general inflation will increase the costs of constructing new facilities in the future. Sedway Consulting therefore restructured the filler's profile of capacity costs to match what is generally seen in the marketplace. This meant that the filler's first year's capacity costs were the lowest, with each year thereafter escalating at 2.5%. Figure 1 displays the escalating capacity price profile used by Sedway Consulting as well as the traditional declining revenue requirements profile. Both profiles have the same present value.

[3] Again, note that Sedway Consulting used the CC assumptions that were in place for the RFP analysis.

[4] FPL used a 553 MW 2-on-1 F technology CC filler for the later years (post-2020) of its analysis. It made sense for FPL to use this smaller (but less efficient) CC filler to minimize end-of-period differences in the total capacity of the evaluated portfolios. Given that Sedway Consulting's RSM process automatically scales the filler, this was not a concern for the Sedway Consulting analysis. Therefore, Sedway Consulting chose to use the same 1,219 MW 3-on-1 G technology CC filler throughout the study period.

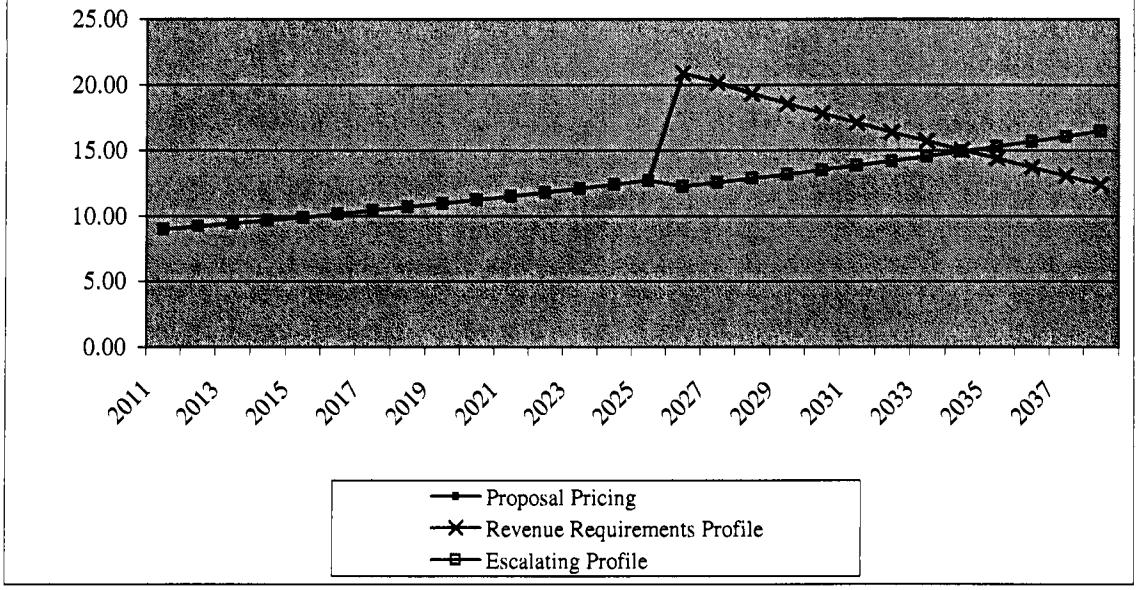
Figure 1
Comparison of Capacity Price Profiles



Over the full 25 years, the restructuring of the filler's capacity costs made no difference to the present value of the facility's revenue requirements. However, in the evaluation of outside proposals that did not extend through 2040 (the end of the study period), it provided the most favorable basis for such proposals' evaluation. In effect, it assumed that, following the expiration of an outside proposal's term, FPL would procure replacement power supplies at a prevailing market price. In reality, if an FPL self-build resource was determined to be most cost-effective at this future decision point, the declining revenue requirements profile would present the actual annual costs that FPL's customers would likely pay.

Figure 2 depicts a comparison of the two approaches for replacing a hypothetical 15-year proposed power supply contract. The proposed contract is assumed to have a capacity charge that begins at $9/kW-month and escalates at 2.5% per annum.

Figure 2
Comparison of Filler Capacity Price Methodologies



Relative to the declining revenue requirements methodology, the escalating filler capacity price methodology favors the 15-year proposed power supply because it defers the most expensive years of capacity costs until beyond the end of the study period. Thus, the present value of total study-period capacity costs (i.e., power supply proposal plus filler resource) is lower under the escalating filler methodology than under the declining revenue requirements methodology. Ultimately, the use of different filler methodologies by Sedway Consulting and FPL provided added value in looking at the evaluation results from two different perspectives and ensuring that the conclusions were supported from either perspective.

Portfolio Development and Cost Computation

Most of the input assumptions for the proposals and FPL's conversion options were directly input into the RSM in a straightforward fashion. There were some additional external cost estimates that were developed outside of the proposal. They entailed the following:

- Firm gas transportation
- Net equity adjustment
- Transmission integration
- Capacity-related transmission loss impacts
- Energy-related transmission loss impacts.

Firm gas transportation. All gas-fired proposals and FPL resources were modeled with firm gas transportation costs as described in Table D.1-1 in FPL's RFP. One of the proposals was for an oil-fired facility that could also be fired on natural gas. That proposal was modeled both ways (burning oil or natural gas). In the natural gas scenario, the facility was modeled with firm gas transportation costs as described in the RFP's Table D.1-1.

Net Equity Adjustment. Rating agencies view some portion of a utility's capacity payment obligations to a power provider as the equivalent of debt on the utility's balance sheet. If a utility does not rebalance its capital structure by issuing stock, this debt equivalent can negatively impact a utility's financial ratios and cause rating agencies to downgrade their opinion of the utility's creditworthiness. This can increase the utility's cost of borrowing.

Sedway Consulting estimated for each proposal the costs for FPL to rebalance its capital structure if it were to enter into a PPA with a proposer. This estimate was referred to as an "equity adjustment" because it reflected the present value of the incremental cost of the additional equity that FPL would need to raise to preserve the integrity of its balance sheet. FPL indicated in its RFP that the completion security and performance security aspects of potential PPAs may mitigate and reduce a purchase's equity adjustment. Sedway Consulting calculated those two mitigating reductions to the equity adjustment (as described in FPL's RFP) for each purchase and included those costs, where applicable, in the individual bid portfolios. Although FPL updated the marginal energy costs that were used in calculating the performance security mitigation values, Sedway Consulting chose to use the marginal energy costs that were published in the RFP. This was done to verify that the use of either set of values did not affect the selection outcome of the conversion analysis.

Transmission integration. With a large addition of new generation to a utility system, several portions of the transmission grid may need to be reinforced. This can entail the construction of new circuits or the reconductoring and upgrading of existing transmission lines. FPL determined that none of the proposal-based portfolios were likely to require material transmission integration investments. However, the conversion options will require transmission investments and those costs were included in the overall project costs.

Capacity-related transmission loss impacts. Based on the description of FPL's transmission evaluation processes in Appendix D of the RFP and as part of the RFP evaluation process, FPL developed estimates for FPL's peak-hour system transmission losses (and the costs associated with such losses) for each portfolio of resources that included outside bids. FPL repeated this process for the conversion portfolio. The costs were based on estimates for replacement capacity that would be added to each portfolio's costs. This process ensured that all portfolios would be compared consistently by having differences in capacity-related transmission losses appropriately addressed. Sedway Consulting performed the calculation of these values for each of the portfolios that

included outside bids and corroborated FPL's calculation of those costs for the conversion portfolio.

Energy-related transmission loss impacts. For each portfolio of resources, FPL developed estimates not only for FPL's peak-hour system transmission losses but average-hour losses as well. These two annual values for each portfolio were used to calculate the energy-related transmission losses that would have to be made up in each hour in order to bring each portfolio's total system generation back up to a level that would be comparable with FPL's reference portfolio. FPL's RFP described how these energy losses would be used to develop cost estimates for replacement energy that would be added to each portfolio's costs. Sedway Consulting checked the calculation of those costs for each portfolio.[5]

Portfolios of resources were developed that would meet FPL's capacity needs by 2014. The total portfolio costs included the sum of the present value net costs of each of the resources that made up a portfolio, the transmission costs described above, the net equity adjustment (also described above) for each appropriate resource in the portfolio, and a value of surplus capacity calculation. The surplus capacity value was meant to capture differences in the size of portfolios. Specifically, if a portfolio provided more than FPL's capacity need in 2014, then the portfolio was deemed to have surplus capacity. This capacity had value because it could potentially be sold as a single-year capacity sale in any of the years in which it occurred and/or would reduce FPL's capacity needs in 2015 and beyond. Thus, in subsequent solicitations, FPL would not have to request as much capacity as it otherwise would if it only acquired or developed exactly 314 MW of 2014 capacity. The value of surplus capacity is dependent on the market price for capacity in 2014 and beyond. Using the exact same filler information (i.e., the 1,219 MW 3-on-1 CC facility) as was described earlier, Sedway Consulting derived a 2014 value of $4.36/kW-month, escalating thereafter at 2.5% per year. This stream represented trended values for the net cost of the filler unit

The inclusion of a surplus capacity benefit in the RSM portfolio results placed those results on a more comparable footing with the FPL P-MArea/Integrated Model portfolio results. While no explicit surplus capacity benefit was calculated to supplement the P-MArea/Integrated Model results in FPL's analysis, this benefit was captured in the long-range expansion plans that were developed for each portfolio.

RSM Evaluation Results

Table 3 depicts the full portfolio analysis results for the six portfolios evaluated by Sedway Consulting. For each element of the portfolios, the table presents the resource's capacity, in-service year, term (i.e., duration), and present value net cost (in millions of dollars). The net cost is developed in the RSM and was described above. For the first

[5] As noted in the net equity adjustment discussion, FPL revised its forecast of marginal energy costs and used its updated values in its calculation. Sedway Consulting used the marginal energy cost values provided in the RFP to ensure that the revised values did not affect the final selection decision.

five portfolios (i.e., those that do not involve converting the Cape Canaveral and Riviera units), the existing oil-fired boilers are included without providing any additional capacity. This is because they are already part of the FPL system. However, their net costs, as evaluated in the RSM, are included. The positive net costs reflect the fact that the resources' energy benefits are expected to be less than the on-going fixed operations and maintenance expenses and environmental compliance investments that FPL would bear if the units were not retired and replaced. In Portfolio #6 (the conversion portfolio), the existing units' capacity is reflected as a negative number because the units' retirement will eliminate their current capacity as a contribution to FPL's system total capacity.

Also included in the table are additional costs or credits (as described above) for each portfolio pertaining to surplus capacity benefits, capacity-related transmission loss impacts, energy-related transmission loss impacts, and net equity adjustments. The values in the far right column show the difference in costs (CPVRR, in millions of dollars) between the evaluated portfolios and the least-cost conversion portfolio. Note that the differences are accurate but may not match a direct subtraction of the displayed portfolio costs because of rounding.

The conversion portfolio was found to be $481 million less expensive than the lowest-cost proposal-based portfolio.

Conclusions

Sedway Consulting performed an independent evaluation of FPL's Cape Canaveral and Riviera conversion options relative to the responses to FPL's recent 2007 resource RFP and concluded that the conversion portfolio represents the lowest-cost portfolio for meeting FPL's 2014 resource need. This portfolio was found to be $481 million (CPVRR) less expensive than the next cheapest portfolio.

Table 3
Comparison of Evaluated Portfolios

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from Portfolio #6 ($M)
Portfolio #1						
P1	-	563	2014	3	$302	
FPL	Existing Canaveral				$205	
FPL	Existing Riviera				$437	
	Total:	563			$943	
	2014 Surplus Capacity:	249			($117)	
				Subtotal:	$827	
	Capacity Losses:				$11	
	Energy Losses:				$77	
	Net Equity Adjustment:				($2)	
			Net Total Cost:		$913	**$481**
Portfolio #2						
P2	-	600	2014	25	$534	
FPL	Existing Canaveral				$205	
FPL	Existing Riviera				$437	
	Total:	600			$1,175	
	2014 Surplus Capacity:	286			($134)	
				Subtotal:	$1,041	
	Capacity Losses:				$9	
	Energy Losses:				$95	
	Net Equity Adjustment:				$103	
			Net Total Cost:		$1,248	**$816**
Portfolio #3						
P3	-	600	2014	20	$524	
FPL	Existing Canaveral				$205	
FPL	Existing Riviera				$437	
	Total:	600			$1,166	
	2014 Surplus Capacity:	286			($134)	
				Subtotal:	$1,032	
	Capacity Losses:				$9	
	Energy Losses:				$99	
	Net Equity Adjustment:				$82	
			Net Total Cost:		$1,221	**$789**

Table 3 - Continued
Comparison of Evaluated Portfolios

		Net Capacity (MW)	In-Service Year	Term (years)	Net Cost ($M)	Difference from Portfolio #6 ($M)
Portfolio #4						
P1	-	563	2014	3	$302	
P2	-	600	2014	25	$534	
FPL	Existing Canaveral				$205	
FPL	Existing Riviera				$437	
	Total:	1163			$1,477	
	2014 Surplus Capacity:	849			($398)	
				Subtotal:	$1,080	
	Capacity Losses:				$14	
	Energy Losses:				$105	
	Net Equity Adjustment:				$101	
			Net Total Cost:		$1,300	**$867**
Portfolio #5						
P1	-	563	2014	3	$302	
P3	-	600	2014	20	$524	
FPL	Existing Canaveral				$205	
FPL	Existing Riviera				$437	
	Total:	1163			$1,468	
	2014 Surplus Capacity:	849			($398)	
				Subtotal:	$1,070	
	Capacity Losses:				$14	
	Energy Losses:				$109	
	Net Equity Adjustment:				$80	
			Net Total Cost:		$1,273	**$840**
Portfolio #6 - Conversions						
FPL	Canaveral CC	1219	2013	27	$358	
FPL	Riviera CC	1207	2014	27	$481	
FPL	Existing Canaveral	(792)				
FPL	Existing Riviera	(565)				
	Total:	1069			$839	
	2014 Surplus Capacity:	755			($353)	
				Subtotal:	$486	
	Capacity Losses:				($6)	
	Energy Losses:				($48)	
	Net Equity Adjustment:				$0	
			Net Total Cost:		$432	**$0**